Quarterly Operations Report
Third Quarter 2013

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

Contract No. N40085-10-D-9409
Contract Task Order No. 0002

February 2014

Prepared for:

Naval Facilities Engineering Command Mid-Atlantic
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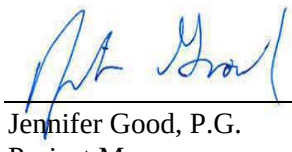
2/20/14

Patrick Schauble, P.E. — Date
Program Manager



2/20/14

Jennifer Good, P.G. — Date
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Acronyms and Abbreviations

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
ECL	Environmental Conservation Law
EB	equipment rinsate blank
ELAP	Environmental Laboratory Accreditation Program
GOCO	Government Owned Contractor Operated
gpm	gallon per minute
GWTP	groundwater treatment plant
H&S	H&S Environmental, Inc.
HMI	human-machine interface
IRP	Installation Restoration Program
LGAC	liquid-phase granular activated carbon
MS/MSD	matrix spike/matrix spike duplicate
NAVFAC	Naval Facilities Engineering Command Mid-Atlantic
NELAC	National Environmental 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	standard conductivity
scfm	standard cubic feet per minute
SPDES	Storm Pollution Discharge Elimination System
TB	trip blank
TCE	trichloroethene
TE	treated effluent
TSS	total suspended solids
TtEC	Tetra Tech EC, Inc.
USEPA	U.S. Environmental Protection Agency
VC	vinyl chloride
VFD	variable frequency drive
VGAC	vapor–phase granular activated carbon
VOC	volatile organic compound

1.0 INTRODUCTION

H&S Environmental, Inc. (H&S) 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 U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Mid-Atlantic, under Contract No. N40085-10-D-9409, Contract Task Order No. 0002. This Third Quarter 2013 Operations Report details activities that occurred from July 2013 to September 2013. Data was collected and operational activities were performed by H&S 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 (Field Sampling Plan and Quality Assurance Project Plan), UFP-SAP for Operations, Maintenance, and Monitoring of the Groundwater Treatment Plant, GM-38 Area, Naval Weapons Industrial Reserve Plant, Bethpage, New York* prepared by TtEC in 2010.

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). Historically, 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 is bordered on the north, west, and south by property owned, or formerly owned, by NG that covered approximately 605 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, NY.

The "hot spot" cleanup remedy for the GM-38 Area groundwater was originally set forth in Record of Decision (ROD) documents for Operable Unit 2 (OU 2) Groundwater for the NGC 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

Groundwater is extracted from recovery wells RW-1 and RW-3 and 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. Though the GWTP was originally equipped with a pH adjustment system utilizing sodium hydroxide, it has since been determined that pH adjustment is not necessary and 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 requirement in the NYSDEC's Storm Pollution Discharge Elimination System (SPDES) Permit Application as an Applicable or Relevant and Appropriate Requirements (ARAR).

The GWTP was designed to operate at an average flow rate of 1,100 gallons per minute (gpm) (800 gpm from RW-1 and 300 gpm from RW-3), as measured by the average discharge flow rate. It was determined that this flow rate would be necessary to effectively contain the higher concentration of contaminated groundwater in the GM-38 Area. Volatile Organic Compounds (VOCs) in the influent groundwater consist of trichloroethene (TCE), tetrachloroethene (PCE), vinyl chloride (VC), cis-1,2-dichloroethene (cis-1,2-DCE), 1,2-dichloroethane (1,2-DCA), benzene, toluene, and total xylenes.

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 air stripper distribution port and sprayed over the column of Jaeger Tripack at a 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 enters the air stripper below the base of the packing material at a rate of 8,000 standard cubic feet per minute (scfm). 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 vinyl chloride, are removed via two 20,000-lb vapor phase granular activated carbon (VGAC) units (VGAC-1 and VGAC-2). Vinyl chloride is oxidized by a 20,000-lb vessel containing zeolite impregnated with potassium permanganate (VGAC-3) into potassium chloride and carbon dioxide. 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 air stripper is processed 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 transmitters, 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.

2.0 GWTP OPERATIONS AND MAINTENANCE

While designed to run completely automated, the GWTP requires regular weekly 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 weekly 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 signal settings, collection of vapor and process water samples, changing out of bag filters, switching of lead/lag pump assignments, and preventive maintenance of system equipment. In addition, the following maintenance tasks were also performed during this reporting period:

- On 31 July, the system was shut down in order to backwash the three LGAC units.

2.2 Non-routine Maintenance / Site Activities

The following non-routine activities were performed during the Third Quarter:

- On 7 July, 8 July, 26 July, 17 August, 4 September, and 5 September, the system went down due to power interruptions caused by storms and/or loss of power in the area. On each occasion, the system was restarted upon arrival by the operator and/or restoration of power.

- On 12 September, a severe storm caused the system to shut down due to malfunction of the variable frequency drives (VFDs) for recovery wells RW-1 and RW-3. The VFD for RW-1 was replaced on 18 September and the recovery well resumed normal operation. The VFD for RW-3 was replaced on 27 September and the recovery well resumed normal operation.

3.0 GWTP MONITORING

The intent 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 quarterly 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 approved by NYSDEC Water Division for the effluent limitations and monitoring requirements. These results are also submitted to the NYSDEC on a monthly basis in the form of a Discharge Monitoring Report (DMR). A copy of the approved NYSDEC effluent limitation and monitoring constituents and the reporting forms are included in **Appendix A**.

Monthly aqueous samples are collected from each recovery well (RW-1 and RW-3), as well as 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 of each of the three LGAC units (LC1, LC2, and LC3). The analytical results of monthly process water samples collected during the Third Quarter are presented in **Table 1**. The data demonstrates that all permitted constituents were in compliance with regulatory requirements during the Third Quarter. **Table 1** also summarizes the average monthly flowrates in gallons per minute along with the total volume of water processed during each month of the Third Quarter.

Monthly DMRs for the Third Quarter (July – September 2013) are included in **Appendix A**.

3.2 Air Quality Monitoring

Treated off-gas discharged at the stack of the GWTP is subject to emissions limitations as described by the calculations submitted by the Navy and approved by the NYSDEC Division of Air Resources (DAR) in July 2009. A copy of the NYSDEC approved calculations is included as **Appendix B**.

While only sampling of the stack emissions is required for NYSDEC compliance, process vapor samples are also collected using 6-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 VC13) collected during the Third Quarter are presented in **Table 2**. Air emissions calculations using the stack vapor concentrations along with discharge flowrates are presented in **Table 3**. The calculations demonstrate that all constituents were within the regulatory requirements during the Third Quarter based on the emission rates in pounds per hour (lb/hr).

3.3 Groundwater Quality Monitoring

The groundwater monitoring well system at the GM-38 Groundwater Remediation Area consists of fourteen monitoring wells (as summarized in **Table 4**), three recovery wells (RW-1, RW-2, RW-3) and one injection well (IW-1). Though RW-2 was installed in 2005, a pump was never installed in this well and the well is not operated as a recovery well due to concerns expressed by the Bethpage Water District. Well locations are depicted on **Figure 3**.

Depth to water (DTW) measurements are collected from twelve of the monitoring wells and water quality samples are collected from eight of the monitoring wells on a quarterly basis. The monitoring network includes well clusters located near the recovery and injection wells as described below and as shown on **Figure 3**. In addition, two wells, GM-38D and GM-38D2, located at the corner of Arthur Avenue and Broadway, are monitored by others.

Quarterly groundwater samples were collected from eight monitoring wells (RW1-MW1, RW1-MW3, RW2-MW1, RW3-MW1, RW3-MW2, RW3-MW3, RW3-MW4, and TP-01). Samples were collected using bladder pumps in accordance with the U.S. Environmental Protection Agency (USEPA) low-flow sampling methodologies. Results of the groundwater sampling for the Third Quarter are presented in Section 3.3.1 below, and 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 on a quarterly basis.

Recovery Well 2 (RW-2) Monitoring Wells
The RW-2 cluster consists of three monitoring wells screened between 470 and 510 feet bgs. RW-2 MW-1 is located approximately 60 feet northwest of RW-2, RW2-MW2 is located approximately 20 feet west of RW-2, and RW2-MW3 is located approximately 100 feet west of RW-2. All three wells are hydraulically monitored while only RW-2 MW1 is monitored for water quality on a quarterly basis.

Recovery Well 3 (RW-3) Monitoring Wells
The RW-3 cluster consists of four monitoring wells. RW3-MW1 and RW3-MW4 are screened between 475 and 495 feet bgs. RW3-MW2 and RW3-MW3 are screened between 330 and 350 ft bgs and 320 and 340 ft bgs, respectively. RW3-MW1 and RW3-MW2 are located approximately 500 feet west of the GM-38 cluster, at the intersection of Arthur Avenue and Leroy Avenue. RW3-MW3 and RW3-MW4 are located approximately 400 feet north of the intersection of Arthur Avenue and Broadway. All four wells are both hydraulically monitored and monitored for water quality on a quarterly basis.

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 due to the influence from the pumping rates at the neighboring public water supply well field near the hot spot area and is also monitored for water quality on a quarterly basis.

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

H&S collected groundwater samples for the Third Quarter from 17-18 September 2013. Field parameters measured during well purging, consisting of pH, specific conductance (SC), temperature, oxidation-reduction potential (ORP) and dissolved oxygen (DO), 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 National Environmental Laboratory Accreditation Conference (NELAC), Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) certified, laboratory, Analytical Laboratories Services, located in Middletown, PA. The samples were analyzed for VOCs via USEPA Method 624, mercury via USEPA Method 245.1, and total suspended solids (TSS) via USEPA Method SM20 2540D. Validated analytical results of samples collected during the Third Quarter monitoring event are summarized in **Table 6.** Data validation reports are presented in **Appendix D**. Raw analytical data is provided under separate cover.

3.3.2 Quality Assurance/Quality Control Sampling

Quality assurance/quality control (QA/QC) samples were collected during the quarterly groundwater monitoring event in accordance with the *Final Sampling and Analysis Plan* (TtEC 2010a). These samples consisted of blind field duplicates (collected from TP-01 during the Third Quarter), matrix spike/matrix spike duplicate (MS/MSD) samples, equipment rinsate blanks (EB) collected at a rate of one per sampling event, and trip blanks (TB) submitted at a rate of one per sample cooler. No contaminants were detected in the equipment blank or trip blank submitted for this event. The overall lack of contamination in the blanks indicates that quality control requirements were achieved.

For field duplicate samples, the precision between the original sample and its duplicate is evaluated by calculating the relative percent difference (RPD). RPDs for the Third Quarter sampling event are presented in the data validation report in **Appendix D**. As indicated, RPDs for all analytes, when calculated, were below the guideline of 50% with the exception of PCE. This slightly elevated RPD is due to low estimated levels of the analyte and not indicative of data precision concerns. This overall consistency between the samples and its duplicate verifies that proper sample collection methods were followed.

3.3.3 Groundwater Concentration Trends

Historical groundwater analytical results through the Third Quarter are presented in **Table 7**. Groundwater analytical results of select VOCs (cis-1,2-DCE, PCE, TCE, and VC) for the Third Quarter monitoring events are presented graphically as **Figure 4**. Additionally, concentration trends of select VOCs (cis-1,2-DCE, TCE, and PCE, as well as VC for RW-1) over time for each recovery well (RW-1 and RW-3 sampled monthly) and the eight monitoring wells sampled during the Third Quarter monitoring event are presented in **Figures 5 through 14** and discussed below.

Figure 5 presents concentrations detected at recovery well RW-1. Concentrations of TCE have decreased from initial concentrations in early 2010 (maximum value of 710 µg/L detected in February 2010), remaining around or below 300 µg/L since the latter half of 2012. During the Third Quarter 2013, concentrations ranged from 209-248 µg/L. Concentrations of cis-1,2-DCE have followed a similar trend, decreasing from a high of 160 µg/L in February 2010 to a low of 20.5 µg/L in November 2012. PCE concentrations have also exhibited decreasing trends over time, with concentrations decreasing from 180 µg/L in February 2010 to a low of 40.4 µg/L in September 2013. Concentrations of VC have decreased below initial concentrations in 2010. After reaching a maximum concentration of 61 µg/L in February 2010, VC concentrations have remained below 5.0 µg/L since the final quarter of 2011, decreasing to non-detectable levels during all three months in the Third Quarter 2013.

Figure 6 presents concentrations detected at recovery well RW-3. Concentrations of TCE have decreased from initial concentrations in February 2010 (660 µg/L). During the Third Quarter 2013, concentrations ranged from 218-243 µg/L. Concentrations of cis-1,2-DCE have remained consistently below 4.0 µg/L. PCE has been detected at low levels during only a few sampling events, including a detection of 1.5 µg/L in August 2013.

Figure 7 presents concentrations detected at RW1-MW1. The concentration of TCE in the Third Quarter 2013 (175 µg/L) was higher than initial concentrations observed in May 2005 (53.6 µg/L) and also the highest concentration observed to date. No overall trend is discernible. The concentration of cis-1,2-DCE in the Third Quarter 2013 (86.2 µg/L) was above initial concentration observed in May 2005 (78.6 µg/L) but below maximum concentration observed in May 2009 (180 µg/L). Concentrations of PCE have remained consistently below 1.0 µg/L.

Figure 8 presents concentrations detected at RW1-MW3. Concentrations of cis-1,2-DCE and PCE have consistently remained below 1.0 µg/L and concentrations of TCE have remained near or below 2.0-3.0 µg/L.

Figure 9 presents concentrations detected at RW2-MW1. Concentrations of TCE have decreased substantially from original concentrations observed in May 2005 (37.6 µg/L), with a concentration of 1.5 µg/L observed in the Third Quarter 2013. Concentrations of cis-1,2-DCE have remained consistently low, with a maximum concentration of 4.6 µg/L detected in June 2013. PCE has not been detected during any sampling event.

Figure 10 presents concentrations detected at RW3-MW1. Concentrations of TCE in the Third Quarter 2013 (62.7 µg/L) were higher than initial concentrations observed in January 2010 (35.0 µg/L), though remain less than maximum TCE concentrations observed in November 2010 (77.6 µg/L). No overall trend is discernible. Concentrations of cis-1,2-DCE and PCE have exhibited similar trends, increasing slightly from initial concentrations, but remaining consistently below 2.0 µg/L.

Figure 11 presents concentrations detected at RW3-MW2. TCE concentrations observed in the Third Quarter 2013 (174 µg/L) were slightly higher than initial concentrations observed in January 2010 (160 µg/L), but less than the maximum concentration observed in April 2010 (211 µg/L). No overall trend is discernible. Concentrations of cis-1,2-DCE at this location have consistently remained between 1.0 – 2.0 µg/L. PCE has not been detected during any sampling event with the exception of August 2012, when a concentration of 0.28 J µg/L was observed.

Figure 12 presents concentrations detected at RW3-MW3. TCE concentrations observed in the Third Quarter 2013 (322 µg/L) were slightly less than initial concentrations observed in January 2010 (350 µg/L), and also less than the maximum concentration observed in June 2013 (410 µg/L). No overall trend is discernible. Concentrations of cis-1,2-DCE have remained near or below 2.0 µg/L and PCE has remained below 1.0 µg/L, with concentrations of both analytes remaining at non-detectable levels in the Third Quarter 2013.

Figure 13 presents concentrations detected at RW3-MW4. TCE concentrations have decreased since the initial sampling event in January 2010 (21 µg/L), with a concentration of 5.0 µg/L observed in the Third Quarter 2013. PCE had not been detected during any sampling event, and cis-1,2-DCE has not been detected since the initial sampling event in January 2010 (0.46 µg/L).

Figure 14 presents concentrations detected at TP-01. TCE concentrations have decreased since the initial sampling event in January 2010 (65 µg/L), with a concentration of 27.0 µg/L observed in the Third Quarter 2013. A similar trend exists for concentrations of cis-1,2-DCE. Concentrations have decreased from an initial value of 190 µg/L to 14.1 µg/L in the Third Quarter 2013, with concentrations fluctuating over time. PCE concentrations have ranged from 0.34 µg/L in March 2013 to 6.0 µg/L in June 2012.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The intent of the groundwater treatment system at GM-38 is to remove 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 apparent. Based on the concentrations in the groundwater wells, the GWTP should continue to be operated. In accordance with the OM&M Plan, the groundwater sampling should be reduced to a semiannual basis for the eight monitoring wells beginning in April 2014. Water levels for the 14 monitoring wells will continued to be monitored on a quarterly basis. In addition, an evaluation was conducted to better determine the capture zone. The results of this evaluation will be addressed by others.

5.0 REFERENCES

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.

Tetra Tech EC, Inc. (TtEC). 2010a. *Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), UFP-SAP for Operations, Maintenance, and Monitoring of the Groundwater Treatment Plant, GM-38 Area, Naval Weapons Industrial Reserve Plant, Bethpage, New York.* September.

TABLES

Table 1
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Results
Third Quarter 2013

SPDES Parameters	Daily Maximum Goal	Units	July 2013									
Process Stream			RW-1	RW-3	Combined Influent [1] (RW-1 + RW-3)	Air Stripper Effluent (ASE)	Bag Filter Effluent (BFE)	Liquid Carbon 1 Effluent (LC1)	Liquid Carbon 2 Effluent (LC2)	Liquid Carbon 3 Effluent (LC3)	Treated Effluent (TE)	Treated Effluent (TE) Duplicate
Well Depth		ft	445	530	NA	NA	NA	NA	NA	NA	NA	NA
Screened Interval		ft	335-395 410-430	392-412 442-504	NA	NA	NA	NA	NA	NA	NA	NA
Sampling Date			7/17/13									
Average Flowrate	1100	GPM	795	202	998	NR	994	NR	NR	NR	997	NR
Total Flow		gallons	35,501,800	9,037,200	44,539,000	NR	44,357,300	NR	NR	NR	44,522,800	NR
pH	5.5 - 8.5	SU	5.15	4.98	5.12	8.76	8.30	7.65	7.55	7.23	6.29	6.29
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	2.3 J	2.6 J	2.4 J	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	µg/L	3.1 J	1.2 J	2.7 J	ND	ND	ND	ND	ND	ND	ND
cis 1,2-Dichloroethene	5	µg/L	22.3	ND	17.8	0.47 J	0.42 J	0.35 J	0.35 J	0.42 J	0.41 J	0.44 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	54.1	ND	43.1	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethene	5	µg/L	2.8 J	ND	2.2 J	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	µg/L	213	218	214	2.2	2.3	ND	ND	ND	0.47 J	0.41 J
Vinyl Chloride	2	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercruy	0.25	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Suspended Solids (TSS)	NA	mg/L	5	ND	4	ND	ND	ND	ND	ND	ND	ND

Table 1
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Results
Third Quarter 2013

SPDES Parameters	Daily Maximum Goal	Units	August 2013									
Process Stream			RW-1	RW-3	Combined Influent [1] (RW-1 + RW-3)	Air Stripper Effluent (ASE)	Bag Filter Effluent (BFE)	Liquid Carbon 1 Effluent (LC1)	Liquid Carbon 2 Effluent (LC2)	Liquid Carbon 3 Effluent (LC3)	Treated Effluent (TE)	Treated Effluent (TE) Duplicate
Well Depth		ft	445	530	NA	NA	NA	NA	NA	NA	NA	NA
Screened Interval		ft	335-395 410-430	392-412 442-504	NA	NA	NA	NA	NA	NA	NA	NA
Sampling Date			8/13/13									
Average Flowrate	1100	GPM	779	187	966	NR	958	NR	NR	NR	960	NR
Total Flow		gallons	34,791,550	8,342,650	43,134,200	NR	42,754,550	NR	NR	NR	42,850,600	NR
pH	5.5 - 8.5	SU	4.99	4.93	4.98	5.31	5.62	5.93	5.99	5.96	6.19	6.19
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	3.0 J	2.9 J	3.0 J	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	µg/L	5.1	1.8 J	4.5 J	ND	ND	ND	ND	ND	ND	ND
cis 1,2-Dichloroethene	5	µg/L	27.5	2.0 J	22.2 J	0.43 J	0.46 J	0.54 J	0.41 J	0.39 J	0.43 J	0.46 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	53.0	1.5 J	42.7 J	ND	0.40 J	ND	ND	ND	ND	ND
1,1,1-Trichloroethene	5	µg/L	3.2 J	ND	2.6 J	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	µg/L	248	243	247	2.1	2.1	ND	ND	ND	0.64 J	0.60 J
Vinyl Chloride	2	µg/L	ND	ND	ND	ND	ND	0.75 J	0.51 J	ND	ND	ND
Mercruy	0.25	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Suspended Solids (TSS)	NA	mg/L	6	ND	5	ND	ND	ND	ND	ND	ND	ND

Table 1
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Results
Third Quarter 2013

SPDES Parameters	Daily Maximum Goal	Units	September 2013									
Process Stream			RW-1	RW-3	Combined Influent [(1)] (RW-1 + RW-3)	Air Stripper Effluent (ASE)	Bag Filter Effluent (BFE)	Liquid Carbon 1 Effluent (LC1)	Liquid Carbon 2 Effluent (LC2)	Liquid Carbon 3 Effluent (LC3)	Treated Effluent (TE)	Treated Effluent (TE) Duplicate
Well Depth		ft	445	530	NA	NA	NA	NA	NA	NA	NA	NA
Screened Interval		ft	335-395 410-430	392-412 442-504	NA	NA	NA	NA	NA	NA	NA	NA
Sampling Date			9/29/13									
Average Flowrate	1100	GPM	661	92	753	NR	760	NR	NR	NR	761	NR
Total Flow		gallons	28,571,950	3,963,550	32,535,500	NR	32,841,250	NR	NR	NR	32,870,800	NR
pH	5.5 - 8.5	SU	5.10	5.03	5.09	5.47	5.77	6.10	6.17	6.20	6.07	6.07
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	ND	2.3 J	0.28 J	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	µg/L	2.5 J	ND	2.2 J	ND	ND	ND	ND	ND	ND	ND
cis 1,2-Dichloroethene	5	µg/L	23.1	ND	20.3	0.43 J	0.28 J	0.28 J	ND	0.32 J	ND	0.35 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	40.4	ND	35.5	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethene	5	µg/L	2.3 J	ND	2.0 J	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	µg/L	209	240	213	2.4	2.4	ND	ND	ND	0.73 J	0.42 J
Vinyl Chloride	2	µg/L	ND	ND	ND	ND	ND	0.68 J	0.68 J	ND	ND	ND
Mercruy	0.25	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Suspended Solids (TSS)	NA	mg/L	ND	ND	ND	ND	5	ND	ND	ND	ND	ND

Notes:
J - Estimated result between laboratory method detection limit and reporting limit
NA - Not Applicable
ND - Not detected above laboratory method detection limit
NR - Not Recorded
gpm - gallons per minute

(1) Influent concentrations presented are the weighted average concentrations of RW-1 and RW-3.

Table 2
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
Third Quarter 2013

DAR Parameters	SGC	Units	July 2013					August 2013				
Process Stream			Influent (VCI1)	VC12	VC23	Effluent	Effluent Duplicate	Influent (VCI1)	VC12	VC23	Effluent	Effluent Duplicate
Sampling Date			7/17/13					8/14/13				
Average Flowrate		CFM	NR	NR	NR	7,800	NR	NR	NR	NR	7,927	NR
Total Flow [(1)]		ft^3	NR	NR	NR	348,209,856	NR	NR	NR	NR	353,861,280	NR
Total Flow [(2)]		m^3	NR	NR	NR	9,860,205	NR	NR	NR	NR	10,020,236	NR
1,2-Dichloroethane	-	$\mu g/m^3$	4.2 J	ND	2.4 J	1.6 J	2.9 J	3.5 J	ND	2.8 J	2.8 J	2.5 J
cis 1,2-Dichloroethene	-	$\mu g/m^3$	220	31	240	21	28	190	40	280	41	41
trans 1,2-Dichloroethene	-	$\mu g/m^3$	5.1 J	ND	4.6	ND	ND	ND	1.3 J	4.2	ND	ND
1,2-Dichloroethene (total)	-	$\mu g/m^3$	220	31	250	21	28	190	41	290	41	41
Toluene	37000	$\mu g/m^3$	1.5 J	30	1.2 J	10	1.6 J	7.4 J	15	0.72 J	0.84 J	ND
Xylene	4300	$\mu g/m^3$	ND	27	0.52 J	3.7	ND	ND	12	ND	ND	ND
1,1,2-Trichloroethane	-	$\mu g/m^3$	3.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	14000	$\mu g/m^3$	3200	730	200	53	43	2800	720	220	61	52
Vinyl Chloride	180000	$\mu g/m^3$	8.9	6.2	7.6	ND	ND	7.8	5.9	8.2	0.54 J	ND
Tetrachloroethene	1000	$\mu g/m^3$	670	240	4.7 J	10	2.1 J	600	190	4.2 J	4.2 J	ND

Table 2
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
Third Quarter 2013

DAR Parameters	SGC	Units	September 2013				
Process Stream			Influent (VCI1)	VC12	VC23	Effluent	Effluent Duplicate
Sampling Date			9/12/13				
Average Flowrate		CFM	NR	NR	NR	7,975	NR
Total Flow [(1)]		ft^3	NR	NR	NR	344,520,000	NR
Total Flow [(2)]		m^3	NR	NR	NR	9,755,720	NR
1,2-Dichloroethane	-	$\mu g/m^3$	3.3 J	ND	3.8	3.8	3.6
cis 1,2-Dichloroethene	-	$\mu g/m^3$	200	41	320	56	52
trans 1,2-Dichloroethene	-	$\mu g/m^3$	ND	ND	4.3	ND	ND
1,2-Dichloroethene (total)	-	$\mu g/m^3$	200	41	320	56	52
Toluene	37000	$\mu g/m^3$	1.5 J	16	0.50 J	0.36 J	4.3
Xylene	4300	$\mu g/m^3$	0.90 J	13	0.54 J	ND	0.68 J
1,1,2-Trichloroethane	-	$\mu g/m^3$	2.5 J	ND	ND	ND	ND
Trichloroethene	14000	$\mu g/m^3$	2800	1000	280	86	68
Vinyl Chloride	180000	$\mu g/m^3$	6.8	7.2	6.2	0.83 J	0.71 J
Tetrachloroethene	1000	$\mu g/m^3$	570	300	5.9	5.0 J	1.8 J

Notes:
ND - Not detected
NR - Not recorded
SGC - Short-term Guideline Concentration
$\mu g/m^3$ - micrograms per cubic meter
CFM - cubic feet per minute
DAR - Division of Air Rescources
[(1)] Total Flow (ft^3) = average flowrate (cfm) * operational time (minutes)
[(2)] Total Flow (m^3) = total flow (ft^3) * (0.3048^3)m^3/ft^3

Disharge goals presented above have since been updated based on NYSDEC's letter dated 31 October 2013.

Table 3
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Stack Emissions
Third Quarter 2013

DAR Parameters	Discharge Goal	Units	July 2013	August 2013	September 2013
Sampling Date			7/17/13	8/14/13	9/12/13
Average Flowrate		CFM	7,800	7,927	7,975
Total Flow		ft^3	348,209,856	353,861,280	344,520,000
Total Flow		m^3	9,860,205	10,020,236	9,755,720
Trichloroethene	0.09	lb/hr	0.00160	0.00187	0.00257
Vinyl Chloride	0.01	lb/hr	0.00000	0.00002	0.00002
1,2 Dichloroethene	0.03	lb/hr	0.00063	0.00126	0.00167
1,2-Dichloroethane	BRT	lb/hr	0.00005	0.00009	0.00011
Toluene	BRT	lb/hr	0.00030	0.00003	0.00001
Xylene	BRT	lb/hr	0.00011	0.00000	0.00000
1,1,2-Trichloroethane	BRT	lb/hr	0.00000	0.00000	0.00000
Tetrachloroethene	--	lb/hr	0.00030	0.00013	0.00015

Notes:
BRT - Below reporting thresholds
lb/hr - pounds per hour
DAR - Divison of Air Resources
CFM - Cubic feet per minute
Stack Emissions (lb/hr) = average flowrate (cfm) * $(0.3048^{\wedge 3})m^3/ft^3$ * conc.(ug/m^3) * 1 lb/453592370 ug * 60 min/hr

Disharge goals presented above have since been updated based on NYSDEC's letter dated 31 October 2013.

Table 4
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Level Measurements
Third Quarter 2013

Monitoring Well ID	Date	Well Elevation (ft amsl)	Total Depth (ft)	Screen Interval (ft)	Depth to Water (ft)	Groundwater Elevation (ft amsl)
RW1-MW1	09/17/13	85.86	435	395-435	34.44	51.42
RW1-MW2	09/17/13	87.35	435	395-435	36.25	51.10
RW1-MW3	09/17/13	80.34	435	395-435	28.28	52.06
RW2-MW1	09/17/13	90.75	510	470-510	38.39	52.36
RW2-MW2	09/17/13	90.15	510	470-510	37.95	52.20
RW2-MW3	09/17/13	89.75	510	470-510	37.55	52.20
RW3-MW1	09/17/13	92.22	495	475-495	37.22	55.00
RW3-MW2	09/17/13	91.98	350	330-350	38.79	53.19
RW3-MW3	09/17/13	92.98	340	320-340	38.81	54.17
RW3-MW4	09/17/13	92.92	495	475-495	39.75	53.17
TP-01	09/17/13	85.91	470	450-470	34.37	51.54
IW1-MW1	09/17/13	89.41	150	20-150	36.15	53.26
GM38D	NA	91.37	340	320-340	NA	NA
GM382D	NA	91.57	495	475-495	NA	NA

Notes:
amsl - above mean sea level
ft - feet
NA - Not Available

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
Third Quarter 2013

Location	Temp (ºC)	pH (SU)	S.C. (uS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color (Visual)
RW1-MW1	19.27	4.23	200	0.84	64.5	0.43	clear
RW1-MW3	15.10	4.91	201	1.27	60.0	1.30	clear
RW2-MW1	15.78	6.89	184	0.49	-99.1	1.49	clear
RW3-MW1	21.96	3.97	147	0.98	69.9	0.44	clear
RW3-MW2	17.49	4.25	96	0.54	68.3	2.31	clear
RW3-MW3	14.37	4.93	154	1.13	46.4	5.03	clear
RW3-MW4	17.57	4.43	152	0.83	59.6	1.81	clear
TP-01	13.83	5.25	173	5.50	65.3	1.16	clear

Notes:
S.C. = Specific Conductance
mS/cm = milliSiemens per centimeter
NTU = nephelometric turbidity units
mg/L = milligrams per liter
ºC = 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
Third Quarter 2013

Sample ID	RW1-MW1	RW1-MW3	RW2-MW1	RW3-MW1	RW3-MW2	RW3-MW3	RW3-MW4	TP-01	
Sample Date	9/17/2013	9/17/2013	9/17/2013	9/18/2013	9/17/2013	9/18/2013	9/17/2013	9/17/2013	9/17/2013
Comments									Duplicate
VOCS (EPA 624) ug/L [(1)]									
1,1,1-trichloroethane	1.2	1.5	ND	0.61 J	0.47 J	ND	ND	0.66 J	0.66 J
1,1-dichloroethane	4.7 J	9.7 J	ND	1.2 J	0.65 J	ND	2.9	2.1 J	2.8
1,1-dichloroethene	2.5	1.6	ND	0.57 J	0.29 J	ND	ND	0.66 J	0.74 J
Benzene	ND	ND	0.59 J	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	5.2 J	ND
cis-1,2-dichloroethene	86.2 J	0.72 J	0.77 J	0.43 J	1.3 J	ND	ND	14.1 J	14.7
Methylene chloride	ND	ND	ND	ND	ND	6.2 J	ND	ND	ND
Tetrachloroethene	0.35 J	ND	ND	1.2	ND	ND	ND	0.77 J	1.5 J
Toluene	ND	ND	0.31 J	ND	ND	ND	ND	ND	ND
Trichloroethene	175	2.5	1.5	62.7	174	322	5.0	27.0	26.7
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	ND	ND	12	ND	ND	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

Samples were analyzed for TCL VOCs. 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 Third Quarter 2013

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	12/4/2012	3/13/2013	6/19/2013[2]	9/17/2013
Comments										Duplicate					Duplicate					
Well Depth (Ft)	435																			
Screened Interval (Ft)	395-435																			
VOCS (EPA 624) ug/L																				
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	0.88 J	1.1	ND	1.2
1,1,2,2-tetrachloroethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-trichloroethane	ND	ND	0.58J	NR	ND	ND	ND	ND	NR	NR	ND	0.33 J	ND	ND	ND	ND	ND	ND	ND	ND
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	4.9	5.3	4.8 J	4.7 J
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	2.0	2.8	ND	2.5
1,2,4-trichlorobenzene	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	ND	ND	ND	NR	NR	NR	NR	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	NR	NR	NR	NR
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
1,2-dichloroethane	ND	ND	0.29J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	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	ND	ND	NR	ND
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
1,4-dioxane	1.75J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-butanone	R	R	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
2-hexanone	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
4-methyl-2-pentanone	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Acetone	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	30 R	ND	ND	NR	NR
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	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	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	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	ND	ND	ND	ND
Chloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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	108	91.7	64	86.2 J
cis-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dibromochloromethane	NR	NR	ND	NR	ND	ND	ND	ND	NR	NR	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	NR	NR	ND	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
isopropylbenzene	NR	NR	ND	NR	NR	NR	NR	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	NR	NR	NR	NR
methylcyclohexane	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	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methyl-tert-butyl-ether	NR	NR	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	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	NR	NR	ND	NR
Tetrachloroethene	ND	ND	0.72J	ND	0.42J	ND	ND	ND	ND	ND	0.36 J	ND	ND	ND	ND	ND	ND	ND	ND	0.35 J
Toluene	ND	0.33J	0.68	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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	1.8	1.7	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	ND	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	85	101	78	175
m,p-xylene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorotrifluoroethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorofluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
Vinyl chloride	ND	ND	1.6	ND	ND	ND	0.17J	ND	ND	0.38 J	0.29 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-xylene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
o-xylene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	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	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	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 Third Quarter 2013

Sample ID	RW1-MW2				RW1-MW3													
Sample Date	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	3/14/2013	6/19/2013[2]	9/17/2013
Comments																			
Well Depth (Ft)	435				435														
Screened Interval (Ft)	395-435				395-435														
VOCS (EPA 624) ug/L																			
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	1.4	1.8	1.5
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	0.23 J	ND	ND	ND	0.20 J	ND
1,1,2-trichloro-1,2,2-trifluoroethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
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	0.61 J	0.46 J	ND
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	8.5	10	9.7 J
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	1.7	1.8	1.6
1,2,4-trichlorobenzene	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	ND	ND	ND	NR	NR	NR	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	NR	NR	NR
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18 J	ND
1,2-dichloropropane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	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	ND	ND	ND
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	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	NR	NR	NR
2-butanone	R	R	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-hexanone	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
4-methyl-2-pentanone	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Acetone	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	30 R	ND	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	ND	ND	ND	NR	NR	ND	ND	ND	ND	NR	NR	NR	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	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	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	ND	0.82	ND
Chloromethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
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	0.53 J	0.46 J	0.72 J
cis-1,3-dichloropropene	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dibromochloromethane	NR	NR	ND	ND	NR	NR	NR	NR	NR	NR	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	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
isopropylbenzene	NR	NR	ND	NR	NR	NR	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	NR	NR	NR
methylcyclohexane	NR	NR	ND	NR	NR	NR	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	ND	ND	ND
methyl-tert-butyl-ether	NR	NR	ND	NR	ND	NR	NR	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	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	ND	ND	ND
Toluene	0.32J	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
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	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
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	1.9	1.7	2.5
m,p-xylene	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorotrifluoroethane	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorofluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	12.9	187.0	4.1	ND	ND	ND	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	ND	ND	NR
m,p-xylene	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
o-xylene	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
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	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	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 Third Quarter 2013

Sample ID	RW2-MW1																		RW2-MW2		
Sample Date	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	8/21/2012	12/7/2012	3/13/2013	6/17/2013[2]	9/17/2013	5/4/2005	7/21/2005	6/17/2013[2]
Comments																					
Well Depth (Ft)	510																		510		
Screened Interval (Ft)	470-510																		470-510		
VOCS (EPA 624) ug/L																					
1,1,1-trichloroethane	ND	0.37J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.33 J	ND	ND	0.84	ND	ND	ND	0.34 J
1,1,2,2-tetrachloroethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	D	ND	ND
1,1-dichloroethane	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	4.8	0.58 J	0.52 J	7.0	ND	ND	0.78J	4.9
1,1-dichloroethene	ND	0.58J	0.55J	0.63J	ND	ND	ND	ND	ND	ND	ND	ND	0.55 J	0.95 J	0.19 J	ND	1.9	ND	ND	0.41J	0.72
1,2,4-trichlorobenzene	NR	NR	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	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	NR	NR	ND	ND	NR
1,2-dibromomethane	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND	NR	NR	NR
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	0.32 J
1,2-dichloropropane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND	NR	NR	NR
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND	NR	NR	NR
1,4-dioxane	5.34	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	7.45J	NR	NR
2-butanone	R	R	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	R	R	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND	NR	NR	NR
2-hexanone	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	ND	ND	ND
4-methyl-2-pentanone	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	ND	ND	ND
Acetone	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	30 R	ND	ND	NR	ND	NR	NR	NR
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND	NR	NR	NR
Benzene	ND	ND	ND	ND	0.15J	0.69J	0.58J	0.30J	NR	0.22 J	0.27 J	0.22 J	ND	ND	0.68 J	0.54 J	ND	0.59 J	ND	ND	ND
Bromodichloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	0.38 J	ND	ND	ND	2.9	ND	ND	ND	0.55
Chloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	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	0.39 J	0.33 J	0.29 J	7.7	0.77 J	0.33J	0.41J	4.6
cis-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dibromochloromethane	NR	NR	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND
dichlorodifluoromethane	NR	NR	ND	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	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
isopropylbenzene	NR	NR	ND	NR	NR	NR	NR	NR	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	NR	NR	NR	NR	NR
methylcyclohexane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methyl-tert-butyl-ether	NR	NR	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	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	NR	NR	ND	ND	NR
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	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	0.27 J	ND	ND	0.31 J	0.33J	0.53J	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	ND
trans-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	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	20.8	0.73 J	0.67 J	14	1.5	7.8	13.8	12
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	ND
Trichlorotrifluoroethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	ND
Trichlorofluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND	NR	NR	NR
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)	ND	1.4J	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	ND
o-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	ND
Mercury (EPA 245.1) ug/L	NR	NR	0.05J	NR	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR
TSS (SM20 2540D) mg/L	NR	NR	2260.0	NR	58.0	<4.0	<4.0	<4.0	181	5	36	6	25	12	10	ND	13	12	NR	NR	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 Third Quarter 2013

Sample ID	RW2-MW3				RW3-MW1																
Sample Date	5/3/2005	7/20/2005	5/28/2009	6/18/2013[2]	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]	6/20/2013[2]	9/18/2013
Comments										Duplicate				Duplicate							Duplicate	
Well Depth (Ft)	510				495																	
Screened Interval (Ft)	470-510				475-495																	
VOCS (EPA 624) ug/L																						
1,1,1-trichloroethane	ND	ND	ND	ND	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	ND	0.61 J
1,1,2,2-tetrachloroethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	0.68J	0.31J	1.4	7.4	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	ND	1.2 J
1,1-dichloroethene	ND	ND	0.42J	ND	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	ND	0.57 J
1,2,4-trichlorobenzene	NR	NR	ND	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	ND	ND	ND	NR	NR	NR	NR	NR	NR	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	NR	NR	NR	NR	NR	NR
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND
1,2-dichloroethane	ND	ND	ND	ND	0.27J	ND	ND	ND	ND	ND	ND	0.57 J	ND	ND	0.43 J	ND	ND	0.50 J	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND
1,4-dioxane	7.42J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-butanone	R	R	ND	ND	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND
2-hexanone	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR
4-methyl-2-pentanone	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR
Acetone	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR
Acrolein	NR	NR	30 R	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	30 R	ND	ND	NR	NR	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	0.19J	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	0.20J	ND	ND	NR	ND	ND	ND	ND	ND	ND	0.63 J	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	0.40J	0.66J	2.3	ND	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	ND	0.43 J
cis-1,3-dichloropropene	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cyclohexane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dibromochloromethane	NR	NR	ND	ND	NR	ND	ND	ND	ND	ND	NR	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	NR	NR	NR	NR	NR	NR
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
isopropylbenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	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	NR	NR	NR	NR	NR	NR
methylcyclohexane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Methylene chloride	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methyl-tert-butyl-ether	NR	NR	ND	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	ND	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	ND	ND	ND	ND	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	1.7 J	1.2
Toluene	ND	0.50J	0.39J	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	0.26 J	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	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	16.2	20.6	18.0	60	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	48	62.7
m,p-xylene	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR
Trichlorotrifluoroethane	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.80 J	ND	NR
Trichlorofluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-xylene	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR
o-xylene	NR	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	NR
Mercury (EPA 245.1) ug/L	NR	NR	ND	NR	NR	<0.20	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	NR	14.8	NR	NR	<4.0	<4.0	<4.0	<4.0	<4.0	5160	ND	ND	ND	NR	17	ND	ND	16	ND	9.5 J	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 Third Quarter 2013

Sample ID	RW3-MW2																		
Sample Date	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	12/4/2012	12/4/2012	3/14/2013	6/20/2013[2]	9/17/2013
Comments		Duplicate			Duplicate									Duplicate		Duplicate			
Well Depth (Ft)	350																		
Screened Interval (Ft)	330-350																		
VOCS (EPA 624) ug/L																			
1,1,1-trichloroethane	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	0.42 J	0.43 J	0.41 J	ND	0.47 J
1,1,2,2-tetrachloroethane	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-trichloroethane	ND	ND	ND	ND	0.25 J	0.27J	ND	NR	0.32 J	0.32 J	0.32 J	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	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	0.69 J	0.71 J	0.68 J	ND	0.65 J
1,1-dichloroethene	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	0.40 J	0.43 J	0.53 J	ND	0.29 J
1,2,4-trichlorobenzene	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	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	0.69 J	ND	ND	ND
1,3-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
1,4-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-butanone	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
2-hexanone	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
4-methyl-2-pentanone	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Acetone	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	30 R	30 R	ND	ND	ND	NR	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	NR	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	0.23 J	ND	ND	0.62 J	0.64 J	ND	ND	ND
Chloromethane	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	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	1.6	1.6	1.6	ND	1.3 J
cis-1,3-dichloropropene	NR	NR	ND	ND	ND	ND	ND	NR	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
Dibromochloromethane	NR	NR	ND	ND	ND	ND	ND	NR	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
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
isopropylbenzene	NR	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	NR
methylcyclohexane	NR	NR	NR	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	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methyl-tert-butyl-ether	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	NR	ND	ND	ND	ND	ND	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	0.28 J	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	ND	ND	0.43 J	ND	ND	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	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	160	170	211	73	58.2	60.9	110	135	151	71.9	96.5	209	198	192	173 J	171	155	140	174
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorotrifluoroethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorofluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
xylenes (total)	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
o-xylene	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	NR	NR	<0.20	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	NR	5.0	6.0	ND	10.0	10.0	7	6	ND	8	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 Third Quarter 2013

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]	9/18/2013
Comments			Duplicate								Duplicate						
Well Depth (Ft)	340																
Screened Interval (Ft)	320-340																
VOCS (EPA 624) ug/L																	
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	ND
1,1,2,2-tetrachloroethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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	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	ND
1,2,4-trichlorobenzene	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
1,2-dibromomethane	NR	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	ND
1,2-dichloroethane	ND	0.52J	0.54J	ND	ND	ND	0.37 J	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	ND
1,3-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	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	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-butanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	ND	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	NR
4-methyl-2-pentanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Acetone	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR
Acrolein	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	150 R	ND	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	ND	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	ND
Bromodichloromethane	NR	ND	ND	ND	ND	ND	NR	ND	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	ND
Bromomethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
carbon disulfide	NR	ND	ND	ND	ND	ND	NR	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	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	NR	ND	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	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	ND
Chloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	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	ND
cis-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	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
Dibromochloromethane	NR	ND	ND	ND	ND	ND	NR	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
Ethylbenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
isopropylbenzene	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
methylcyclohexane	NR	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	6.2 J
methyl-tert-butyl-ether	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	ND	ND	ND	ND	ND	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	ND
Toluene	ND	ND	ND	ND	ND	ND	NR	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	ND
trans-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	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	322
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorotrifluoroethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorofluoromethane	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND
Vinyl chloride	ND	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	NR
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
o-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	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	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	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 Third Quarter 2013

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																
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
1,1,2,2-tetrachloroethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND
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
1,1-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
1,2,4-trichlorobenzene	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
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23 J	ND
1,2-dichloropropane	NR	ND	ND	ND	ND	ND	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	NR	ND
1,4-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-butanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND
2-hexanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
4-methyl-2-pentanone	NR	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Acetone	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	NR
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
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
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
Chloroethane	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	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
cis-1,2-dichloroethene	0.46J	ND	ND	ND	1.6	ND	ND	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
cyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dibromochloromethane	NR	ND	ND	ND	ND	ND	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
Ethylbenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	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
methylcyclohexane	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
methyl-tert-butyl-ether	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
styrene	NR	ND	ND	ND	ND	ND	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
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	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
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
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorotrifluoroethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
Trichlorofluoromethane	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND	ND	ND	ND	NR	ND
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
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR
o-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	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 Third Quarter 2013

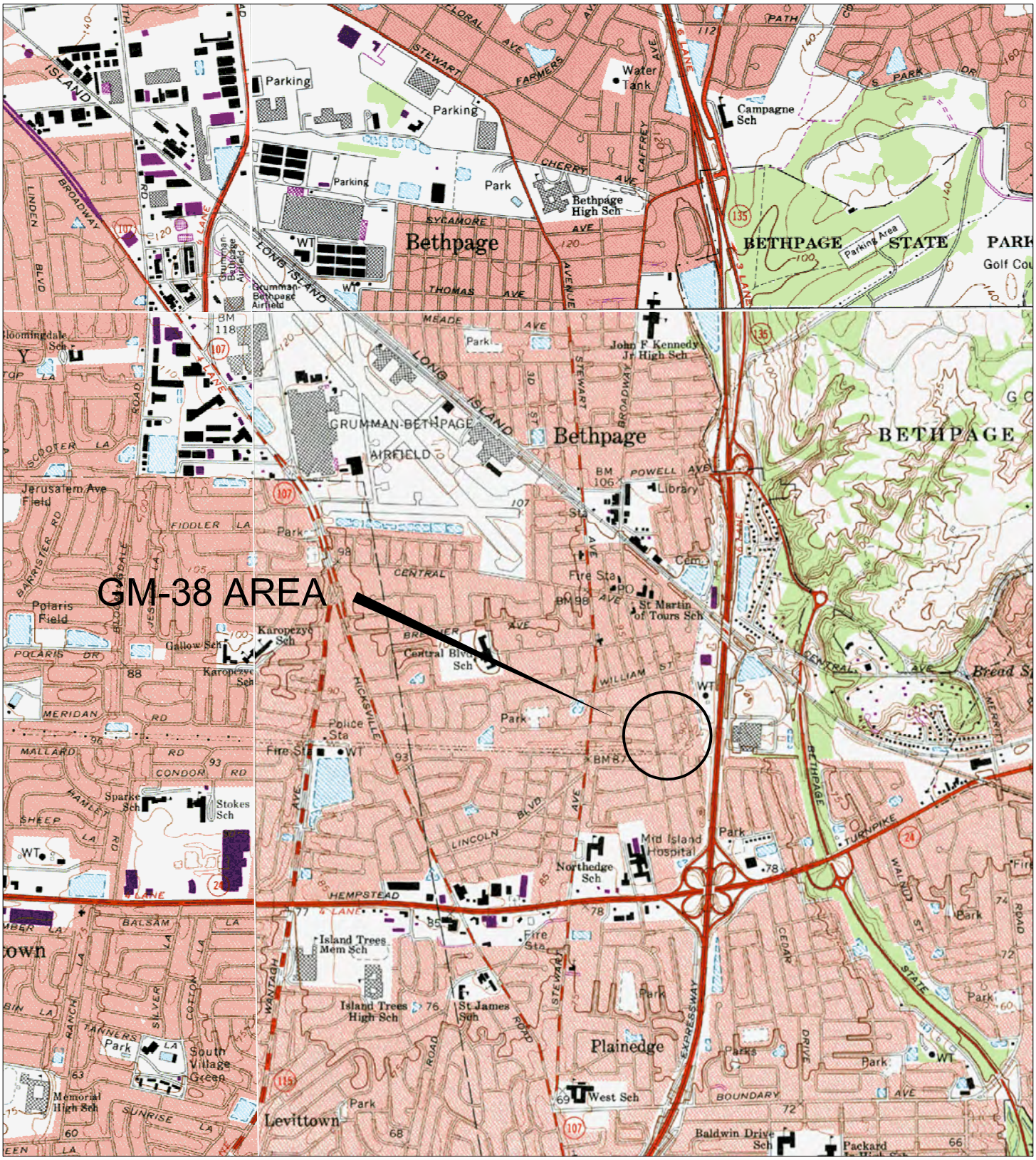
Sample ID	TP-01														IW-1 MW-1		IW-1
Sample Date	1/21/2010	6/15/2011	9/27/2011	9/27/2011	11/30/2011	3/8/2012	6/6/2012	8/22/2012	12/4/2012	3/13/2013	3/13/2013	6/17/2013(2)	9/17/2013	9/17/2013	5/3/2005	6/18/2013(2)	5/27/2009
Comments				Duplicate							Duplicate			Duplicate			
Well Depth (Ft)	470														150		230
Screened Interval (Ft)	450-470														20-150		200-230
VOCS (EPA 624) ug/L																	
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	0.47	0.92	0.49J
1,1,2,2-tetrachloroethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloro-1,2,2-trifluoroethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	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	ND
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	0.39J	0.51	0.22J
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	ND	ND	ND
1,2,4-trichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
1,2-dibromo-3-chloro-propane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	ND
1,2-dibromomethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	ND
1,2-dichlorobenzene	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	NR	NR	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	ND
1,2-dichloropropane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	NR	NR	ND
1,4-dichlorobenzene	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	NR	NR	ND
1,4-dioxane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2-butanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	R	ND	ND
2-chloroethylvinyl ether	NR	NR	ND	ND	ND	ND	ND	ND	ND	2.0 R	2.0 R	NR	ND	ND	NR	NR	NR
2-hexanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	ND	ND	ND
4-methyl-2-pentanone	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	ND	ND	ND
Acetone	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	NR	NR	ND	ND	ND	ND	ND	30 R	ND	ND	ND	NR	ND	ND	NR	NR	NR
Acrylonitrile	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	NR	NR	NR
Benzene	ND	NR	ND	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	ND
Bromoform	NR	NR	ND	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	ND
carbon disulfide	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	ND
Carbon tetrachloride	ND	NR	ND	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	ND
Chloroethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	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	0.94J	ND	0.98J
Chloromethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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	ND	ND	ND
cis-1,3-dichloropropene	NR	NR	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	ND
Dibromochloromethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND
dichlorodifluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
Ethylbenzene	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
isopropylbenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
methyl acetate	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
methylcyclohexane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND
Methylene chloride	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
methyl-tert-butyl-ether	ND	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	0.46J
styrene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	ND
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	ND	0.55	ND
Toluene	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.19J
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	ND
trans-1,3-dichloropropene	NR	NR	ND	ND	ND	ND	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	ND	ND	0.17J
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	ND	ND
Trichlorotrifluoroethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	ND	ND
Trichlorofluoromethane	NR	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	NR	NR	ND
Vinyl chloride	ND	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	ND	NR	ND
m,p-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	ND	ND
o-xylene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	NR	NR	NR	ND	ND
Mercury (EPA 245.1) ug/L	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	0.20
TSS (SM20 2540D) mg/L	NR	63	18	NR	ND	7	6	ND	ND	ND	ND	ND	ND	ND	NR	NR	2.4

Note:
VOC analysis changed from SW846 8260B to EPA Method 624 in January 2010.
D = Dilution
J = estimated value
ND = not detected
NR = not reported / required
R = rejected
mg/L - milligrams per liter
µg/L - micrograms per liter

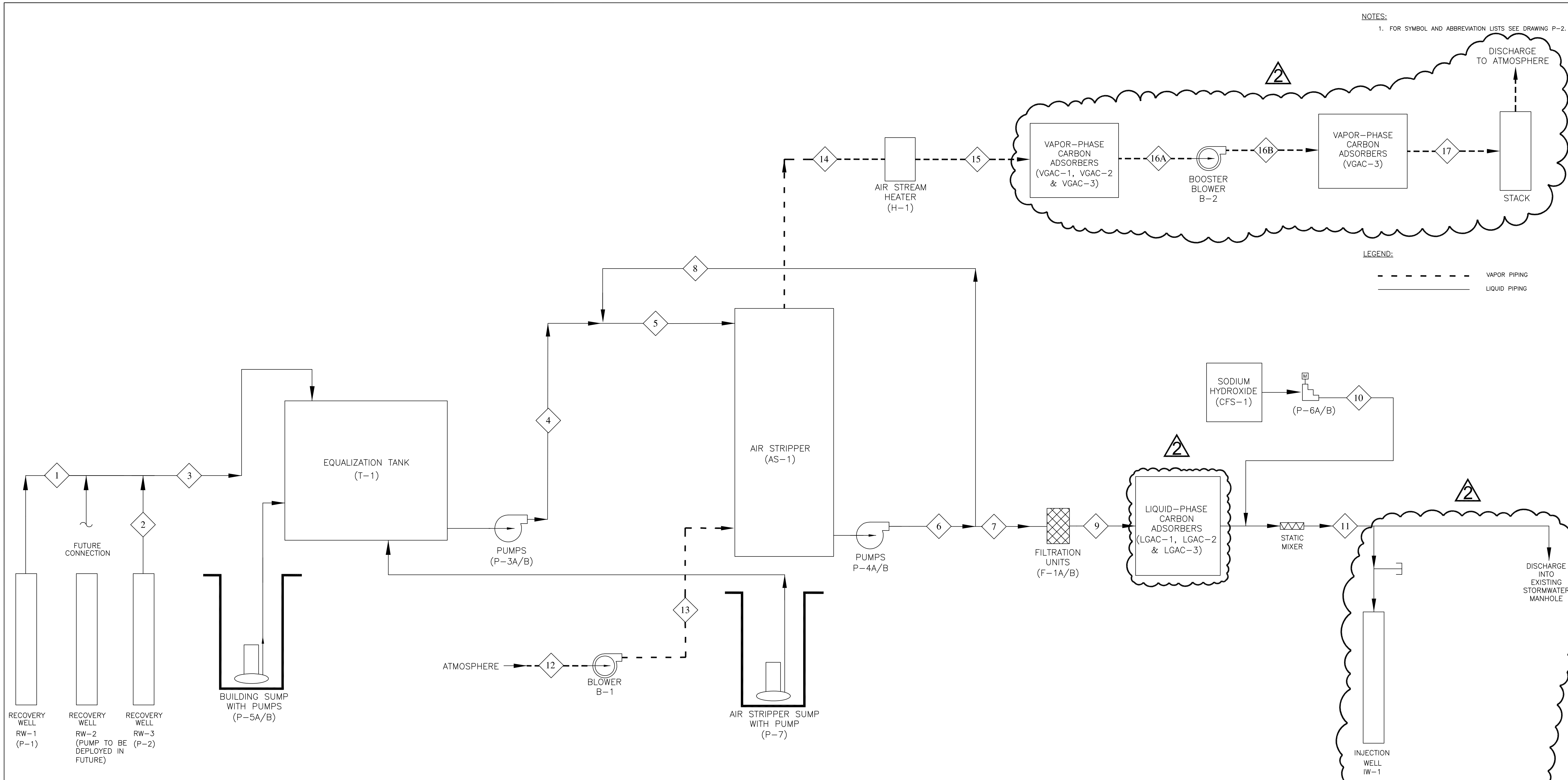
(1) Analytical results presented above for samples collected from RW3-MW3 and RW3-MW4 in November 2010 are not consistent with historical trends, indicating samples may have been switched. For trend analysis, concentrations for RW3-MW3 were used for RW3-MW4 for November 2010 and vise versa.
(2) VOCs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

Data prior to June 2011 were collected by others.

FIGURES



P:\LantDiv\Bethpage\CAD - GIS\Dwg\O&M Manual\Site Location Map.dwg, 6/29/2009 3:33:52 PM



STREAM NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COMPOSITION (UG/L, UNLESS OTHERWISE NOTED)																
BENZENE	4	4	4	4	3	-	-	-	-		-					
TOLUENE	15	15	15	15	12	-	-	-	-		-					
XYLENES, TOTAL	16	16	16	16	12	-	-	-	-		-					
1,2-DICHLOROETHANE	3	3	3	3	2.8						2.7 E-07					
cis 1,2-DICHLOROETHENE	1100	1100	1100	1100	1008	0.10	0.10	0.10	0.10		1.0 E-04					
VINYL CHLORIDE	300	300	300	300	275	0.03	0.03	0.03	0.03		2.7 E-05					
TETRACHLOROETHENE (PCE)	900	900	900	900	825	0.08	0.08	0.08	0.08		8.2 E-05					
TRICHLOROETHENE (TCE)	3400	3400	3400	3400	3117	3.12	3.12	3.12	3.12		3.1 E-03					
WATER FLOW RATE (GPM)	800	300	1100	1100	1200	1200	1100	100	1100	1.1 gpd	1100					
TEMPERATURE (°F)	55	55	55	55	55	55	55	55	55	60	55					
PRESSURE (PSIG)												-0.27	1.50	1.36	1.18	0.53
DENSITY (lb/ft^3)										95.5		0.077	0.085	0.084	0.082	0.079
MASS FLOW RATE (lb/hr)	400364	150136	550500	550500	600545	600545	550500	50,045	550500	0.59	550500	36,960	40,800	40,320	39,360	37,920
RELATIVE HUMIDITY (%)												50	50	100	50	50
STATIC PRESSURE (PSIA)												0.214	0.214	0.214	0.275	0.275
pH (S.U.)	5.5	5.5	5.5	5.5	5.5	6.0	6.0	6.0	6.0	14	7.0					
VAPOR FLOW RATE (CFM)												8000	8000	8000	8000	8000
TOTAL VAPOR VOC (PPMV)												-	-	25.5	25.5	1.2
TOTAL VAPOR VOC (LBS/HR)												-	-	3.18	3.18	0.15

THIS DRAWING PRODUCED ON AUTOCAD DO NOT REVISE MANUALLY

TETRA TECH ENGINEERING CORPORATION PC

REV	DESCRIPTION	PREP BY	DATE	APPRVD
0	FINAL DESIGN	DL	05/05/06	BKB
1	ADDED RECOVERY WELL RW-3 CHANGED RW-2 TO FUTURE CONNECTION	DLB	03/31/08	BKB
2	REVISED BASED ON VENDOR SUBMITTALS, DRAWING UPDATES FOR CONSTRUCTION	DLB	02/24/09	BKB

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
ENGINEERING FIELD ACTIVITY - NORTHEAST
PENNSYLVANIA
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK
GM-38 AREA
GROUNDWATER TREATMENT PLANT
PROCESS FLOW DIAGRAM - GROUNDWATER AND OFF-GAS TREATMENT

SAT TO DATE 05/05/06
CODE I.D. NO. 80091
SCALE : AS SHOWN
SPEC. NO.
CONSTRN. CONTR. NO. N62472-99-D-0032
NAVFAC DRAWING NO. Figure 2
SHEET OF
SIZE: D
DIS. SH. NO. 1-4

Legend

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

SOPHIA STREET
NORTH WINDHORST
NORTH HERMAN AVENUE
LEROY AVENUE
ARTHUR AVENUE
RECHARGE BASIN
MAIN STREET (BROADWAY)
SOUTH WINDHORST
SOUTH HERMAN AVENUE
WILSON LANE
(SEAFORD-OYSTER BAY EXPRESSWAY - RTE 135)
GROUNDWATER TREATMENT PLANT

RW3-MW-4
RW3-MW-3
RW3-MW-1
RW3-MW-2
RW-3
GM-38D
GM-38D-2
RW2-MW-1
RW2-MW-2
RW2-MW-3
RW-2
TP-1
RW1-MW-3
RW1-MW-2
RW1-MW-1
RW-1
IW-1
IW1-MW-1

0 160
APPROXIMATE SCALE IN FEET

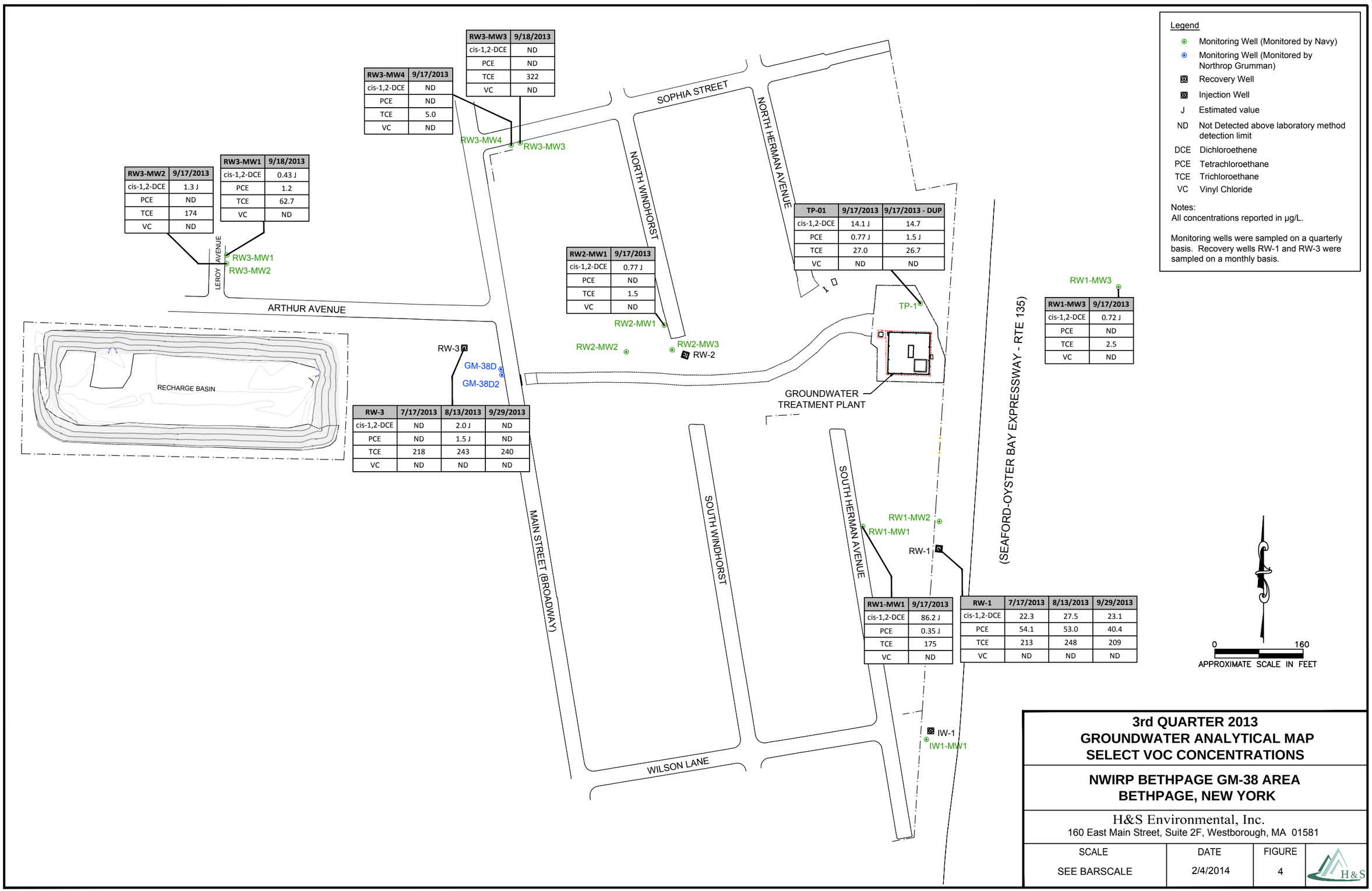
SITE MAP

NWIRP BETHPAGE GM-38 AREA
BETHPAGE, NEW YORK

H&S Environmental, Inc.
160 East Main Street, Suite 2F, Westborough, MA 01581

SCALE	DATE	FIGURE
SEE BARSCALE	4/12/2012	3

X:\HS_Environmental\NWIRP-NY\As-Built 2008-PM.dwg 4/12/2012



RW3-MW4	9/17/2013
cis-1,2-DCE	ND
PCE	ND
TCE	5.0
VC	ND

RW3-MW3	9/18/2013
cis-1,2-DCE	ND
PCE	ND
TCE	322
VC	ND

RW3-MW2	9/17/2013
cis-1,2-DCE	1.3 J
PCE	ND
TCE	174
VC	ND

RW3-MW1	9/18/2013
cis-1,2-DCE	0.43 J
PCE	1.2
TCE	62.7
VC	ND

RW2-MW1	9/17/2013
cis-1,2-DCE	0.77 J
PCE	ND
TCE	1.5
VC	ND

TP-01	9/17/2013	9/17/2013 - DUP
cis-1,2-DCE	14.1 J	14.7
PCE	0.77 J	1.5 J
TCE	27.0	26.7
VC	ND	ND

RW-3	7/17/2013	8/13/2013	9/29/2013
cis-1,2-DCE	ND	2.0 J	ND
PCE	ND	1.5 J	ND
TCE	218	243	240
VC	ND	ND	ND

RW1-MW3	9/17/2013
cis-1,2-DCE	0.72 J
PCE	ND
TCE	2.5
VC	ND

RW1-MW1	9/17/2013
cis-1,2-DCE	86.2 J
PCE	0.35 J
TCE	175
VC	ND

RW-1	7/17/2013	8/13/2013	9/29/2013
cis-1,2-DCE	22.3	27.5	23.1
PCE	54.1	53.0	40.4
TCE	213	248	209
VC	ND	ND	ND

3rd QUARTER 2013
GROUNDWATER ANALYTICAL MAP
SELECT VOC CONCENTRATIONS

NWIRP BETHPAGE GM-38 AREA
BETHPAGE, NEW YORK

H&S Environmental, Inc.
160 East Main Street, Suite 2F, Westborough, MA 01581

SCALE	DATE	FIGURE
SEE BARSCALE	2/4/2014	4

X:\HS_Environmental\Bethpage-GM38\2013\3rdQ2013-GW-VOC.dwg 2/4/2014

Figure 5
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW1

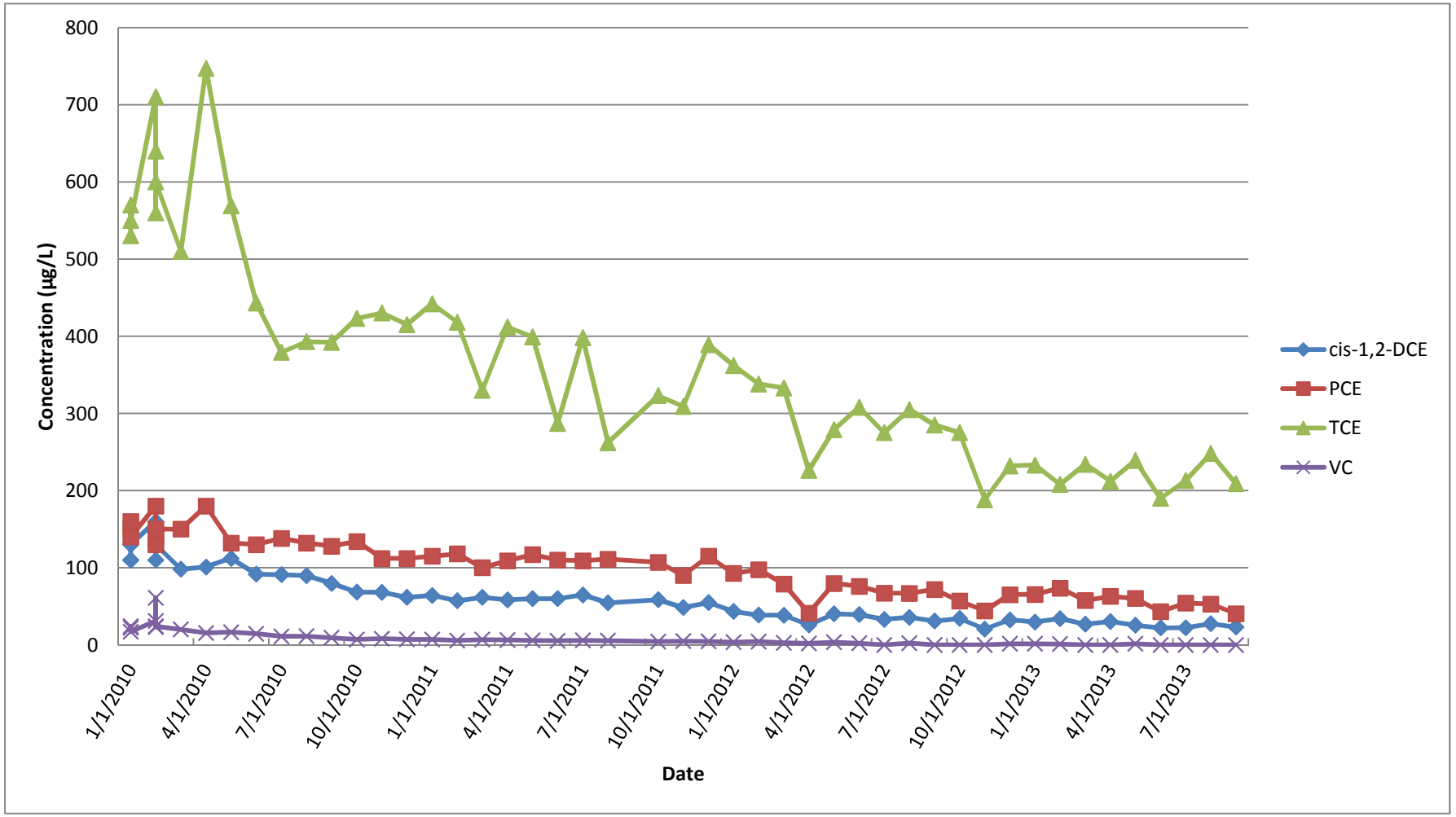


Figure 6
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3

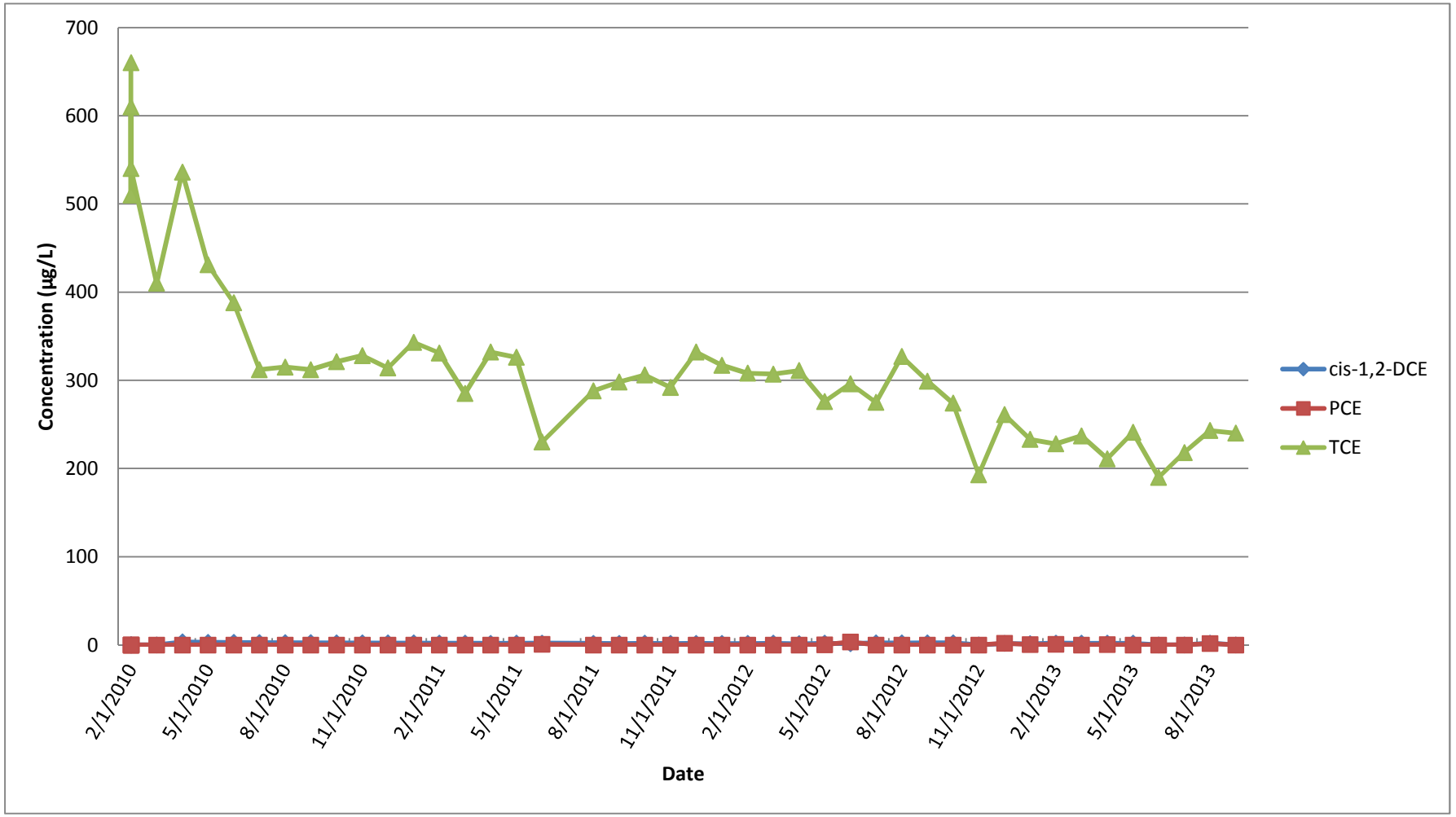


Figure 7
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW1-MW1

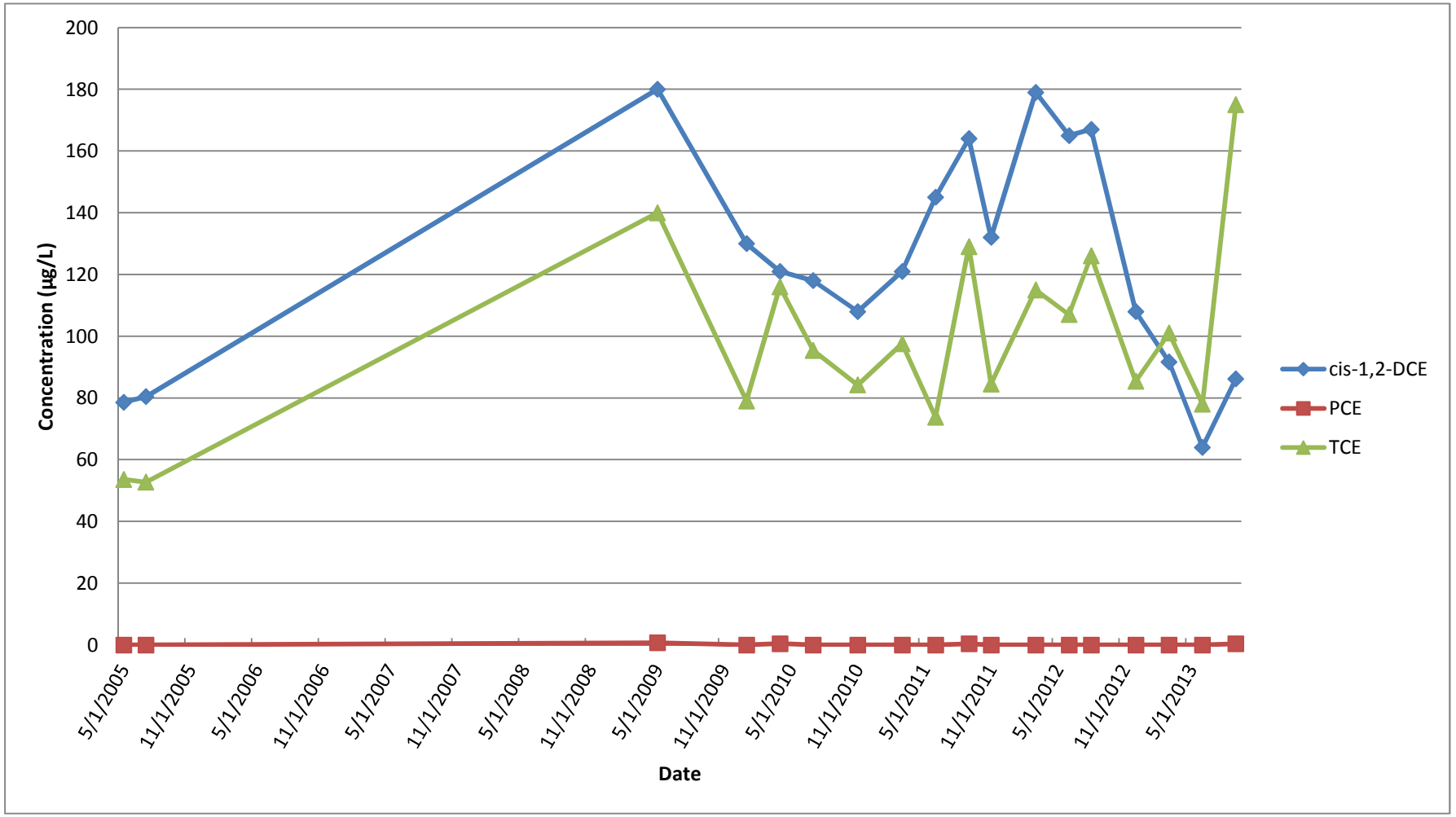


Figure 8
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW1-MW3

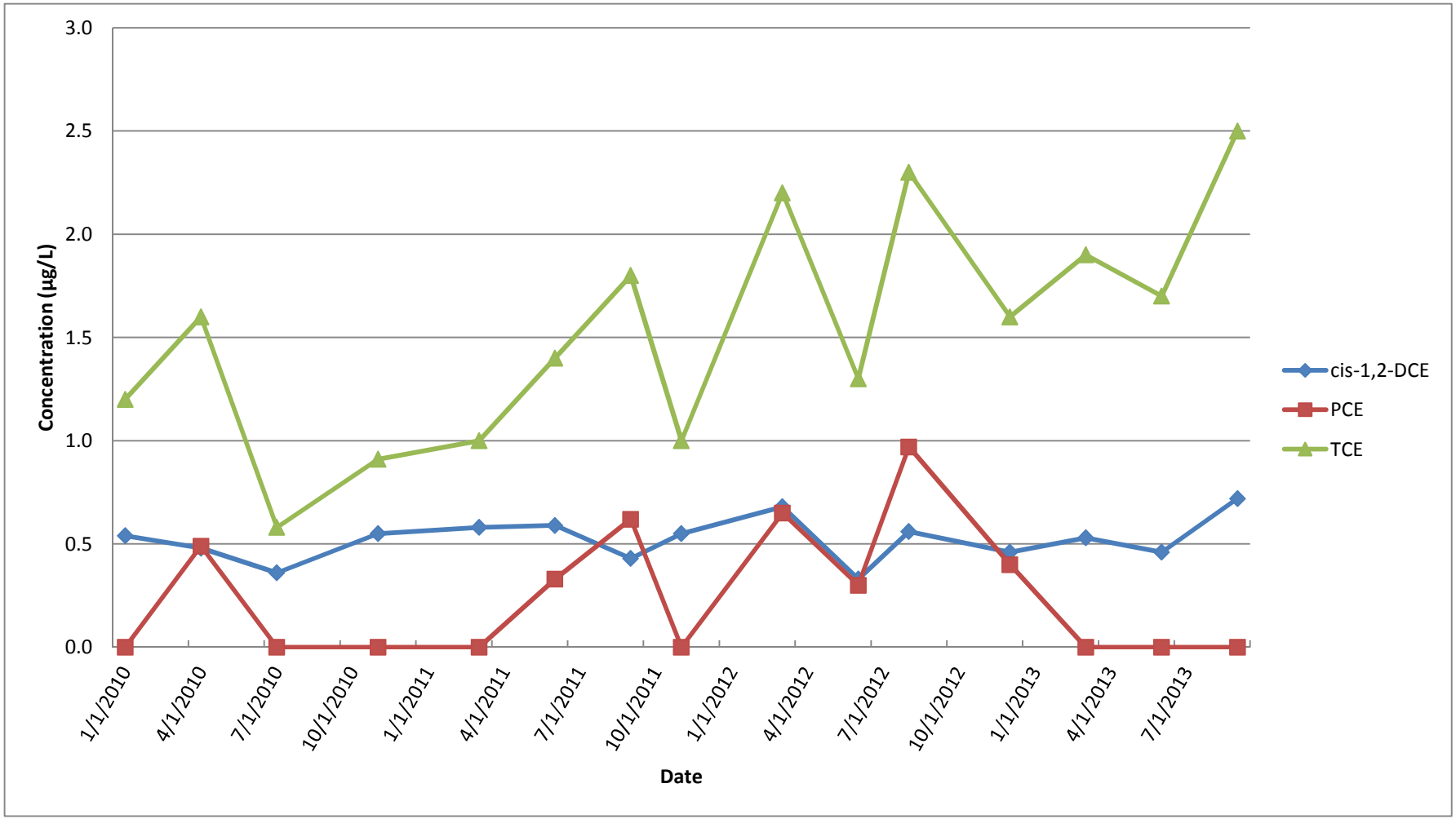


Figure 9
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW2-MW1

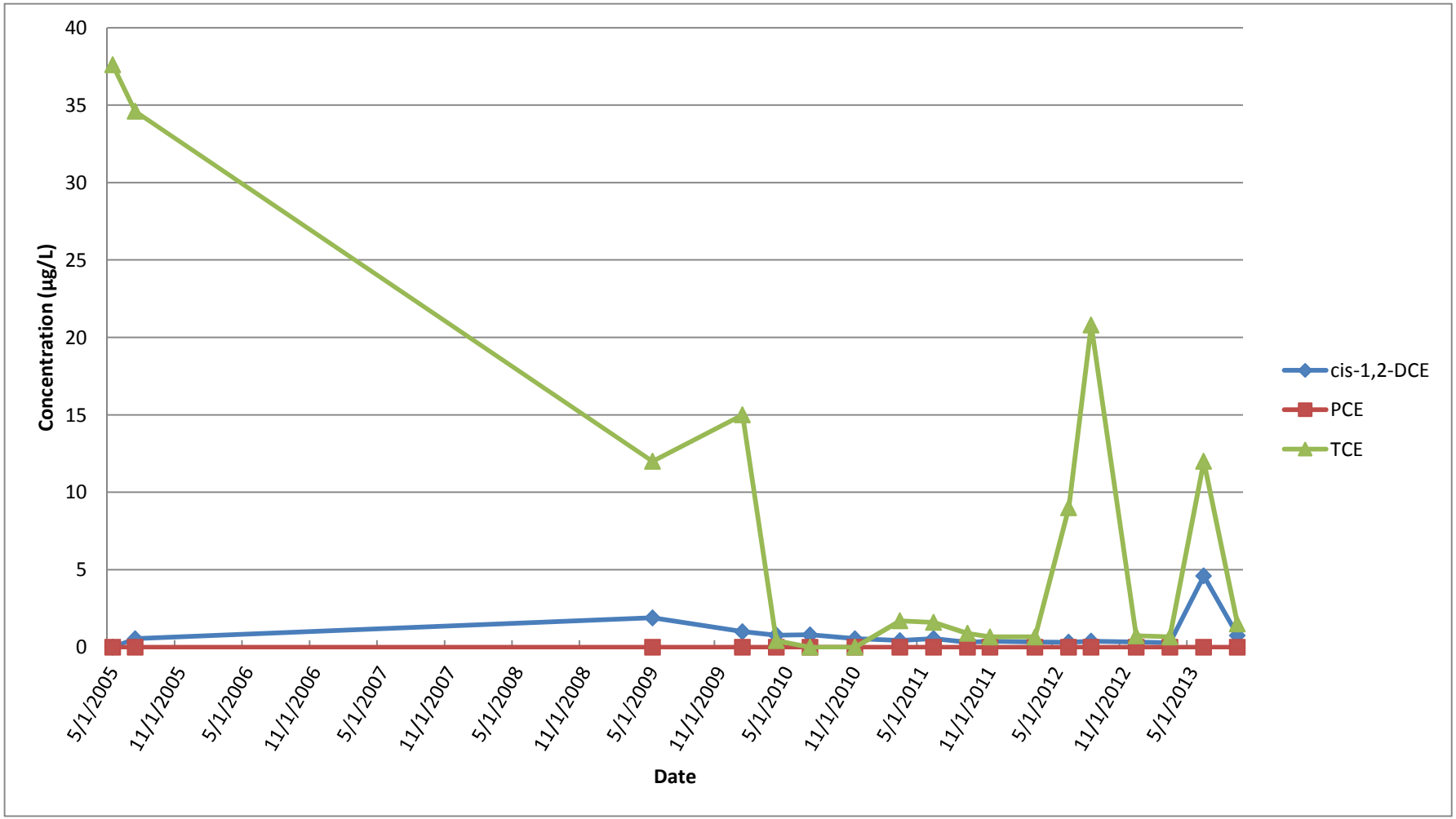


Figure 10
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3-MW1

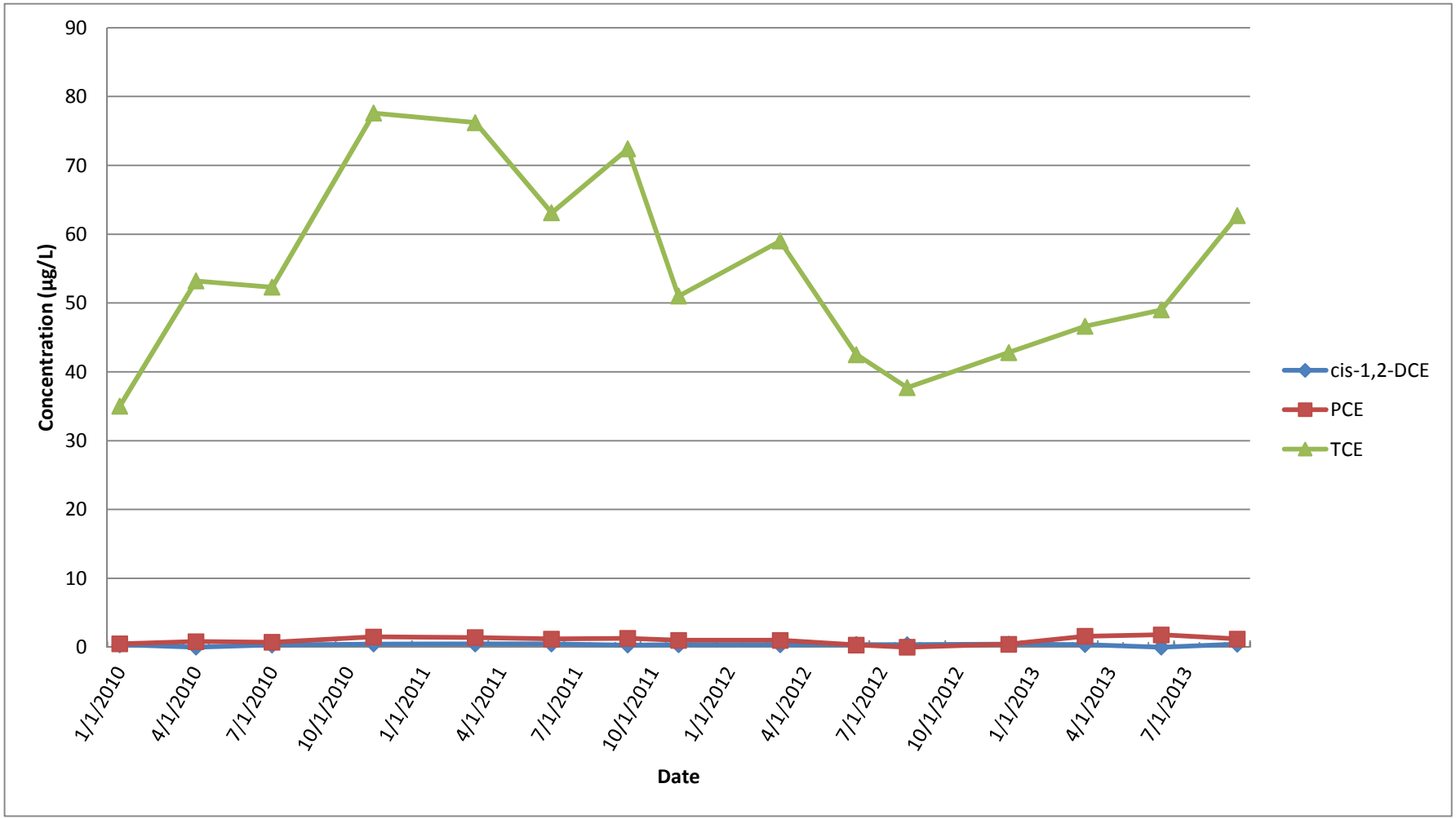


Figure 11
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3-MW2

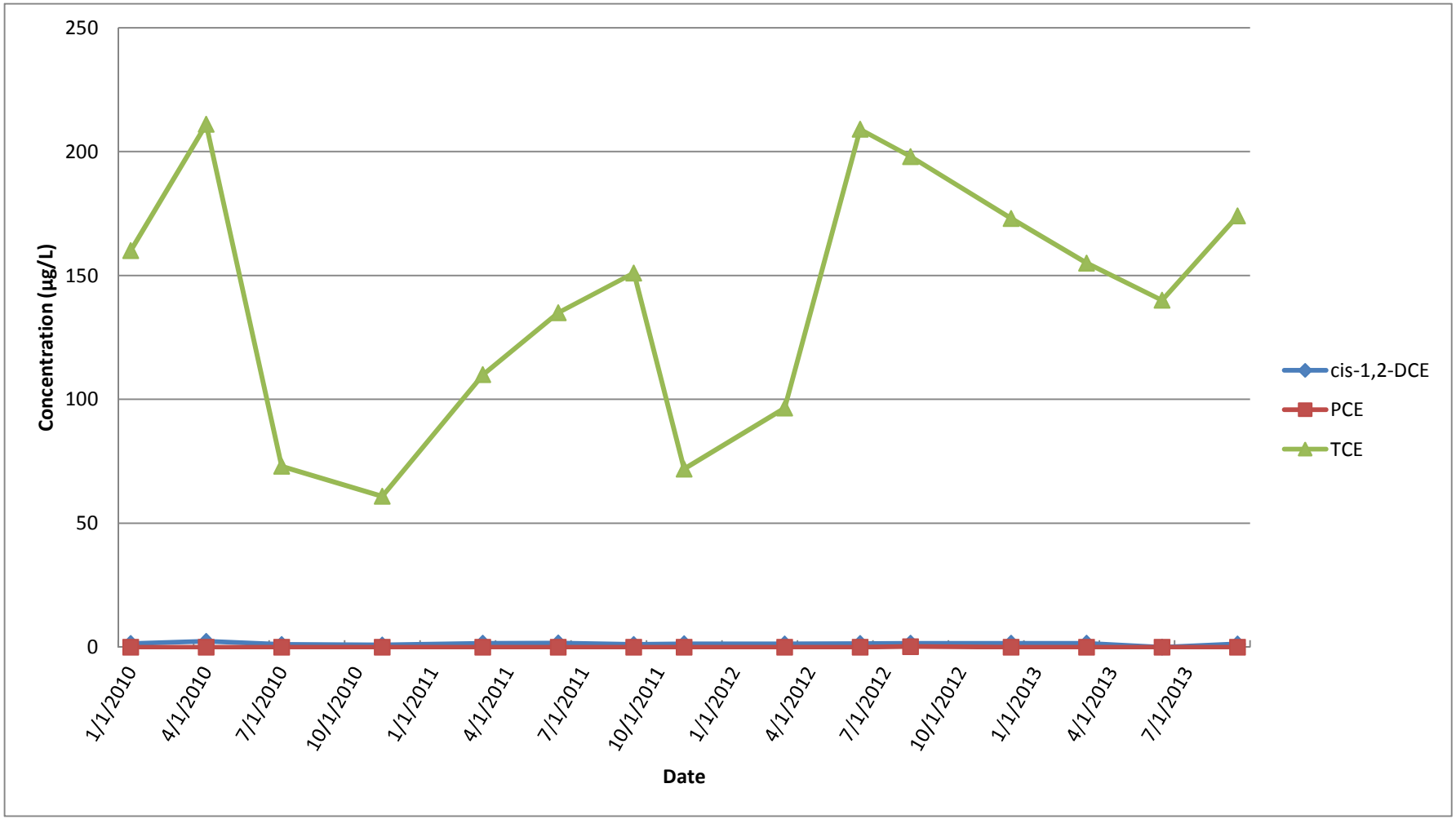


Figure 12
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3-MW3

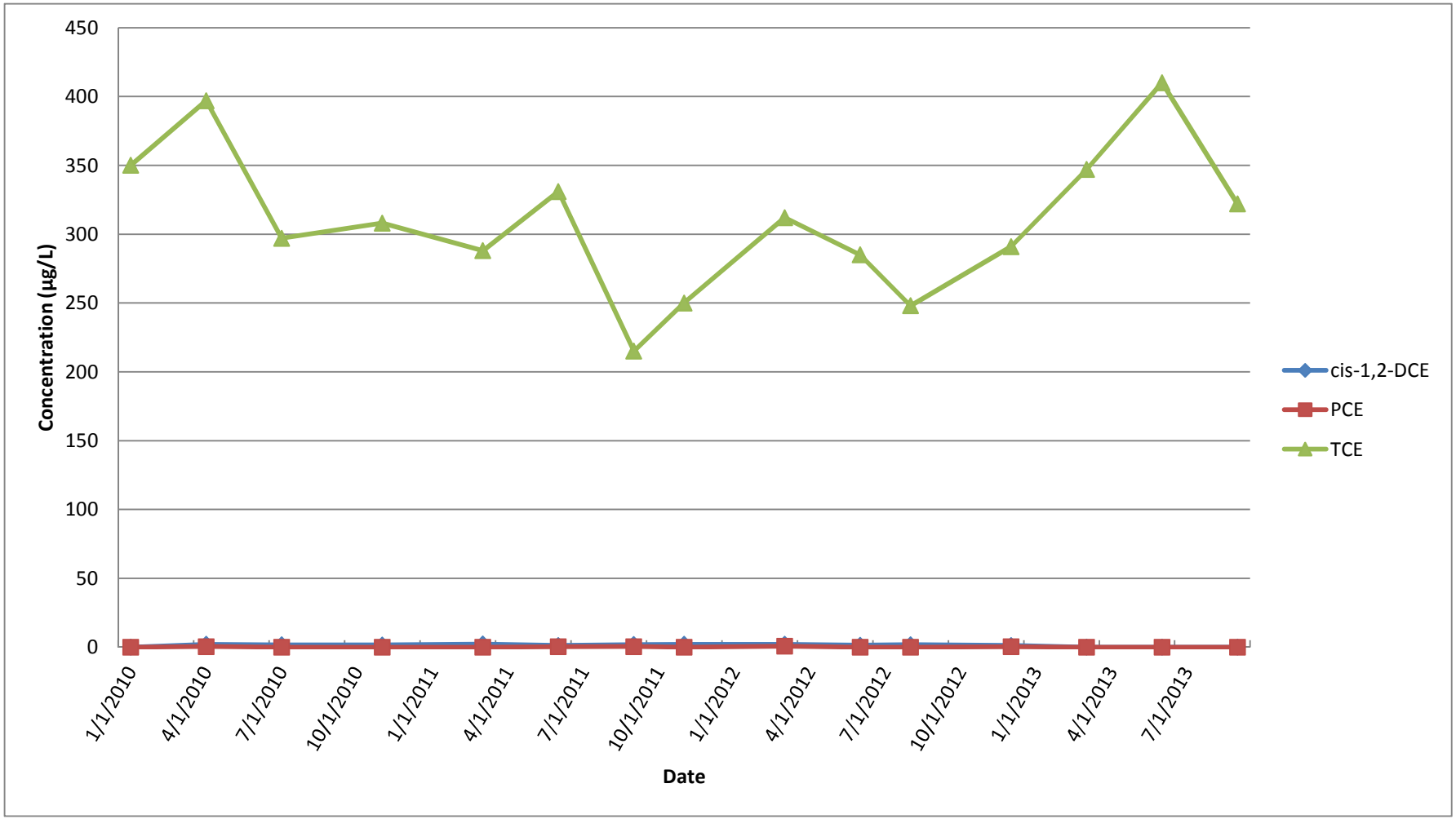


Figure 13
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3-MW4

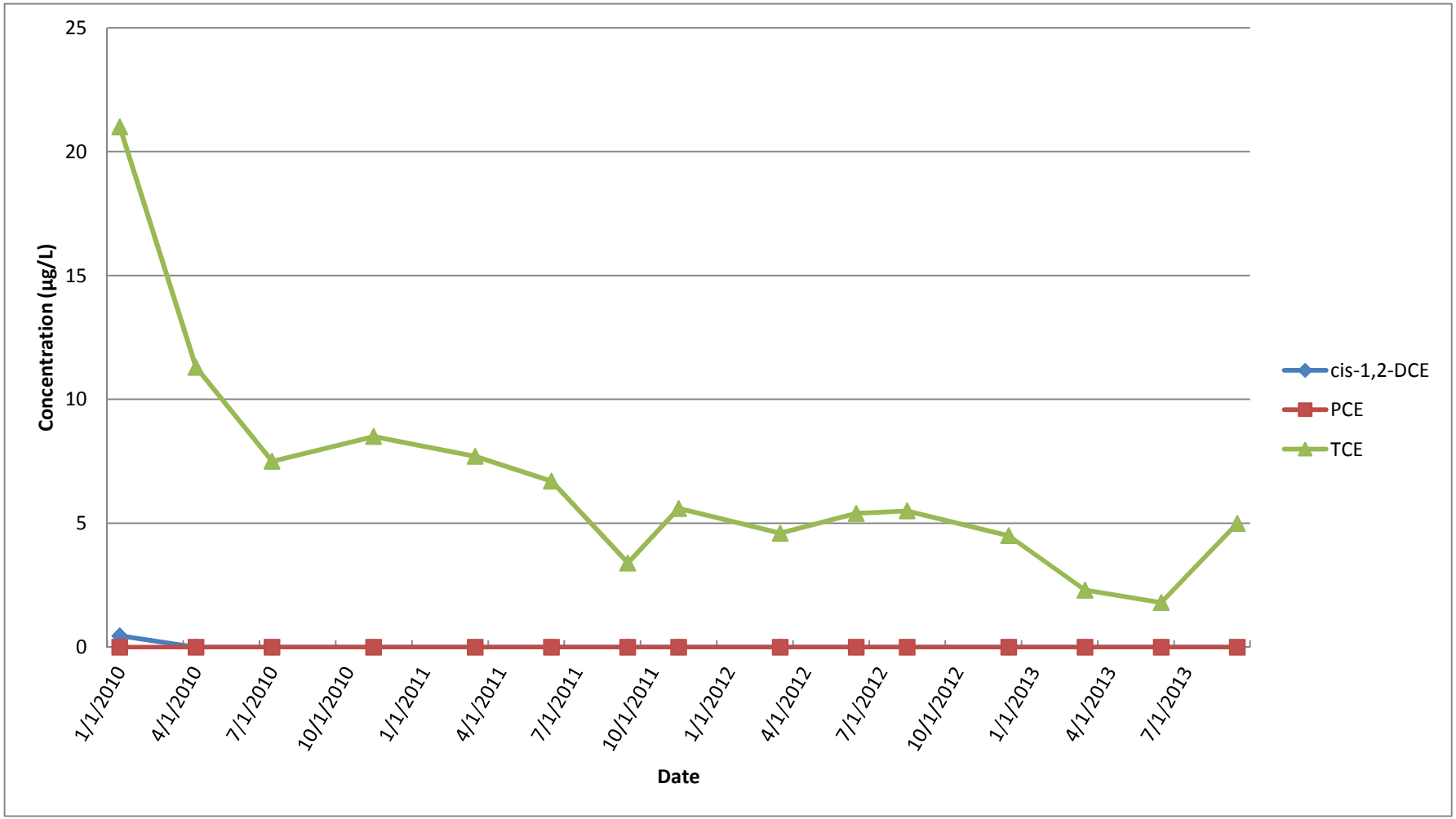
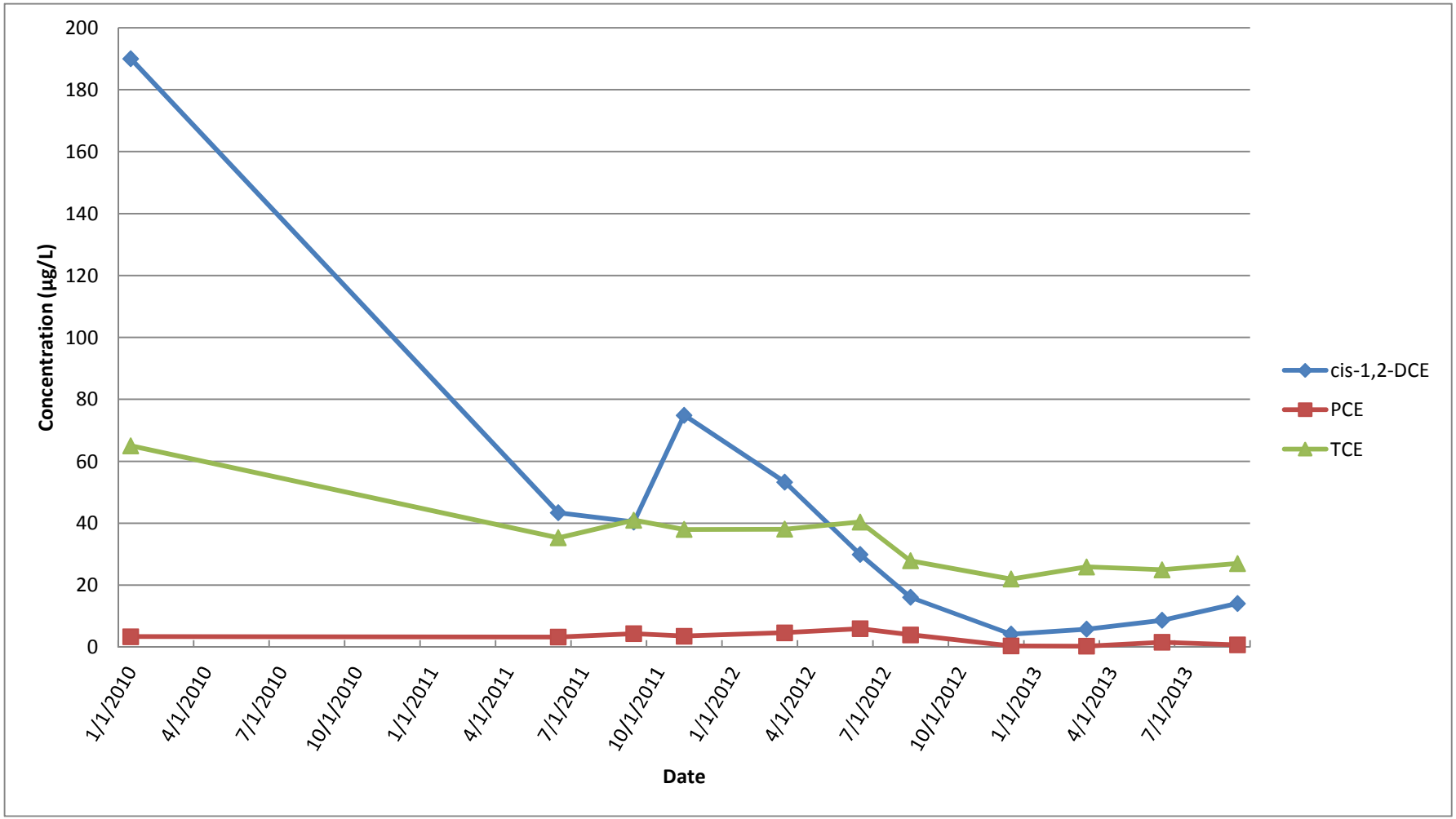


Figure 14
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

TP-01



APPENDIX A

NYSDEC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS AND MONTHLY 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, 2009

and 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.

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.

JULY 2013

H&S ENVIRONMENTAL
...an 8(a), SDB, woman-owned company

8 August 2013

Mr. Steven Scharf
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Action, Bureau A
625 Broadway
Albany, NY 12233-7015

Subject: GROUNDWATER DISCHARGE MONITORING/AIR EMISSION REPORT GM-38 AREA, NWIRP BETHPAGE, NY; DER SITE # 1-30-003B-OU 2 JULY 2013 REPORTING PERIOD

Dear Mr. Scharf:

H&S Environmental, Inc. (H&S) 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.

GWTP operational data from 1 July 2013 to 31 July 2013 are presented in Attachment A. During this reporting period, unscheduled downtime occurred on 26 July 2013 due to a power interruption. Scheduled downtime occurred on 31 July 2013 for maintenance of the liquid phase granular activated carbon (LGAC) units. Both unscheduled and scheduled downtime affected the average flowrates during the July 2013 reporting period.

As indicated in Attachment A, all permitted constituents were in compliance with regulatory guidelines during this reporting period.

Please contact me at 508-366-7442 with any questions or concerns you may have regarding this report.

Sincerely,
H&S Environmental, Inc.

Jennifer Good, P.G.
Project Manager

Attachment A: Groundwater and Air Sampling Results from July 2013

Cc: Jean Occidental - NYSDEC Division of Water
William Spitz - NYSDEC – Region 1 Water Engineer
Gerard Ennis - Nassau County Department of Public Works
Linda Bianculli - Town of Oyster Bay
Lora Fly - NAVFAC Mid-Atlantic RPM
Al Taormina – H&S
GM-38 Copy

ATTACHMENT A

GROUNDWATER AND AIR SAMPLING RESULTS

JULY 2013

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
July 2013

SPDES Parameters	July 2013					
Process Stream	Daily Treated Effluent Maximum	Units	RW-1	RW-3	Combined Influent [(1)] (RW-1 + RW-3)	Treated Effluent
Well Depth	N/A	ft	445	530	N/A	N/A
Screened Interval	N/A	ft bgs	335-395 410-430	392-412 442-504	N/A	N/A
Sampling Date	N/A		7/17/13			
Average Flowrate	1100	GPM	795	202	998	997
Total Flow	N/A	gallons	35,501,800	9,037,200	44,539,000	44,522,800
pH	5.5 - 8.5	SU	5.15	4.98	5.12	6.29
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	2.3 J	2.6 J	2.4 J	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND
1,1-Dichloroethene	5	µg/L	3.1 J	1.2 J	2.7 J	ND
cis 1,2-Dichloroethene	5	µg/L	22.3	ND	17.8	0.41 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	54.1	ND	43.1	ND
1,1,1-Trichloroethene	5	µg/L	2.8 J	ND	2.2 J	ND
Trichloroethene	5	µg/L	213	218	214	0.47 J
Vinyl Chloride	2	µg/L	ND	ND	ND	ND
Mercury	0.25	µg/L	ND	ND	ND	ND
Total Suspended Solids (TSS)	N/A	mg/L	5	ND	4	ND

Notes:
J - Estimated result between laboratory method detection limit and reporting limit
ND - Not detected above laboratory method detection limit
N/A - Not Applicable
(1) Influent concentrations presented are the weighted average concentrations of RW-1 and RW-3.

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
July 2013

DAR Parameters	Units	SGC	July 2013	
Process Stream			**Influent**	**Effluent**
Sampling Date	N/A	N/A	7/17/13	
Average Flowrate	CFM	N/A	NR	7,800
Total Flow	ft^3	N/A	NR	348,209,856
Total Flow	m^3	N/A	NR	9,860,205
1,2-Dichloroethane	$\mu g/m^3$	N/A	4.2 J	1.6 J
cis 1,2-Dichloroethene	$\mu g/m^3$	N/A	220	21
trans 1,2-Dichloroethene	$\mu g/m^3$	N/A	5.1 J	ND
1,2-Dichloroethene (total)	$\mu g/m^3$	N/A	220	21
Toluene	$\mu g/m^3$	37,000	1.5 J	10
Total Xylene	$\mu g/m^3$	4,300	ND	3.7
1,1,2-Trichloroethane	$\mu g/m^3$	N/A	3.6 J	ND
Trichloroethene	$\mu g/m^3$	14,000	3200	53
Vinyl Chloride	$\mu g/m^3$	180,000	8.9	ND
Tetrachloroethene	$\mu g/m^3$	1,300	670	10

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
SGC - Short-term Guideline Concentration

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
July 2013

DAR Parameters	Units	Discharge Goal	July 2013
Sampling Date	N/A	N/A	7/17/13
Average Flowrate	CFM	N/A	7,800
Total Flow	ft^3	N/A	348,209,856
Total Flow	m^3	N/A	9,860,205
Trichloroethene	lb/hr	0.09	0.00160
Vinyl Chloride	lb/hr	0.01	0.00000
1,2 Dichloroethene	lb/hr	0.03	0.00063
1,2-Dichloroethane	lb/hr	BRT	0.00005
Toluene	lb/hr	BRT	0.00030
Total Xylene	lb/hr	BRT	0.00011
1,1,2-Trichloroethane	lb/hr	BRT	0.00000
Tetrachloroethene	lb/hr	0.02	0.00030

Notes:
BRT - below reporting thresholds
CFM - cubic feet per minute
DAR - Division of Air Resources
N/A - Not Applicable

AUGUST 2013

H&S ENVIRONMENTAL
...an 8(a), SDB, woman-owned company

10 September 2013

Mr. Steven Scharf
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Action, Bureau A
625 Broadway
Albany, NY 12233-7015

Subject: GROUNDWATER DISCHARGE MONITORING/AIR EMISSION REPORT GM-38 AREA, NWIRP BETHPAGE, NY; DER SITE # 1-30-003B-OU 2 AUGUST 2013 REPORTING PERIOD

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GWTP operational data from 1 August 2013 to 31 August 2013 are presented in Attachment A. During this reporting period, unscheduled downtime occurred on 17 August 2013 and 18 August 2013 due to multiple power outages. No scheduled downtime occurred. Unscheduled downtime affected the average flowrates during the August 2013 reporting period.

As indicated in Attachment A, all permitted constituents were in compliance with regulatory guidelines during this reporting period.

Please contact me at 508-366-7442 with any questions or concerns you may have regarding this report.

Sincerely,
H&S Environmental, Inc.

Jennifer Good, P.G.
Project Manager

Attachment A: Groundwater and Air Sampling Results from August 2013

Cc: Jean Occidental - NYSDEC Division of Water
William Spitz - NYSDEC – Region 1 Water Engineer
Gerard Ennis - Nassau County Department of Public Works
Linda Bianculli - Town of Oyster Bay
Lora Fly - NAVFAC Mid-Atlantic RPM
Al Taormina – H&S
GM-38 Copy

ATTACHMENT A

GROUNDWATER AND AIR SAMPLING RESULTS

AUGUST 2013

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
August 2013

SPDES Parameters	August 2013					
Process Stream	Daily Treated Effluent Maximum	Units	RW-1	RW-3	Combined Influent [(1)] (RW-1 + RW-3)	Treated Effluent
Well Depth	N/A	ft	445	530	N/A	N/A
Screened Interval	N/A	ft bgs	335-395 410-430	392-412 442-504	N/A	N/A
Sampling Date	N/A		8/13/13			
Average Flowrate	1100	GPM	779	187	966	960
Total Flow	N/A	gallons	34,791,550	8,342,650	43,134,200	42,850,600
pH	5.5 - 8.5	SU	4.99	4.93	4.98	6.19
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	3.0 J	2.9 J	3.0 J	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND
1,1-Dichloroethene	5	µg/L	5.1	1.8 J	4.5 J	ND
cis 1,2-Dichloroethene	5	µg/L	27.5	2.0 J	22.2 J	0.43 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	53.0	1.5 J	42.7 J	ND
1,1,1-Trichloroethene	5	µg/L	3.2 J	ND	2.6 J	ND
Trichloroethene	5	µg/L	248	243	247	0.64 J
Vinyl Chloride	2	µg/L	ND	ND	ND	ND
Mercury	0.25	µg/L	ND	ND	ND	ND
Total Suspended Solids (TSS)	N/A	mg/L	6	ND	5	ND

Notes:
J - Estimated result between laboratory method detection limit and reporting limit
ND - Not detected above laboratory method detection limit
N/A - Not Applicable
(1) Influent concentrations presented are the weighted average concentrations of RW-1 and RW-3.

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
August 2013

DAR Parameters	Units	SGC	August 2013	
Process Stream			**Influent**	**Effluent**
Sampling Date	N/A	N/A	8/14/13	
Average Flowrate	CFM	N/A	NR	7,927
Total Flow	ft^3	N/A	NR	353,861,280
Total Flow	m^3	N/A	NR	10,020,236
1,2-Dichloroethane	$\mu g/m^3$	N/A	3.5 J	2.8 J
cis 1,2-Dichloroethene	$\mu g/m^3$	N/A	190	41
trans 1,2-Dichloroethene	$\mu g/m^3$	N/A	ND	ND
1,2-Dichloroethene (total)	$\mu g/m^3$	N/A	190	41
Toluene	$\mu g/m^3$	37,000	7.4 J	0.84 J
Total Xylene	$\mu g/m^3$	4,300	ND	ND
1,1,2-Trichloroethane	$\mu g/m^3$	N/A	ND	ND
Trichloroethene	$\mu g/m^3$	14,000	2800	61
Vinyl Chloride	$\mu g/m^3$	180,000	7.8	0.54 J
Tetrachloroethene	$\mu g/m^3$	1,300	600	4.2 J

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
SGC - Short-term Guideline Concentration

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
August 2013

DAR Parameters	Units	Discharge Goal	August 2013
Sampling Date	N/A	N/A	8/14/13
Average Flowrate	CFM	N/A	7,927
Total Flow	ft^3	N/A	353,861,280
Total Flow	m^3	N/A	10,020,236
Trichloroethene	lb/hr	0.09	0.00187
Vinyl Chloride	lb/hr	0.01	0.00002
1,2 Dichloroethene	lb/hr	0.03	0.00126
1,2-Dichloroethane	lb/hr	BRT	0.00009
Toluene	lb/hr	BRT	0.00003
Total Xylene	lb/hr	BRT	0.00000
1,1,2-Trichloroethane	lb/hr	BRT	0.00000
Tetrachloroethene	lb/hr	0.02	0.00013

Notes:
BRT - below reporting thresholds
CFM - cubic feet per minute
DAR - Division of Air Resources
N/A - Not Applicable

SEPTEMBER 2013

11 October 2013

Mr. Steven Scharf
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Action, Bureau A
625 Broadway
Albany, NY 12233-7015

Subject: GROUNDWATER DISCHARGE MONITORING/AIR EMISSION REPORT GM-38 AREA, NWIRP BETHPAGE, NY; DER SITE # 1-30-003B-OU 2 SEPTEMBER 2013 REPORTING PERIOD

Dear Mr. Scharf:

H&S Environmental, Inc. (H&S) 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.

GWTP operational data from 1 September 2013 to 30 September 2013 are presented in Attachment A. During this reporting period, unscheduled downtime occurred due to an electrical storm on 12 September 2013, which resulted in system downtime until replacement of the variable frequency drives (VFDs) for the recovery wells could be performed. Additional downtime occurred during this reporting period for maintenance of the bag filter units. Scheduled and unscheduled downtime resulted in lower than average flowrates during the September 2013 reporting period.

As indicated in Attachment A, all permitted constituents were in compliance with regulatory guidelines during this reporting period.

Please contact me at 508-366-7442 with any questions or concerns you may have regarding this report.

Sincerely,
H&S Environmental, Inc.

Jennifer Good, P.G.
Project Manager

Attachment A: Groundwater and Air Sampling Results from September 2013

Cc: Jean Occidental - NYSDEC Division of Water
William Spitz - NYSDEC – Region 1 Water Engineer
Gerard Ennis - Nassau County Department of Public Works
Linda Bianculli - Town of Oyster Bay
Lora Fly - NAVFAC Mid-Atlantic RPM
Al Taormina – H&S
GM-38 Copy

ATTACHMENT A

GROUNDWATER AND AIR SAMPLING RESULTS

SEPTEMBER 2013

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
September 2013

SPDES Parameters	September 2013					
Process Stream	Daily Treated Effluent Maximum	Units	RW-1 (2)	RW-3 (2)	Combined Influent (1) (2) (RW-1 + RW-3)	Treated Effluent (2)
Well Depth	N/A	ft	445	530	N/A	N/A
Screened Interval	N/A	ft bgs	335-395 410-430	392-412 442-504	N/A	N/A
Sampling Date	N/A		9/29/13			
Average Flowrate	1100	GPM	661	92	753	761
Total Flow	N/A	gallons	28,571,950	3,963,550	32,535,500	32,870,800
pH	5.5 - 8.5	SU	5.10	5.03	5.09	6.07
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	ND	2.3 J	0.28 J	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND
1,1-Dichloroethene	5	µg/L	2.5 J	ND	2.2 J	ND
cis 1,2-Dichloroethene	5	µg/L	23.1	ND	20.3	ND
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	40.4	ND	35.5	ND
1,1,1-Trichloroethene	5	µg/L	2.3 J	ND	2.0 J	ND
Trichloroethene	5	µg/L	209	240	213	0.73 J
Vinyl Chloride	2	µg/L	ND	ND	ND	ND
Mercury	0.25	µg/L	ND	ND	ND	ND
Total Suspended Solids (TSS)	N/A	mg/L	ND	ND	ND	ND

Notes:
J - Estimated result between laboratory method detection limit and reporting limit
ND - Not detected above laboratory method detection limit
N/A - Not Applicable
(1) Influent concentrations presented are the weighted average concentrations of RW-1 and RW-3.

(2) The system went off-line on 9/12/13 due to inoperable VFDs for RW-1 and RW-3 resulting from an electrical storm. A replacement VFD for RW-1 was installed on 9/18/13 and the well resumed normal operation. A replacement VFD for RW-3 was installed on 9/27/13 and the well resumed normal operation. This downtime resulted in lower than average flowrates for the month.

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
September 2013

DAR Parameters	Units	SGC	September 2013	
Process Stream			**Influent**	**Effluent**
Sampling Date	N/A	N/A	9/12/13	
Average Flowrate	CFM	N/A	NR	7,975
Total Flow	ft^3	N/A	NR	344,520,000
Total Flow	m^3	N/A	NR	9,755,720
1,2-Dichloroethane	$\mu g/m^3$	N/A	3.3 J	3.8
cis 1,2-Dichloroethene	$\mu g/m^3$	N/A	200	56
trans 1,2-Dichloroethene	$\mu g/m^3$	N/A	ND	ND
1,2-Dichloroethene (total)	$\mu g/m^3$	N/A	200	56
Toluene	$\mu g/m^3$	37,000	1.5 J	0.36 J
Total Xylene	$\mu g/m^3$	4,300	0.90 J	ND
1,1,2-Trichloroethane	$\mu g/m^3$	N/A	2.5 J	ND
Trichloroethene	$\mu g/m^3$	14,000	2800	86
Vinyl Chloride	$\mu g/m^3$	180,000	6.8	0.83 J
Tetrachloroethene	$\mu g/m^3$	1,300	570	5.0 J

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
SGC - Short-term Guideline Concentration

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
September 2013

DAR Parameters	Units	Discharge Goal	September 2013
Sampling Date	N/A	N/A	9/12/13
Average Flowrate	CFM	N/A	7,975
Total Flow	ft^3	N/A	344,520,000
Total Flow	m^3	N/A	9,755,720
Trichloroethene	lb/hr	0.09	0.00257
Vinyl Chloride	lb/hr	0.01	0.00002
1,2 Dichloroethene	lb/hr	0.03	0.00167
1,2-Dichloroethane	lb/hr	BRT	0.00011
Toluene	lb/hr	BRT	0.00001
Total Xylene	lb/hr	BRT	0.00000
1,1,2-Trichloroethane	lb/hr	BRT	0.00000
Tetrachloroethene	lb/hr	0.02	0.00015

Notes:
BRT - below reporting thresholds
CFM - cubic feet per minute
DAR - Division of Air Resources
N/A - Not Applicable

APPENDIX B

NYSDEC AIR PERMIT EQUIVALENT APPROVAL

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

Alexander P. Grannis
Commissioner

July 24, 2009

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

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

Dear Ms. Fly:

Tetra Tech FW, on behalf of the Department of the Navy (Navy), has submitted the enclosed New York State Department of Environmental Conservation (NYSDEC) Division of Air Resources (DAR) Air Permit Application as a permit equivalent. This DAR Air permit equivalent is for the air stripper discharge at the GM 38 Area groundwater remediation system, Near Broadway and North Herman Avenue in Bethpage, NY. The NYSDEC Division of Environmental Remediation (DER) has reviewed the permit equivalent and, by means of this letter approves the GM 38 Area remedy air discharge for immediate operation.

The GM 38 Area remedial system utilizes the best available control technology (BACT) with activated carbon followed by potassium permanganate impregnated xeolite resin. The air discharge will be periodically monitored at start up and will be added for routine monitoring in the operation, maintenance and monitoring (OMM) plan, to be submitted shortly for Departmental review.

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

Sincerely,

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

Enclosure
ec/w/enc:
J. Swartwout/S. Scharf/File
W. Parish, Region 1 NYSDEC
A. J. Shah, region 1 NYSDEC
S. Patselos, Tetra Tech FW
J. Cofman, Northrop Grumman]
edocs: Region 1, Nassau, Oyster Bay (T): Grumman Aerospace 130003A-OU2-OMM and NWIRP Bethpage 130003B-OU2-OMM

New York State Department of Environmental Conservation
Air Permit Application

DEC ID	APPLICATION ID	OFFICE USE ONLY
- -	- /	/ /

Section I - Certification

Title V Certification

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

Responsible Official	Title
Signature	Date / /

State Facility Certification

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

Responsible Official	Title
Signature	Date / /

Section II - Identification Information

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

Owner/Firm

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

Facility

❑ Confidential

Name	Naval Weapons Industrial Reserve Plant (NWIRP) GM-38 Area	
Location Address	Bethpage	
❑ City / ☒ Town / ❑ Village	Oyster Bay, New York	Zip 11714

Project Description

❑ Continuation Sheet(s)

Air stripping of groundwater to remove VOCs

Owner/Firm Contact Mailing Address

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

Facility Contact Mailing Address

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

New York State Department of Environmental Conservation
Air Permit Application

DEC ID
- -

Section III - Facility Information

Classification

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

Affected States (Title V Only) N/A

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

SIC Codes

9999												

Facility Description ☐ Continuation Sheet(s)

Groundwater Remediation by Air Stripping followed by Vapor-Phase GAC for emission control

Compliance Statements (Title V Only) N/A

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

If one or more emission units at the facility are not in compliance with all applicable requirements at the time of signing this application (the 'NO' box must be checked), the noncomplying units must be identified in the "Compliance Plan" block on page 8 of this form along with the compliance plan information required. For all emission units at this facility that are operating in compliance with all applicable requirements complete the following:

- ☐ This facility will continue to be operated and maintained in such a manner as to assure compliance for the duration of the permit, except those units referenced in the compliance plan portion of Section IV of this application.
- ☐ For all emission units, subject to any applicable requirements that will become effective during the term of the permit, this facility will meet all such requirements on a timely basis.
- ☐ Compliance certification reports will be submitted at least once a year. Each report will certify compliance status with respect to each requirement, and the method used to determine the status.

Facility Applicable Federal Requirements N/A ☐ Continuation Sheet(s)

Title	Type	Part	Sub Part	Section	Sub Division	Paragraph	Sub Paragraph	Clause	Sub Clause
	CERCLA	all substantive requirements							

Facility State Only Requirements ☐ Continuation Sheet(s)

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

New York State Department of Environmental Conservation
Air Permit Application

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

Section III - Facility Information (continued)

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

Rule Citation

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

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

Monitoring Information

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

Description

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

Parameter Code	Parameter Description	Manufacturer Name/Model No.

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description

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

Facility Emissions Summary ❑ Continuation Sheet(s)

CAS No.	Contaminant Name	PTE (lbs/yr)	PTE Range Code	Actual (lbs/yr)
NY075 - 00 - 5	PM-10			
NY075 - 00 - 0	PARTICULATES			
7446 - 09 - 5	SULFUR DIOXIDE			
NY210 - 00 - 0	OXIDES OF NITROGEN			
630 - 08 - 0	CARBON MONOXIDE			
7439 - 92 - 1	LEAD			
NY998 - 00 - 0	VOC	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		
- -				
- -				

New York State Department of Environmental Conservation
Air Permit Application

DEC ID
- - -

Section IV - Emission Unit Information

Emission Unit Description

❑ Continuation Sheet(s)

EMISSION UNIT: 0-00EU1

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

❑ Continuation Sheet(s)

Building	Building Name	Length (ft)	Width (ft)	Orientation
BLDG-1	Treatment Plant	75	75	0

Emission Point

❑ Continuation Sheet(s)

EMISSION PT.: 00ST1

Ground Elev. (ft)	Height (ft)	Height Above Structure (ft)	Inside Diameter (in)	Exit Temp. (°F)	Cross Section	
					Length (in)	Width (in)
90	40	15	36	80		
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

❑ Continuation Sheet(s)

Emission Source ID	Emission Source Type	Date of Construction	Date of Operation	Date of Removal	Control Type Code	Control Type Description	Manufacturer's Name/Model No.
AS-1	I				048	Granular Act. Carbon	Air Stripping Column

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

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

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

New York State Department of Environmental Conservation
Air Permit Application

DEC ID
- - -

Section IV - Emission Unit Information (continued)

Process Information

❑ Continuation Sheet(s)

EMISSION UNIT	0 - 0 0 E U 1	PROCESS	P R 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

❑ Confidential ☒ Operating at Maximum Capacity ❑ 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

❑ Confidential ❑ Operating at Maximum Capacity ❑ Activity with Insignificant Emissions	Operating Schedule		Building	Floor/Location
	Hrs/Day	Days/Yr		

Emission Source/Control Identifier(s)

New York State Department of Environmental Conservation
Air Permit Application

DEC ID
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Section IV - Emission Unit Information (continued)

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

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

Emission Unit Compliance Certification ❑ Continuation Sheet(s)

Rule Citation

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

☒ Applicable Federal Requirement ❑ State Only Requirement ❑ Capping

Emission Unit	Emission Point	Process	Emission Source	CAS No.	Contaminant Name
0-00EU1	00ST1	PR1	AS-1	00079 - 01 - 6	Trichloroethylene

Monitoring Information

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

Description

Monthly grab samples analyzed for VOCs from the vapor phase treatment system influent, effluent and two intermediate locations.

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

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

Limit Upper	Limit Lower	Limit Units Code	Limit Units Description
3,125		255	micrograms per cubic meter

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

DEC ID
- -

Section IV - Emission Unit Information (continued)

Determination of Non-Applicability (Title V Only) N/A ❑ Continuation Sheet(s)

Rule Citation

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

Emission Unit	Emission Point	Process	Emission Source	❑ Applicable Federal Requirement ❑ State Only Requirement
-				

Description

Rule Citation

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

Emission Unit	Emission Point	Process	Emission Source	❑ Applicable Federal Requirement ❑ State Only Requirement
-				

Description

Process Emissions Summary ❑ Continuation Sheet(s)

EMISSION UNIT	0-00EU1				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 (lbs/hr)	PTE (lbs/yr)	PTE (standard units)	Standard Units	PTE How Determined	Actual (lbs/hr)	Actual (lbs/yr)
0.09	99			02		

EMISSION UNIT	0-00EU1				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 (lbs/hr)	PTE (lbs/yr)	PTE (standard units)	Standard Units	PTE How Determined	Actual (lbs/hr)	Actual (lbs/yr)
0.01	3.7			02		

EMISSION UNIT	0-00EU1				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 (lbs/hr)	PTE (lbs/yr)	PTE (standard units)	Standard Units	PTE How Determined	Actual (lbs/hr)	Actual (lbs/yr)
0.03	7.3			02		

New York State Department of Environmental Conservation
Air Permit Application

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Section IV - Emission Unit Information (continued)

EMISSION UNIT 0-00EU1	Emission Unit Emissions Summary			❑ Continuation Sheet(s)
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

❑ Continuation Sheet(s)

For any emission units which are not in compliance at the time of permit application, the applicant shall complete the following

Consent Order — Certified progress reports are to be submitted every 6 months beginning ____/____/____

Emission Unit	Process	Emission Source	Applicable Federal Requirement									
			Title	Type	Part	Sub Part	Section	Sub Division	Parag.	Sub Parag.	Clause	Sub Clause
-												

Remedial Measure / Intermediate Milestones	R/I	Date Scheduled

DEC ID

Section IV - Emission Unit Information (continued)

Request for Emission Reduction Credits

❑ Continuation Sheet(s)

EMISSION UNIT

Emission Reduction Description

Contaminant Emission Reduction Data

Baseline Period ____/____/____ to ____/____/____

Reduction Date	Reduction Method
/ /	

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

Facility to Use Future Reduction

Name

APPLICATION ID

Location Address

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

Use of Emission Reduction Credits

❑ Continuation Sheet(s)

EMISSION UNIT

Proposed Project Description

Contaminant Emissions Increase Data

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

Statement of Compliance

❑ All facilities under the ownership of this "ownership/firm" are operating in compliance with all applicable requirements and state regulations including any compliance certification requirements under Section 114(a)(3) of the Clean Air Act Amendments of 1990, or are meeting the schedule of a consent order.

Source of Emission Reduction Credit - Facility

Name

PERMIT ID

Location Address

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

Emission Unit	CAS No.	Contaminant Name	ERC (lbs/yr) Netting	ERC (lbs/yr) 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): _____ (/ /)

_____ (/ /)
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ATTACHMENT 1
Emission Estimate

Feed Water Flow	1,100	gpm: max or normal
	250	m^3/hr
Water Flow Including Recycle	1,200	gpm: max or normal
	273	m^3/hr
Air Flow	8,000	cfm
	13,592	m^3/hr
A/W vol ratio	50	

EXAMPLE EMISSION CALC: Vinyl Chloride
4.8 ug/L x 1000 L/m^3 x 250 m^3 water/13,623 m^3 air = 88 ug/m^3

					GW Conc.[1]		Effluent Conc[1]		Uncontrolled Stripper Exhaust							
	CAS	Toxicity:			Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg
Name	Number	H/M/L[2]	VOC[3]	HAP[4]	ug/L	ug/L	ug/L	ug/L	lb/day	lb/day	lb/hr	lb/hr	gm/sec	gm/sec	ug/m^3	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	m^3/hr
Water Flow Including Recycle	1,200	gpm: max or normal
	273	m^3/hr
Air Flow	8,000	cfm
	13,592	m^3/hr
A/W vol ratio	50	

							Controlled Stripper Exhaust		
Name	CAS Number	Toxicity: H/M/L[2]	VOC[3]	HAP[4]	Control by GAC	Max lb/day	Avg lb/day	Max gm/sec	Avg 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 2
AIR SCREENING ANALYSIS:
Annual

BETHPAGE SCREENING ANALYSIS					1-Hour Impact	405.7	(ug/m^3)	
ANNUAL IMPACTS COMPARED TO ANNUAL GUIDELINE CONCENTRATIONS (AGCs)					Annual Impact	32.456	(ug/m^3)	
		NYSDEC Guideline	Estimated Emissions		Predicted Annual Impact		Maximum Percent of AGC	
		AGC	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Pollutant	CAS Number	(ug/m^3)	(g/s)	(g/s)	(ug/m^3)	(ug/m^3)	Pct	Pct
1,1,1-Trichloroethane (Methyl Chloroform)	00071-55-6	1000.00	2.08E-04	1.04E-05	0.0068	0.0003	0.0%	0.0%
1,1,2-Trichloroethane	00079-00-5	1.40	2.08E-05	1.04E-06	0.0007	0.0000	0.0%	0.0%
1,1-Dichloroethane	00075-34-3	0.63	4.85E-05	2.43E-06	0.0016	0.0001	0.3%	0.0%
1,2-Dichloroethane	00107-06-2	0.04	6.24E-05	3.12E-06	0.0020	0.0001	5.3%	0.3%
1,1-Dichloroethylene (Vinylidene Chloride)	00075-35-4	70.00	1.11E-04	5.55E-06	0.0036	0.0002	0.0%	0.0%
1,2-Dichloroethylene	00540-59-0	63.00	2.18E-03	1.09E-04	0.0709	0.0035	0.1%	0.0%
Benzene	00071-43-2	0.13	6.94E-06	3.47E-07	0.0002	0.0000	0.2%	0.0%
Carbon Tetrachloride	00056-23-5	0.07	6.94E-06	3.47E-07	0.0002	0.0000	0.3%	0.0%
Chlorobenzene (Monochlorobenzene)	00108-90-7	110.00	6.94E-06	3.47E-07	0.0002	0.0000	0.0%	0.0%
Chloroform	00067-66-3	0.04	5.55E-05	2.77E-06	0.0018	0.0001	4.2%	0.2%
Methyl tert-Butyl Ether	01634-04-4	3000.00	6.94E-06	3.47E-07	0.0002	0.0000	0.0%	0.0%
Tetrachloroethylene	00127-18-4	1.00	2.34E-03	1.17E-04	0.0761	0.0038	7.6%	0.4%
Toluene	00108-88-3	5000.00	4.85E-05	2.43E-06	0.0016	0.0001	0.0%	0.0%
Trichloroethylene	00079-01-6	0.50	2.85E-02	1.43E-03	0.9252	0.0463	**185.0%**	9.3%
Vinyl Chloride	00075-01-4	0.11	3.33E-04	1.66E-05	0.0108	0.0005	9.8%	0.5%
Xylenes	01330-20-7	100.00	1.39E-05	6.94E-07	0.0005	0.0000	0.0%	0.0%

ATTACHMENT 2
AIR SCREENING ANALYSIS:
Short term

BETHPAGE SCREENING ANALYSIS							1-Hour Impact	405.7	(ug/m^3)
SHORT-TERM IMPACTS COMPARED TO SHORT-TERM GUIDELINE CONCENTRATIONS (SGCs)							Annual Impact	32.456	(ug/m^3)
		NYSDEC Guideline SGC	Estimated Emissions		Predicted Short-term Impact		Maximum Percent of SGC		
			Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled	
Pollutant	CAS Number	(ug/m^3)	(g/s)	(g/s)	(ug/m^3)	(ug/m^3)	Pct	Pct	
1,1,1-Trichloroethane (Methyl Chloroform)	00071-55-6	68000.00	2.08E-04	1.04E-05	0.084	0.004	0.0%	0.0%	
1,1,2-Trichloroethane	00079-00-5	-	2.43E-04	1.21E-05	0.098	0.005	-	-	
1,1-Dichloroethane	00075-34-3	-	2.77E-04	1.39E-05	0.113	0.006	-	-	
1,2-Dichloroethane	00107-06-2	-	1.87E-04	9.36E-06	0.076	0.004	-	-	
1,1-Dichloroethylene (Vinylidene Chloride)	00075-35-4	-	6.24E-04	3.12E-05	0.253	0.013	-	-	
1,2-Dichloroethylene	00540-59-0	-	7.62E-02	3.81E-03	30.915	1.546	-	-	
Benzene	00071-43-2	1300.00	2.77E-04	1.39E-05	0.113	0.006	0.0%	0.0%	
Carbon Tetrachloride	00056-23-5	1900.00	2.77E-04	1.39E-05	0.113	0.006	0.0%	0.0%	
Chlorobenzene (Monochlorobenzene)	00108-90-7	-	6.94E-05	3.47E-06	0.028	0.001	-	-	
Chloroform	00067-66-3	150.00	1.39E-04	6.94E-06	0.056	0.003	0.0%	0.0%	
Methyl tert-Butyl Ether	01634-04-4	-	1.39E-04	6.94E-06	0.056	0.003	-	-	
Tetrachloroethylene	00127-18-4	1000.00	6.24E-02	3.12E-03	25.298	1.265	2.5%	0.1%	
Toluene	00108-88-3	37000.00	1.04E-03	5.20E-05	0.422	0.021	0.0%	0.0%	
Trichloroethylene	00079-01-6	14000.00	2.35E-01	1.18E-02	95.541	4.777	0.7%	0.0%	
Vinyl Chloride	00075-01-4	180000.00	2.08E-02	1.04E-03	8.441	0.422	0.0%	0.0%	
Xylenes	01330-20-7	4300.00	1.11E-03	5.55E-05	0.450	0.023	0.0%	0.0%	

ATTACHMENT 2
AIR SCREENING ANALYSIS:
Short term

BETHPAGE SCREENING ANALYSIS					1-Hour Impact	405.7	(ug/m^3)
SHORT-TERM IMPACTS COMPARED TO SHORT-TERM GUIDELINE CONCENTRATIONS (SGCs)					Annual Impact	32.456	(ug/m^3)

		NYSDEC Guideline	Estimated Emissions		Predicted Short-term Impact		Maximum Percent of SGC	
		SGC	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
Pollutant	CAS Number	(ug/m^3)	(g/s)	(g/s)	(ug/m^3)	(ug/m^3)	Pct	Pct
1,1,1-Trichloroethane (Methyl Chloroform)	00071-55-6	68000.00	2.08E-04	1.04E-05	0.084	0.004	0.0%	0.0%
1,1,2-Trichloroethane	00079-00-5	-	2.43E-04	1.21E-05	0.098	0.005	-	-
1,1-Dichloroethane	00075-34-3	-	2.77E-04	1.39E-05	0.113	0.006	-	-
1,2-Dichloroethane	00107-06-2	-	1.87E-04	9.36E-06	0.076	0.004	-	-
1,1-Dichloroethylene (Vinylidene Chloride)	00075-35-4	-	6.24E-04	3.12E-05	0.253	0.013	-	-
1,2-Dichloroethylene	00540-59-0	-	7.62E-02	3.81E-03	30.915	1.546	-	-
Benzene	00071-43-2	1300.00	2.77E-04	1.39E-05	0.113	0.006	0.0%	0.0%
Carbon Tetrachloride	00056-23-5	1900.00	2.77E-04	1.39E-05	0.113	0.006	0.0%	0.0%
Chlorobenzene (Monochlorobenzene)	00108-90-7	-	6.94E-05	3.47E-06	0.028	0.001	-	-
Chloroform	00067-66-3	150.00	1.39E-04	6.94E-06	0.056	0.003	0.0%	0.0%
Methyl tert-Butyl Ether	01634-04-4	-	1.39E-04	6.94E-06	0.056	0.003	-	-
Tetrachloroethylene	00127-18-4	1000.00	6.24E-02	3.12E-03	25.298	1.265	2.5%	0.1%
Toluene	00108-88-3	37000.00	1.04E-03	5.20E-05	0.422	0.021	0.0%	0.0%
Trichloroethylene	00079-01-6	14000.00	2.35E-01	1.18E-02	95.541	4.777	0.7%	0.0%
Vinyl Chloride	00075-01-4	180000.00	2.08E-02	1.04E-03	8.441	0.422	0.0%	0.0%
Xylenes	01330-20-7	4300.00	1.11E-03	5.55E-05	0.450	0.023	0.0%	0.0%

03/16/09
11:26:15

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

Bethpage GM-38 Air Stripper Uncontrolled

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	1.00000
STACK HEIGHT (M)	=	12.2000
STK INSIDE DIAM (M)	=	.9100
STK EXIT VELOCITY (M/S)	=	5.7700
STK GAS EXIT TEMP (K)	=	294.0000
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	.0000
URBAN/RURAL OPTION	=	URBAN
BUILDING HEIGHT (M)	=	7.6000
MIN HORIZ BLDG DIM (M)	=	22.9000
MAX HORIZ BLDG DIM (M)	=	22.9000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = .040 M**4/S**3; MOM. FLUX = 6.869 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
10.	.1323E-07	1	1.5	1.5	480.0	22.39	3.65	2.99	NO
100.	278.3	3	1.0	1.0	320.0	27.34	22.00	20.46	NO
200.	339.9	6	1.0	1.1	10000.0	20.81	21.31	14.25	NO
MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:									
201.	339.9	6	1.0	1.1	10000.0	20.81	21.51	14.37	NO

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 2. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
210.	405.7	6	1.0	1.1	10000.0	18.81	22.32	14.86	NO
300.	307.9	6	1.0	1.1	10000.0	18.81	31.28	20.08	NO
400.	219.2	6	1.0	1.1	10000.0	18.81	40.93	25.42	NO

500.	162.3	6	1.0	1.1	10000.0	18.81	50.27	30.34	NO
600.	125.2	6	1.0	1.1	10000.0	18.81	59.32	34.91	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 210. M:

210.	405.7	6	1.0	1.1	10000.0	18.81	22.32	14.86	NO

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 9. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
610.	133.2	6	1.0	1.1	10000.0	11.81	60.21	35.35	NO
700.	107.4	6	1.0	1.1	10000.0	11.81	68.10	39.19	NO
800.	87.22	6	1.0	1.1	10000.0	11.81	76.63	43.22	NO
900.	72.75	6	1.0	1.1	10000.0	11.81	84.93	47.03	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 610. M:

610.	133.2	6	1.0	1.1	10000.0	11.81	60.21	35.35	NO

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 11. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1000.	62.47	6	1.0	1.1	10000.0	9.81	93.00	50.66	NO
1100.	54.05	6	1.0	1.1	10000.0	9.81	100.86	54.11	NO
1200.	47.42	6	1.0	1.1	10000.0	9.81	108.53	57.42	NO
1300.	42.10	6	1.0	1.1	10000.0	9.81	116.01	60.60	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1000. M:

1000.	62.47	6	1.0	1.1	10000.0	9.81	93.00	50.66	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
* SUMMARY OF TERRAIN HEIGHTS ENTERED FOR *
* SIMPLE ELEVATED TERRAIN PROCEDURE *
****

TERRAIN HT (M)	DISTANCE RANGE (M) MINIMUM	MAXIMUM
0.	10.	200.
2.	210.	600.
9.	610.	920.

```
          11.         1000.       1300.

****************************************
     *** REGULATORY (Default) ***
    PERFORMING CAVITY CALCULATIONS
  WITH ORIGINAL SCREEN CAVITY MODEL
          (BRODE, 1988)
****************************************
```

*** CAVITY CALCULATION - 1 ***			*** CAVITY CALCULATION - 2 ***		
CONC (UG/M**3)	=	.0000	CONC (UG/M**3)	=	.0000
CRIT WS @10M (M/S)	=	99.99	CRIT WS @10M (M/S)	=	99.99
CRIT WS @ HS (M/S)	=	99.99	CRIT WS @ HS (M/S)	=	99.99
DILUTION WS (M/S)	=	99.99	DILUTION WS (M/S)	=	99.99
CAVITY HT (M)	=	7.84	CAVITY HT (M)	=	7.84
CAVITY LENGTH (M)	=	22.86	CAVITY LENGTH (M)	=	22.86
ALONGWIND DIM (M)	=	22.90			

APPENDIX C

FIELD DATA SHEETS AND CHAIN OF CUSTODY DOCUMENTATION

Date: 9/17/13

H&S

Groundwater Level Measurement Sheet

Project Site: NWIRP Bethpage – GM-38
Location: Bethpage, NY
Field Crew: R. Mastrocola / K. Griffaton

Water Level Meter: Solinst 101
Weather: clear, 49°F
Time of Low Tide: N/A
Time of High Tide: N/A

Well ID	Time	Depth to Water (ft.)	Total Depth of Well / Screed Interval (ft.)	PID (ppm)	Comments
RW1-MW1	12:15	34.44	435 / 395-435		
RW1-MW2	7:57	36.25	435 / 395-435		
RW1-MW3	11:00	28.28	435 / 395-435		
RW2-MW1	13:43	38.39	510 / 470-510		
RW2-MW2	13:40	37.95	510 / 470-510		vegitation in vicinity appears dead/treated w/pesticide
RW2-MW3	13:35	37.55	510 / 470-510		" "
RW3-MW1	15:53	37.22	350 / 330-350		
RW3-MW2	15:50	38.79	495 / 475-495		
RW3-MW3	18:00	38.81	340 / 320-340		
RW3-MW4	17:55	39.75	495 / 475-495		
TP1	8:15	34.37	470 / 450-470		
IW1-MW1	7:52	36.15	470 / 450-470		

Signature: [signature]

Date: 9-17-13

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: RW 1 - MW 1

Date: 9/17/13
Sampler: RMastrocola
PID: ----

Start Time: 1230 End Time: 1305
Well Construction: 4"
Depth to Water: 34.44
Well Depth: 435'
Water Column: 400.56
Total Volume Removed (L): 8.25
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	12411004 35
LaMotte	2020e	1859 0412
QED	MP15	Rental unit
Marschalk Bladder Pump	24"	ID# 6084

Time (hh:mm)	Volume Removed (L)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
1230			34.42							
1240	2.5	250	34.43	18.08	4.11	205	1.06	73.3	0.42	clear
1245	3.75	250	34.43	17.80	3.92	206	0.77	75.7	0.660	clear
1250	5.0	200	34.43	16.86	3.71	201	0.81	81.7	0.53	clear
1255	6.25	200	34.43	19.12	4.19	200	0.82	65.2	0.41	clear
1300	7.50	200	34.43	19.22	4.23	200	0.83	64.9	0.42	clear
1305	8.75	200	34.43	19.27	4.23	200	0.84	64.5	0.43	clear
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.16 gal/ft
4" Screen Volume = 0.64 gal/ft
6" Screen Volume = 1.46 gal/ft

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
13:05	NWIRP-GM-38-GW-	40 mL CG	3	HCl	Select VOCs (524.2)
	RW 1 -MW 1 - 20130917	250 mL PL	1	HNO_3	Hg (245.1)
		500 mL PL	1	---	TSS (SM2540D)

Comments

House builders across street.
Mowers at 928 94 S. Herman 12:55 - 1305

RMastrocola
Signature

9-17-13
Date

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: RW 1 - MW 3

Date: 9/17/13
Sampler: RMastrocola
PID: ------

Start Time: 1115 End Time: 11:50
Well Construction: 4"
Depth to Water: 28.28
Well Depth: 434.35'
Water Column: 406.72
Total Volume Removed (L): 7.0
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	12L100435
LaMotte	2020e	1859.0412
QED	MP15	Rental Unit
Marschalk Bladder Pump	24"	ID# 16084

Time (hh:mm)	Volume Removed (L)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
11:15	~~2.0~~	200	28.25							
11:25	~~3.0~~2.0	200	28.25	15.42	5.03	201	2.63	57.4	1.07	clear
11:30	~~4.0~~3.0	200	28.25	15.23	4.95	201	1.49	57.8	1.10	clear
11:35	4.0	200	28.25	15.16	4.94	201	1.45	59.1	1.26	clear
11:40	5.0	200	28.25	15.13	4.93	201	1.28	59.9	1.33	clear
11:45	6.0	200	28.25	15.10	4.91	201	1.22	59.9	1.49	clear
11:50	7.0	200	28.25	15.10	4.91	201	1.27	60.0	1.30	clear
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.16 gal/ft
4" Screen Volume = 0.64 gal/ft
6" Screen Volume = 1.46 gal/ft

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
11:50	NWIRP-GM-38-GW-	40 mL CG	3	HCl	Select VOCs (524.2)
	RW 1 -MW3 - 20130917	250 mL PL	1	HNO_3	Hg (245.1)
		500 mL PL	1	---	TSS (SM2540D)

Comments

Signature

9-17-13
Date

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: RW 2 - MW 1

Date: 9/17/13
Sampler: R Mastrocola
PID: ------

Start Time: 1415 End Time: 1450
Well Construction: 4"
Depth to Water: 38.39'
Well Depth: 510'
Water Column: 471.61
Total Volume Removed (L): 2.50
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	12L190435
LaMotte	2020e	1859 0412
QED	MP15	Rental Unit
Marschalk Bladder Pump	24"	ID# ~~0089~~ per 420

Time (hh:mm)	Volume Removed (L)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
1415		125	38.39							
1425	1.25	125	38.39	15.17	6.00	224	1.26	-53.4	1.30	clear
1430	1.50	125	38.39	15.83	6.73	187	0.63	-90.8	2.09	clear
1435	1.75	125	38.39	15.89	6.83	186	0.52	-96.2	1.16	clear
1440	2.00	125	38.39	15.86	6.86	185	0.51	-99.9	1.19	clear
1445	2.25	125	38.39	15.80	6.88	184	0.50	-99.0	1.13	clear
1450	2.50	125	38.39	15.78	6.89	184	0.49	-99.1	1.49	clear
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.16 gal/ft
4" Screen Volume = 0.64 gal/ft
6" Screen Volume = 1.46 gal/ft

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
1450	NWIRP-GM-38-GW-	40 mL CG	3	HCl	Select VOCs (524.2)
	RW 2 -MW 1 -20130917	250 mL PL	1	HNO_3	Hg (245.1)
		500 mL PL	1	---	TSS (SM2540D)

Comments

Signature

9-17-13
Date

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: RW 3 - MW 1

Date: 9/18/13
Sampler: R. mastrorola
PID: ------

Start Time: 11:15 **End Time:** 11:50
Well Construction: 4"
Depth to Water: 38.18
Well Depth: ~~350~~ 495 (DW)
Water Column: 456.82
Total Volume Removed (L): 5.25
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	12L100435
LaMotte	2020e	1859-0412
QED	MP15	Rental Unit
Marschalk Bladder Pump	24"	ID# 6884

Time (hh:mm)	Volume Removed (L)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
11:15		150	38.18							
11:30	2.25	150	38.10	21.50	3.94	149	1.31	71.3	0.26	clear
11:35	3.00	150	38.10	21.14	3.96	148	1.08	70.4	0.72	clear
11:40	3.75	150	38.10	21.02	3.97	148	1.01	69.8	0.68	clear
11:45	4.50	150	38.10	21.01	3.98	148	0.99	69.3	0.53	clear
11:50	5.25	150	38.10	20.96	3.97	147	0.98	69.9	0.44	clear
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.16 gal/ft
4" Screen Volume = 0.64 gal/ft
6" Screen Volume = 1.46 gal/ft

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
11:50	NWIRP-GM-38-GW-	40 mL CG	3	HCl	Select VOCs (524.2)
	RW 3 -MW 1 - 20131813	250 mL PL	1	HNO_3	Hg (245.1)
		500 mL PL	1	---	TSS (SM2540D)

Comments air/water lines replaced - cut to 65'

Signature

9-18-13
Date

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: RW 3 - MW 2

Date: 9/17/13
Sampler: RMastrocola
PID: ------

Start Time: 16:15 End Time: 1650
Well Construction: 4"
Depth to Water: 38.79
Well Depth: 495
Water Column: 456.21
Total Volume Removed (L): 7.0
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	12L100435
LaMotte	2020e	1859 0412
QED	MP15	Rental
Marschalk Bladder Pump	24"	ID# ~~0054~~ 9979

Time (hh:mm)	Volume Removed (L)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
1615		200								
1625	2.0	200	39.22	17.40	4.01	98	0.79	72.0	0.85	Clear
1630	3.0	200	39.22	17.34	4.01	98	0.68	73.0	1.26	Clear
1635	4.0	200	39.22	17.41	4.07	98	0.63	71.5	2.08	Clear
1640	5.0	200	39.22	17.48	4.21	96	0.56	68.4	1.13	Clear
1645	6.0	200	39.21	17.47	4.27	96	0.54	67.9	1.96	Clear
1650	7.0	200	39.21	17.49	4.25	96	0.51	68.3	2.31	Clear
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.16 gal/ft
4" Screen Volume = 0.64 gal/ft
6" Screen Volume = 1.46 gal/ft

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
1650	NWIRP-GM-38-GW-	40 mL CG	3	HCl	Select VOCs (524.2)
	RW 3 -MW 2- 20130917	250 mL PL	1	HNO_3	Hg (245.1)
		500 mL PL	1	---	TSS (SM2540D)

Comments

Signature

9-17-13
Date

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: RW 3 - MW 3

Date: 9/ 18/13
Sampler: RMastrocola
PID: ----

Start Time: 07:35 End Time: 8:15
Well Construction: 4"
Depth to Water: ~~38.81~~ 39.85
Well Depth: 340
Water Column: 300.15
Total Volume Removed (L): 7.00
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	12L100435
LaMotte	2020e	1859-0412
QED	MP15	Rental unit
Marschalk Bladder Pump	24"	ID# 6884

Time (hh:mm)	Volume Removed (L)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
7:35										
7:45	1.75	175	39.82	14.13	4.64	153	3.04	61.5	2.16	clear
7:50	2.625	175	39.82	14.13	4.48	153	2.64	62.2	2.23	clear
7:55	3.5	175	39.81	14.15	4.55	154	2.25	58.3	3.61	clear
8:00	4.375	175	39.79	14.17	4.73	155	1.59	51.8	4.28	clear
8:05	5.25	175	39.77	14.33	4.96	154	1.13	47.1	4.80	clear
8:10	6.125	175	39.77	14.35	4.92	154	1.16	46.6	4.94	clear
8:15	7.00	175	39.78	14.37	4.93	154	1.13	46.4	5.03	clear
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.16 gal/ft
4" Screen Volume = 0.64 gal/ft
6" Screen Volume = 1.46 gal/ft

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
8:15	NWIRP-GM-38-GW-	40 mL CG	3	HCl	Select VOCs (524.2)
	RW 3 -MW3 - 20130918	250 mL PL	1	HNO_3	Hg (245.1)
		500 mL PL	1	---	TSS (SM2540D)

Comments

Signature

9-18-13
Date

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: RW 3 - MW 4

Date: 9/18/13
Sampler: R. Mastrocola
PID: ------

Start Time: 0850 End Time: 940
Well Construction: 4"
Depth to Water: ~~39.75~~ 40.99
Well Depth: 495
Water Column: 454.01
Total Volume Removed (L):
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	12L100435
LaMotte	2020e	1859. 0412
QED	MP15	Rental unit
Marschalk Bladder Pump	24"	ID# 6884

Time (hh:mm)	Volume Removed (L)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
850		200	40.90							
910	4.0	200	40.89	16.92	4.26	182	1.05	66.0	0.67	clear
915	5.0	200	40.89	17.10	4.32	176	0.93	63.0	0.83	clear
920	6.0	200	40.89	17.38	4.41	156	0.80	59.3	0.97	clear
925	7.0	200	40.89	17.47	4.44	131	0.85	59.0	1.42	clear
930	8.0	200	40.89	17.55	4.44	149	0.87	59.1	1.68	clear
935	9.0	200	40.89	17.59	4.44	150	0.85	59.7	1.71	clear
940	10.0	200	40.89	17.57	4.43	152	0.83	59.6	1.81	clear
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.16 gal/ft
4" Screen Volume = 0.64 gal/ft
6" Screen Volume = 1.46 gal/ft

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
940	NWIRP-GM-38-GW-	40 mL CG	3	HCl	Select VOCs (524.2)
	RW 3 -MW 4 - 20130918	250 mL PL	1	HNO_3	Hg (245.1)
		500 mL PL	1	---	TSS (SM2540D)

Comments

Signature

9-18-13
Date

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: TP-1

Date: 9/17/13
Sampler: R Mastracola
PID: ------

Start Time: 0840 End Time: 09:25
Well Construction: 4"
Depth to Water: 34.37
Well Depth: 470'
Water Column: 435.63
Total Volume Removed (L): 6.75
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	12L1004 35
LaMotte	2020e	18590412
QED	MP15	Rental
Marschalk Bladder Pump	24"	ID# 06084

Time (hh:mm)	Volume Removed (L)	Flow Rate (mL/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
0840			34.32							
0850	1.5	150	34.35	13.98	5.58	213	7.43	55.5	1.07	clear
0855	2.25	150	34.35	13.84	5.48	211	6.98	55.7	1.10	clear
0900	3.0	150	34.35	13.85	5.50	212	6.87	54.9	1.15	clear
0905	3.75	150	34.33	13.79	5.36	171	5.71	59.5	1.51	clear
0910	4.5	150	34.33	13.84	5.27	172	5.35	61.7	1.48	clear
0915	5.25	150	34.33	1384	5.22	172	5.33	63.0	1.12	clear
0920	6.00	150	34.33	13.83	5.27	173	5.40	63.2	1.11	clear
0925	6.75	150	34.33	13.83	5.25	173	5.50	65.3	1.16	clear
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.16 gal/ft
4" Screen Volume = 0.64 gal/ft
6" Screen Volume = 1.46 gal/ft

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
0925	NWIRP-GM-38-GW-	40 mL CG	3	HCl	Select VOCs (524.2)
	TP1-20130917	500 ~~250~~ mL PL	1	HNO_3	Hg (245.1)
		250 ~~500~~ mL PL	1	---	TSS (SM2540D)
0000	NWIRP-GM-38-GW-DUP01-20130917	- Same analysis as above			

Comments

+ MS / MSD collected (without TSS)
+ DUP-01 collected

Signature

9-17-13
Date

H&S

Instrument Calibration Log

Project/Site Name: NWIRP Bethpage – GM-38 **Date:** 9/17/13 **Weather:** Clear Skies 49°F

Calibrated By: R. Mastrocola **Instrument:** YSI 556 **Serial Number:** 022859

Parameters	Morning Calibration Time: 0715	Cal. Temperature °C	Afternoon Cal. Check Time: 1830	Comments
Conductivity 1000 ~~1413~~ (µS/cm°)	989 / 1000	14.14	1037 / 1000	
pH (7)	7.18 / 7.00	14.87	6.70	
pH (4)	4.31 / 4.00	13.47	4.04	
pH (10)	9.59 / 10.00	14.43	10.11	
ORP 240 (mv)	253.9 / 240.0	14.13	226.9	
Dissolved Oxygen (%)	109.2 / 100.0	16.16	101.1	
Zero Dissolved Oxygen (mg/L)	—	—		
Barometric Pressure (mmHg)	760.0	—	760.0	

pH Check (Every 3 hrs): (NJ only)

Time: Standard: NA Reading:

Time: Standard: NA Reading:

Time: Standard: NA Reading:

Signature: [redacted] Date: 9-17-13

H&S

Instrument Calibration Log

Project/Site Name: NWIRP Bethpage – GM-38 **Date:** 9/18/13 **Weather:** Clear 46°F

Calibrated By: R Mastrocola **Instrument:** YSI 556 **Serial Number:** 022859

Parameters	Morning Calibration Time: 630	Cal. Temperature °C	Afternoon Cal. Check Time: 1245	Comments
Conductivity 1000 ~~1413~~ (µS/cm°)	1037 / 1000	13.56	1021	
pH (7)	6.70 / 7.00	14.50	7.03	
pH (4)	4.04 / 4.00	12.83	4.16	
pH (10)	10.11 / 10.00	13.84	10.04	
ORP 240 (mv)	226.9 / 240.0	14.40	236.0	
Dissolved Oxygen (%)	101.1 / 100.0	17.06	106.3	
Zero Dissolved Oxygen (mg/L)	—	—	—	
Barometric Pressure (mmHg)	760.0	—	761.0	

pH Check (Every 3 hrs): (NJ only)

Time: Standard: NA Reading:

Time: Standard: NA Reading:

Time: Standard: NA Reading:

Signature: [signature] Date: 9-17-13

H&S

Instrument Calibration Log

Project/Site Name: NWIRP Bethpage GM-38

Calibrated By: R. Mastrocola

Instrument/Serial Number	Pre-Cal 1-AM (NTU)	Pre-Cal 1-PM (NTU)	Pre-Cal 10-AM (NTU)	Pre-Cal 10-PM (NTU)	Post-Cal 1-AM (NTU)	Post-Cal 1-PM (NTU)	Post-Cal 10-AM (NTU)	Post-Cal 10-PM (NTU)	Date
LaMotte 2020e SN 1859-0412	1.09	1.07	9.96	10.77	1.00	1.00	10.00	10.00	9-17-13 Time: 7:40 & 18:30
	1.11	1.09	10.26	10.30	1.00	1.00	10.00	10.00	9-18-13 Time: 6:30 & 12:45
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &

Signature: [signature]

Date: 9-18-13

Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 2
Courier: Fed EX
Tracking #:

Co. Name: H&S Environmental, Inc.
Contact (Report to): Jen Good **Phone:** 508.366.7442
Address: 160 E. Main St., Suite 2F
Westborough, MA 01581

Bill to (if different than Report to): Same
PO#: 2031-307

Project Name/#: NWIRP Bethpage GM-38 Qtrly LTM
ALSI Quote #:

TAT: [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required:
Approved By:

Email? [x] -Y jgood@hsenv.com
Fax? [ ] -Y No.:

	Container Type	40 mL	500 mL	250 mL								
	Container Size	CG	PL	PL								
	Preservative	HCL	HNO3	---								

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	TCL VOCs (Method 624)	Mercury (Method 245.1)	TSS (SM2540D)							
							Enter Number of Containers Per Analysis									
1	NWIRP-GM-38-GW-RW1-MW1-20130917		9/17/13	13:05	G	GW	3	1	1							
2	NWIRP-GM-38-GW-RW1-MW3-20130917		9/17/13	11:50	G	GW	3	1	1							
3	NWIRP-GM-38-GW-RW2-MW1-20130917		9/17/13	14:50	G	GW	3	1	1							
4	NWIRP-GM-38-GW-RW3-MW1-20130918		9/18/13	1150	G	GW	3	1	1							
5	NWIRP-GM-38-GW-RW3-MW2-20130917		9/17/13	16:50	G	GW	3	1	1							
6	NWIRP-GM-38-GW-RW3-MW3-20130918		9/18/13	8:15	G	GW	3	1	1							
7	NWIRP-GM-38-GW-RW3-MW4-20130918		9/18/13	9:40	G	GW	3	1	1							
8	NWIRP-GM-38-GW-TP1-20130917	MS/MSD for VOCs, Hg	9/17/13	0925	G	GW	9	3	1							

Receipt Information (completed by Sample)
Performed by:
Cooler Temp:
Therm. ID:
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N
	N	N	N	N	
	Y	Y	Y	Y	
1	N	N	N	N	N
2	N	N	N	N	N
3	Y	Y	Y	Y	Y
4					
5					
6					
7					
8					

	Custody seals Present?	(If present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1					
2					
3					
4					
5					
6					
7					
8					

SAMPLED BY (Please Print): ROSA MASTROCOLA
LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] H&S	9-18-13	13:00	2		
3			4		
5			6		
7			8		
9			10		

Data Deliverables
[ ] Standard
[ ] CLP-like
[ ] NJ-Reduced
[ ] NJ-Full
(other) [ ]

EDDs Required? [ ] If yes, format type:

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [x] PA [ ]
Other
PWSID

DOD Criteria Required?

ALSI FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 08-2008

Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier: Fed Ex

Tracking #:

Co. Name: H&S Environmental, Inc.

Contact (Report to): Jen Good **Phone:** 508.366.7442

Address: 160 E. Main St., Suite 2F
Westborough, MA 01581

Bill to (if different than Report to): Same

PO#: 2031-307

Project Name/#: NWIRP Bethpage GM-38 Qtrly LTM **ALSI Quote #:**

TAT: [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges. **Date Required:** **Approved By:**

Email? [x] -Y jgood@hsenv.com **Fax?** [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	TCL VOCs (Method 624)	Mercury (Method 245.1)	TSS (SM2540D)						
***Container Type						40 mL	500 mL	250 mL						
***Container Size						CG	PL	PL						
*** Preservative						HCL	HNO3	—						
						ANALYSES/METHOD REQUESTED								
1 NWIRP-GM-38-GW- DUP01 - 20130917		9/17/13	00:00	G	GW	3	1	1						
2 NWIRP-GM-38-FB- 20130917		9/17/13	10:20	G	GW	3	1							
3 NWIRP-GM-38-TB- 20130917		9/17/13	07:00			3								
4														
5														
6														
7														
8														

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample)
Performed by:
Cooler Temp:
Therm. ID:
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	N / Y	N / Y	N / Y	N / Y	
1	N / Y	N / Y	N / Y	N / Y	N / Y
2	N / Y	N / Y	N / Y	N / Y	N / Y
3	N / Y	N / Y	N / Y	N / Y	N / Y

	Custody seals Present?	(if present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
1	N / Y	N / Y	N / Y	N / Y	N / Y
2	N / Y	N / Y	N / Y	N / Y	N / Y
3	N / Y	N / Y	N / Y	N / Y	N / Y

SAMPLED BY (Please Print): ROSA MASTROCOLA

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 ROSA MASTROCOLA	9-18-13	13:00	2		
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] (other)

EDDs Required? [ ] If yes, format type:

DOD Criteria Required?

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [X] PA [ ]

Other

PWSID

ALSI FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite

**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

APPENDIX D

DATA VALIDATION REPORTS

VOLATILE ORGANIC COMPOUNDS
USEPA Region II –Data Validation

Project Name: Naval Weapons Industrial Reserve Plant, GM-38 Area-LTM

Location: 100 Broadway, Bethpage, NY

Project Number: 2031-108

SDG #: G1048933-HNW-065

Client: H&S Environmental, Inc.

Date: 12/13/2013

Laboratory: ALS Environmental, Middletown, PA

Reviewer: Sherri Pullar

Summary:

1. Data validation was performed on the data for nine (9) water samples, one (1) trip blank and one (1) field blank analyzed for Volatiles by EPA Method 624.

2. The samples were collected on 9/17 and 18/2013. The samples were submitted to ALS Environmental, Middletown, PA on 9/19/2013 for analysis.

3. The USEPA Region II SOP HW-24, Revision No.: 2, August 2008, Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B; USEPA National Functional Guidelines for Organic Data Review, EPA 540/R-99/008, October 1999; EPA Method 624 and Quality Assurance Project Plan for GM-38 Area, Naval Weapons Industrial Reserve Plant, Bethpage, NY; September 3, 2009 were used in evaluating the Volatiles data in this summary report.

4. In general, the data are valid as reported and may be used for decision making purposes. Selected data points were qualified due to nonconformance of certain Quality Control criteria (See discussion below).

Samples:

The samples included in this review are listed below:

Client Sample ID	Laboratory Sample ID	Collection Date	Matrix	Sample Status
NWIRP-GM-38-GW-RW1-MW1-20130917	1048933001	9/17/2013	Water	
NWIRP-GM-38-GW-RW1-MW3-20130917	1048933002	9/17/2013	Water	
NWIRP-GM-38-GW-RW2-MW1-20130917	1048933003	9/17/2013	Water	
NWIRP-GM-38-GW-RW3-MW1-20130918	1048933004	9/18/2013	Water	
NWIRP-GM-38-GW-RW3-MW2-20130917	1048933005	9/17/2013	Water	
NWIRP-GM-38-GW-RW3-MW3-20130918	1048933006	9/18/2013	Water	
NWIRP-GM-38-GW-RW3-MW4-20130918	1048933007	9/18/2013	Water	
NWIRP-GM-38-GW-TP1-20130917	1048933008	9/17/2013	Water	
NWIRP-GM-38-DUP01-20130917	1048933009	9/17/2013	Water	Field Duplicate of sample NWIRP-GM-38-GW-TP1-20130917
NWIRP-GM-38-FB-20130917	1048933010	9/17/2013	Water	Field Blank
NWIRP-GM-38-TB-20130917	1048933011	9/17/2013	Water	Trip Blank

Sample Conditions/Problems:

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

Holding Times:

1. All water samples were analyzed within 14days from sample collection. No qualifications were required.

2. All water samples were properly preserved (pH<2.0). No qualifications were required.

GC/MS Tuning:

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

Initial Calibration:

1. Initial calibration curve analyzed on 9/19/2013 (ms05.i) exhibited acceptable %RSD and average RRF values for all compounds. No qualifications were required.

Continuing Calibration Verification (CCV):

1. CCV analyzed on 9/20/2013 @ 21:42 PM (ms05.i) exhibited acceptable %Ds (≤15.0%) for all compounds with the following exception(s):

Compound	%D
Acrolein	22.2
Acrylonitrile	24.2
Benzene	15.8
Bromodichloromethane	16.3
Bromomethane	-15.7
Carbon Tetrachloride	19.6
Chlorodibromomethane	15.2
Chloroethane	-18.3
1,1-Dichloroethane	18.7
Cis-1,2-Dichloroethene	18.8
1,2-Dichloropropane	16.2
Cis-1,3-dichloropropene	20.9
Trans-1,3-dichloropropene	26.8
Ethylbenzene	19.2

Client Sample ID	Laboratory Sample ID	Compound	Action
NWIRP-GM-38-GW-RW1-MW1-2013313	1048933001	Acrolein, Acrylonitrile, Benzene, Bromodichloromethane, Bromomethane, Carbon Tetrachloride, Chlorodibromomethane, Chloroethane, 1,1-Dichloroethane, Cis-1,2-Dichloroethene, 1,2-Dichloropropane, Cis-1,3-dichloropropene, Trans-1,3-dichloropropene, Ethylbenzene	UJ UJ UJ UJ UJ J UJ UJ UJ UJ
NWIRP-GM-38-GW-RW1-MW3-2013314	1048933002	Acrolein, Acrylonitrile, Benzene, Bromodichloromethane, Bromomethane,	UJ UJ

Client Sample ID	Laboratory Sample ID	Compound	Action
		Carbon Tetrachloride, Chlorodibromomethane, Chloroethane, 1,1-Dichloroethane, Cis-1,2-Dichloroethene, 1,2-Dichloropropane, Cis-1,3-dichloropropene, Trans-1,3-dichloropropene, Ethylbenzene	UJ UJ J UJ UJ UJ
NWIRP-GM-38-GW-RW2-MW1-2013313	1048933003	Acrolein, Acrylonitrile, Bromodichloromethane, Bromomethane, Carbon Tetrachloride, Chlorodibromomethane, Chloroethane, 1,1-Dichloroethane, 1,2-Dichloropropane, Cis-1,2-Dichloroethene, Benzene, Cis-1,3-dichloropropene, Trans-1,3-dichloropropene, Ethylbenzene	UJ UJ UJ UJ UJ J UJ UJ
NWIRP-GM-38-GW-RW3-MW1-2013314	1048933004	Acrolein, Acrylonitrile, Benzene, Bromodichloromethane, Bromomethane, Carbon Tetrachloride, Chlorodibromomethane, Chloroethane, 1,1-Dichloroethane, Cis-1,2-Dichloroethene, 1,2-Dichloropropane, Cis-1,3-dichloropropene, Trans-1,3-dichloropropene, Ethylbenzene	UJ UJ UJ UJ J UJ UJ UJ
NWIRP-GM-38-GW-RW3-MW2-2013314	1048933005	Acrolein, Acrylonitrile, Benzene, Bromodichloromethane, Bromomethane, Carbon Tetrachloride, Chlorodibromomethane, Chloroethane, 1,1-Dichloroethane, Cis-1,2-Dichloroethene, 1,2-Dichloropropane, Cis-1,3-dichloropropene, Trans-1,3-dichloropropene, Ethylbenzene	UJ UJ UJ UJ J UJ UJ UJ
NWIRP-GM-38-GW-TP1-2013313	1048933008	Acrolein, Acrylonitrile, Benzene, Bromodichloromethane, Bromomethane, Carbon Tetrachloride, Chlorodibromomethane, Chloroethane, 1,1-Dichloroethane, Cis-1,2-Dichloroethene, 1,2-Dichloropropane, Cis-1,3-dichloropropene, Trans-1,3-dichloropropene, Ethylbenzene	UJ UJ UJ UJ J UJ UJ UJ

2. CCV analyzed on 9/20/2013 @ 21:42 PM (ms05.i) exhibited acceptable %Ds (≤15.0%) for all compounds with the following exception(s):

Compound	%D
1,1,2,2-Tetrachloroethane	18.6
1,1,1-Trichloroethane	16.1
1,1,2-Trichloroethane	15.6

Client Sample ID	Laboratory Sample ID	Compound	Action
NWIRP-GM-38-FB-20130917	1048933010	1,1,2,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane	UJ
NWIRP-GM-38-TB-20130917	1048933011	1,1,2,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane	UJ

3. CCV analyzed on 9/24/2013 @ 20:00 PM (ms05.i) exhibited acceptable %Ds (≤15.0%) for all compounds with the following exception(s):

Compound	%D
Acrolein	20.4
Acrylonitrile	18.5
Bromodichloromethane	15.8
Bromomethane	-21.7
Chloroethane	-27.0
2-chloroethylvinyl ether	19.5
1,2-dichloroethane	15.4
Cis-1,3-Dichloropropene	19.0
Trans-1,3-Dichlorpropene	23.9
Total 1,3-dichloropropene	24.0
Methylene Chloride	15.9
1,1,2,2-Tetrachloroethane	15.1

Client Sample ID	Laboratory Sample ID	Compound	Action
NWIRP-GM-38-GW-RW3-MW3-20130918	1048933006	Acrolein, acrylonitrile, Bromodichloromethane, Bromomethane, Chloroethane, 2-chloroethylvinyl ether, 1,2-dichloroethane, Cis-1,3-Dichloropropene, Trans-1,3-Dichlorpropene, Total 1,3-dichloropropene, 1,1,2,2-Tetrachloroethane Methylene Chloride	UJ UJ UJ UJ UJ UJ UJ J
NWIRP-GM-38-GW-RW3-MW4-20130918	1048933007	Acrolein, acrylonitrile, Bromodichloromethane, Bromomethane,	UJ UJ

Client Sample ID	Laboratory Sample ID	Compound	Action
		Chloroethane, 2-chloroethylvinyl ether, 1,2-dichloroethane, Cis-1,3-Dichloropropene, Trans-1,3-Dichlorpropene, Total 1,3-dichloropropene, 1,1,2,2-Tetrachloroethane Methylene Chloride	UJ UJ UJ UJ UJ UJ
NWIRP-GM-38-DUP01-20130917	1048933009	Acrolein, acrylonitrile, Bromodichloromethane, Bromomethane, Chloroethane, 2-chloroethylvinyl ether, 1,2-dichloroethane, Cis-1,3-Dichloropropene, Trans-1,3-Dichlorpropene, Total 1,3-dichloropropene, 1,1,2,2-Tetrachloroethane Methylene Chloride	UJ UJ UJ UJ UJ UJ UJ UJ

Surrogates:

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

Internal Standard (IS) Area Performance:

1. All samples exhibited acceptable area count for all three internal standards. 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 (1187913) analyzed on 9/20/2013 was free of contamination with the exception of the following:

Sample ID	Compound	Result (µg/l)	Action Level (5x)* (µg/l)	Sample(s) Affected	Action
1187913	Chloroform	0.63	3.15	NWIRP-GM-38-GW-RW1-MW1-20130917 NWIRP-GM-38-GW-RW1-MW3-20130917 NWIRP-GM-38-GW-RW2-MW1-20130917 NWIRP-GM-38-GW-RW3-MW1-20130918 NWIRP-GM-38-GW-RW3-MW2-20130917 NWIRP-GM-38-GW-TP1-20130917	None U None None None None
	1,2-Dichlorobenzene	0.40	2.00	NWIRP-GM-38-GW-RW1-MW1-20130917 NWIRP-GM-38-GW-RW1-MW3-20130917 NWIRP-GM-38-GW-RW2-MW1-20130917 NWIRP-GM-38-GW-RW3-MW1-20130918 NWIRP-GM-38-GW-RW3-MW2-20130917	None None None None None

Sample ID	Compound	Result (µg/l)	Action Level (5x)* (µg/l)	Sample(s) Affected	Action
				NWIRP-GM-38-GW-TP1-20130917	None
	1,3-Dichlorobenzene	0.40	2.00	NWIRP-GM-38-GW-RW1-MW1-20130917	None
				NWIRP-GM-38-GW-RW1-MW3-20130917	None
				NWIRP-GM-38-GW-RW2-MW1-20130917	None
				NWIRP-GM-38-GW-RW3-MW1-20130918	None
				NWIRP-GM-38-GW-RW3-MW2-20130917	None
				NWIRP-GM-38-GW-TP1-20130917	None
	1,4-Dichlorobenzene	0.49	2.45	NWIRP-GM-38-GW-RW1-MW1-20130917	None
				NWIRP-GM-38-GW-RW1-MW3-20130917	None
				NWIRP-GM-38-GW-RW2-MW1-20130917	None
				NWIRP-GM-38-GW-RW3-MW1-20130918	None
				NWIRP-GM-38-GW-RW3-MW2-20130917	None
				NWIRP-GM-38-GW-TP1-20130917	None
	Ethylbenzene	0.35	1.75	NWIRP-GM-38-GW-RW1-MW1-20130917	None
				NWIRP-GM-38-GW-RW1-MW3-20130917	None
				NWIRP-GM-38-GW-RW2-MW1-20130917	None
				NWIRP-GM-38-GW-RW3-MW1-20130918	None
				NWIRP-GM-38-GW-RW3-MW2-20130917	None
				NWIRP-GM-38-GW-TP1-20130917	None

*= If sample concentration less than the Action Level (AL), then sample result qualified as non-detect (U). If sample concentration greater than the Action Level (AL) or sample result was not detected, no qualifications/action required.

2. Method Blank (1188553) analyzed on 9/20/2013 was free of contamination with the exception of the following:

Sample ID	Compound	Result (µg/l)	Action Level (5x)* (µg/l)	Sample(s) Affected	Action
1188553	Chloroform	0.63	3.15	NWIRP-GW-38-FB-20130917	None
				NWIRP-GW-38-TB-20130917	None

*= If sample concentration less than the Action Level (AL), then sample result qualified as non-detect (U). If sample concentration greater than the Action Level (AL) or sample result was not detected, no qualifications/action required.

3. Method Blank (1190225) analyzed on 9/24/2013 was free of contamination with the exception of the following:

Sample ID	Compound	Result (µg/l)	Action Level (5x)* (µg/l)	Sample(s) Affected	Action
1190225	Chloroform	0.75	3.75	NWIRP-GW-38-DUP01-20130917	U
				NWIRP-GW-38-GW-RW3-MW3-20130918	U
				NWIRP-GW-38-GW-RW3-MW4-20130918	U

*= If sample concentration less than the Action Level (AL), then sample result qualified as non-detect (U). If sample concentration greater than the Action Level (AL) or sample result was not detected, no qualifications/action required.

4. Field Blank (NWIRP-GM-38-FB-20130917) (1048933010) analyzed on 9/21/2013 was free of contamination. No qualifications were required.

5. Trip Blank (NWIRP-GM-38-TB-20130917) (1048933011) analyzed on 9/21/2013 was free of contamination with the exception of the following:

Sample ID	Compound	Result (µg/l)	Action Level (5x)* (µg/l)	Sample(s) Affected	Action
1048933011	Methylene Chloride	0.47	2.35	NWIRP-GM-38-GW-RW1-MW1-2013313	None
				NWIRP-GM-38-GW-RW1-MW3-2013314	None
				NWIRP-GM-38-GW-RW2-MW1-2013313	None
				NWIRP-GM-38-GW-RW3-MW1-2013314	None
				NWIRP-GM-38-GW-RW3-MW2-2013314	None
				NWIRP-GM-38-GW-RW3-MW3-2013314	None
				NWIRP-GM-38-GW-RW3-MW4-2013314	None
				NWIRP-GM-38-GW-TP1-2013313	None
				NWIRP-GM-38-DUP01-2013313	None

*= If sample concentration less than the Action Level (AL), then sample result qualified as non-detect (U). If sample concentration greater than the Action Level (AL) or sample result was not detected, no qualifications/action required.

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

1. Laboratory Control Sample (1187914) was analyzed on 09/20/2013. All %RECs were within the laboratory control limits. No qualifications were required.

2. Laboratory Control Sample (1188554) was analyzed on 09/20/2013. All %RECs were within the laboratory control limits. No qualifications were required.

3. Laboratory Control Sample (1190226) was analyzed on 09/24/2013. All %RECs were within the laboratory control limits. No qualifications were required.

Field Duplicate:

1. Sample NWIRP-GM-38-DUP01-20130917 (1048933009) was collected as field duplicate for sample NWIRP-GM-38-GW-TP1-20130917 (1048933008). All RPDs were ≤50.0% with the exception of tetrachloroethene. The results for chloroform were qualified in the field sample as J and in the field duplicate as UJ.

Field Sample	Compound	Analytical Method	Result	Units	Field Duplicate	Result	Units	RPD	Qualifier
NWIRP-GM-38-GW-TP1-20130917	1,1,1-Trichloroethane	EPA 624	0.66	µg/l	NWIRP-GM-38-DUP01-20130917	0.66	µg/l	0.0	None
NWIRP-GM-38-GW-TP1-20130917	1,1-Dichloroethane	EPA 624	2.1	µg/l	NWIRP-GM-38-DUP01-20130917	2.8	µg/l	28.6	None
NWIRP-GM-38-GW-TP1-20130917	1,1-Dichloroethene	EPA 624	0.66	µg/l	NWIRP-GM-38-DUP01-20130917	0.74	µg/l	11.4	None
NWIRP-GM-38-GW-TP1-20130917	Chloroform	EPA 624	5.2	µg/l	NWIRP-GM-38-DUP01-20130917	4.7	µg/l	NC	J/UJ
NWIRP-GM-38-GW-TP1-20130917	Cis-1,2-Dichloroethene	EPA 624	14.1	µg/l	NWIRP-GM-38-DUP01-20130917	14.7	µg/l	4.2	None
NWIRP-GM-38-GW-TP1-20130917	Tetrachloroethene	EPA 624	0.77	µg/l	NWIRP-GM-38-DUP01-20130917	1.5	µg/l	64.3	J
NWIRP-GM-38-GW-TP1-20130917	Trichloroethene	EPA 624	27	µg/l	NWIRP-GM-38-DUP01-20130917	26.7	µg/l	1.1	None

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

1. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were performed on sample NWIRP-GM-38-GW-RW3-MW3-20130918 (1048933006). All %RECs and RPDs were within the laboratory control limits with the following exception(s):

Compound	%REC/%REC/RPD	Action
Cis-1,2-Dichloroethene	128/A/A	None
Acrylonitrile	A/A/16	UJ

NA= Not Applicable; A=Acceptable

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: G1048933-HNW-065.

MERCURY
USEPA Region II – Data Validation

Project Name: Naval Weapons Industrial Reserve Plant, GM-38 Area-LTM

Location: 100 Broadway, Bethpage, NY

Project Number: 2031-108

SDG #: G1048933-HNW-065

Client: H&S Environmental, Inc.

Date: 12/16/2013

Laboratory: ALS Environmental, Middletown, PA

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 9/17 and 18/2013. The samples were submitted to ALS Environmental, Middletown, PA on 9/19/2013 for analysis.

3. The USEPA Region II SOP No. HW-2, Revision 13, September 2006, Validation of Metals for Contract Laboratory Program (CLP), SOW-ILM05.3 (SOP Revision 13); USEPA National Functional Guidelines for Inorganic Data Review, EPA 540-R-04-004, October 2004 and Quality Assurance Project Plan for GM-38 Area, Naval Weapons Industrial Reserve Plant, Bethpage, NY; September 3, 2009 were used in evaluating the Mercury data in this summary report.

4. In general, the data are valid as reported and may be used for decision making purposes. Selected data points were qualified due to nonconformance of certain Quality Control criteria (See discussion below).

Samples:

The samples included in this review are listed below:

Client Sample ID	Laboratory Sample ID	Collection Date	Matrix	Sample Status
NWIRP-GM-38-GW-RW1-MW1-20130917	1048933001	9/17/2013	Water	
NWIRP-GM-38-GW-RW1-MW3-20130917	1048933002	9/17/2013	Water	
NWIRP-GM-38-GW-RW2-MW1-20130917	1048933003	9/17/2013	Water	
NWIRP-GM-38-GW-RW3-MW1-20130918	1048933004	9/18/2013	Water	
NWIRP-GM-38-GW-RW3-MW2-20130917	1048933005	9/17/2013	Water	
NWIRP-GM-38-GW-RW3-MW3-20130918	1048933006	9/18/2013	Water	
NWIRP-GM-38-GW-RW3-MW4-20130918	1048933007	9/18/2013	Water	
NWIRP-GM-38-GW-TP1-20130917	1048933008	9/17/2013	Water	
NWIRP-GM-38-DUP01-20130917	1048933009	9/17/2013	Water	Field Duplicate of sample NWIRP-GM-38-GW-TP1-20130917
NWIRP-GM-38-FB-20130917	1048933010	9/17/2013	Water	Field Blank

Sample Conditions/Problems:

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

Holding Times:

1. All water samples were digested and analyzed within the 28 days holding times for Mercury. No qualifications were required.

Initial and Continuing Calibration Verification (ICV and CCV):

1 The correlation coefficient for Mercury calibration curve analyzed was ≥0.995. No qualifications were required.

2. All ICVs and CCVs %REC values were within the QC limits (80-120%). 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 (1190756) digested on 9/26/2013 was free of contamination. No qualifications were required.

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

1. Field Blank (NWIRP-GM-38-FB-20130917) (1048933010) analyzed on 9/21/2013 was free of contamination. No qualifications were required.

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

1. Mercury %REC in Laboratory Control Sample (1190757) analyzed on 9/25/2013 was within the laboratory control limits. No qualifications were required.

Field Duplicate:

1. Sample NWIRP-GM-38-DUP01-20130917 (1048933009) was collected as field duplicate for sample NWIRP-GM-38-GW-TP1-20130917 (1048933008). Both samples were reported as non-detects. No qualifications were required.

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

1. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were performed on sample NWIRP-GM-38-GW-RW3-MW3-20130918 (1048933006). 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: G1048933-HNW-065.

GENERAL CHEMISTRY
USEPA Region II – Data Validation

Project Name: Naval Weapons Industrial Reserve Plant, GM-38 Area-LTM

Location: 100 Broadway, Bethpage, NY

Project Number: 2031-108

SDG #: G1048933-HNW-065

Client: H&S Environmental, Inc.

Date: 12/16/2013

Laboratory: ALS Environmental, Middletown, PA

Reviewer: Sherri Pullar

Summary:

1. Data validation was performed on the data for nine (9) water samples analyzed for Solids, Total Suspended (TSS) by SM20th 2540D.

2. The samples were collected on 9/17 and 18/2013. The samples were submitted to ALS Environmental, Middletown, PA on 9/19/2013 for analysis.

3. The USEPA Region II SOP No. HW-2, Revision 13, September 2006, Validation of Metals for Contract Laboratory Program (CLP), SOW-ILM05.3 (SOP Revision 13); USEPA National Functional Guidelines for Inorganic Data Review, EPA 540-R-04-004, October 2004 and Quality Assurance Project Plan for GM-38 Area, Naval Weapons Industrial Reserve Plant, Bethpage, NY; September 3, 2009 were used in evaluating the Solids, Total Suspended data in this summary report.

4. In general, the data are valid as reported and may be used for decision making purposes. Selected data points were qualified due to nonconformance of certain Quality Control criteria (See discussion below).

Samples:

The samples included in this review are listed below:

Client Sample ID	Laboratory Sample ID	Collection Date	Matrix	Sample Status
NWIRP-GM-38-GW-RW1-MW1-20130917	1048933001	9/17/2013	Water	
NWIRP-GM-38-GW-RW1-MW3-20130917	1048933002	9/17/2013	Water	
NWIRP-GM-38-GW-RW2-MW1-20130917	1048933003	9/17/2013	Water	
NWIRP-GM-38-GW-RW3-MW1-20130918	1048933004	9/18/2013	Water	
NWIRP-GM-38-GW-RW3-MW2-20130917	1048933005	9/17/2013	Water	
NWIRP-GM-38-GW-RW3-MW3-20130918	1048933006	9/18/2013	Water	
NWIRP-GM-38-GW-RW3-MW4-20130918	1048933007	9/18/2013	Water	
NWIRP-GM-38-GW-TP1-20130917	1048933008	9/17/2013	Water	
NWIRP-GM-38-DUP01-20130917	1048933009	9/17/2013	Water	Field Duplicate of sample NWIRP-GM-38-GW-TP1-20130917
NWIRP-GM-38-FB-20130917	1048933010	9/17/2013	Water	Field Blank

Sample Conditions/Problems:

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

Holding Times:

1. All water samples were analyzed within the 7 days holding times 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 (1189218) analyzed on 9/23/2013 was free of contamination. No qualifications were required.

2. Method Blank (1189298) analyzed on 9/23/2013 was free of contamination. No qualifications were required.

Field Duplicate:

1. Sample NWIRP-GM-38-DUP01-2013313 (1017222009) was collected as field duplicate for sample NWIRP-GM-38-GW-TP1-2013313 (1017222008). Both samples were reported as non-detects. No qualifications were required.

Laboratory Duplicate:

1. Laboratory Duplicate was performed on sample NWIRP-GM-38-GW-TP1-20130917 (1048933008). RPD was inside the laboratory control limit (<20%). 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: G1017222-HNW-059.

NWIRP BETHPAGE GM-38
SEPTEMBER 2013 EVENT
DATA SUMMARY TABLE
AQUEOUS
SDG: 1048933, HNW-065

Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Ethylbenzene	1	ug/L	U	0.16	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	U	0.12	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	U	0.14	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Acrolein	30	ug/L	U	2.4	30
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,2-Dichloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Acrylonitrile	5	ug/L	U	0.89	5
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Toluene	1	ug/L	U	0.12	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	U	0.28	2
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Chlorodibromomethane	1	ug/L	U	0.22	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Tetrachloroethene	1	ug/L	U	0.26	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	cis-1,2-Dichloroethene	1	ug/L	U	0.26	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	trans-1,2-Dichloroethene	1	ug/L	U	0.12	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	U	0.19	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Carbon Tetrachloride	1	ug/L	U	0.24	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Chloroform	1	ug/L	U	0.15	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Benzene	1	ug/L	U	0.16	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,1,1-Trichloroethane	1	ug/L	UJ	0.27	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Bromomethane	2	ug/L	U	0.27	2
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Chloroethane	1	ug/L	U	0.24	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Methylene Chloride	1	ug/L	U	0.32	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Bromodichloromethane	1	ug/L	U	0.13	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,1-Dichloroethane	1	ug/L	U	0.19	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,1-Dichloroethene	1	ug/L	U	0.17	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,2-Dichloropropane	1	ug/L	U	0.24	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	UJ	0.3	1

NWIRP BETHPAGE GM-38
SEPTEMBER 2013 EVENT
DATA SUMMARY TABLE
AQUEOUS
SDG: 1048933, HNW-065

Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	Trichloroethene	1	ug/L	U	0.21	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-FB-091713	1048933010	624	17-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1
NWIRP-GM-38-FB-091713	1048933010	245.1	17-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Ethylbenzene	1	ug/L	U	0.16	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	UJ	0.12	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	UJ	0.14	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Acrolein	30	ug/L	UJ	2.4	30
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,2-Dichloroethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Acrylonitrile	5	ug/L	UJ	0.89	5
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Toluene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	UJ	0.28	2
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Chlorodibromomethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,1,1-Trichloroethane	0.66	ug/L	J	0.27	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,1,1-Trichloroethane	0.66	ug/L	J	0.27	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	trans-1,2-Dichloroethene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	UJ	0.19	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Carbon Tetrachloride	1	ug/L	U	0.24	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,1-Dichloroethane	2.8	ug/L		0.19	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Benzene	1	ug/L	U	0.16	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,1-Dichloroethane	2.1	ug/L	J	0.19	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Bromomethane	2	ug/L	UJ	0.27	2
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Chloroethane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Methylene Chloride	1	ug/L	UJ	0.32	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Bromodichloromethane	1	ug/L	UJ	0.13	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,1-Dichloroethene	0.74	ug/L	J	0.17	1

NWIRP BETHPAGE GM-38
SEPTEMBER 2013 EVENT
DATA SUMMARY TABLE
AQUEOUS
SDG: 1048933, HNW-065

Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,1-Dichloroethene	0.66	ug/L	J	0.17	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,2-Dichloropropane	1	ug/L	U	0.24	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	U	0.3	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Chloroform	4.7	ug/L	UJ	0.15	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	245.1	17-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-DUP01-091713	1048933009	2540D	17-Sep-13	1	Total Suspended Solids	5	mg/L	U	5	5
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Ethylbenzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	UJ	0.12	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	UJ	0.14	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Acrolein	30	ug/L	UJ	2.4	30
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,2-Dichloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Acrylonitrile	5	ug/L	UJ	0.89	5
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Toluene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	U	0.28	2
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Chlorodibromomethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Tetrachloroethene	0.35	ug/L	J	0.26	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	cis-1,2-Dichloroethene	86.2	ug/L	J	0.26	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	trans-1,2-Dichloroethene	1.3	ug/L		0.12	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	U	0.19	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Carbon Tetrachloride	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Chloroform	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Benzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,1,1-Trichloroethane	1.2	ug/L		0.27	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Bromomethane	2	ug/L	UJ	0.27	2
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Chloroethane	1	ug/L	UJ	0.24	1

NWIRP BETHPAGE GM-38
SEPTEMBER 2013 EVENT
DATA SUMMARY TABLE
AQUEOUS
SDG: 1048933, HNW-065

Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Methylene Chloride	1	ug/L	U	0.32	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Bromodichloromethane	1	ug/L	UJ	0.13	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,1-Dichloroethane	4.7	ug/L	J	0.19	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,1-Dichloroethene	2.5	ug/L		0.17	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,2-Dichloropropane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	U	0.3	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	Trichloroethene	175	ug/L		0.21	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	624	17-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	245.1	17-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-RW1-MW1-091713	1048933001	2540D	17-Sep-13	1	Total Suspended Solids	5	mg/L	U	5	5
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Ethylbenzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	UJ	0.12	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	UJ	0.14	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Acrolein	30	ug/L	UJ	2.4	30
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,2-Dichloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Acrylonitrile	5	ug/L	UJ	0.89	5
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Toluene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	U	0.28	2
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Chlorodibromomethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Tetrachloroethene	1	ug/L	U	0.26	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	cis-1,2-Dichloroethene	0.72	ug/L	J	0.26	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	trans-1,2-Dichloroethene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	U	0.19	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Carbon Tetrachloride	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Chloroform	0.8	ug/L	U	0.15	1

NWIRP BETHPAGE GM-38
SEPTEMBER 2013 EVENT
DATA SUMMARY TABLE
AQUEOUS
SDG: 1048933, HNW-065

Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Benzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,1,1-Trichloroethane	1.5	ug/L		0.27	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Bromomethane	2	ug/L	UJ	0.27	2
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Chloroethane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Methylene Chloride	1	ug/L	U	0.32	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Bromodichloromethane	1	ug/L	UJ	0.13	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,1-Dichloroethane	9.7	ug/L	J	0.19	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,1-Dichloroethene	1.6	ug/L		0.17	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,2-Dichloropropane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	U	0.3	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	Trichloroethene	2.5	ug/L		0.21	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	624	17-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	245.1	17-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-RW1-MW3-091713	1048933002	2540D	17-Sep-13	1	Total Suspended Solids	5	mg/L	U	5	5
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Ethylbenzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	UJ	0.12	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	UJ	0.14	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Acrolein	30	ug/L	UJ	2.4	30
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,2-Dichloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Acrylonitrile	5	ug/L	UJ	0.89	5
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Toluene	0.31	ug/L	J	0.12	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	U	0.28	2
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Chlorodibromomethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Tetrachloroethene	1	ug/L	U	0.26	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	cis-1,2-Dichloroethene	0.77	ug/L	J	0.26	1

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DATA SUMMARY TABLE
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Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	trans-1,2-Dichloroethene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	U	0.19	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Carbon Tetrachloride	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Chloroform	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Benzene	0.59	ug/L	J	0.16	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,1,1-Trichloroethane	1	ug/L	U	0.27	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Bromomethane	2	ug/L	UJ	0.27	2
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Chloroethane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Methylene Chloride	1	ug/L	U	0.32	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Bromodichloromethane	1	ug/L	UJ	0.13	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,1-Dichloroethane	1	ug/L	UJ	0.19	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,1-Dichloroethene	1	ug/L	U	0.17	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,2-Dichloropropane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	U	0.3	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	Trichloroethene	1.5	ug/L		0.21	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	624	17-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	245.1	17-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-RW2-MW1-091713	1048933003	2540D	17-Sep-13	1	Total Suspended Solids	12	mg/L		5	5
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Ethylbenzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	UJ	0.12	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	UJ	0.14	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Acrolein	30	ug/L	UJ	2.4	30
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,2-Dichloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Acrylonitrile	5	ug/L	UJ	0.89	5
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Toluene	1	ug/L	U	0.12	1

NWIRP BETHPAGE GM-38
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DATA SUMMARY TABLE
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Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	U	0.28	2
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Chlorodibromomethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Tetrachloroethene	1.2	ug/L		0.26	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	cis-1,2-Dichloroethene	0.43	ug/L	J	0.26	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	trans-1,2-Dichloroethene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	U	0.19	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Carbon Tetrachloride	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Chloroform	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Benzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,1,1-Trichloroethane	0.61	ug/L	J	0.27	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Bromomethane	2	ug/L	UJ	0.27	2
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Chloroethane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Methylene Chloride	1	ug/L	U	0.32	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Bromodichloromethane	1	ug/L	UJ	0.13	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,1-Dichloroethane	1.2	ug/L	J	0.19	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,1-Dichloroethene	0.57	ug/L	J	0.17	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,2-Dichloropropane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	U	0.3	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	Trichloroethene	62.7	ug/L		0.21	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	624	18-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	245.1	18-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-RW3-MW1-091813	1048933004	2540D	18-Sep-13	1	Total Suspended Solids	5	mg/L	U	5	5
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Ethylbenzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	UJ	0.12	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	UJ	0.14	1

NWIRP BETHPAGE GM-38
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DATA SUMMARY TABLE
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Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Acrolein	30	ug/L	UJ	2.4	30
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,2-Dichloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Acrylonitrile	5	ug/L	UJ	0.89	5
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Toluene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	U	0.28	2
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Chlorodibromomethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Tetrachloroethene	1	ug/L	U	0.26	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	cis-1,2-Dichloroethene	1.3	ug/L	J	0.26	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	trans-1,2-Dichloroethene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	U	0.19	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Carbon Tetrachloride	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Chloroform	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Benzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,1,1-Trichloroethane	0.47	ug/L	J	0.27	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Bromomethane	2	ug/L	UJ	0.27	2
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Chloroethane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Methylene Chloride	1	ug/L	U	0.32	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Bromodichloromethane	1	ug/L	UJ	0.13	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,1-Dichloroethane	0.65	ug/L	J	0.19	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,1-Dichloroethene	0.29	ug/L	J	0.17	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,2-Dichloropropane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	U	0.3	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	Trichloroethene	174	ug/L		0.21	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	624	17-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1

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Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	245.1	17-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-RW3-MW2-091713	1048933005	2540D	17-Sep-13	1	Total Suspended Solids	5	mg/L	U	5	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Ethylbenzene	5	ug/L	U	0.8	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	cis-1,3-Dichloropropene	5	ug/L	UJ	0.6	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	trans-1,3-Dichloropropene	5	ug/L	UJ	0.7	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,4-Dichlorobenzene	5	ug/L	U	0.75	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Acrolein	150	ug/L	UJ	12	150
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,2-Dichloroethane	5	ug/L	UJ	1.1	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Acrylonitrile	25	ug/L	UJ	4.5	25
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Toluene	5	ug/L	U	0.6	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Chlorobenzene	5	ug/L	U	0.55	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	2-Chloroethylvinyl ether	10	ug/L	UJ	1.4	10
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Chlorodibromomethane	5	ug/L	U	1.1	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Tetrachloroethene	5	ug/L	U	1.3	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	cis-1,2-Dichloroethene	5	ug/L	U	1.3	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	trans-1,2-Dichloroethene	5	ug/L	U	0.6	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,3-Dichlorobenzene	5	ug/L	U	0.7	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,3-Dichloropropene, Total	5	ug/L	UJ	0.95	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Carbon Tetrachloride	5	ug/L	U	1.2	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Chloroform	2.6	ug/L	U	0.75	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Benzene	5	ug/L	U	0.8	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,1,1-Trichloroethane	5	ug/L	U	1.4	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Bromomethane	10	ug/L	UJ	1.4	10
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Chloromethane	5	ug/L	U	1.3	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Chloroethane	5	ug/L	UJ	1.2	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Vinyl Chloride	10	ug/L	U	1.2	10
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Methylene Chloride	6.2	ug/L	J	1.6	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Bromoform	10	ug/L	U	1.1	10
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Bromodichloromethane	5	ug/L	UJ	0.65	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,1-Dichloroethane	5	ug/L	U	0.95	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,1-Dichloroethene	5	ug/L	U	0.85	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Trichlorofluoromethane	5	ug/L	U	1.1	5

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Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,2-Dichloropropane	5	ug/L	U	1.2	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,1,2-Trichloroethane	5	ug/L	U	1.5	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	Trichloroethene	322	ug/L		1.1	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,1,2,2-Tetrachloroethane	5	ug/L	UJ	1.1	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	624	18-Sep-13	5	1,2-Dichlorobenzene	5	ug/L	U	1	5
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	245.1	18-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-RW3-MW3-091713	1048933006	2540D	18-Sep-13	1	Total Suspended Solids	5	mg/L	U	5	5
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Ethylbenzene	1	ug/L	U	0.16	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	UJ	0.12	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	UJ	0.14	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Acrolein	30	ug/L	UJ	2.4	30
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,2-Dichloroethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Acrylonitrile	5	ug/L	UJ	0.89	5
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Toluene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	UJ	0.28	2
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Chlorodibromomethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Tetrachloroethene	1	ug/L	U	0.26	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	cis-1,2-Dichloroethene	1	ug/L	U	0.26	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	trans-1,2-Dichloroethene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	UJ	0.19	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Carbon Tetrachloride	1	ug/L	U	0.24	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Chloroform	0.52	ug/L	U	0.15	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Benzene	1	ug/L	U	0.16	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,1,1-Trichloroethane	1	ug/L	U	0.27	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Bromomethane	2	ug/L	UJ	0.27	2
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Chloroethane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Methylene Chloride	1	ug/L	UJ	0.32	1

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Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Bromodichloromethane	1	ug/L	UJ	0.13	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,1-Dichloroethane	2.9	ug/L		0.19	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,1-Dichloroethene	1	ug/L	U	0.17	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,2-Dichloropropane	1	ug/L	U	0.24	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	U	0.3	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	Trichloroethene	5	ug/L		0.21	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	624	18-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	245.1	18-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-RW3-MW4-091713	1048933007	2540D	18-Sep-13	1	Total Suspended Solids	5	mg/L	U	5	5
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Ethylbenzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	UJ	0.12	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	UJ	0.14	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Acrolein	30	ug/L	UJ	2.4	30
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,2-Dichloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Acrylonitrile	5	ug/L	UJ	0.89	5
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Toluene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	U	0.28	2
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Chlorodibromomethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Chloroform	5.2	ug/L	J	0.15	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	cis-1,2-Dichloroethene	14.7	ug/L		0.26	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	trans-1,2-Dichloroethene	1	ug/L	U	0.12	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	U	0.19	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Carbon Tetrachloride	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	cis-1,2-Dichloroethene	14.1	ug/L	J	0.26	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Benzene	1	ug/L	UJ	0.16	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Tetrachloroethene	1.5	ug/L	J	0.26	1

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DATA SUMMARY TABLE
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Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Bromomethane	2	ug/L	UJ	0.27	2
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Chloroethane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Methylene Chloride	1	ug/L	U	0.32	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Bromodichloromethane	1	ug/L	UJ	0.13	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Tetrachloroethene	0.77	ug/L	J	0.26	1
NWIRP-GM-38-GW-DUP01-091713	1048933009	624	17-Sep-13	1	Trichloroethene	26.7	ug/L		0.21	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,2-Dichloropropane	1	ug/L	UJ	0.24	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	U	0.3	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	Trichloroethene	27	ug/L		0.21	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-GW-TP1-091713	1048933008	624	17-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1
NWIRP-GM-38-GW-TP1-091713	1048933008	245.1	17-Sep-13	1	Mercury, Total	0.0005	mg/L	U	0.0002	0.0005
NWIRP-GM-38-GW-TP1-091713	1048933008	2540D	17-Sep-13	1	Total Suspended Solids	5	mg/L	U	5	5
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Ethylbenzene	1	ug/L	U	0.16	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	cis-1,3-Dichloropropene	1	ug/L	U	0.12	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	trans-1,3-Dichloropropene	1	ug/L	U	0.14	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,4-Dichlorobenzene	1	ug/L	U	0.15	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Acrolein	30	ug/L	U	2.4	30
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,2-Dichloroethane	1	ug/L	U	0.22	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Acrylonitrile	5	ug/L	U	0.89	5
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Toluene	1	ug/L	U	0.12	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Chlorobenzene	1	ug/L	U	0.11	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	2-Chloroethylvinyl ether	2	ug/L	U	0.28	2
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Chlorodibromomethane	1	ug/L	U	0.22	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Tetrachloroethene	1	ug/L	U	0.26	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	cis-1,2-Dichloroethene	1	ug/L	U	0.26	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	trans-1,2-Dichloroethene	1	ug/L	U	0.12	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,3-Dichlorobenzene	1	ug/L	U	0.14	1

NWIRP BETHPAGE GM-38
SEPTEMBER 2013 EVENT
DATA SUMMARY TABLE
AQUEOUS
SDG: 1048933, HNW-065

Sample Name	Lab ID	Analytical Method	Sample Date	Dilution Factor	Analyte	Result	Unit	Qualifier	MDL	RL
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,3-Dichloropropene, Total	1	ug/L	U	0.19	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Carbon Tetrachloride	1	ug/L	U	0.24	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Chloroform	1	ug/L	U	0.15	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Benzene	1	ug/L	U	0.16	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,1,1-Trichloroethane	1	ug/L	UJ	0.27	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Bromomethane	2	ug/L	U	0.27	2
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Chloromethane	1	ug/L	U	0.25	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Chloroethane	1	ug/L	U	0.24	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Vinyl Chloride	2	ug/L	U	0.24	2
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Methylene Chloride	0.47	ug/L	J	0.32	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Bromoform	2	ug/L	U	0.21	2
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Bromodichloromethane	1	ug/L	U	0.13	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,1-Dichloroethane	1	ug/L	U	0.19	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,1-Dichloroethene	1	ug/L	U	0.17	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Trichlorofluoromethane	1	ug/L	U	0.21	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,2-Dichloropropane	1	ug/L	U	0.24	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,1,2-Trichloroethane	1	ug/L	UJ	0.3	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	Trichloroethene	1	ug/L	U	0.21	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,1,2,2-Tetrachloroethane	1	ug/L	UJ	0.22	1
NWIRP-GM-38-TB-091713	1048933011	624	17-Sep-13	1	1,2-Dichlorobenzene	1	ug/L	U	0.2	1