Quarterly Operations Report
First Quarter 2012

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

August 2012

Prepared for:

Naval Facilities Engineering Command Mid-Atlantic
9742 Maryland Avenue
Norfolk, VA 23511

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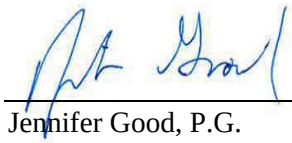
Patrick Schauble, P.E. — Date
Program Manager



8/6/12

Jennifer Good, P.G. — Date
Project Manager

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

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
ECOR	ECOR Federal Services, LLC.
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
NGC	Northrop Grumman Corporation
NWIRP	Naval Weapons Industrial Reserve Plant
NYDOH	New York Department of Health
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	United States Environmental Protection Agency
VC	vinyl chloride
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 United States Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Mid-Atlantic, under Contract No. N40085-10-D-9409, Contract Task Order No. 0002. H&S assumed operational responsibility of the GWTP from ECOR Federal Services, LLC (ECOR) on 1 June 2011. This First Quarter 2012 Operations Report details activities that occurred from January 2012 to March 2012. Data collected and operational activities were performed by H&S in accordance with the *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."

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 the Northrop Grumman Corporation (NGC) until September 1998. NWIRP Bethpage is bordered on the north, west, and south by property owned, or formerly owned, by NGC 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 NGC. The GM-38 Area is approximately 8,500 feet south southeast and hydraulically down-gradient of NWIRP Bethpage. The GWTP is located within a utility easement with a street address of 100 Broadway.

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 Northrop 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, liquid-phase carbon treatment and pH adjustment (if needed). 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 contamination in the GM-38 Area groundwater. 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 potassium permanganate vessel (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 passed 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 OPERATION 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.

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 the reporting period:

- The system was shut down from 3-5 January 2012 in order to change out the carbon in VGAC 1 and VGAC 2. The LGAC units were also backwashed during this time.

- On 22 March 2012, the annual backflow preventer inspection was performed. Results were submitted to Bethpage Water District and New York Department of Health (NYDOH), as required.

2.2 Non-routine Maintenance Activities

The following non-routine activities were performed during the First Quarter 2012:

- On 20 January, a vapor leak was observed in a fitting between the air stripper and VGAC train. A temporary solution was enacted while further evaluation was conducted; design of a permanent solution is currently underway.

- On 8 February, the system went down due to a high level AS alarm. The system was restarted following response by the operator, resetting the LGAC feed pump.

- On 25 February, 13 March, 14 March, and 16 March, the system went down due to a power interruption apparently caused by high winds in the area. On each occasion, the system was restarted upon arrival by the operator.

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. In doing so, impacts on water supply wells and currently unaffected portions of the groundwater aquifer will be minimized. The GWTP is not intended to remediate groundwater contamination in the local aquifer to non-detectable levels (TtEC 2010a). To monitor GWTP effectiveness and for compliance with Federal and State requirements, several process (water and vapor) samples are collected on a monthly basis. 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 First Quarter 2012 are presented in **Table 1**. The data demonstrates that all permitted constituents were in compliance with regulatory requirements during the First Quarter 2012. **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 First Quarter 2012.

Monthly DMRs for the First Quarter 2012 (January – March 2012) are included as **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, 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 First Quarter 2012 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 permitted constituents were in compliance regulatory requirements during the 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 14 monitoring wells (as summarized in **Table 4**), three recovery wells (RW-1, RW-2, RW-3) and one injection well (IW-1). Well locations are depicted on **Figure 3**.

Depth to water (DTW) measurements are collected from 12 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-1). Samples were collected using bladder pumps in accordance with the United States Environmental Protection Agency (USEPA) low-flow sampling methodologies. Results of the groundwater sampling for the First Quarter 2012 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). RW-1 MW-1 is located approximately 140 feet northwest of RW-1 and RW-1 MW-2 is located approximately 50 feet north of RW-1. RW-1 MW-3 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 RW-1 MW1 and RW-1 MW-3 are also monitored for water quality.

Recovery Well 2 (RW-2) Monitoring Wells
The RW-2 cluster consists of three monitoring wells screened between 470 and 510 feet bgs. RW-2 MW-1 is located approximately 60 feet northwest of RW-2, RW-2 MW-2 is located approximately 20 feet west of RW-2, and RW-2 MW-3 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.

Recovery Well 3 (RW-3) Monitoring Wells
The RW-3 cluster consists of four monitoring wells; RW-3 MW-1 and RW-3 MW-3 are screened between 320 and 340 ft bgs, RW-3 MW-2 and RW-3 MW-4 are screened between 475 and 495 feet bgs. RW-3 MW-1 and RW-3 MW-2 are located approximately 500 feet west of the GM-38 cluster, at the intersection of Arthur Avenue and Leroy Avenue. RW-3 MW-3 and RW-3 MW-4 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.

TP-1
TP-1 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.

Injection Well 1 (IW-1) Monitoring Well
There is one monitoring well associated with injection well IW-1. IW-1 MW-1 is screened between 130 and 150 feet bgs, is located approximately 20 feet south of IW-1, and is only hydraulically monitored.

3.3.1 Groundwater Quality Results

H&S collected groundwater samples for the First Quarter 2012 from 7-8 March 212. 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 are analyzed for VOCs via USEPA Method 624, mercury via USEPA Method SW846 7470A, and total suspended solids (TSS) via USEPA Method SM20 2540D. Validated analytical results of samples

collected during the March 2012 monitoring event are summarized in **Table 6.** The data validation reports are presented in **Appendix D**. Raw analytical data is presented in **Appendix E**.

3.3.2 Quality Assurance/Quality Control Sampling

Quality assurance/quality control (QA/QC) samples were collected during each quarterly groundwater monitoring event in accordance with the *Final Sampling and Analysis Plan* (TtEC 2010a). These samples consisted of blind field duplicates (collected from RW3-MW3 during the First Quarter 2012), 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 or trip blank samples, indicating that there was no apparent cross-contamination of samples during sample collection or transport.

For field duplicate samples, the precision between the original sample and its duplicate is evaluated by calculating the relative percent difference (RPD). RPDs for the First Quarter 2012 sampling event are presented in the data validation report in **Appendix D**. As indicated, all of the calculated RPDs were under 10%. 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 First Quarter 2012 are presented in **Table 7**. 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 First Quarter 2012 monitoring event are presented in Figures 4 through 13 and discussed below.

Figure 4 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 consistently below 400 µg/L since May 2011. Concentrations of cis-1,2-DCE have followed a similar trend, decreasing from a high of 160 µg/L in February 2010 to below 40 µg/L in February and March 2012. PCE concentrations have also exhibited decreasing trends over time, with concentrations decreasing from 180 µg/L in February 2010 to a low of 78.9 µg/L in March 2012. Concentrations of VC have decreased below initial concentrations in 2010. After reaching a maximum concentration of 61 µg/L in February 2010, concentrations have decreased below 5.0 µg/L in the final quarter of 2011 and first quarter of 2012.

Figure 5 presents concentrations detected at recovery well RW-3. Concentrations of TCE have decreased from initial concentrations in February 2010 (660 µg/L), falling below 300 µg/L several months throughout 2011, with a low of 230 µg/L in June 2011. Concentrations have remained just above 300 µg/L in the first quarter of 2012. Concentrations of cis-1,2-DCE have remained consistently below 4.0 µg/L, and PCE has been detected during only one sampling event in June 2011 (0.69 J µg/L).

Figure 6 presents concentrations detected at RW1-MW1. Concentrations of TCE and cis-1,2-DCE in March 2012 (115 µg/L and 179 µg/L, respectively) were higher than initial concentrations observed in May 2005 (53.6 µg/L and 78.6 µg/L, respectively). However, TCE and cis-1,2-DCE remain below the maximum concentrations observed in May 2009 (140 µg/L and 180 µg/L, respectively). Concentrations of PCE have remained consistently below 1.0 µg/L.

Figure 7 presents concentrations detected at RW1-MW3. Concentrations of cis-1,2-DCE and PCE have consistently remained below 1.0 µg/L. Concentrations of TCE have generally remained below 2.0 µg/L, though increased slightly to 2.2 µg/L in March 2012.

Figure 8 presents concentrations detected at RW2-MW1. Concentrations of TCE have decreased substantially from original concentrations observed in May and July 2005 (37.6 µg/L and 34.6 µg/L, respectively). In April 2010, TCE decreased to less than 1.0 µg/L and has remained below 2.0 µg/L. Concentrations of cis-1,2-DCE have remained consistently below 2.0 µg/L, and PCE has not been detected during any sampling event.

Figure 9 presents concentrations detected at RW3-MW1. Concentrations of TCE in March 2012 (59.0 µg/L) have increased since 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). 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 10 presents concentrations detected at RW3-MW2. TCE reached a maximum concentration of 211 µg/L in April 2010, having increased from initial concentrations observed in January 2010 (160 µg/L). The concentration of TCE detected in March 2012 (96.5 µg/L) has decreased from the initial collected sample, though no overall trend is discernible. Concentrations of cis-1,2-DCE at this location have consistently remained between 1.0 – 2.0 µg/L, and PCE has not been detected during any sampling event.

Figure 11 presents concentrations detected at RW3-MW3. Maximum concentrations of TCE were detected in April 2010 (397 µg/L), having increased slightly from initial concentrations in January 2010 (350 µg/L). The concentration of TCE detected in March 2012 (312 µg/L) has decreased from the initial collected sample, though no overall trend is discernible. Concentrations of cis-1,2-DCE have remained near 2.0 µg/L and PCE has remained below 1.0 µg/L.

Figure 12 presents concentrations detected at RW3-MW4. TCE concentrations have exhibited a decreasing trend since the initial sampling event in January 2010 (21 µg/L) with a detection of 4.6 µg/L in March 2012. PCE had not been detected during any sampling event, and cis-1,2-DCE has not been detected since its detection during the initial sampling event in January 2010 (0.46 µg/L).

Figure 13 presents concentrations detected at TP-01. TCE concentrations have exhibited a decreasing trend since the initial sampling event in January 2010 (65 µg/L), decreasing to 38.1 µg/L in March 2012; concentrations have remained fairly consistently at this level since June 2011. A similar trend exists for concentrations of cis-1,2-DCE; concentrations have decreased from an initial value of 190 µg/L in

January 2010 to 53.3 µg/L in March 2012, with concentrations fluctuating over time. PCE concentrations have remained consistent over time, ranging from 3.3 – 4.7 µg/L.

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 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 is being made toward these goals. The GWTP should continue to be operated and monitored on a quarterly basis using the 14 monitoring wells. In addition, the plant should be assessed to optimize the system's performance and an evaluation conducted to better determine the capture zone.

5.0 REFERENCES

Tetra Tech EC, Inc. (TtEC). 2010a. *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). 2010b. *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
First Quarter 2012

SPDES Parameters	Daily Maximum Goal	Units	January 2012									
Process Stream			RW-1	RW-3	Combined Influent [1] [2] (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) [2]	Treated Effluent Duplicate
Well Depth		ft	500	500	NA	NA	NA	NA	NA	NA	500	500
Screened Interval		ft	470-500	470-500	NA	NA	NA	NA	NA	NA	470-500	470-500
Sampling Date			1/8/12									
Average Flowrate	1100	GPM	739	273	1,012	NR	991	NR	NR	NR	1,020	NR
Total Flow		gallons	32,993,460	12,164,600	45,158,060	NR	44,220,620	NR	NR	NR	45,523,120	NR
pH	5.5 - 8.5	SU	6.02	8.18	6.60	7.99	7.90	7.79 8	7.54	7.62	7.60	7.60
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	2.7 J	2.6 J	2.7 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	6.4	ND	4.7	ND	ND	ND	ND	ND	ND	ND
cis 1,2-Dichloroethene	5	µg/L	43.4	1.5 J	32.1 J	0.78 J	0.79 J	0.95 J	0.91 J	0.92 J	1.0 J	0.94 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	92.7	ND	68	0.51 J	0.54 J	ND	ND	ND	ND	ND
1,1,1-Trichloroethene	5	µg/L	6.7	ND	4.9	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	µg/L	364	317	351	3.8	3.8	0.40 J	0.96 J	0.46 J	0.70 J	0.71 J
Vinyl Chloride	2	µg/L	3.4 J	ND	2.5 J	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	5	5	ND	ND	6	ND	ND	ND	ND

Table 1
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Results
First Quarter 2012

SPDES Parameters	Daily Maximum Goal	Units	February 2012									
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	500	500	NA	NA	NA	NA	NA	NA	NA	NA
Screened Interval		ft	470-500	470-500	NA	NA	NA	NA	NA	NA	NA	NA
Sampling Date			2/6/12									
Average Flowrate	1100	GPM	758	217	976	NR	991	NR	NR	NR	1007	NR
Total Flow		gallons	31,668,400	9,074,540	40,742,940	NR	40,648,760	NR	NR	NR	42,066,120	NR
pH	5.5 - 8.5	SU	5.98	6.06	6.00	6.07	7.01	7.61	7.53	7.64	7.35	7.35
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	2.7 J	2.3 J	2.6 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	5.4	1.7 J	4.6 J	ND	ND	ND	ND	ND	ND	ND
cis 1,2-Dichloroethene	5	µg/L	38.6	1.6 J	30.4 J	0.66 J	0.73 J	0.84 J	0.83 J	0.89 J	0.9 J	0.87 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	97.6	ND	76	0.56 J	0.52 J	ND	ND	ND	ND	ND
1,1,1-Trichloroethene	5	µg/L	4.7 J	ND	3.7 J	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	µg/L	338	308	331	3.2	3.1	0.34 J	0.78 J	0.34 J	0.65 J	0.46 J
Vinyl Chloride	2	µg/L	4.3 J	ND	3.3 J	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	ND	ND	ND	ND	5	5	ND	ND	ND	ND

Table 1
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Results
First Quarter 2012

SPDES Parameters	Daily Maximum Goal	Units	March 2012									
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	500	500	NA	NA	NA	NA	NA	NA	NA	NA
Screened Interval		ft	470-500	470-500	NA	NA	NA	NA	NA	NA	NA	NA
Sampling Date			3/7/12									
Average Flowrate	1100	GPM	788	201	989	NR	986	NR	NR	NR	1,010	NR
Total Flow		gallons	35,168,800	8,966,960	44,135,760	NR	44,006,740	NR	NR	NR	45,100,947	NR
pH	5.5 - 8.5	SU	6.00	6.15	6.03	6.84	7.31	7.60	7.65	7.68	7.53	7.53
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	2.6 J	2.3 J	2.5 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 J	1.2 J	4.2 J	ND	ND	ND	ND	ND	ND	ND
cis 1,2-Dichloroethene	5	µg/L	38.4	1.8 J	31.0 J	0.8 J	0.90 J	1.0	1.0 J	1.0	1.0 J	1.0 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	78.9	ND	63	0.63 J	0.60 J	ND	ND	ND	ND	ND
1,1,1-Trichloroethene	5	µg/L	5.4 J	ND	4.3 J	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	µg/L	333	307	328	3.9	3.9	0.46 J	1.1	0.47 J	0.76 J	0.73 J
Vinyl Chloride	2	µg/L	2.7 J	ND	2.2 J	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	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
J - Estimated result less than reporting limit
NA - Not Applicable
NR - Not Recorded
gpm - gallons per minute

(1) Influent concentrations presented are the weighted average concentrations of RW-1 and RW-3.
(2) System downtime occurred from 3-5 January 2012 for carbon changeout of the two VGAC units.

Table 2
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
First Quarter 2012

DAR Parameters	SGC	Units	January 2012					February 2012				
Process Stream			Influent (VCI1)	VC12	VC23	Effluent	Effluent Duplicate	Influent (VCI1)	VC12	VC23	Effluent	Effluent Duplicate
Sampling Date			1/20/12					2/17/12				
Average Flowrate		CFM	NR	NR	NR	8,186	NR	NR	NR	NR	8,562	NR
Total Flow [1]		ft^3	NR	NR	NR	365,408,160	NR	NR	NR	NR	357,560,509	NR
Total Flow [2]		m^3	NR	NR	NR	10,347,207	NR	NR	NR	NR	10,124,986	NR
1,2-Dichloroethane	-	$\mu g/m^3$	5 J	ND	ND	ND	ND	8 J	1 J	1 J	ND	ND
cis 1,2-Dichloroethene	-	$\mu g/m^3$	530	2.2 J	3.2	ND	10	390	78	2.5 J	0.86 J	ND
trans 1,2-Dichloroethene	-	$\mu g/m^3$	ND	ND	ND	ND	ND	6.6 J	1.7 J	ND	ND	ND
1,2-Dichloroethene (total)	-	$\mu g/m^3$	530	2 J	3	ND	ND	400	81	3 J	1 J	ND
Toluene	37000	$\mu g/m^3$	9 J	ND	ND	ND	ND	25	4.9	0.83 J	0.93 J	0.5 J
Xylene	4300	$\mu g/m^3$	8.1 J	ND	0.91 J	ND	ND	18	3.2 J	1.4 J	1.3 J	ND
1,1,2-Trichloroethane	-	$\mu g/m^3$	ND	ND	ND	ND	ND	4.8 J	0.9 J	0.52 J	ND	ND
Trichloroethene	14000	$\mu g/m^3$	5,700	36	20	4.7	15	3,400	800	17	12	3.9 J
Vinyl Chloride	180000	$\mu g/m^3$	39	36	44	ND	ND	28	10	26	ND	ND
Tetrachloroethene	1000	$\mu g/m^3$	1,500	3.5 J	3.6 J	ND	3.7 J	970	95	5 J	4.6 J	2.1 J

Table 2
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
First Quarter 2012

DAR Parameters	SGC	Units	March 2012				
Process Stream			Influent (VCl1)	VC12	VC23	Effluent	Effluent Duplicate
Sampling Date			3/14/12				
Average Flowrate		CFM	NR	NR	NR	8,530	NR
Total Flow [(1)]		ft^3	NR	NR	NR	380,768,040	NR
Total Flow [(2)]		m^3	NR	NR	NR	10,782,150	NR
1,2-Dichloroethane	-	$\mu g/m^3$	6 J	1.20 J	ND	ND	ND
cis 1,2-Dichloroethene	-	$\mu g/m^3$	460	68	1.2 J	0.59 J	ND
trans 1,2-Dichloroethene	-	$\mu g/m^3$	6.7 J	0.98 J	ND	ND	ND
1,2-Dichloroethene (total)	-	$\mu g/m^3$	480	68	1 J	0.59 J	ND
Toluene	37000	$\mu g/m^3$	6.4 J	7.6	0.7 J	1.2 J	1.1 J
Xylene	4300	$\mu g/m^3$	9.3 J	6.8	1.2 J	ND	0.54 J
1,1,2-Trichloroethane	-	$\mu g/m^3$	ND	ND	ND	ND	ND
Trichloroethene	14000	$\mu g/m^3$	4,200	820	13	9.7	4.4
Vinyl Chloride	180000	$\mu g/m^3$	28	7	18	ND	ND
Tetrachloroethene	1000	$\mu g/m^3$	1,100	200	4.6 J	3.7 J	2.3 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

Table 3
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Stack Emissions
First Quarter 2012

DAR Parameters	Discharge Goal	Units	January 2012	February 2012	March 2012
Sampling Date			1/20/12	2/17/12	3/14/12
Average Flowrate		CFM	8,186	8,562	8,530
Total Flow		ft^3	365,408,160	357,560,509	380,768,040
Total Flow		m^3	10,347,207	10,124,986	10,782,150
Trichloroethene	0.09	lb/hr	0.0001	0.0004	0.0003
Vinyl Chloride	0.01	lb/hr	0.0000	0.0000	0.0000
1,2 Dichloroethene	0.03	lb/hr	0.0000	0.0000	0.0000
1,2-Dichloroethane	BRT	lb/hr	0.0000	0.0000	0.0000
Toluene	BRT	lb/hr	0.0000	0.0000	0.0000
Xylene	BRT	lb/hr	0.0000	0.0000	0.0000
1,1,2-Trichloroethane	BRT	lb/hr	0.0000	0.0000	0.0000
Tetrachloroethene	--	lb/hr	0.0000	0.0001	0.0001

Notes:
BRT - Below reporting thresholds
lb/hr - pounds per hour
DAR - Divison of Air Resources
CFM - Cubic feet per minute
Stack Emissions = average flowrate (cfm) * $(0.3048^{\wedge 3})m^3/ft^3$ * conc.(mg/m^3) * 0.000001 g/mg * 0.002205 lbs/g * 60 min/hr * operational time (hours)

Table 4
GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Level Measurements
March 2012

Monitoring Well ID	Date	Time	Well Elevation (ft amsl)	Total Depth (ft)	Screen Interval (ft)	Depth to Water (ft)	Groundwater Elevation (ft amsl)
RW1-MW1	03/07/12	0952	85.86	435	395-435	34.35	51.51
RW1-MW2	03/07/12	0838	87.35	435	395-435	36.44	50.91
RW1-MW3	03/07/12	0920	80.34	435	395-435	28.45	51.89
RW2-MW1	03/07/12	0857	90.75	510	470-510	37.45	53.30
RW2-MW2	03/07/12	0941	90.15	510	470-510	36.89	53.26
RW2-MW3	03/07/12	0939	89.75	510	470-510	36.43	53.32
RW3-MW1	03/07/12	1705	92.22	350	330-350	36.26	55.96
RW3-MW2	03/07/12	1510	91.98	495	475-495	38.71	53.27
RW3-MW3	03/07/12	1345	92.98	340	320-340	37.21	55.77
RW3-MW4	03/07/12	1150	92.92	495	475-495	39.15	53.77
TP-1	03/07/12	0822	85.91	470	450-470	32.81	53.10
IW1-MW1	03/07/12	0842	89.41	150	130-150	34.58	54.83
GM38D	NA	NA	91.37	340	320-340	NA	NA
GM382D	NA	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
March 2012

Location	Temp (ºC)	pH (SU)	S.C. (uS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Color (Visual)
RW1-MW1	15.07	4.60	193	0.43	318.5	14.6	clear
RW1-MW3	13.99	5.14	182	0.22	138.8	2.81	clear
RW2-MW1	12.43	7.75	91	2.49	79.2	5.23	clear
RW3-MW1	8.47	5.02	114	3.40	232.1	115	cloudy orange
RW3-MW2	13.57	4.92	77	3.39	265.9	5.01	clear
RW3-MW3	13.61	5.66	131	0.49	106.2	1.55	clear
RW3-MW4	13.99	4.67	116	0.33	265.2	3.21	clear
TP-1	12.63	5.22	185	0.73	239.9	4.01	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
March 2012

Sample ID	RW1-MW1	RW1-MW3	RW2-MW1	RW3-MW1	RW3-MW2	RW3-MW3		RW3-MW4	TP-01
Sample Date	3/8/2012	3/8/2012	3/7/2012	3/7/2012	3/8/2012	3/7/2012	3/7/2012	3/7/2012	3/8/2012
Comments							Duplicate		
VOCS (EPA 624) ug/L									
Benzene	ND	ND	0.22 J	ND	ND	ND	ND	ND	ND
Chloroform	ND	0.73 J	ND	ND	ND	0.42 J	0.42 J	0.38 J	0.74 J
1,1-dichloroethane	5.2	8.4	0.50 J	0.90 J	0.41 J	3.3	3.3	1.8	3.7
1,2-dichloroethane	ND	ND	ND	0.43 J	ND	ND	ND	ND	ND
1,1-dichloroethene	2.7	1.8	ND	0.47 J	0.27 J	1.9	1.9	0.21 J	1
cis-1,2-dichloroethene	179	0.68 J	0.34 J	0.37 J	1.3	2.1	2.1	ND	53.3
trans-1,2-dichloroethene	3.0	ND	ND	ND	ND	ND	ND	ND	0.87 J
Tetrachloroethene	ND	0.65 J	ND	1.0	ND	0.72 J	0.69 J	ND	4.7
Toluene	ND	ND	0.19 J	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	0.96 J	1.8	ND	0.58 J	ND	0.84 J	0.87 J	ND	0.57 J
1,1,2-trichloroethane	ND	0.70 J	ND	ND	0.32 J	ND	ND	ND	ND
Trichloroethene	115	2.2	0.67 J	59.0	96.5	312	325	4.6	38.1
Mercury (EPA 245.1) ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	16	5	6	NR	8	ND	ND	5	7

Note:

J = estimated value
ND = not detected
mg/L = milligrams per liter
µg/L = micrograms per liter

Samples were analyzed for TCL VOCs by Method 624. Only those analytes 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

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
Comments										Duplicate			
Well Depth (Ft)	435												
Screened Interval (Ft)	395-435												
VOCS (EPA 624) ug/L													
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acetone	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND
Bromodichloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
Bromoform	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
Bromomethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
Carbon tetrachloride	ND	ND	0.32J	ND	ND	ND	0.17J	ND	NR	NR	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND
Dibromochloromethane	NR	NR	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Chloroform	ND	0.7J	1.1	ND	0.70J	0.65J	0.56J	0.55J	NR	NR	ND	ND	ND
Chloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	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
1,2-dichloroethane	ND	ND	0.29J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	1.3	2.8	3.1	1.7J	1.9	1.7	1.7	1.9	0.85 J	2.1 J	2.3 J	2.1	2.7
cis-1,2-dichloroethene	78.6	80.4	180D	130	121	118	108	121	55.8 J	145 J	164	132	179
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
1,2-dichloropropane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND
Methylene chloride	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	NR	ND	ND	ND
Tetrachloroethene	ND	ND	0.72J	ND	0.42J	ND	ND	ND	ND	ND	0.36 J	ND	ND
Toluene	ND	0.33J	0.68	ND	ND	ND	ND	ND	NR	NR	ND	ND	ND
1,1,1-trichloroethane	ND	ND	0.71J	ND	0.52J	0.43J	0.53J	0.79J	ND	0.63 J	1.1 J	0.66 J	0.96 J
1,1,2-trichloroethane	ND	ND	0.58J	NR	ND	ND	ND	ND	NR	NR	ND	0.33 J	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
Trichlorofluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Vinyl chloride	ND	ND	1.6	ND	ND	ND	0.17J	ND	ND	0.38 J	0.29 J	ND	ND
Mercury (EPA 245.1) ug/L	NR	NR	ND	0.20	<0.20	<0.20	<0.20	<0.20	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

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

Sample ID	RW1-MW2			RW1-MW3								
Sample Date	5/4/2005	7/22/2005	5/28/2009	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
Comments												
Well Depth (Ft)	435			435								
Screened Interval (Ft)	395-435			395-435								
VOCS (EPA 624) ug/L												
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acetone	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Bromodichloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Bromoform	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Bromomethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Dibromochloromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
Chloroethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Chloroform	ND	1.4	ND	0.67J	0.80J	0.47J	0.69J	0.73J	NR	0.97 J	ND	0.73 J
Chloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,1-dichloroethane	4.6	5.5	3.4	2.4	4.6	1.5	2.3	2.4	9.3	10.1 J	2.1	8.4
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	3.2	12.3	ND	0.42J	1.10	ND	0.28J	ND	1.8	2.2 J	ND	1.8
cis-1,2-dichloroethene	181.0	47.6	160.0	0.54J	0.48J	0.36J	0.55J	0.58J	0.59 J	0.43 J	0.55 J	0.68 J
trans-1,2-dichloroethene	2.5	7.6	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Methylene chloride	1.0	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Tetrachloroethene	ND	134.0	19.0	ND	049J	ND	ND	ND	0.33 J	0.62 J	ND	0.65 J
Toluene	0.32J	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
1,1,1-trichloroethane	1.3	1.0	ND	0.41J	0.98J	ND	0.26J	0.33J	1.6	2.7 J	ND	ND
1,1,2-trichloroethane	ND	0.65J	ND	0.62J	0.60J	0.36J	0.55J	0.41J	NR	0.57 J	0.63 J	0.70 J
Trichloroethene	158.0	198.0	200.0	1.2	1.6	0.58J	0.91J	1.0	1.4	1.8 J	1.0 J	2.2
Trichlorofluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
Vinyl chloride	12.9	187.0	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury (EPA 245.1) ug/L	NR	NR	0.20	NR	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	NR	4.0	NR	8.0	<4.0	<4.0	<4.0	ND	ND	ND	5

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

Sample ID	RW2-MW1											
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
Comments				EPA 624								
Well Depth (Ft)	510											
Screened Interval (Ft)	470-510											
VOCS (EPA 624) ug/L												
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acetone	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Benzene	ND	ND	ND	ND	0.15J	0.69J	0.58J	0.30J	NR	0.22 J	0.27 J	0.22 J
Bromodichloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Bromoform	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Bromomethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Dibromochloromethane	NR	NR	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Chloroethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Chloromethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	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
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	ND	0.58J	0.55J	0.63J	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
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Methylene chloride	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	NR	ND	ND	ND	ND	NR	ND	ND	ND
Tetrachloroethene	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
1,1,1-trichloroethane	ND	0.37J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	NR	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
Trichlorofluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury (EPA 245.1) ug/L	NR	NR	0.05J	NR	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	NR	2260.0	NR	58.0	<4.0	<4.0	<4.0	181	5	36	6

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

Sample ID	RW2-MW3			RW3-MW1										
Sample Date	5/3/2005	7/20/2005	5/28/2009	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
Comments									duplicate				duplicate	
Well Depth (Ft)	510			350										
Screened Interval (Ft)	470-510			330-350										
VOCS (EPA 624) ug/L														
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
Acetone	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Bromoform	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Bromomethane	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	0.19J	ND	ND	NR	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Dibromochloromethane	NR	NR	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Chloroethane	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	0.20J	ND	ND	NR	ND	ND	ND	ND
Chloromethane	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
1,2-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
1,4-dichlorobenzene	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
1,1-dichloroethane	0.68J	0.31J	1.4	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
1,2-dichloroethane	ND	ND	ND	0.27J	ND	ND	ND	ND	ND	ND	0.57 J	ND	ND	0.43 J
1,1-dichloroethene	ND	ND	0.42J	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
cis-1,2-dichloroethene	0.40J	0.66J	2.3	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
trans-1,2-dichloroethene	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	ND	NR	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Methylene chloride	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Tetrachloroethene	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
Toluene	ND	0.50J	0.39J	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
1,1,1-trichloroethane	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
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Trichloroethene	16.2	20.6	18.0	35.0	53.2	52.3	77.6	76.2	77.9	63.1	72.4 J	51.0	55.2	59.0
Trichlorofluoromethane	NR	NR	ND	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury (EPA 245.1) ug/L	NR	NR	ND	NR	<0.20	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	NR	14.8	NR	<4.0	<4.0	<4.0	<4.0	<4.0	5160	ND	ND	ND	NR

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

Sample ID	RW2-MW2		RW3-MW2										
Sample Date	5/4/2005	7/21/2005	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
Comments				duplicate			duplicate						
Well Depth (Ft)	510		495										
Screened Interval (Ft)	470-510		475-495										
VOCS (EPA 624) ug/L													
Acrolein	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acetone	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Bromodichloromethane	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Bromoform	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Bromomethane	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Dibromochloromethane	NR	NR	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Chloroethane	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Chloromethane	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
1,2-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,3-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,4-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,1-dichloroethane	ND	0.78J	ND	ND	0.54J	ND	ND	ND	ND	0.52 J	0.37 J	ND	0.41 J
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	ND	0.41J	ND	ND	1.2	ND	ND	ND	ND	0.57 J	0.45 J	0.27 J	0.27 J
cis-1,2-dichloroethene	0.33J	0.41J	1.5J	1.6J	2.4	1.1	0.92J	0.92J	1.6	1.7	1.1	1.4	1.3
trans-1,2-dichloroethene	ND	ND	ND	ND	0.43 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Methylene chloride	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	NR	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	0.33J	0.53J	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
1,1,1-trichloroethane	ND	ND	ND	ND	0.58J	ND	ND	ND	ND	0.39 J	0.43 J	ND	ND
1,1,2-trichloroethane	D	ND	ND	ND	ND	ND	0.25 J	0.27J	ND	NR	0.32 J	0.32 J	0.32 J
Trichloroethene	7.8	13.8	160	170	211	73	58.2	60.9	110	135	151	71.9	96.5
Trichlorofluoromethane	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury (EPA 245.1) ug/L	NR	NR	NR	NR	<0.20	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	NR	NR	NR	5.0	6.0	ND	10.0	10.0	7	6	ND	8

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

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
Comments			duplicate								duplicate
Well Depth (Ft)	340										
Screened Interval (Ft)	320-340										
VOCS (EPA 624) ug/L											
Acrolein	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
Acetone	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Bromodichloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Bromoform	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Bromomethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Dibromochloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Chloroethane	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	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
Chloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
1,2-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
1,3-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
1,4-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	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
1,2-dichloroethane	ND	0.52J	0.54J	ND	ND	ND	0.37 J	ND	ND	ND	ND
1,1-dichloroethene	ND	1.1	1.3	1.2	ND	0.96J	2.6	1.8 J	0.96 J	1.9	1.9
cis-1,2-dichloroethene	ND	2.1	2.1	1.7	ND	2.3	1.2	1.9	2.1	2.1	2.1
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
cis-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
trans-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Methylene chloride	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Tetrachloroethene	ND	0.45J	0.49J	ND	ND	ND	0.40 J	0.50 J	ND	0.72 J	0.69 J
Toluene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
1,1,1-trichloroethane	ND	0.95J	1.0J	0.72J	ND	0.62J	1.3	1.0 J	0.49 J	0.84 J	0.87 J
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND
Trichloroethene	350	397	382	297	8.5	288	331	215 J	250	312	325
Trichlorofluoromethane	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury (EPA 245.1) ug/L	NR	<0.20	<0.20	<0.20	<0.20	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

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

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
Comments				duplicate						
Well Depth (Ft)	495									
Screened Interval (Ft)	475-495									
VOCS (EPA 624) ug/L										
Acrolein	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acrylonitrile	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Acetone	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Bromodichloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Bromoform	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Bromomethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Dibromochloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Chloroethane	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Chloroform	ND	ND	ND	ND	0.32J	ND	NR	0.87 J	ND	0.38 J
Chloromethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
1,2-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,3-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
1,4-dichlorobenzene	NR	NR	NR	NR	NR	NR	NR	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
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	1.0	ND	ND	ND	0.86J	ND	0.20 J	0.53 J	ND	0.21 J
cis-1,2-dichloroethene	0.46J	ND	ND	ND	1.6	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
cis-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
trans-1,3-dichloropropene	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Methylene chloride	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
1,1,2,2-tetrachloroethane	NR	ND	ND	ND	ND	ND	NR	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
1,1,1-trichloroethane	ND	ND	ND	ND	0.67J	ND	ND	0.66 J	ND	ND
1,1,2-trichloroethane	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND
Trichloroethene	21	11	7.5	8.0	308	7.7	6.7	3.4 J	5.6	4.6
Trichlorofluoromethane	NR	NR	NR	NR	NR	NR	NR	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury (EPA 245.1) ug/L	NR	<0.20	<0.20	<0.20	<0.20	<0.20	ND	ND	ND	ND
TSS (SM20 2540D) mg/L	NR	16.0	<4.0	<4.0	<4.0	<4.0	ND	11	6	5

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

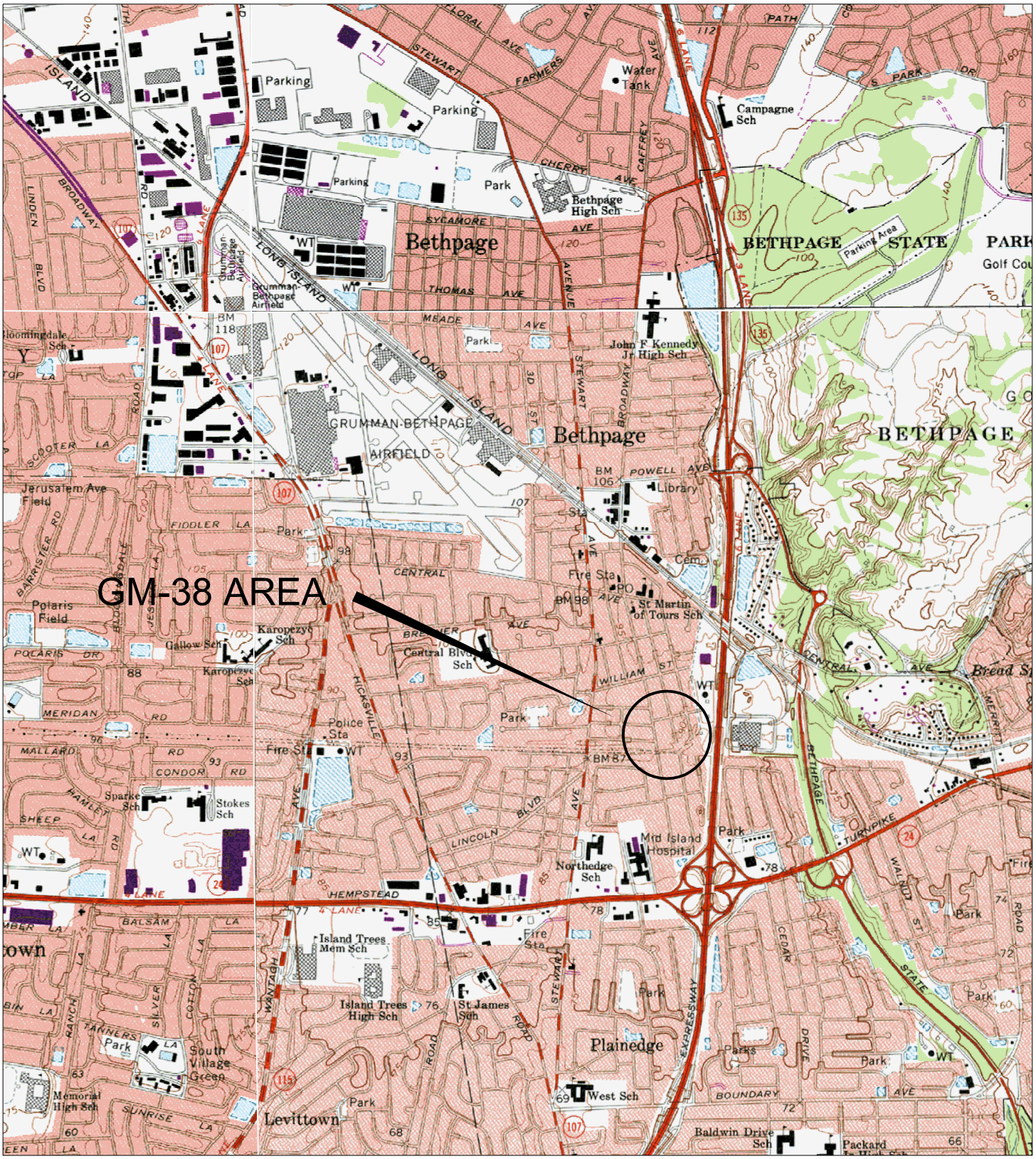
Sample ID	TP-01						IW-1 MW-1	IW-1
Sample Date	1/21/2010	6/15/2011	9/27/2011	9/27/2011	11/30/2011	3/8/2012	5/3/2005	5/27/2009
Comments				Duplicate				
Well Depth (Ft)	470						150	230
Screened Interval (Ft)	470-510						130-150	200-230
VOCS (EPA 624) ug/L								
Acrolein	NR	NR	ND	ND	ND	ND	NR	NR
Acrylonitrile	NR	NR	ND	ND	ND	ND	NR	NR
Acetone	NR	NR	ND	ND	ND	ND	ND	ND
Benzene	ND	NR	ND	ND	ND	ND	ND	ND
Bromodichloromethane	NR	NR	ND	ND	ND	ND	ND	ND
Bromoform	NR	NR	ND	ND	ND	ND	ND	ND
Bromomethane	NR	NR	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	NR	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	NR	ND	ND	ND	ND	ND	ND
Dibromochloromethane	NR	NR	ND	ND	ND	ND	NR	ND
Chloroethane	NR	NR	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	NR	NR	ND	ND	ND	ND	NR	NR
Chloroform	ND	NR	0.68 J	0.74 J	ND	0.74 J	0.94J	0.98J
Chloromethane	NR	NR	ND	ND	ND	ND	ND	ND
1,2-dichlorobenzene	NR	NR	ND	ND	ND	ND	NR	ND
1,3-dichlorobenzene	NR	NR	ND	ND	ND	ND	NR	ND
1,4-dichlorobenzene	NR	NR	ND	ND	ND	ND	NR	ND
1,1-dichloroethane	3.6J	5.0	3.7	3.7	2.9	3.7	0.39J	0.22J
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	ND	1.7	1.1	1.0	1.0	1.2	ND	ND
cis-1,2-dichloroethene	190	43.4	40.4	40.2	74.9	53.3	ND	ND
trans-1,2-dichloroethene	3.0J	1.1	1.0 J	0.92 J	1.1	0.87 J	ND	ND
1,2-dichloropropane	NR	NR	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	NR	NR	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	NR	NR	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	NR	ND	ND	ND	ND	ND	ND
Methylene chloride	NR	NR	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	NR	NR	ND	ND	ND	ND	ND	ND
Tetrachloroethene	3.4J	3.3	4.4	4.4	3.6	4.7	ND	ND
Toluene	ND	NR	ND	ND	ND	ND	ND	0.19J
1,1,1-trichloroethane	ND	0.63 J	0.73 J	0.76 J	0.29 J	0.57 J	0.47	0.49J
1,1,2-trichloroethane	ND	NR	0.31 J	0.31 J	0.32 J	ND	ND	ND
Trichloroethene	65	35.3	41.0	39.6	38.0	38.1	ND	0.17J
Trichlorofluoromethane	NR	NR	ND	ND	ND	ND	NR	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND
Mercury (EPA 245.1) ug/L	NR	ND	ND	ND	ND	ND	NR	0.20
TSS (SM20 2540D) mg/L	NR	63	18	NR	ND	7	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 requested
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 in line 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.

Data prior to June 2011 were collected by others.

FIGURES



Quadrangle Location Map

0 2000 4000 Feet

N

Source: U.S.G.S. Topographic Maps (7.5 Minute)
Amityville, Freeport, Hicksville, Huntington, NY Quadrangles

U.S. Navy RAC
Engineering Field Activity, Northeast

GM-38 Area (Offsite)
NWIRP Bethpage
Bethpage, NY

Figure 1
Site Location Map

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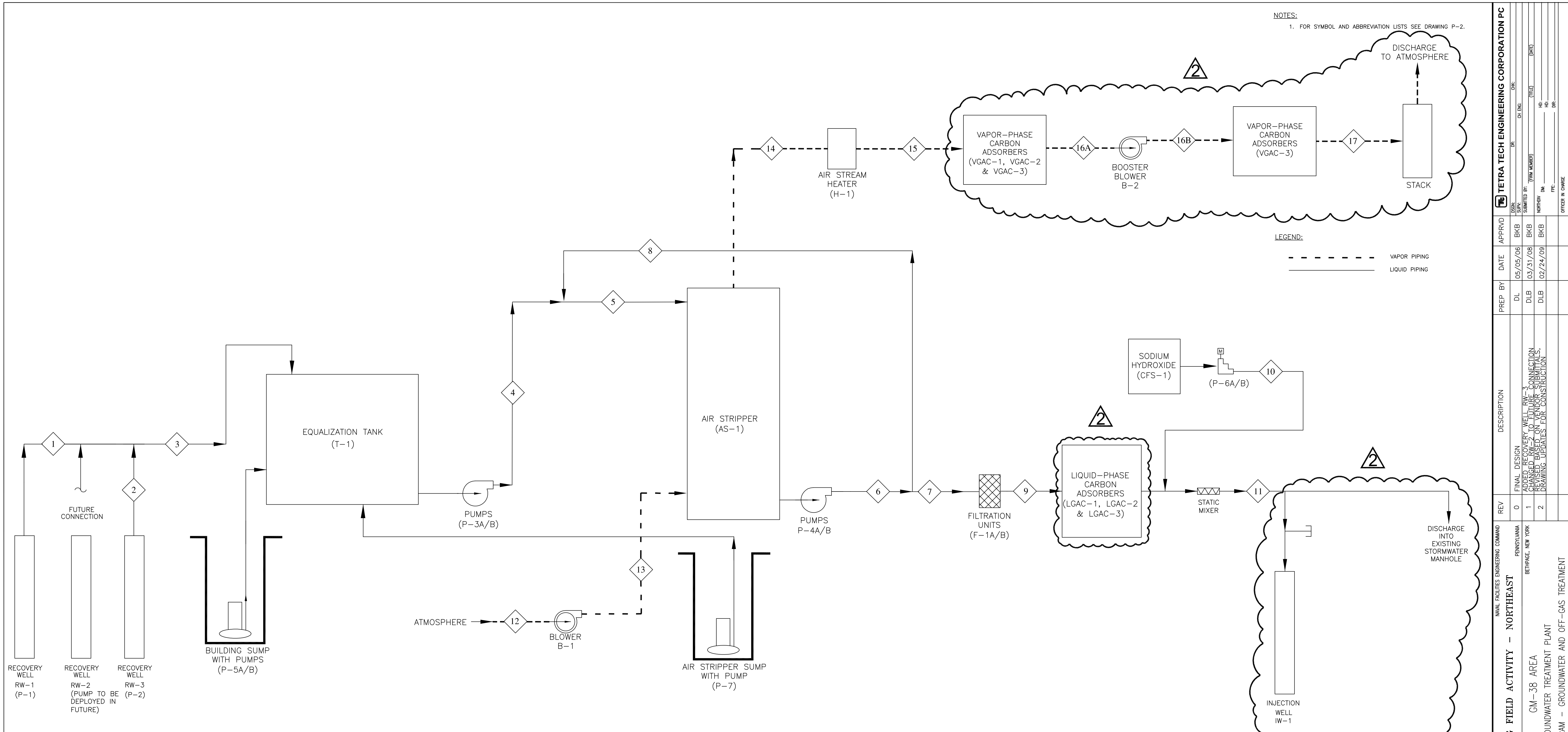

STREAM NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COMPOSITION (UG/L, UNLESS OTHERWISE NOTED)																
BENZENE	4	4	4	4	3	-	-	-	-		-					
TOLUENE	15	15	15	15	12	-	-	-	-		-					
XYLENES, TOTAL	16	16	16	16	12	-	-	-	-		-					
1,2-DICHLOROETHANE	3	3	3	3	2.8						2.7 E-07					
cis 1,2-DICHLOROETHENE	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

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SAT TO	DATE 05/05/06
CODE I.D. NO.	80091
SCALE : AS SHOWN	
SPEC. NO.	
CONSTR. 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
RW3-3
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

Figure 4
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW1

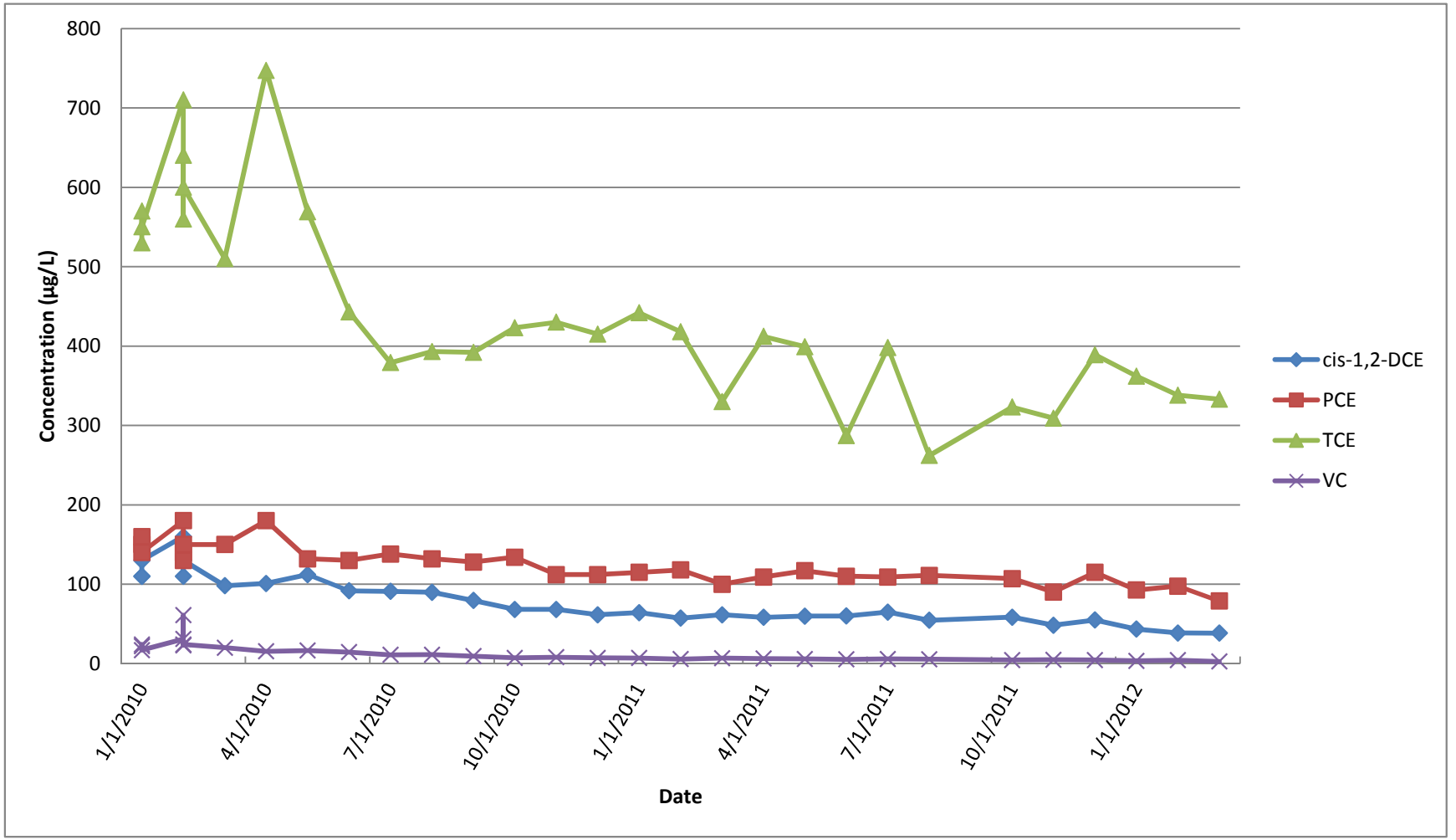


Figure 5
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3

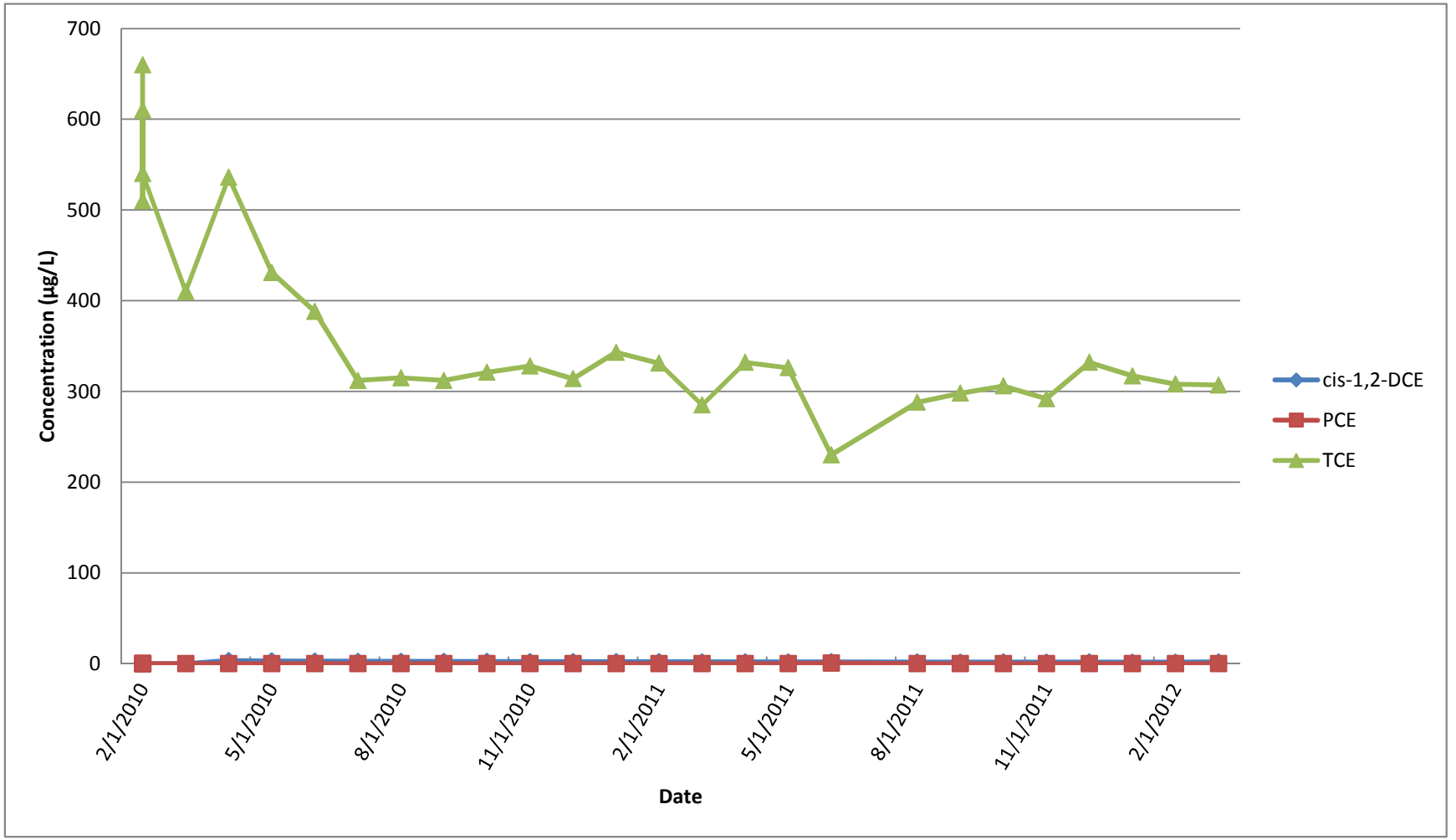


Figure 6
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW1-MW1

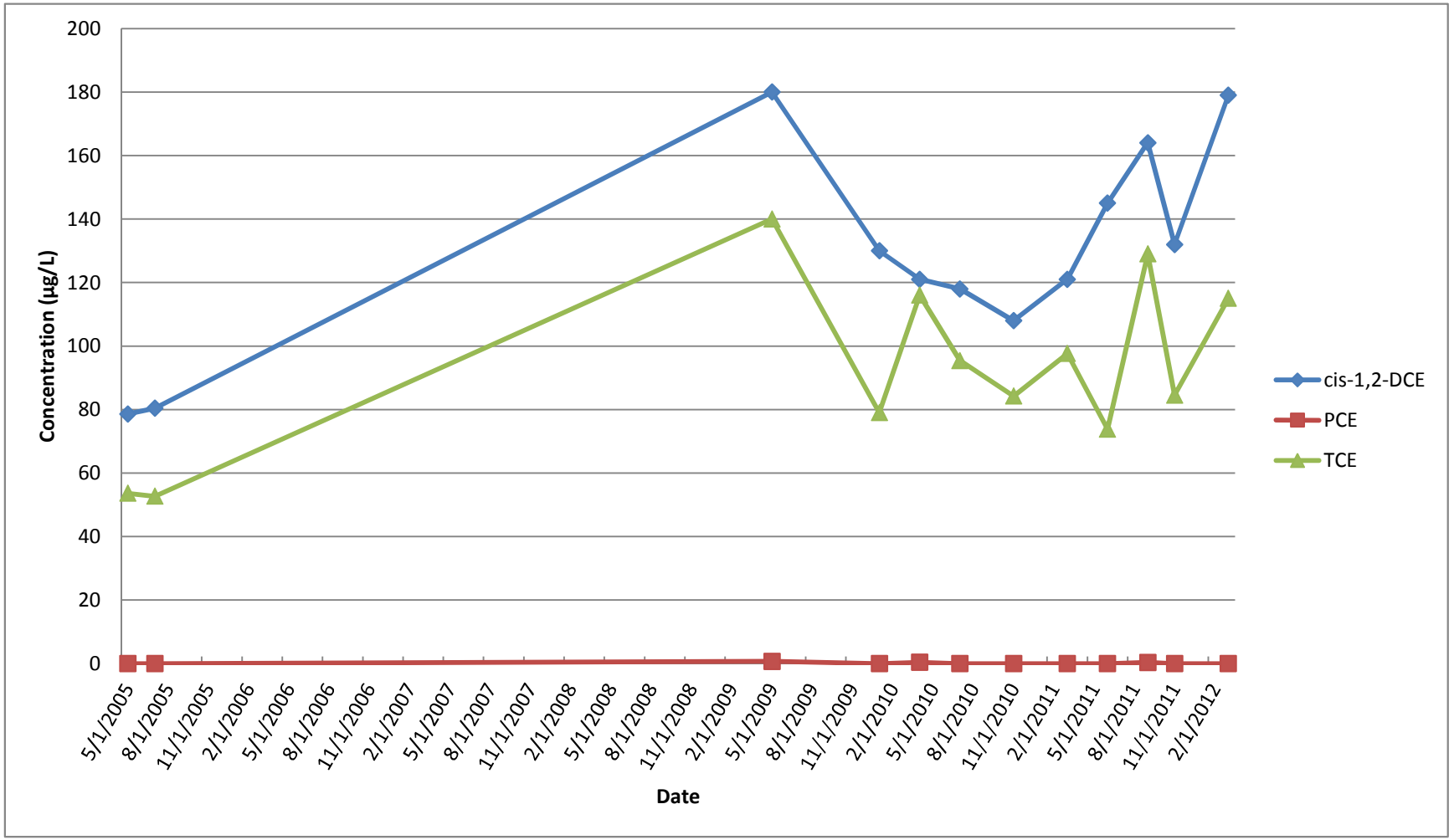


Figure 7
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW1-MW3

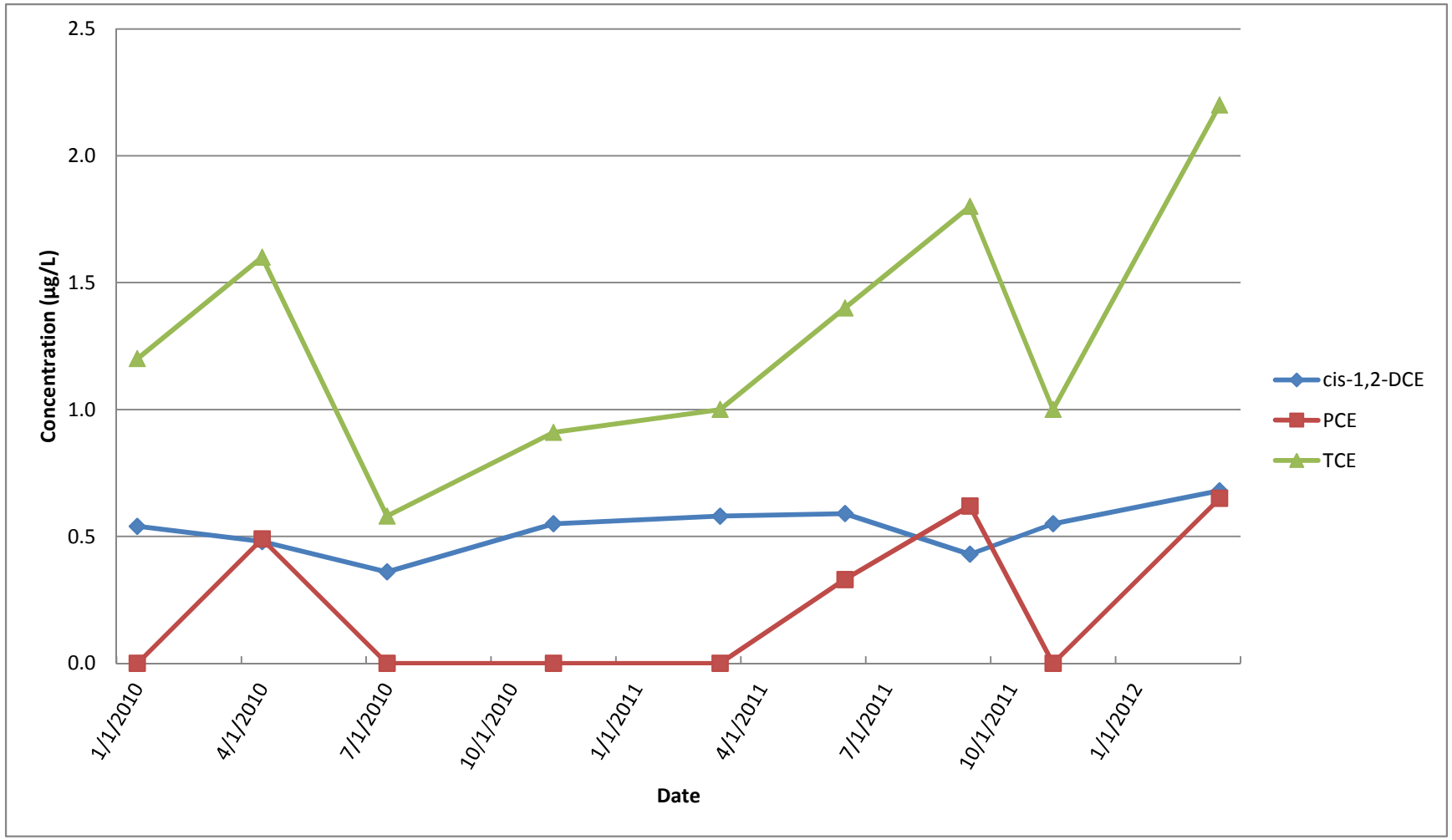


Figure 8
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW2-MW1

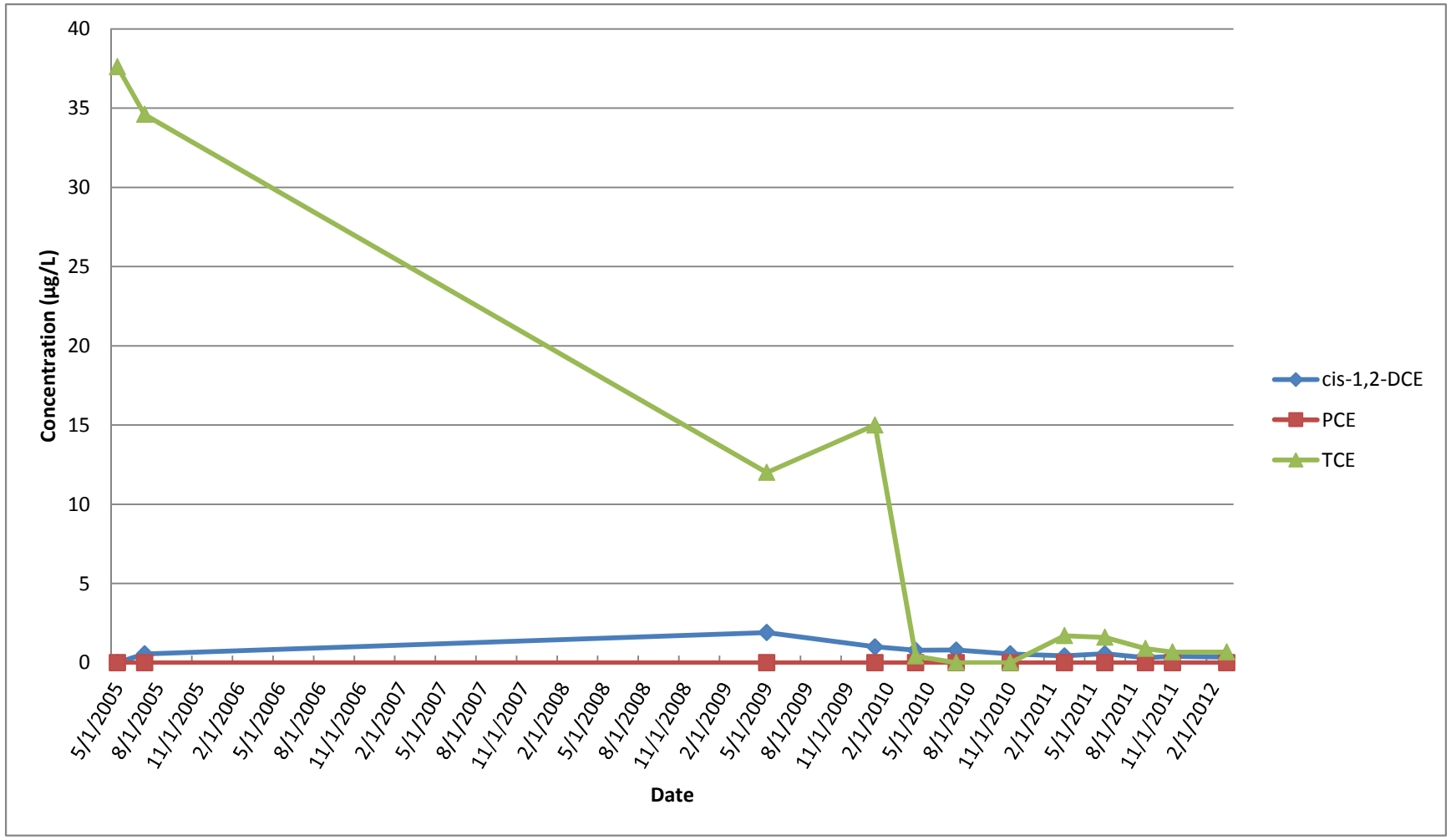


Figure 9
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3-MW1

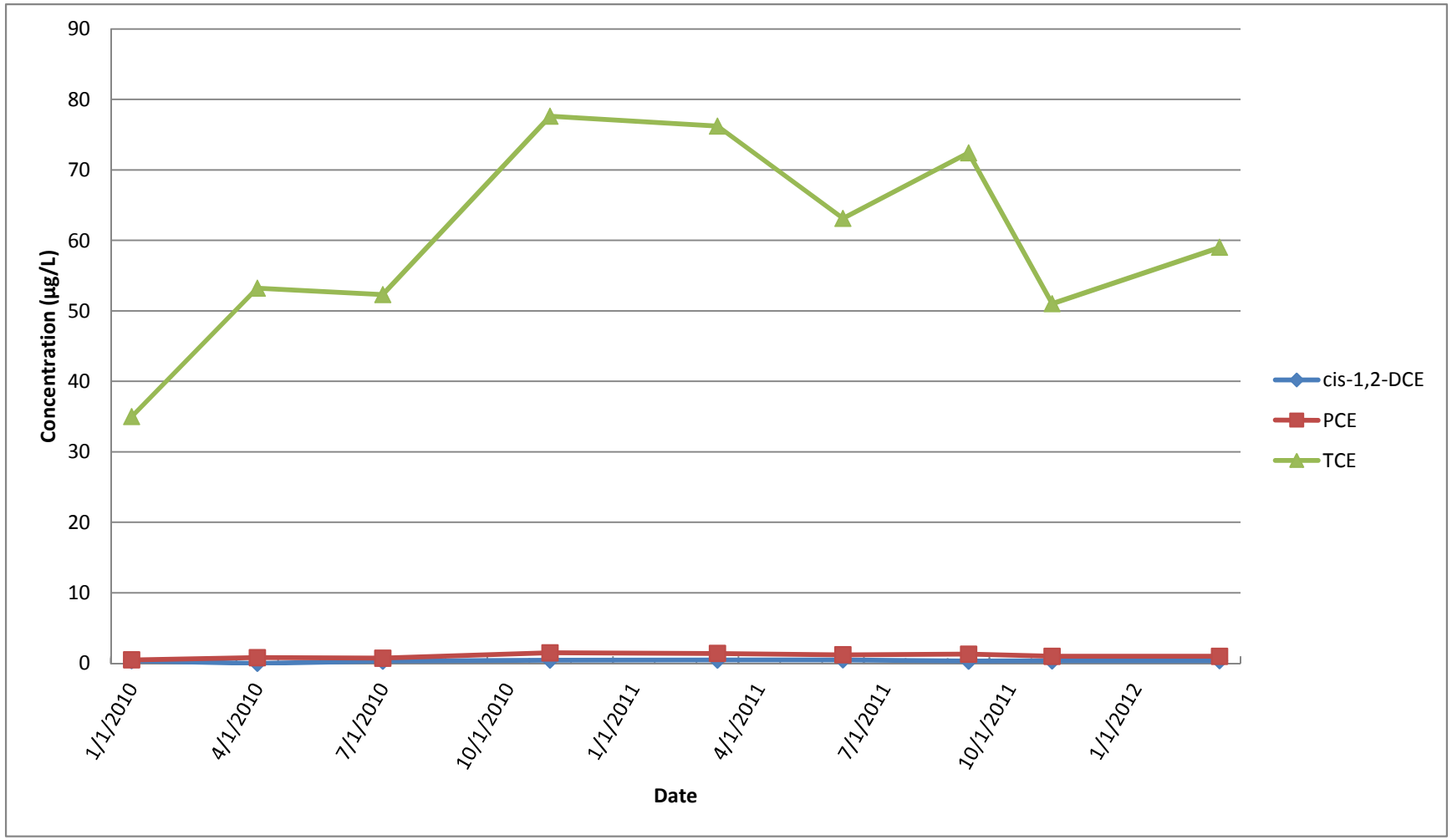


Figure 10
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3-MW2

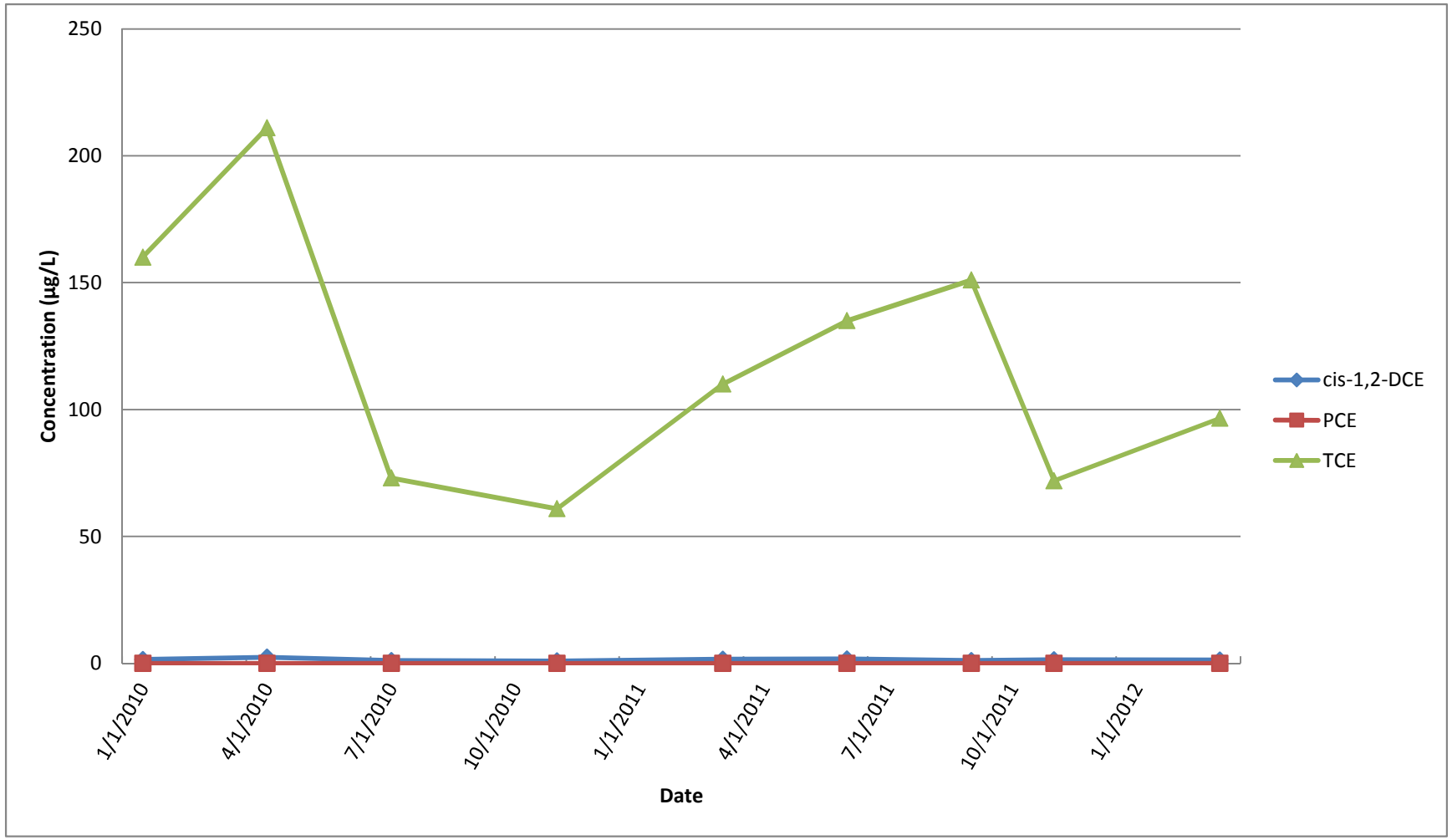


Figure 11
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3-MW3

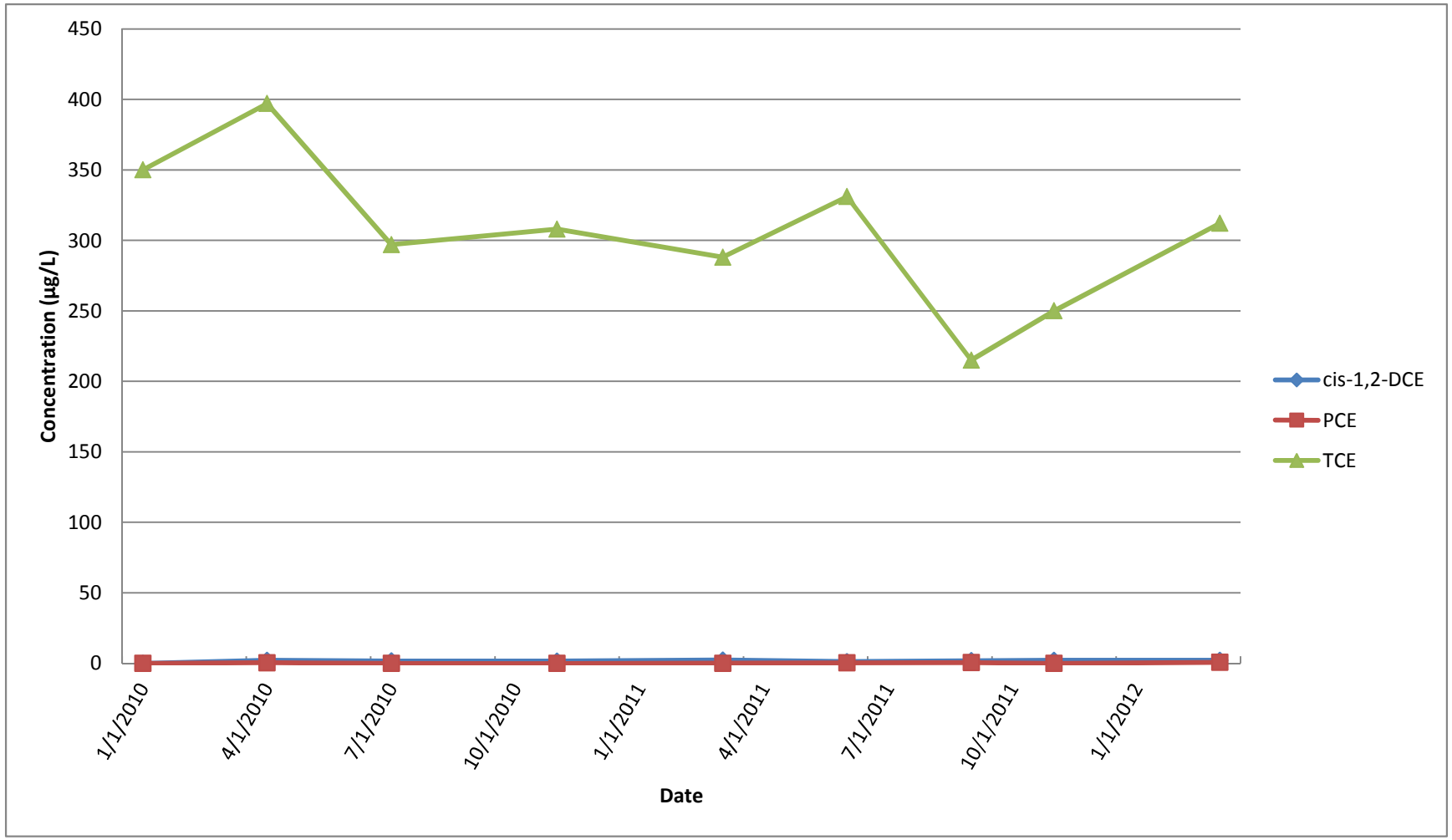


Figure 12
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

RW3-MW4

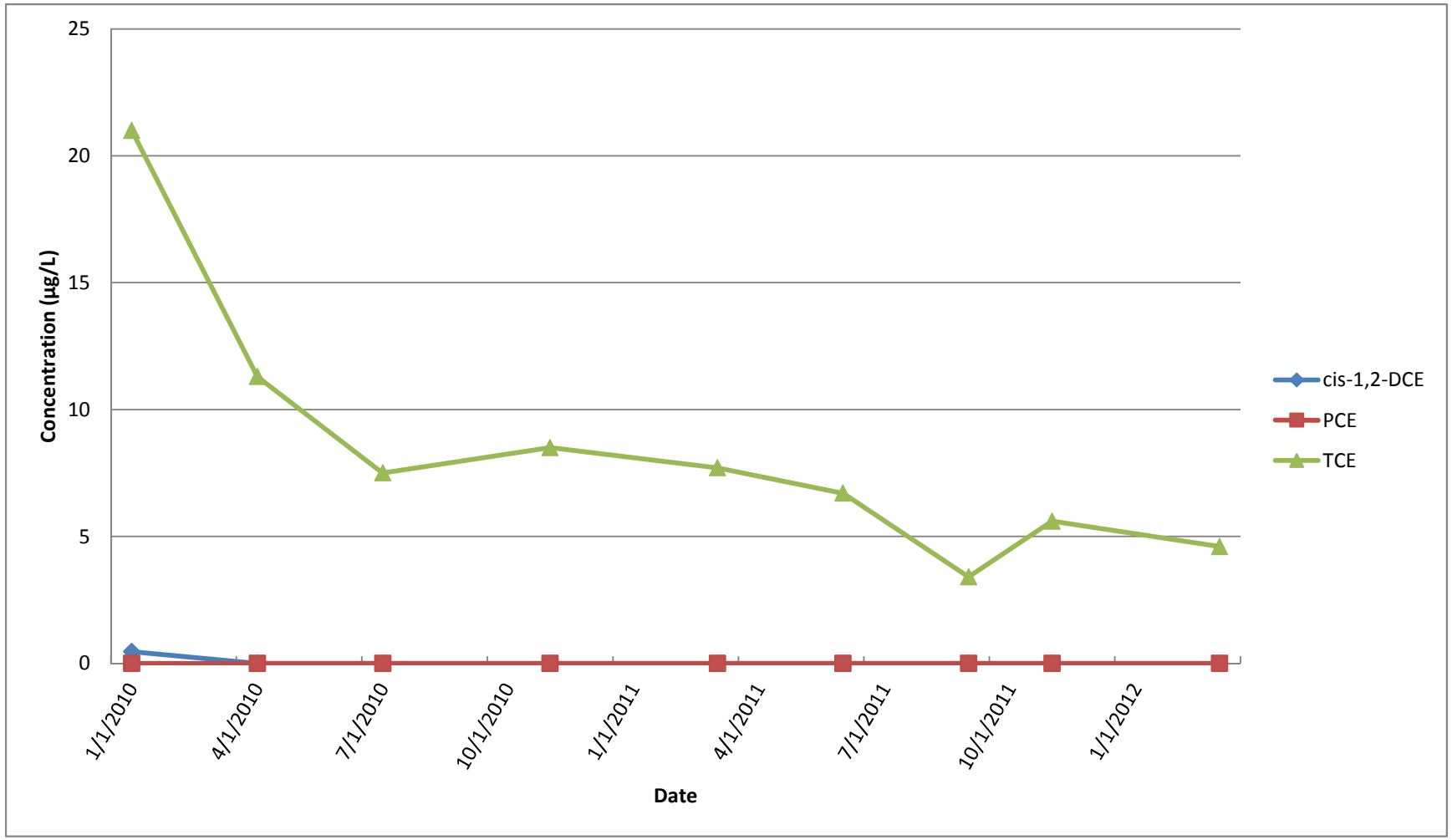
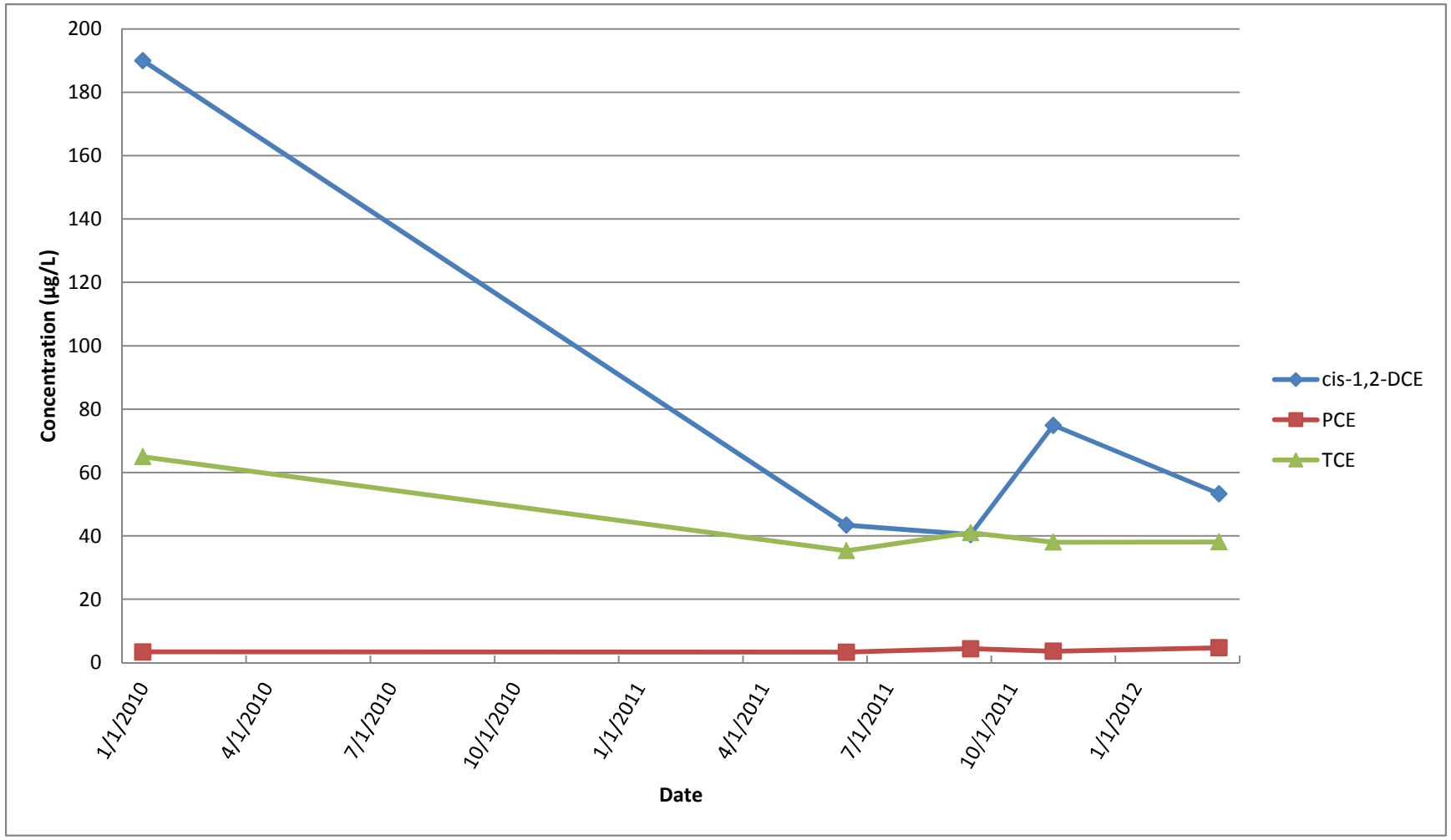


Figure 13
GM-38 Area Groundwater Remediation
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Groundwater Concentration Trends of Select VOCs

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.

January 2012

H&S ENVIRONMENTAL
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8 February 2012

Mr. Steven Scharf
New York State Department of Environmental Conversation
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 JANUARY 2012 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 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. H&S assumed operational responsibility of the GWTP on 1 June 2011. GWTP operational data from 1 January to 31 January 2012 are included in Attachment A. All constituents were within permit limitations during this reporting period.

Please contact Ms. Jennifer Good or myself at 508-366-7442 with any questions or concerns you may have regarding this report.

Sincerely,
H&S Environmental, Inc.

Patrick Schauble, P.E.
Senior Project Manager

Attachment A: Groundwater and Air Sampling Results from October 2011

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

ATTACHMENT A

GROUNDWATER AND AIR SAMPLING RESULTS

JANUARY 2012

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Report
January 2012

SPDES Parameters	January 2012					
Process Stream	Daily Treated Effluent Maximum	Units	RW-1	RW-3	Combined Influent (1) (2) (RW-1 + RW-3)	Treated Effluent (2)
Well Depth	N/A	ft	500	500	500	N/A
Screened Interval	N/A	ft	470-500	470-500	470-500	N/A
Sampling Date	N/A		1/18/12			
Average Flowrate	1100	GPM	739	273	1,012	1020
Total Flow	N/A	gallons	32,993,460	12,164,600	45,158,060	45,523,120
pH	5.5 - 8.5	SU	6.02	8.18	6.60	7.60
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	2.7 J	2.6 J	2.7	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND
1,1-Dichloroethene	5	µg/L	6.4	ND	4.7	ND
cis 1,2-Dichloroethene	5	µg/L	43.4	1.5 J	32.1 J	0.96 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	92.7	ND	67.7	ND
1,1,1-Trichloroethene	5	µg/L	6.7	ND	4.9	ND
Trichloroethene	5	µg/L	364	317	351	0.70 J
Vinyl Chloride	2	µg/L	3.4 J	ND	2.5 J	ND
Mercury	0.25	µg/L	ND	ND	ND	ND
Total Suspended Solids (TSS)	N/A	mg/L	5	5	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.
(2) System downtime from 3-5 January 2012 for carbon changeout of the two VGAC units resulted in lower than average flowrates during this reporting period.

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
January 2012

DAR Parameters	Units	SGC	January 2012	
Process Stream			**Influent**	**Effluent**
Sampling Date	N/A	N/A	1/20/12	
Average Flowrate	CFM	N/A	NR	8,186
Total Flow	ft^3	N/A	NR	365,408,160
Total Flow	m^3	N/A	NR	10,347,207
1,2-Dichloroethane	$\mu g/m^3$	N/A	5.0 J	ND
cis 1,2-Dichloroethene	$\mu g/m^3$	N/A	530	ND
trans 1,2-Dichloroethene	$\mu g/m^3$	N/A	ND	ND
1,2-Dichloroethene (total)	$\mu g/m^3$	N/A	530	ND
Toluene	$\mu g/m^3$	37,000	9.0 J	ND
Total Xylene	$\mu g/m^3$	4,300	8.1 J	ND
1,1,2-Trichloroethane	$\mu g/m^3$	N/A	ND	ND
Trichloroethene	$\mu g/m^3$	14,000	5700	4.7
Vinyl Chloride	$\mu g/m^3$	180,000	39	ND
Tetrachloroethene	$\mu g/m^3$	1,300	1500	ND

Notes:
CFM - cubic feet per minute
DAR - Division of Air Resources
J - Estimated result between laboratory method detection limit and reporting limit
N/A - Not Applicable
NR - Not recorded
SGC - Short-term Guideline Concentration

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Controlled Stack Emissions
January 2012

DAR Parameters	Units	Discharge Goal	January 2012
Sampling Date	N/A	N/A	1/20/12
Average Flowrate	CFM	N/A	8,186
Total Flow	ft^3	N/A	365,408,160
Total Flow	m^3	N/A	10,347,207
Trichloroethene	lb/hr	0.09	0.0001
Vinyl Chloride	lb/hr	0.01	0.0000
1,2 Dichloroethene	lb/hr	0.03	0.0000
1,2-Dichloroethane	lb/hr	BRT	0.0000
Toluene	lb/hr	BRT	0.0000
Total Xylene	lb/hr	BRT	0.0000
1,1,2-Trichloroethane	lb/hr	BRT	0.0000
Tetrachloroethene	lb/hr	0.02	0.0000

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

February 2012

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14 March 2012

Mr. Steven Scharf
New York State Department of Environmental Conversation
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 FEBRUARY 2012 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 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. H&S assumed operational responsibility of the GWTP on 1 June 2011. GWTP operational data from 1 February 2012 to 29 February 2012 are included in Attachment A. All constituents were within permit limitations during this reporting period.

Please contact Ms. Jennifer Good or myself at 508-366-7442 with any questions or concerns you may have regarding this report.

Sincerely,
H&S Environmental, Inc.

Patrick Schauble, P.E.
Senior Project Manager

Attachment A: Groundwater and Air Sampling Results from February 2012

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

ATTACHMENT A

GROUNDWATER AND AIR SAMPLING RESULTS

FEBRUARY 2012

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Report
February 2012

SPDES Parameters	February 2012					
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	500	500	500	N/A
Screened Interval	N/A	ft	470-500	470-500	470-500	N/A
Sampling Date	N/A		2/16/12			
Average Flowrate	1100	GPM	758	217	976	1007
Total Flow	N/A	gallons	31,668,400	9,074,540	40,742,940	42,066,120
pH	5.5 - 8.5	SU	5.98	6.06	6.00	7.35
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	2.7 J	2.3 J	2.6 J	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND
1,1-Dichloroethene	5	µg/L	5.4	1.7 J	4.6 J	ND
cis 1,2-Dichloroethene	5	µg/L	38.6	1.6 J	30.4 J	0.85 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	97.6	ND	75.9	ND
1,1,1-Trichloroethene	5	µg/L	4.7 J	ND	3.7 J	ND
Trichloroethene	5	µg/L	338	308	331	0.65 J
Vinyl Chloride	2	µg/L	4.3 J	ND	3.3 J	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.

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
February 2012

DAR Parameters	Units	SGC	February 2012	
Process Stream			**Influent**	**Effluent**
Sampling Date	N/A	N/A	2/17/12	
Average Flowrate	CFM	N/A	NR	8,562
Total Flow	ft^3	N/A	NR	357,560,509
Total Flow	m^3	N/A	NR	10,124,986
1,2-Dichloroethane	$\mu g/m^3$	N/A	8.1 J	ND
cis 1,2-Dichloroethene	$\mu g/m^3$	N/A	390	0.86 J
trans 1,2-Dichloroethene	$\mu g/m^3$	N/A	6.6 J	ND
1,2-Dichloroethene (total)	$\mu g/m^3$	N/A	400	0.87 J
Toluene	$\mu g/m^3$	37,000	25	0.93 J
Total Xylene	$\mu g/m^3$	4,300	18	1.3 J
1,1,2-Trichloroethane	$\mu g/m^3$	N/A	4.8 J	ND
Trichloroethene	$\mu g/m^3$	14,000	3400	12
Vinyl Chloride	$\mu g/m^3$	180,000	28	ND
Tetrachloroethene	$\mu g/m^3$	1,300	970	4.6 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
February 2012

DAR Parameters	Units	Discharge Goal	February 2012
Sampling Date	N/A	N/A	2/17/12
Average Flowrate	CFM	N/A	8,562
Total Flow	ft^3	N/A	357,560,509
Total Flow	m^3	N/A	10,124,986
Trichloroethene	lb/hr	0.09	0.0004
Vinyl Chloride	lb/hr	0.01	0.0000
1,2 Dichloroethene	lb/hr	0.03	0.0000
1,2-Dichloroethane	lb/hr	BRT	0.0000
Toluene	lb/hr	BRT	0.0000
Total Xylene	lb/hr	BRT	0.0000
1,1,2-Trichloroethane	lb/hr	BRT	0.0000
Tetrachloroethene	lb/hr	0.02	0.0001

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

March 2012

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

13 April 2012

Mr. Steven Scharf
New York State Department of Environmental Conversation
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 MARCH 2012 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 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. H&S assumed operational responsibility of the GWTP on 1 June 2011. GWTP operational data from 1 March 2012 to 31 March 2012 are included in Attachment A. All constituents were within permit limitations during this reporting period.

Please contact Ms. Jennifer Good or myself at 508-366-7442 with any questions or concerns you may have regarding this report.

Sincerely,
H&S Environmental, Inc.

Patrick Schauble, P.E.
Senior Project Manager

Attachment A: Groundwater and Air Sampling Results from March 2012

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

ATTACHMENT A

GROUNDWATER AND AIR SAMPLING RESULTS

MARCH 2012

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Discharge Monitoring Report
March 2012

SPDES Parameters	March 2012					
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	500	500	500	N/A
Screened Interval	N/A	ft	470-500	470-500	470-500	N/A
Sampling Date	N/A		3/7/12			
Average Flowrate	1100	GPM	788	201	989	1,010
Total Flow	N/A	gallons	35,168,800	8,966,960	44,135,760	45,100,947
pH	5.5 - 8.5	SU	6.00	6.15	6.03	7.53
Carbon Tetrachloride	NA	µg/L	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	2.6 J	2.3 J	2.5 J	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND
1,1-Dichloroethene	5	µg/L	5.0 J	1.2 J	4.2 J	ND
cis 1,2-Dichloroethene	5	µg/L	38.4	1.8 J	31.0 J	0.96 J
trans 1,2-Dichloroethene	5	µg/L	ND	ND	ND	ND
Tetrachloroethene	5	µg/L	78.9	ND	62.9	ND
1,1,1-Trichloroethene	5	µg/L	5.4 J	ND	4.3 J	ND
Trichloroethene	5	µg/L	333	307	328	0.76 J
Vinyl Chloride	2	µg/L	2.7 J	ND	2.2 J	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.

GM-38 Area Groundwater Remediation
Groundwater Treatment Plant
Naval Weapons Industrial Reserve Plant - Bethpage, NY
Air Sampling Results
March 2012

DAR Parameters	Units	SGC	March 2012	
Process Stream			**Influent**	**Effluent**
Sampling Date	N/A	N/A	3/14/12	
Average Flowrate	CFM	N/A	NR	8,530
Total Flow	ft^3	N/A	NR	380,768,040
Total Flow	m^3	N/A	NR	10,782,150
1,2-Dichloroethane	$\mu g/m^3$	N/A	5.6 J	ND
cis 1,2-Dichloroethene	$\mu g/m^3$	N/A	460	0.59 J
trans 1,2-Dichloroethene	$\mu g/m^3$	N/A	6.7 J	ND
1,2-Dichloroethene (total)	$\mu g/m^3$	N/A	480	0.59 J
Toluene	$\mu g/m^3$	37,000	6.4 J	1.2 J
Total Xylene	$\mu g/m^3$	4,300	9.3 J	ND
1,1,2-Trichloroethane	$\mu g/m^3$	N/A	ND	ND
Trichloroethene	$\mu g/m^3$	14,000	4200	9.7
Vinyl Chloride	$\mu g/m^3$	180,000	28	ND
Tetrachloroethene	$\mu g/m^3$	1,300	1100	3.7 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
March 2012

DAR Parameters	Units	Discharge Goal	March 2012
Sampling Date	N/A	N/A	3/14/12
Average Flowrate	CFM	N/A	8,530
Total Flow	ft^3	N/A	380,768,040
Total Flow	m^3	N/A	10,782,150
Trichloroethene	lb/hr	0.09	0.00031
Vinyl Chloride	lb/hr	0.01	0.00000
1,2 Dichloroethene	lb/hr	0.03	0.00002
1,2-Dichloroethane	lb/hr	BRT	0.00000
Toluene	lb/hr	BRT	0.00004
Total Xylene	lb/hr	BRT	0.00000
1,1,2-Trichloroethane	lb/hr	BRT	0.00000
Tetrachloroethene	lb/hr	0.02	0.00012

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
- -

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

DEC ID
- - - - - - - - -

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: 3/7/12

H&S

Groundwater Level Measurement Sheet

Project Site: NWIRP Bethpage – GM-38
Location: Bethpage, NY
Field Crew: VL/SL

Water Level Meter: Solinst
Weather: 50°F clear
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
	0952	34.35			
RW1-MW1	~~0957~~ SL	~~37.45~~ SL	435 / 395-435		
RW1-MW2	0838	36.44	435 / 395-435		Gauge only
RW1-MW3	0920	28.45	435 / 395-435		
RW2-MW1	0857	37.45	510 / 470-510		
RW2-MW2	0941	36.89	510 / 470-510		Gauge only MISSING 1 BOLT
RW2-MW3	0939	36.43	510 / 470-510		Gauge only MISSING 2 BOLTS
RW3-MW1	1705	36.26	350 / 330-350		
RW3-MW2	1510	38.71	495 / 475-495		
RW3-MW3	1345	37.21	340 / 320-340		missing 1 bolt
RW3-MW4	11:50	39.15	495 / 475-495		missing 2 bolts
TP1	0822	32.81	470 / 450-470		
IW1-MW1	0842	34.58	470 / 450-470		Gauge only

Signature: Stacy Hall

Date: 3/7/12

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

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

Date: 3/ 8 /12
Sampler: VAL / Stacey Lee
PID: ------

Start Time: 1015 **End Time:** 1105
Well Construction: 4"
Depth to Water: 34.35
Well Depth: 435
Water Column: 400.65
Total Volume Removed (L): ~10L
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	10H100928
LaMotte	2020e	ME15044
QED	MP15	
Marschalk Bladder Pump	24"	ID# 9983

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
1020	1	200	35.10	14.91	4.91	199	1.25	232.3	7.58	clear
1025	1	200	35.27	1508	4.87	197	0.76	248.9	20.39	cloudy
1030	1	200	35.27	15.12	4.76	194	0.68	259.7	158	orange floc
1040	2	200	34.45	15.22	4.54	192	0.59	275.5	122	"
1045	1	200	34.50	15.13	4.64	195	0.51	291.3	63	cloudy
1050	1	200	34.60	14.96	4.57	194	0.47	305.5	19.4	cloudy
1055	1	200	34.59	14.95	4.61	194	0.46	311.3	15.4	cloudy
1100	1	200	34.60	15.06	4.61	193	0.45	314.3	15.9	cloudy
1105	1	200	34.62	1507	4.66	193	0.43	318.5	14.60	cloudy
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
1105	NWIRP-GM-38-GW-	40 mL CG	3	HCl	TCL VOCs (624)
↓	RW | -MW | - 03082012	500 mL PL	1	HNO_3	Hg (245.1)
		250 mL PL	1	---	TSS (SM2540D)

Comments

replaced drop tubing

Stacy Lee
Signature

3/8/12
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: 3/ 8 /12
Sampler: VAL / Stacey Lee
PID: ------

Start Time: 1245 End Time: 1330
Well Construction: 4"
Depth to Water: 29.45
Well Depth: 435
Water Column: 405.55
Total Volume Removed (L): NOL
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	10H100928
LaMotte	2020e	ME15044
QED	MP15	
Marschalk Bladder Pump	24"	ID# 9983

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
1250	1	200	28.50	14.68	5.30	182	2.34	202.6	4.63	clear
1300	2	200	28.53	13.91	5.21	182	0.35	148.3	6.57	"
1305	1	200	28.57	14.02	5.17	181	0.29	143.0	6.70	"
1315	2	200	28.59	14.07	5.10	182	0.34	141.7	5.87	"
1320	1	200	28.59	14.09	5.18	181	0.24	138.7	5.21	"
1325	1	200	28.59	14.03	5.17	182	0.23	137.6	3.05	"
1330	1	200	28.59	13.99	5.14	182	0.22	136.6	2.81	"
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
1330	NWIRP-GM-38-GW-	40 mL CG	3	HCl	TCL VOCs (624)
↓	RW 1 -MW3 - 03082012	500 mL PL	1	HNO_3	Hg (245.1)
		250 mL PL	1	---	TSS (SM2540D)

Comments

Signature

3/8/12
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: 3/7/12
Sampler: VAL / Stacey Lee
PID: ------

Start Time: 10:00 End Time: 1120
Well Construction: 4"
Depth to Water: 37.45
Well Depth: 510
Water Column: 472.55
Total Volume Removed (L): 4.6 L
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	10H100928
LaMotte	2020e	ME15044
QED	MP15	
Marschalk Bladder Pump	24"	ID# 9180

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
10:05	0.3	60	37.79	10.43	6.04	210	8.79	181.6	33.3	cloudy
10:15	0.6	60	37.65	10.65	~~7.85~~	118	7.56	171.9	27.7	"
10:25	0.6	60	37.45	11.38	7.41 7.77	106	5.11	145.1	25.7	"
10:35	0.6	60	37.22	12.29	7.74	98	3.98	134.7	20.6	"
10:45	0.6	60	37.17	11.11	7.80	94	3.99	127.5	19.3	"
10:55	0.6	60	37.23	11.80	7.77	93	3.53	126.0	11.9	clear
11:00	0.3	60	37.69	12.58	7.69	92	2.88	96.2	8.69	clear
11:05	0.3	60	37.84	12.72	7.61	92	2.72	89.3	8.17	"
11:10	0.3	60	38.05	12.62	7.75	92	2.53	84.0	8.05	"
11:15	0.3	60	38.05	12.46	7.79	91	2.48	78.6	7.75	"
11:20	0.3	60	38.05	12.43	7.75	91	2.49	79.2	5.23	
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
1120	NWIRP-GM-38-GW- 030720 12	40 mL CG	3	HCl	TCL VOCs (624)
	RW 2 -MW 1 -	500 mL PL	1	HNO_3	Hg (245.1)
		250 mL PL	1	---	TSS (SM2540D)

Comments

Signature

3/7/12
Date

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: RW3 - MW1

Date: 3/7/12
Sampler: VAL / Stacey Lee
PID: ------

Start Time: 1705 End Time: 1750
Well Construction: 4"
Depth to Water: 36.26
Well Depth: 350
Water Column: 313.74
Total Volume Removed (L): N12L
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	10H100928
LaMotte	2020e	ME15044
QED	MP15	
Marschalk Bladder Pump	24"	ID# 9186

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
1710	1.5	300	36.26	11.65	5.20	119	2.35	210.0	35.3	cloudy
1715	1.5	300	"	11.21	5.18	118	1.96	216.3	107	orange floc
1720	1.5	300	"	10.90	5.19	117	1.78	218.8	189	"
1725	1.5	300	"	10.28	5.12	118	1.69	221.9	152	"
1730	1.5	300	"	10.67	5.11	117		219.2	136	"
1745	1.5	300	"	8.56	5.03	115	3.41	230.1	~~230~~ 124	
1750	1.5	300	"	2.47	5.02	114	3.40	232.1	115	orange

Acceptance Criteria: <0.3ft 3% ±0.1 3% 10% ± 10mv 10%

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
1750	NWIRP-GM-38-GW-	40 mL CG	3	HCl	TCL VOCs (624)
	RW3 -MW1 - 03072012	500 mL PL	1	HNO_3	Hg (245.1)
		250 mL PL	1	---	TSS (SM2540D)

Comments

tubing dropped down well sampled from drop tubing only

Signature

3/7/12
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: 3/ 8 /12
Sampler: VL / SL
PID: ------

Start Time: 1150 End Time: 1215
Well Construction: 4"
Depth to Water: 38.56
Well Depth: 495
Water Column: 456.44
Total Volume Removed (L): ~7.5 L
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	10H100928
LaMotte	2020e	ME15044
QED	MP15	
Marschalk Bladder Pump	24"	ID# 9983

Time (hh:mm)	Volume Removed (L)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
1155	1.5	300	38.56	13.14	4.97	78	4.12	246.5	5.29	clear
1200	1.5	300	38.72	13.57	4.73	77	3.58	263.7	4.86	clear
1205	1.5	300	39.90	13.23	4.98	77	3.46	260.5	6.49	clear
1210	1.5	300	39.91	13.59	4.85	77	3.40	265.3	6.36	"
1215	1.5	300	39.91	13.57	4.92	77	3.39	265.9	5.01	"
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
1215	NWIRP-GM-38-GW-	40 mL CG	3	HCl	TCL VOCs (624)
	RW 3 -MW 2- 03082012	500 mL PL	1	HNO_3	Hg (245.1)
		250 mL PL	1	---	TSS (SM2540D)

Comments

collected sample from drop tubing only

Signature

3/8/12
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: 3/7/12
Sampler: VAL / Stacey Lee
PID: ------

Start Time: 1345 End Time: 1445
Well Construction: 4"
Depth to Water: 37.21
Well Depth: 340
Water Column: 302.79
Total Volume Removed (L): N/A
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	10H100928
LaMotte	2020e	ME15044
QED	MP15	
Marschalk Bladder Pump	24"	ID# 9180

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
1350	1	200	37.23	15.24	5.35	129	1.12	149.2	3.87	clear
1405	3	200	37.25	15.45	5.69	130	0.81	109.2	4.16	clear
1410	1	200	37.25	15.32	5.69	130	0.69	105.9	3.23	"
1426	3	200	37.25	14.09	5.68	130	0.57	106.7	3.14	"
1430	1	200	37.25	13.91	5.75	130	0.56	105.5	2.21	"
1435	1	200	37.25	13.62	5.67	131	0.50	106.0	1.81	"
1440	1	200	37.25	13.61	5.65	131	0.56	105.4	1.31	"
1445	1	200	37.25	13.61	5.66	131	0.49	106.2	1.55	"
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
1445	NWIRP-GM-38-GW-	40 mL CG	3	HCl	TCL VOCs (624)
	RW3 -MW3-	500 mL PL	1	HNO_3	Hg (245.1)
		250 mL PL	1	---	TSS (SM2540D)
	NWIRP-GM-38-GW-RW3-MW3-03072012 MS				
	NWIRP-GM-38-GW-RW3-MW3-03072012 DUP			> same as above	
	NWIRP-GM-38-GW-RW3-MW3-03072012 MSD				

Comments

Signature

3/7/12
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: 3/ 7 /12
Sampler: VAL / Stacey Lee
PID: ------

Start Time: 1225 End Time: 1315
Well Construction: 4"
Depth to Water: 39.15
Well Depth: 495
Water Column: 455.85
Total Volume Removed (L): ~ 10 L
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	10H100928
LaMotte	2020e	ME15044
QED	MP15	
Marschalk Bladder Pump	24"	ID# 9180

Time (hh:mm)	Volume Removed (L)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color
1230	1	200	39.26	14.38	4.61	155	1.09	236.8	5.62	clear
1240	2	200	39.26	14.35	4.47	146	0.76	258.4	4.00	"
1245	1	200	39.26	14.18	4.62	125	0.66	254.3	4.54	"
1255	2	200	39.29	14.06	4.66	113	0.47	261.4	4.06	"
1300	1	200	39.28	14.06	4.68	113	0.40	262.8	4.32	"
1305	1	200	39.28	14.02	4.68	114	0.35	264.6	3.86	"
1310	1	200	39.28	13.99	4.67	116	0.33	267.6	3.69	"
1315	1	200	39.28	13.99	4.67	116	0.33	265.2	3.21	clear
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
1315	NWIRP-GM-38-GW-	40 mL CG	3	HCl	TCL VOCs (624)
	RW3 -MW4- 03072012	500 mL PL	1	HNO_3	Hg (245.1)
		250 mL PL	1	---	TSS (SM2540D)

Comments

S Lee
Signature

3/7/12
Date

H&S Environmental, Inc.

Low Flow/ Low Stress Groundwater Sampling Log

Project: NWIRP Bethpage - GM-38
Location: Bethpage, NY
Well ID: TP1

Date: 3/8/12
Sampler: VAL / Stacey Lee
PID: ------

Start Time: 08:30 End Time: 09:00
Well Construction: 4"
Depth to Water: 33.89
Well Depth: 470
Water Column: 436.11
Total Volume Removed (L): 3L
Dedicated Pump in Well?: No

Field Testing Equipment

Make	Model	Serial #
YSI	556	10H100928
LaMotte	2020e	ME15044
QED	MP15	
Marschalk Bladder Pump	24"	ID# 9983

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
08:35	0.5	100	33.89	12.55	5.09	178	1.72	229.8	6.84	clear
08:40		"	33.90	12.61	5.24	178	.94	234.0	6.73	"
08:45		"	33.91	12.58	5.21	177	.72	236.3	6.44	"
08:50		"	33.91	12.52	5.17	178	.72	236.0	5.38	"
08:55		"	33.91	12.62	5.19	180	.78	240.1	5.21	"
09:00	0.5	"	33.91	12.63	5.22	185	.73	239.9	4.01	"
Acceptance Criteria:			<0.3ft	3%	±0.1	3%	10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sample Collection

Time	Sample ID	Container	# Bottles	Preservative	Analysis
09:00	NWIRP-GM-38-GW-TP1-03082012	40 mL CG	3	HCl	TCL VOCs (624)
	"	500 mL PL	1	HNO_3	Hg (245.1)
	"	250 mL PL	1	---	TSS (SM2540D)

Comments

Signature

03/08/12
Date

H&S

Instrument Calibration Log

Project/Site Name: NWIRP Bethpage – GM-38 **Date:** 3/7/12 **Weather:** 55°F - 60°F

Calibrated By: VAL / Stacey Lee **Instrument:** YSI 556 **Serial Number:** 10H100928

Parameters	Morning Calibration Time: 0800	Cal. Temperature °C	Afternoon Cal. Check Time: 1830	Comments
Conductivity (µS/cm°)	1131 / 1000	1.93	880	1060 µS/cm
pH (7)	6.95 / 7.03	4.04	7.25	
pH (4)	3.83 / 4.00	2.28	3.94	
pH (10)	9.77 / 9.90	2.69	10.21	
ORP (mv)	240.4 / 240.0	5.69	226.6	~~200~~ 240 mv
Dissolved Oxygen (%)	92.8 % / 102.2	3.86	110.5	
Zero Dissolved Oxygen (mg/L)	—	—	—	
Barometric Pressure (mmHg)	777.8	—	—	

pH Check (Every 3 hrs):

Time:	Time:	Time:
Standard:	Standard:	Standard:
Reading:	Reading:	Reading:

Signature: Stacy Lee Date: 3/7/12

H&S

Instrument Calibration Log

Project/Site Name: NWIRP Bethpage – GM-38 **Date:** 3/8/12 **Weather:** 50°F

Calibrated By: SL **Instrument:** YSI 556 **Serial Number:** 10H100928

Parameters	Morning Calibration Time: 0745	Cal. Temperature °C	Afternoon Cal. Check Time: 1600	Comments
Conductivity (µS/cm°)	881 / 1006	10.93	987	
pH (7)	7.26 / 7.00	10.66	7.06	
pH (4)	3.94 / 3.99	9.95	4.02	
pH (10)	10.21 / 10.03	10.13	9.92	
ORP (240) (mv)	226.6 / 240.0	10.35	242.7	
Dissolved Oxygen (%)	110.5 / 101.0	11.22	98.9	
Zero Dissolved Oxygen (mg/L)				
Barometric Pressure (mmHg)	767.3		765.2	

pH Check (Every 3 hrs):

Time:	Time:	Time:
Standard:	Standard:	Standard:
Reading:	Reading:	Reading:

Signature: [signature] Date: 3/8/12

H&S

Instrument Calibration Log

Project/Site Name: NWIRP Bethpage GM-38 **Calibrated By:** VL/SL

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 / ME15044	1.39	2.81	7.31	8.72	1.00	1.00	10.00	10.00	Time: 0900 & 1730
"	2.74	1.51	9.13	10.20	1.00	1.00	10.00	10.00	Time: 0800 & 1400
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &
									Time: &

Signature: Jacyhei Date: 3/8/12

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:

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#: 2031-005

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

TAT: [x] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALSI approval and surcharges. 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)
1 NWIRP-GM-38-GW-RW1-MW1-	~~MS/MSD for VOCs, Hg~~	3/8/12	1105	G	GW	3	1	1
2 NWIRP-GM-38-GW-RW1-MW3- 03080212		3/8/12	1330	G	GW	3	1	1
3 NWIRP-GM-38-GW-RW2-MW1- 03072012		3/7/12	1120	G	GW	3	1	1
4 NWIRP-GM-38-GW-RW3-MW1- 03072012		3/7/12	1750	G	GW	3	1	1
5 NWIRP-GM-38-GW-RW3-MW2- 03082012		3/8/12	1215	G	GW	3	1	1
6 NWIRP-GM-38-GW-RW3-MW3- 03072012	MS/MSD for VOCs, Hg	3/7/12	1445	G	GW	3	1	1
7 NWIRP-GM-38-GW-RW3-MW4- 03072012		3/7/12	1315	G	GW	3	1	1
8 NWIRP-GM-38-GW-TP1- 03082012		3/8/12	0900	G	GW	3	1	1

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

ANALYSES/METHOD REQUESTED — Enter Number of Containers Per Analysis

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

Circle appropriate Y or N.	Correct containers?	Correct sample volume?	Correct preservation?	HeadspaceVolatiles?	Custody seals Present?	(if present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
N	N	N	N	N	N	N	N	N	N
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): Stacey Lee

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Stacey Lee H&S	3/8/12	1500	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; Oi=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:

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#:** 2031-005

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	---								

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~~ RW3-MW3-03072012DUP		3/7/12	1445	G	GW	3	1	1							
2 NWIRP-GM-38-FB- 03072012		3/7/12	1030	G	GW	3	1								
3 NWIRP-GM-38-TB- 03072012				G	GW	3									
4				G	GW										
5				G	GW										
6				G	GW										
7				G	GW										
8				G	GW										

Receipt Information (completed by Sample)

Performed by: INITIAL HERE

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	N	
Y	Y	Y	Y	Y	

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

SAMPLED BY (Please Print):

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1			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; Oi=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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

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: 2031-005

SDG #: 9956129-HNW-041

Client: H&S Environmental, Inc.

Date: 04/24/2012

Laboratory: ALS Environmental, Middletown, PA

Reviewer: Samir A. Naguib

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 03/07, 08 and 09/2012. The samples were submitted to ALS Environmental, Middletown, PA on 03/09/2012 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	9956129001	03/08/12	Water	
NWIRP-GM-38-GW-RW1-MW3-03082012	9956129002	03/08/12	Water	
NWIRP-GM-38-GW-RW2-MW1-03072012	9956129003	03/07/12	Water	
NWIRP-GM-38-GW-RW3-MW1-03072012	9956129004	03/07/12	Water	
NWIRP-GM-38-GW-RW3-MW2-03082012	9956129005	03/08/12	Water	
NWIRP-GM-38-GW-RW3-MW3-03072012	9956129006	03/07/12	Water	
NWIRP-GM-38-GW-RW3-MW4-03072012	9956129007	03/07/12	Water	
NWIRP-GM-38-GW-TP1-03082012	9956129008	03/08/12	Water	
NWIRP-GM-38-GW-RW3-MW3-03072012DUP	9956129009	03/07/12	Water	Field Duplicate of sample NWIRP-GM-38-GW-RW3-MW3-03072012
NWIRP-GM-38-FB-03072012	9956129010	03/07/12	Water	Field Blank
NWIRP-GM-38-TB-03072012	9956129011	03/09/12	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 03/12/2012 (ms03.i) exhibited acceptable %RSD and average RRF values for all compounds. No qualifications were required.

Continuing Calibration Verification (CCV):

1. CCV analyzed on 03/13/2012 @ 07:05 AM (ms03.i) exhibited acceptable %Ds (≤15.0%) for all compounds with the following exception(s):

Compound	%D
Bromomethane	-19.5
Chloromethane	-18.4
Vinyl Chloride	-36.1

Client Sample ID	Laboratory Sample ID	Compound	Action
NWIRP-GM-38-GW-RW1-MW1	9956129001	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-GW-RW1-MW3-03082012	9956129002	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-GW-RW2-MW1-03072012	9956129003	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-GW-RW3-MW1-03072012	9956129004	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-GW-RW3-MW2-03082012	9956129005	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-GW-RW3-MW3-03072012	9956129006	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-GW-RW3-MW4-03072012	9956129007	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-GW-TP1-03082012	9956129008	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-GW-RW3-MW3-03072012DUP	9956129009	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-FB-03072012	9956129010	Bromomethane, Chloromethane, Vinyl Chloride	UJ
NWIRP-GM-38-TB-03072012	9956129011	Bromomethane, Chloromethane, Vinyl Chloride	UJ

2. CCV analyzed on 03/14/2012 @ 08:57 AM (ms03.i) exhibited acceptable %D (≤15.0%) for Trichloroethene. No qualifications were required.

Surrogates:

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

Internal Standard (IS) Area Performance:

1. All samples exhibited acceptable area count for all three internal standards. 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 (958673) analyzed on 03/13/2012 was free of contamination. No qualifications were required.

2. Method Blank (959143) analyzed on 03/14/2012 was free of contamination. No qualifications were required.

3. Field Blank (NWIRP-GM38-FB-03072012) (9956129010) analyzed on 03/13/2012 was free of contamination. No qualifications were required.

4. Trip Blank (NWIRP-GM38-TB-03072012) (9956129011) analyzed on 03/13/2012 was free of contamination. No qualifications were required.

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

1. Laboratory Control Sample (958674) was analyzed on 03/13/2012. All %RECs were within the laboratory control limits. No qualifications were required.

2. Laboratory Control Sample (959144) was analyzed on 03/14/2012. All %RECs were within the laboratory control limits. No qualifications were required.

Field Duplicate:

1. Sample NWIRP-GM-38-GW-RW3-MW3-03072012DUP (9956129009) was collected as field duplicate for sample NWIRP-GM-38-GW-RW3-MW3-03072012 (9956129006). All RPDs were ≤50.0%. No qualifications were required.

Field Sample	Compound	Analytical Method	Result	Units	Field Duplicate	Result	Units	RPD	Qualifier
MWIRP-GM-38-GW-RW3-MW3-03072012	1,1-Dichloroethane	EPA 624	3.3	µg/l	MWIRP-GM-38-RW3-MW3-03070212DUP	3.3	µg/l	0.0	None
MWIRP-GM-38-GW-RW3-MW3-03072012	1,1-Dichloroethene	EPA 624	1.9	µg/l	MWIRP-GM-38-RW3-MW3-03070212DUP	1.9	µg/l	0.0	None
MWIRP-GM-38-GW-RW3-MW3-03072012	cis-1,2-Dichloroethene	EPA 624	2.1	µg/l	MWIRP-GM-38-RW3-MW3-03070212DUP	2.1	µg/l	0.0	None
MWIRP-GM-38-GW-RW3-MW3-03072012	Trichloroethene	EPA 624	312	µg/l	MWIRP-GM-38-RW3-MW3-03070212DUP	325	µg/l	4.1	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-MW3-03072012 (9956129006). All %RECs and RPDs were within the laboratory control limits with the following exception(s):

Compound	%REC/%REC/RPD	Action
2-Chloroethylvinyl ether	0/0/NA	R(1)

NA= Not Applicable
(1)= R qualifier was used due to both MS and MSD were not recovered.

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: 9956129-HNW-041.

MERCURY
USEPA Region II – Data Validation

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

Location: 100 Broadway, Bethpage, NY

Project Number: 2031-005

SDG #: 9956129-HNW-041

Client: H&S Environmental, Inc.

Date: 04/25/2012

Laboratory: ALS Environmental, Middletown, PA

Reviewer: Samir A. Naguib

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 03/07 and 08/2012. The samples were submitted to ALS Environmental, Middletown, PA on 03/09/2012 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	9956129001	03/08/12	Water	
NWIRP-GM-38-GW-RW1-MW3-03082012	9956129002	03/08/12	Water	
NWIRP-GM-38-GW-RW2-MW1-03072012	9956129003	03/07/12	Water	
NWIRP-GM-38-GW-RW3-MW1-03072012	9956129004	03/07/12	Water	
NWIRP-GM-38-GW-RW3-MW2-03082012	9956129005	03/08/12	Water	
NWIRP-GM-38-GW-RW3-MW3-03072012	9956129006	03/07/12	Water	
NWIRP-GM-38-GW-RW3-MW4-03072012	9956129007	03/07/12	Water	
NWIRP-GM-38-GW-TP1-03082012	9956129008	03/08/12	Water	
NWIRP-GM-38-GW-RW3-MW3-03072012DUP	9956129009	03/07/12	Water	Field Duplicate of sample NWIRP-GM-38-GW-RW3-MW3-03072012
NWIRP-GM-38-FB-03072012	9956129010	03/07/12	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 28days 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 (959753) digested on 03/15/2012 was free of contamination. No qualifications were required.

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

1. Field Blank (NWIRP-GM-38-FB-03072012) (9956129010) analyzed on 03/15/2012 was free of contamination. No qualifications were required.

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

1. Mercury %REC in Laboratory Control Sample (959754) analyzed on 03/15/2012 was within the laboratory control limits. No qualifications were required.

Field Duplicate:

1. Sample NWIRP-GM-38-GW-RW3-MW3-03072012DUP (9956129009) was collected as field duplicate for sample NWIRP-GM-38-GW-RW3-MW3-03072012 (9956129006). 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-MW3-03072012 (9956129006). 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: 9956129-HNW-041.

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: 2031-005

SDG #: 9956129-HNW-041

Client: H&S Environmental, Inc.

Date: 04/25/2012

Laboratory: ALS Environmental, Middletown, PA

Reviewer: Samir A. Naguib

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 03/07 and 08/2012. The samples were submitted to ALS Environmental, Middletown, PA on 03/09/2012 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	9956129001	03/08/12	Water	
NWIRP-GM-38-GW-RW1-MW3-03082012	9956129002	03/08/12	Water	
NWIRP-GM-38-GW-RW2-MW1-03072012	9956129003	03/07/12	Water	
NWIRP-GM-38-GW-RW3-MW1-03072012	9956129004	03/07/12	Water	
NWIRP-GM-38-GW-RW3-MW2-03082012	9956129005	03/08/12	Water	
NWIRP-GM-38-GW-RW3-MW3-03072012	9956129006	03/07/12	Water	
NWIRP-GM-38-GW-RW3-MW4-03072012	9956129007	03/07/12	Water	
NWIRP-GM-38-GW-TP1-03082012	9956129008	03/08/12	Water	
NWIRP-GM-38-GW-RW3-MW3-03072012DUP	9956129009	03/07/12	Water	Field Duplicate of sample NWIRP-GM-38-GW-RW3-MW3-03072012

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 7days 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 (958186) analyzed on 03/12/2012 was free of contamination. No qualifications were required.

2. Method Blank (959110) analyzed on 03/14/2012 was free of contamination. No qualifications were required.

Field Duplicate:

1. Sample NWIRP-GM-38-GW-RW3-MW3-03072012DUP (9956129009) was collected as field duplicate for sample NWIRP-GM-38-GW-RW3-MW3-03072012 (9956129006). Both samples were reported as non-detects. No qualifications were required.

Laboratory Duplicate:

1. Laboratory Duplicate source sample was associated with a different SDG.

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: 9956129-HNW-041.

APPENDIX E
Raw Analytical Data

January 2012 O&M Data

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

January 31, 2012

Ms. Jennifer Good
H & S Environmental
160 East Main Street, 2F
Westborough, MA 01581

Certificate of Analysis

Project Name:	**NWIRP Bethpage - GM-38**	Workorder:	**9947838**
Purchase Order:	**2031-003**	Workorder ID:	**HNW038|NWIRP Bethpage - GM-38**

Dear Ms. Good,

Enclosed are the analytical results for samples received by the laboratory on Thursday, January 19, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Tonya Hironimus (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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SAMPLE SUMMARY

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38 Discard Date: 03/31/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9947838001	NWIRP-GM-38-PS-RW1-011812	Water	1/18/12 10:00	1/19/12 08:50	Customer
9947838002	NWIRP-GM-38-PS-RW3-011812	Water	1/18/12 10:15	1/19/12 08:50	Customer
9947838003	NWIRP-GM-38-PS-ASE-011812	Water	1/18/12 10:25	1/19/12 08:50	Customer
9947838004	NWIRP-GM-38-PS-BFE-011812	Water	1/18/12 10:35	1/19/12 08:50	Customer
9947838005	NWIRP-GM-38-PS-TE-011812	Water	1/18/12 10:50	1/19/12 08:50	Customer
9947838006	NWIRP-GM-38-PS-LC1-011812	Water	1/18/12 11:00	1/19/12 08:50	Customer
9947838007	NWIRP-GM-38-PS-LC2-011812	Water	1/18/12 11:10	1/19/12 08:50	Customer
9947838008	NWIRP-GM-38-PS-LC3-011812	Water	1/18/12 11:20	1/19/12 08:50	Customer
9947838009	NWIRP-GM-38-PS-TE-DUP-011812	Water	1/18/12 11:30	1/19/12 08:50	Customer
9947838010	NWIRP-GM-38-TB-011812	Water	1/18/12 11:45	1/19/12 08:50	Customer

Workorder Comments:

This report was modified to provide the appropriate VOC compounds for the O&M project. TMH 1/26/12

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838001** Date Collected: 1/18/2012 10:00 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-RW1-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	5.0U	ug/L		5.0	5.0	1.2	EPA 624		1/23/12 18:25	MES	A
1,1-Dichloroethane	2.7J	ug/L		5.0	5.0	0.95	EPA 624		1/23/12 18:25	MES	A
1,2-Dichloroethane	5.0U	ug/L		5.0	5.0	1.1	EPA 624		1/23/12 18:25	MES	A
1,1-Dichloroethene	6.4	ug/L		5.0	5.0	0.85	EPA 624		1/23/12 18:25	MES	A
cis-1,2-Dichloroethene	43.4	ug/L		5.0	5.0	1.3	EPA 624		1/23/12 18:25	MES	A
trans-1,2-Dichloroethene	5.0U	ug/L		5.0	5.0	0.60	EPA 624		1/23/12 18:25	MES	A
Tetrachloroethene	92.7	ug/L		5.0	5.0	1.3	EPA 624		1/23/12 18:25	MES	A
1,1,1-Trichloroethane	6.7	ug/L		5.0	5.0	1.4	EPA 624		1/23/12 18:25	MES	A
Trichloroethene	364	ug/L		5.0	5.0	1.1	EPA 624		1/23/12 18:25	MES	A
Vinyl Chloride	3.4J	ug/L		10.0	10.0	1.2	EPA 624		1/23/12 18:25	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112	%		72-142			EPA 624		1/23/12 18:25	MES	A
4-Bromofluorobenzene (S)	98.2	%		73-119			EPA 624		1/23/12 18:25	MES	A
Dibromofluoromethane (S)	111	%		74-132			EPA 624		1/23/12 18:25	MES	A
Toluene-d8 (S)	126	%		75-133			EPA 624		1/23/12 18:25	MES	A
WET CHEMISTRY											
Total Suspended Solids	5	mg/L		5	5	5	SM20-2540 D		1/20/12 15:10	KAK	M
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	1/23/12	1/23/12 11:42	MNP	J1

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838002** Date Collected: 1/18/2012 10:15 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-RW3-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	5.0U	ug/L		5.0	5.0	1.2	EPA 624		1/23/12 18:59	MES	A
1,1-Dichloroethane	2.6J	ug/L		5.0	5.0	0.95	EPA 624		1/23/12 18:59	MES	A
1,2-Dichloroethane	5.0U	ug/L		5.0	5.0	1.1	EPA 624		1/23/12 18:59	MES	A
1,1-Dichloroethene	1.5J	ug/L		5.0	5.0	0.85	EPA 624		1/23/12 18:59	MES	A
cis-1,2-Dichloroethene	1.5J	ug/L		5.0	5.0	1.3	EPA 624		1/23/12 18:59	MES	A
trans-1,2-Dichloroethene	5.0U	ug/L		5.0	5.0	0.60	EPA 624		1/23/12 18:59	MES	A
Tetrachloroethene	5.0U	ug/L		5.0	5.0	1.3	EPA 624		1/23/12 18:59	MES	A
1,1,1-Trichloroethane	5.0U	ug/L		5.0	5.0	1.4	EPA 624		1/23/12 18:59	MES	A
Trichloroethene	317	ug/L		5.0	5.0	1.1	EPA 624		1/23/12 18:59	MES	A
Vinyl Chloride	10.0U	ug/L		10.0	10.0	1.2	EPA 624		1/23/12 18:59	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109	%		72-142			EPA 624		1/23/12 18:59	MES	A
4-Bromofluorobenzene (S)	97.1	%		73-119			EPA 624		1/23/12 18:59	MES	A
Dibromofluoromethane (S)	111	%		74-132			EPA 624		1/23/12 18:59	MES	A
Toluene-d8 (S)	128	%		75-133			EPA 624		1/23/12 18:59	MES	A
WET CHEMISTRY											
Total Suspended Solids	5	mg/L		5	5	5	SM20-2540 D		1/20/12 15:10	KAK	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	1/23/12	1/23/12 11:45	MNP	D1

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

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Technical Manager

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ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838003** Date Collected: 1/18/2012 10:25 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-ASE-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		1/23/12 19:31	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		1/23/12 19:31	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		1/23/12 19:31	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		1/23/12 19:31	MES	A
cis-1,2-Dichloroethene	0.78J	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 19:31	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		1/23/12 19:31	MES	A
Tetrachloroethene	0.51J	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 19:31	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		1/23/12 19:31	MES	A
Trichloroethene	3.8	ug/L		1.0	1.0	0.21	EPA 624		1/23/12 19:31	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		1/23/12 19:31	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112	%		72-142			EPA 624		1/23/12 19:31	MES	A
4-Bromofluorobenzene (S)	96.5	%		73-119			EPA 624		1/23/12 19:31	MES	A
Dibromofluoromethane (S)	109	%		74-132			EPA 624		1/23/12 19:31	MES	A
Toluene-d8 (S)	128	%		75-133			EPA 624		1/23/12 19:31	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		1/20/12 15:10	KAK	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	1/23/12	1/23/12 11:46	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838004** Date Collected: 1/18/2012 10:35 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-BFE-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		1/23/12 20:04	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		1/23/12 20:04	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		1/23/12 20:04	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		1/23/12 20:04	MES	A
cis-1,2-Dichloroethene	0.79J	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 20:04	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		1/23/12 20:04	MES	A
Tetrachloroethene	0.54J	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 20:04	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		1/23/12 20:04	MES	A
Trichloroethene	3.8	ug/L		1.0	1.0	0.21	EPA 624		1/23/12 20:04	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		1/23/12 20:04	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	114	%		72-142			EPA 624		1/23/12 20:04	MES	A
4-Bromofluorobenzene (S)	96.2	%		73-119			EPA 624		1/23/12 20:04	MES	A
Dibromofluoromethane (S)	111	%		74-132			EPA 624		1/23/12 20:04	MES	A
Toluene-d8 (S)	130	%		75-133			EPA 624		1/23/12 20:04	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		1/20/12 15:10	KAK	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	1/23/12	1/23/12 11:47	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838005** Date Collected: 1/18/2012 10:50 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-TE-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		1/23/12 20:37	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		1/23/12 20:37	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		1/23/12 20:37	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		1/23/12 20:37	MES	A
cis-1,2-Dichloroethene	0.96J	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 20:37	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		1/23/12 20:37	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 20:37	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		1/23/12 20:37	MES	A
Trichloroethene	0.70J	ug/L		1.0	1.0	0.21	EPA 624		1/23/12 20:37	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		1/23/12 20:37	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	113	%		72-142			EPA 624		1/23/12 20:37	MES	A
4-Bromofluorobenzene (S)	95.7	%		73-119			EPA 624		1/23/12 20:37	MES	A
Dibromofluoromethane (S)	110	%		74-132			EPA 624		1/23/12 20:37	MES	A
Toluene-d8 (S)	126	%		75-133			EPA 624		1/23/12 20:37	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		1/20/12 15:10	KAK	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	1/23/12	1/23/12 11:50	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838006** Date Collected: 1/18/2012 11:00 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-LC1-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		1/23/12 21:10	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		1/23/12 21:10	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		1/23/12 21:10	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		1/23/12 21:10	MES	A
cis-1,2-Dichloroethene	0.95J	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 21:10	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		1/23/12 21:10	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 21:10	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		1/23/12 21:10	MES	A
Trichloroethene	0.40J	ug/L		1.0	1.0	0.21	EPA 624		1/23/12 21:10	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		1/23/12 21:10	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111	%		72-142			EPA 624		1/23/12 21:10	MES	A
4-Bromofluorobenzene (S)	99.7	%		73-119			EPA 624		1/23/12 21:10	MES	A
Dibromofluoromethane (S)	112	%		74-132			EPA 624		1/23/12 21:10	MES	A
Toluene-d8 (S)	125	%		75-133			EPA 624		1/23/12 21:10	MES	A
WET CHEMISTRY											
Total Suspended Solids	6	mg/L		5	5	5	SM20-2540 D		1/20/12 15:10	KAK	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	1/23/12	1/23/12 11:51	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838007** Date Collected: 1/18/2012 11:10 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-LC2-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		1/23/12 21:43	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		1/23/12 21:43	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		1/23/12 21:43	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		1/23/12 21:43	MES	A
cis-1,2-Dichloroethene	0.91J	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 21:43	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		1/23/12 21:43	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 21:43	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		1/23/12 21:43	MES	A
Trichloroethene	0.96J	ug/L		1.0	1.0	0.21	EPA 624		1/23/12 21:43	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		1/23/12 21:43	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	115	%		72-142			EPA 624		1/23/12 21:43	MES	A
4-Bromofluorobenzene (S)	97.8	%		73-119			EPA 624		1/23/12 21:43	MES	A
Dibromofluoromethane (S)	114	%		74-132			EPA 624		1/23/12 21:43	MES	A
Toluene-d8 (S)	125	%		75-133			EPA 624		1/23/12 21:43	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		1/20/12 15:10	KAK	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	1/23/12	1/23/12 11:52	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838008** Date Collected: 1/18/2012 11:20 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-LC3-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		1/23/12 22:16	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		1/23/12 22:16	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		1/23/12 22:16	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		1/23/12 22:16	MES	A
cis-1,2-Dichloroethene	0.92J	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 22:16	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		1/23/12 22:16	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 22:16	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		1/23/12 22:16	MES	A
Trichloroethene	0.46J	ug/L		1.0	1.0	0.21	EPA 624		1/23/12 22:16	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		1/23/12 22:16	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112	%		72-142			EPA 624		1/23/12 22:16	MES	A
4-Bromofluorobenzene (S)	96.6	%		73-119			EPA 624		1/23/12 22:16	MES	A
Dibromofluoromethane (S)	110	%		74-132			EPA 624		1/23/12 22:16	MES	A
Toluene-d8 (S)	125	%		75-133			EPA 624		1/23/12 22:16	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		1/20/12 15:10	KAK	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	1/23/12	1/23/12 11:53	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838009** Date Collected: 1/18/2012 11:30 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-TE-DUP-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		1/23/12 22:49	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		1/23/12 22:49	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		1/23/12 22:49	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		1/23/12 22:49	MES	A
cis-1,2-Dichloroethene	0.94J	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 22:49	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		1/23/12 22:49	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 22:49	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		1/23/12 22:49	MES	A
Trichloroethene	0.71J	ug/L		1.0	1.0	0.21	EPA 624		1/23/12 22:49	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		1/23/12 22:49	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	112	%		72-142			EPA 624		1/23/12 22:49	MES	A
4-Bromofluorobenzene (S)	95.5	%		73-119			EPA 624		1/23/12 22:49	MES	A
Dibromofluoromethane (S)	111	%		74-132			EPA 624		1/23/12 22:49	MES	A
Toluene-d8 (S)	124	%		75-133			EPA 624		1/23/12 22:49	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		1/20/12 15:10	KAK	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	1/23/12	1/23/12 11:56	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9947838 HNW038|NWIRP Bethpage - GM-38

Lab ID: **9947838010** Date Collected: 1/18/2012 11:45 Matrix: Water

Sample ID: **NWIRP-GM-38-TB-011812** Date Received: 1/19/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		1/23/12 17:52	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		1/23/12 17:52	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		1/23/12 17:52	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		1/23/12 17:52	MES	A
cis-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 17:52	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		1/23/12 17:52	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		1/23/12 17:52	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		1/23/12 17:52	MES	A
Trichloroethene	1.0U	ug/L		1.0	1.0	0.21	EPA 624		1/23/12 17:52	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		1/23/12 17:52	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108	%		72-142			EPA 624		1/23/12 17:52	MES	A
4-Bromofluorobenzene (S)	99.6	%		73-119			EPA 624		1/23/12 17:52	MES	A
Dibromofluoromethane (S)	107	%		74-132			EPA 624		1/23/12 17:52	MES	A
Toluene-d8 (S)	126	%		75-133			EPA 624		1/23/12 17:52	MES	A

Sample Comments:

Anna G Milliken
Technical Manager

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 #: 8705 2409 6982

* 9 9 4 7 8 3 8 *

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#:** 2031-003

Project Name/#: NWIRP Bethpage GM-38 Monthly O&M **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 — Enter Number of Containers Per Analysis

#	Sample Description/Location (as it will appear on the lab record)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Select VOCs (Method 624) - incl. CCl4	Mercury (Method 245.1)	TSS (SM2540D)	pH (measured in the field)
1	NWIRP-GM-38-PS-RW1-011812	MS/MSD for VOC's, Hg	01/18	10:00			9	3	1	6.02
2	NWIRP-GM-38-PS-RW3-011812	~~MS/MSD for VOCs, Hg~~	01/18	1015	G	GW	3	1	1	8.18
3	NWIRP-GM-38-PS-ASE-011812		01/18	1025	G	GW	3	1	1	7.99
4	NWIRP-GM-38-PS-BFE-011812		01/18	1035	G	GW	3	1	1	7.96
5	NWIRP-GM-38-PS-TE-011812		01/18	1050	G	GW	3	1	1	7.60
6	NWIRP-GM-38-PS-LC1-011812		01/18	1100	G	GW	3	1	1	7.79
7	NWIRP-GM-38-PS-LC2-011812		01/18	1110	G	GW	3	1	1	7.73
8	NWIRP-GM-38-PS-LC3-011812		01/18	1120	G	GW	3	1	1	

(completed by Sampler) Performed by: AM
Cooler Temp: 3C
Therm. ID: TH 215
No. of Coolers:
Notes:

Check	Response
Correct containers?	Y
Correct sample volume?	Y
Correct preservation?	Y
Headspace/Volatiles?	N
Custody seals Present?	N
(if present) Seals intact?	
Received on Ice?	Y
COC/Labels complete/accurate?	Y
Container in good condition?	Y

Circle appropriate Y or N.

SAMPLED BY (Please Print): G. Gangemi

LOGGED BY(signature): [signature] DATE 1/19/12 TIME 1023
REVIEWED BY(signature): [signature] 012612 TGB

#	Relinquished By / Company Name	Date	Time	#	Received By / Company Name	Date	Time
1	[signature]	1/18/12	1400	2	[signature] / ALS	1/19/12	0850
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: AI=Air; DW=Drinking Water; GW=Groundwater; OI=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 06-2008

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.

Page 2 of 2
Courier:
Tracking #:
9947838

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#: 2031-003

Project Name/#: NWIRP Bethpage GM-38 Monthly O&M 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.:

						Select VOCs (Method 624) - incl CCl4	Mercury (Method 245.1)	TSS (SM2540D)	pH (measured in the field)
***Container Type						40 mL	500 mL	250 mL	
***Container Size						CG	PL	PL	
***Preservative						HCL	HNO3	–	
Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Enter Number of Containers Per Analysis			
1 NWIRP-GM-38-PS-TE -DUP-011812		01/18	1130	G	GW	3	1	1	7.60
2 NWIRP-GM-38-TB-011912		01/18	1145	G	GW	3			
3									
4									
5									
6									
7									
8									

ANALYSES/METHOD REQUESTED

Receipt Information (completed by Sample ...)
Performed by: [signature]
Cooler Temp: 3°C
Therm. ID: TH 215
No. of Coolers:
Notes:

	Y	N
Correct containers?	(Y)	N
Correct sample volume?	(Y)	N
Correct preservation?	(Y)	N
Headspace/Volatiles?	Y	(N)
Circle appropriate Y or N.		
Custody seals Present?	Y	(N)
(if present) Seals intact?	Y	N
Received on ice?	(Y)	N
COC/Labels complete/accurate?	(Y)	N
Container in good condition?	(Y)	N

SAMPLED BY (Please Print): G. Gangemi
LOGGED BY(signature): [signature] DATE 1/19/12 TIME 1035
REVIEWED BY(signature): [signature] 20120612 1413

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	1/18/12	1400	2 [signature] - ALS	1/18/12	0850
3			4	1/19/12	
5			6	TMH 1/19/12	
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 [ ] Other PWSID

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

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
Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass; PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.
Rev 08-2008

Air Toxics LTD.
Laboratory Services Since 1989

2/6/2012
Ms. Jennifer Good
H&S Environmental
160 East Main Street #2F

Westborough MA 01581

Project Name: NWIRP GM-38 Bethpage
Project #: 2031-003
Workorder #: 1201391

Dear Ms. Jennifer Good

The following report includes the data for the above referenced project for sample(s) received on 1/24/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 1201391

Work Order Summary

CLIENT:	Ms. Jennifer Good H&S Environmental 160 East Main Street #2F Westborough, MA 01581	**BILL TO:**	Accounts Payable H&S Environmental 160 East Main Street #2F Westborough, MA 01581
PHONE:	508-366-7442	**P.O. #**	12-297
FAX:	508-366-7445	**PROJECT #**	2031-003 NWIRP GM-38 Bethpage
DATE RECEIVED:	01/24/2012	**CONTACT:**	Ausha Scott
DATE COMPLETED:	02/06/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	nwirp-GM-38-AIR-VC11-012012	Modified TO-15	4.5 "Hg	5 psi
02A	nwirp-GM-38-AR-VC12-012012	Modified TO-15	6.0 "Hg	5 psi
02AA	nwirp-GM-38-AR-VC12-012012 Lab Dupli	Modified TO-15	6.0 "Hg	5 psi
03A	nwirp-GM-38-AIR-VC23-012012	Modified TO-15	5.0 "Hg	5 psi
04A	nwirp-GM-38-AIR-VCES-012012-1	Modified TO-15	5.0 "Hg	5 psi
05A	nwirp-GM-38-AR-VCES-012012-2	Modified TO-15	3.5 "Hg	5 psi
06A	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 02/06/12

Laboratory Director

Certfication numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
H&S Environmental
Workorder# 1201391

Five 6 Liter Summa Canister samples were received on January 24, 2012. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

The Chain of Custody (COC) information for samples nwirp-GM-38-AR-VC12-012012 and nwirp-GM-38-AR-VCES-012012-2 did not match the entries on the sample tags with regard to sample identification. Therefore the information on the COC was used to process and report the samples.

Analytical Notes

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified (0.2 ppbv for compounds reported at 0.5 ppbv and 0.8 ppbv for compounds reported at 2.0 ppbv) may be false positives.

Dilution was performed on sample nwirp-GM-38-AIR-VC11-012012 due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV and/or LCS.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	nwirp-GM-38-AIR-VC11-012012		
Lab ID:	1201391-01A	**Date/Time Analyzed:**	1/27/12 08:37 AM
Date/Time Collecte	1/20/12 10:30 AM	**Dilution Factor:**	6.32
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdp.i / p012613

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	7.1	8.6	17	Not Detected U
1,2-Dichloroethane	107-06-2	2.7	6.4	13	5.0 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	12	530
cis-1,2-Dichloroethene	156-59-2	6.2	6.3	12	530
Tetrachloroethene	127-18-4	8.8	11	21	1500
Toluene	108-88-3	2.3	6.0	12	9.0 J
Total Xylenes	9999-9999-015	NA	NA	14	8.1 J
trans-1,2-Dichloroethene	156-60-5	8.8	6.3	12	Not Detected U
Trichloroethene	79-01-6	5.3	8.5	17	5700
Vinyl Chloride	75-01-4	2.0	4.0	8.1	39

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	111
4-Bromofluorobenzene	460-00-4	75-126	96
Toluene-d8	2037-26-5	74-121	101

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	nwirp-GM-38-AR-VC12-012012		
Lab ID:	1201391-02A	**Date/Time Analyzed:**	1/26/12 10:17 PM
Date/Time Collecte	1/20/12 10:30 AM	**Dilution Factor:**	1.68
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdp.i / p012607

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	1.9	2.3	4.6	Not Detected U
1,2-Dichloroethane	107-06-2	0.71	1.7	3.4	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.3	2.2 J
cis-1,2-Dichloroethene	156-59-2	1.6	1.7	3.3	2.2 J
Tetrachloroethene	127-18-4	2.4	2.8	5.7	3.5 J
Toluene	108-88-3	0.62	1.6	3.2	Not Detected U
Total Xylenes	9999-9999-015	NA	NA	3.6	Not Detected U
trans-1,2-Dichloroethene	156-60-5	2.3	1.7	3.3	Not Detected U
Trichloroethene	79-01-6	1.4	2.2	4.5	36
Vinyl Chloride	75-01-4	0.53	1.1	2.1	36

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	103
4-Bromofluorobenzene	460-00-4	75-126	97
Toluene-d8	2037-26-5	74-121	105

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	nwirp-GM-38-AR-VC12-012012 Lab Duplic		
Lab ID:	1201391-02AA	**Date/Time Analyzed:**	1/26/12 10:34 PM
Date/Time Collecte	1/20/12 10:30 AM	**Dilution Factor:**	1.68
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdp.i / p012608

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	1.9	2.3	4.6	Not Detected U
1,2-Dichloroethane	107-06-2	0.71	1.7	3.4	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.3	2.1 J
cis-1,2-Dichloroethene	156-59-2	1.6	1.7	3.3	2.0 J
Tetrachloroethene	127-18-4	2.4	2.8	5.7	3.8 J
Toluene	108-88-3	0.62	1.6	3.2	Not Detected U
Total Xylenes	9999-9999-015	NA	NA	3.6	Not Detected U
trans-1,2-Dichloroethene	156-60-5	2.3	1.7	3.3	Not Detected U
Trichloroethene	79-01-6	1.4	2.2	4.5	34
Vinyl Chloride	75-01-4	0.53	1.1	2.1	39

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	112
4-Bromofluorobenzene	460-00-4	75-126	100
Toluene-d8	2037-26-5	74-121	106

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	nwirp-GM-38-AIR-VC23-012012		
Lab ID:	1201391-03A	**Date/Time Analyzed:**	1/27/12 06:29 AM
Date/Time Collecte	1/20/12 10:30 AM	**Dilution Factor:**	1.61
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdp.i / p012609

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	1.8	2.2	4.4	Not Detected U
1,2-Dichloroethane	107-06-2	0.68	1.6	3.2	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.2	3.2
cis-1,2-Dichloroethene	156-59-2	1.6	1.6	3.2	3.2
Tetrachloroethene	127-18-4	2.2	2.7	5.5	3.6 J
Toluene	108-88-3	0.60	1.5	3.0	Not Detected U
Total Xylenes	9999-9999-015	NA	NA	3.5	0.91 J
trans-1,2-Dichloroethene	156-60-5	2.2	1.6	3.2	Not Detected U
Trichloroethene	79-01-6	1.3	2.2	4.3	20
Vinyl Chloride	75-01-4	0.50	1.0	2.0	44

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	109
4-Bromofluorobenzene	460-00-4	75-126	94
Toluene-d8	2037-26-5	74-121	103

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	nwirp-GM-38-AIR-VCES-012012-1		
Lab ID:	1201391-04A	**Date/Time Analyzed:**	1/27/12 06:57 AM
Date/Time Collecte	1/20/12 10:30 AM	**Dilution Factor:**	1.61
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdp.i / p012610

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	1.8	2.2	4.4	Not Detected U
1,2-Dichloroethane	107-06-2	0.68	1.6	3.2	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.2	Not Detected U
cis-1,2-Dichloroethene	156-59-2	1.6	1.6	3.2	Not Detected U
Tetrachloroethene	127-18-4	2.2	2.7	5.5	3.7 J
Toluene	108-88-3	0.60	1.5	3.0	Not Detected U
Total Xylenes	9999-9999-015	NA	NA	3.5	Not Detected U
trans-1,2-Dichloroethene	156-60-5	2.2	1.6	3.2	Not Detected U
Trichloroethene	79-01-6	1.3	2.2	4.3	15
Vinyl Chloride	75-01-4	0.50	1.0	2.0	Not Detected U

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	110
4-Bromofluorobenzene	460-00-4	75-126	97
Toluene-d8	2037-26-5	74-121	103

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	nwirp-GM-38-AR-VCES-012012-2		
Lab ID:	1201391-05A	**Date/Time Analyzed:**	1/27/12 07:31 AM
Date/Time Collecte	1/20/12 11:20 AM	**Dilution Factor:**	1.52
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdp.i / p012611

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	1.7	2.1	4.1	Not Detected U
1,2-Dichloroethane	107-06-2	0.64	1.5	3.1	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.0	Not Detected U
cis-1,2-Dichloroethene	156-59-2	1.5	1.5	3.0	Not Detected U
Tetrachloroethene	127-18-4	2.1	2.6	5.2	Not Detected U
Toluene	108-88-3	0.56	1.4	2.9	Not Detected U
Total Xylenes	9999-9999-015	NA	NA	3.3	Not Detected U
trans-1,2-Dichloroethene	156-60-5	2.1	1.5	3.0	Not Detected U
Trichloroethene	79-01-6	1.3	2.0	4.1	4.7
Vinyl Chloride	75-01-4	0.48	0.97	1.9	Not Detected U

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	110
4-Bromofluorobenzene	460-00-4	75-126	97
Toluene-d8	2037-26-5	74-121	103

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	Lab Blank		
Lab ID:	1201391-06A	**Date/Time Analyzed:**	1/26/12 09:21 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdp.i / p012606c

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	1.1	1.4	2.7	Not Detected U
1,2-Dichloroethane	107-06-2	0.42	1.0	2.0	0.44 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	2.0	Not Detected U
cis-1,2-Dichloroethene	156-59-2	0.97	0.99	2.0	Not Detected U
Tetrachloroethene	127-18-4	1.4	1.7	3.4	Not Detected U
Toluene	108-88-3	0.37	0.94	1.9	Not Detected U
Total Xylenes	9999-9999-015	NA	NA	2.2	0.52 J
trans-1,2-Dichloroethene	156-60-5	1.4	0.99	2.0	Not Detected U
Trichloroethene	79-01-6	0.84	1.3	2.7	Not Detected U
Vinyl Chloride	75-01-4	0.31	0.64	1.3	Not Detected U

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	105
4-Bromofluorobenzene	460-00-4	75-126	101
Toluene-d8	2037-26-5	74-121	102

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	CCV		
Lab ID:	1201391-07A	**Date/Time Analyzed:**	1/26/12 07:54 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdp.i / p012602a

Compound	CAS#	%Recovery
1,1,2-Trichloroethane	79-00-5	114
1,2-Dichloroethane	107-06-2	117
1,2-Dichloroethene (Total of cis/trans)	540-59-0	118
cis-1,2-Dichloroethene	156-59-2	115
Tetrachloroethene	127-18-4	105
Toluene	108-88-3	110
Total Xylenes	9999-9999-015	112
trans-1,2-Dichloroethene	156-60-5	121
Trichloroethene	79-01-6	110
Vinyl Chloride	75-01-4	122

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	112
4-Bromofluorobenzene	460-00-4	75-126	106
Toluene-d8	2037-26-5	74-121	101

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	LCS		
Lab ID:	1201391-08A	**Date/Time Analyzed:**	1/26/12 08:12 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdp.i / p012603a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	
1,1,2-Trichloroethane	79-00-5			101
1,2-Dichloroethane	107-06-2			103
1,2-Dichloroethene (Total of cis/trans)	540-59-0			112
cis-1,2-Dichloroethene	156-59-2			103
Tetrachloroethene	127-18-4			92
Toluene	108-88-3			97
Total Xylenes	9999-9999-015			98
trans-1,2-Dichloroethene	156-60-5			122
Trichloroethene	79-01-6			100
Vinyl Chloride	75-01-4			111

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	110
4-Bromofluorobenzene	460-00-4	75-126	108
Toluene-d8	2037-26-5	74-121	102

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN
NWIRP GM-38 Bethpage

Client ID:	LCSD		
Lab ID:	1201391-08AA	**Date/Time Analyzed:**	1/26/12 08:29 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdp.i / p012604a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	
1,1,2-Trichloroethane	79-00-5			102
1,2-Dichloroethane	107-06-2			109
1,2-Dichloroethene (Total of cis/trans)	540-59-0			114
cis-1,2-Dichloroethene	156-59-2			104
Tetrachloroethene	127-18-4			95
Toluene	108-88-3			103
Total Xylenes	9999-9999-015			102
trans-1,2-Dichloroethene	156-60-5			123
Trichloroethene	79-01-6			103
Vinyl Chloride	75-01-4			115

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	108
4-Bromofluorobenzene	460-00-4	75-126	108
Toluene-d8	2037-26-5	74-121	105

* % Recovery is calculated using unrounded analytical results.

February 2012 O&M Data

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

February 23, 2012

Ms. Jennifer Good
H & S Environmental
160 East Main Street, 2F
Westborough, MA 01581

Certificate of Analysis

Project Name:	**NWIRP Bethpage - GM-38**	Workorder:	**9952764**
Purchase Order:	**2031-003**	Workorder ID:	**HNW039|NWIRP Bethpage - GM-38**

Dear Ms. Good,

Enclosed are the analytical results for samples received by the laboratory on Friday, February 17, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Tonya Hironimus (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

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This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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SAMPLE SUMMARY

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38 Discard Date: 04/23/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9952764001	NWIRP-GM-38-PS-RW1-021612	Water	2/16/12 12:40	2/17/12 14:00	Customer
9952764002	NWIRP-GM-38-PS-RW3-021612	Water	2/16/12 13:00	2/17/12 14:00	Customer
9952764003	NWIRP-GM-38-PS-ASE-021612	Water	2/16/12 13:10	2/17/12 14:00	Customer
9952764004	NWIRP-GM-38-PS-BFE-021612-1	Water	2/16/12 13:25	2/17/12 14:00	Customer
9952764005	NWIRP-GM-38-PS-TE-021612	Water	2/16/12 13:40	2/17/12 14:00	Customer
9952764006	NWIRP-GM-38-PS-LC1-021612	Water	2/16/12 13:55	2/17/12 14:00	Customer
9952764007	NWIRP-GM-38-PS-LC2-021612	Water	2/16/12 14:10	2/17/12 14:00	Customer
9952764008	NWIRP-GM-38-PS-LC3-021612	Water	2/16/12 14:30	2/17/12 14:00	Customer
9952764009	NWIRP-GM-38-PS-TE DUP-021612	Water	2/16/12 14:40	2/17/12 14:00	Customer
9952764010	NWIRP-GM-38-PS-TB-021612	Water	2/17/12 14:00	2/17/12 14:00	Customer

Workorder Comments:

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764001** Date Collected: 2/16/2012 12:40 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-RW1-021612** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	5.0U	ug/L		5.0	5.0	1.2	EPA 624		2/21/12 17:26	TMP	A
1,1-Dichloroethane	2.7J	ug/L		5.0	5.0	0.95	EPA 624		2/21/12 17:26	TMP	A
1,2-Dichloroethane	5.0U	ug/L		5.0	5.0	1.1	EPA 624		2/21/12 17:26	TMP	A
1,1-Dichloroethene	5.4	ug/L		5.0	5.0	0.85	EPA 624		2/21/12 17:26	TMP	A
cis-1,2-Dichloroethene	38.6	ug/L		5.0	5.0	1.3	EPA 624		2/21/12 17:26	TMP	A
trans-1,2-Dichloroethene	5.0U	ug/L		5.0	5.0	0.60	EPA 624		2/21/12 17:26	TMP	A
Tetrachloroethene	97.6	ug/L		5.0	5.0	1.3	EPA 624		2/21/12 17:26	TMP	A
1,1,1-Trichloroethane	4.7J	ug/L		5.0	5.0	1.4	EPA 624		2/21/12 17:26	TMP	A
Trichloroethene	338	ug/L		5.0	5.0	1.1	EPA 624		2/21/12 17:26	TMP	A
Vinyl Chloride	4.3J	ug/L		10.0	10.0	1.2	EPA 624		2/21/12 17:26	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	77.3	%		72-142			EPA 624		2/21/12 17:26	TMP	A
4-Bromofluorobenzene (S)	101	%		73-119			EPA 624		2/21/12 17:26	TMP	A
Dibromofluoromethane (S)	91.8	%		74-132			EPA 624		2/21/12 17:26	TMP	A
Toluene-d8 (S)	115	%		75-133			EPA 624		2/21/12 17:26	TMP	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		2/20/12 04:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	2/23/12	2/23/12 11:53	MNP	D1

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

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ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764002** Date Collected: 2/16/2012 13:00 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-RW3-021612** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	5.0U	ug/L		5.0	5.0	1.2	EPA 624		2/21/12 17:58	TMP	A
1,1-Dichloroethane	2.3J	ug/L		5.0	5.0	0.95	EPA 624		2/21/12 17:58	TMP	A
1,2-Dichloroethane	5.0U	ug/L		5.0	5.0	1.1	EPA 624		2/21/12 17:58	TMP	A
1,1-Dichloroethene	1.7J	ug/L		5.0	5.0	0.85	EPA 624		2/21/12 17:58	TMP	A
cis-1,2-Dichloroethene	1.6J	ug/L		5.0	5.0	1.3	EPA 624		2/21/12 17:58	TMP	A
trans-1,2-Dichloroethene	5.0U	ug/L		5.0	5.0	0.60	EPA 624		2/21/12 17:58	TMP	A
Tetrachloroethene	5.0U	ug/L		5.0	5.0	1.3	EPA 624		2/21/12 17:58	TMP	A
1,1,1-Trichloroethane	5.0U	ug/L		5.0	5.0	1.4	EPA 624		2/21/12 17:58	TMP	A
Trichloroethene	308	ug/L	1,2	5.0	5.0	1.1	EPA 624		2/21/12 17:58	TMP	A
Vinyl Chloride	10.0U	ug/L		10.0	10.0	1.2	EPA 624		2/21/12 17:58	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	77	%		72-142			EPA 624		2/21/12 17:58	TMP	A
4-Bromofluorobenzene (S)	102	%		73-119			EPA 624		2/21/12 17:58	TMP	A
Dibromofluoromethane (S)	90.1	%		74-132			EPA 624		2/21/12 17:58	TMP	A
Toluene-d8 (S)	118	%		75-133			EPA 624		2/21/12 17:58	TMP	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		2/20/12 04:30	OA	M
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	2/23/12	2/23/12 11:54	MNP	J1

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

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ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764003** Date Collected: 2/16/2012 13:10 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-ASE-021612** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		2/21/12 18:31	TMP	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		2/21/12 18:31	TMP	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		2/21/12 18:31	TMP	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		2/21/12 18:31	TMP	A
cis-1,2-Dichloroethene	0.66J	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 18:31	TMP	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		2/21/12 18:31	TMP	A
Tetrachloroethene	0.56J	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 18:31	TMP	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		2/21/12 18:31	TMP	A
Trichloroethene	3.2	ug/L		1.0	1.0	0.21	EPA 624		2/21/12 18:31	TMP	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		2/21/12 18:31	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	77.8	%		72-142			EPA 624		2/21/12 18:31	TMP	A
4-Bromofluorobenzene (S)	96.8	%		73-119			EPA 624		2/21/12 18:31	TMP	A
Dibromofluoromethane (S)	87.6	%		74-132			EPA 624		2/21/12 18:31	TMP	A
Toluene-d8 (S)	116	%		75-133			EPA 624		2/21/12 18:31	TMP	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		2/20/12 04:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	2/23/12	2/23/12 12:00	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764004** Date Collected: 2/16/2012 13:25 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-BFE-021612-1** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		2/21/12 19:04	TMP	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		2/21/12 19:04	TMP	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		2/21/12 19:04	TMP	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		2/21/12 19:04	TMP	A
cis-1,2-Dichloroethene	0.73J	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 19:04	TMP	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		2/21/12 19:04	TMP	A
Tetrachloroethene	0.52J	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 19:04	TMP	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		2/21/12 19:04	TMP	A
Trichloroethene	3.1	ug/L		1.0	1.0	0.21	EPA 624		2/21/12 19:04	TMP	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		2/21/12 19:04	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	76.5	%		72-142			EPA 624		2/21/12 19:04	TMP	A
4-Bromofluorobenzene (S)	104	%		73-119			EPA 624		2/21/12 19:04	TMP	A
Dibromofluoromethane (S)	89.4	%		74-132			EPA 624		2/21/12 19:04	TMP	A
Toluene-d8 (S)	115	%		75-133			EPA 624		2/21/12 19:04	TMP	A
WET CHEMISTRY											
Total Suspended Solids	5	mg/L		5	5	5	SM20-2540 D		2/20/12 04:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	2/23/12	2/23/12 12:01	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764005** Date Collected: 2/16/2012 13:40 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-TE-021612** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		2/21/12 19:36	TMP	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		2/21/12 19:36	TMP	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		2/21/12 19:36	TMP	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		2/21/12 19:36	TMP	A
cis-1,2-Dichloroethene	0.85J	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 19:36	TMP	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		2/21/12 19:36	TMP	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 19:36	TMP	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		2/21/12 19:36	TMP	A
Trichloroethene	0.65J	ug/L		1.0	1.0	0.21	EPA 624		2/21/12 19:36	TMP	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		2/21/12 19:36	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	77.8	%		72-142			EPA 624		2/21/12 19:36	TMP	A
4-Bromofluorobenzene (S)	105	%		73-119			EPA 624		2/21/12 19:36	TMP	A
Dibromofluoromethane (S)	88.8	%		74-132			EPA 624		2/21/12 19:36	TMP	A
Toluene-d8 (S)	114	%		75-133			EPA 624		2/21/12 19:36	TMP	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		2/20/12 04:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	2/23/12	2/23/12 12:02	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764006** Date Collected: 2/16/2012 13:55 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-LC1-021612** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		2/21/12 20:09	TMP	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		2/21/12 20:09	TMP	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		2/21/12 20:09	TMP	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		2/21/12 20:09	TMP	A
cis-1,2-Dichloroethene	0.84J	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 20:09	TMP	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		2/21/12 20:09	TMP	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 20:09	TMP	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		2/21/12 20:09	TMP	A
Trichloroethene	0.34J	ug/L		1.0	1.0	0.21	EPA 624		2/21/12 20:09	TMP	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		2/21/12 20:09	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	79.6	%		72-142			EPA 624		2/21/12 20:09	TMP	A
4-Bromofluorobenzene (S)	100	%		73-119			EPA 624		2/21/12 20:09	TMP	A
Dibromofluoromethane (S)	90.5	%		74-132			EPA 624		2/21/12 20:09	TMP	A
Toluene-d8 (S)	113	%		75-133			EPA 624		2/21/12 20:09	TMP	A
WET CHEMISTRY											
Total Suspended Solids	5	mg/L		5	5	5	SM20-2540 D		2/20/12 04:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	2/23/12	2/23/12 12:03	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764007** Date Collected: 2/16/2012 14:10 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-LC2-021612** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		2/21/12 20:42	TMP	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		2/21/12 20:42	TMP	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		2/21/12 20:42	TMP	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		2/21/12 20:42	TMP	A
cis-1,2-Dichloroethene	0.83J	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 20:42	TMP	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		2/21/12 20:42	TMP	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 20:42	TMP	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		2/21/12 20:42	TMP	A
Trichloroethene	0.78J	ug/L		1.0	1.0	0.21	EPA 624		2/21/12 20:42	TMP	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		2/21/12 20:42	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	81.5	%		72-142			EPA 624		2/21/12 20:42	TMP	A
4-Bromofluorobenzene (S)	98.9	%		73-119			EPA 624		2/21/12 20:42	TMP	A
Dibromofluoromethane (S)	91	%		74-132			EPA 624		2/21/12 20:42	TMP	A
Toluene-d8 (S)	114	%		75-133			EPA 624		2/21/12 20:42	TMP	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		2/20/12 04:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	2/23/12	2/23/12 12:04	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764008** Date Collected: 2/16/2012 14:30 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-LC3-021612** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		2/21/12 21:15	TMP	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		2/21/12 21:15	TMP	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		2/21/12 21:15	TMP	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		2/21/12 21:15	TMP	A
cis-1,2-Dichloroethene	0.89J	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 21:15	TMP	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		2/21/12 21:15	TMP	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 21:15	TMP	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		2/21/12 21:15	TMP	A
Trichloroethene	0.34J	ug/L		1.0	1.0	0.21	EPA 624		2/21/12 21:15	TMP	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		2/21/12 21:15	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	80.6	%		72-142			EPA 624		2/21/12 21:15	TMP	A
4-Bromofluorobenzene (S)	102	%		73-119			EPA 624		2/21/12 21:15	TMP	A
Dibromofluoromethane (S)	92.1	%		74-132			EPA 624		2/21/12 21:15	TMP	A
Toluene-d8 (S)	117	%		75-133			EPA 624		2/21/12 21:15	TMP	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		2/20/12 04:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	2/23/12	2/23/12 12:05	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764009** Date Collected: 2/16/2012 14:40 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-TE DUP-021612** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		2/21/12 21:47	TMP	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		2/21/12 21:47	TMP	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		2/21/12 21:47	TMP	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		2/21/12 21:47	TMP	A
cis-1,2-Dichloroethene	0.87J	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 21:47	TMP	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		2/21/12 21:47	TMP	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 21:47	TMP	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		2/21/12 21:47	TMP	A
Trichloroethene	0.46J	ug/L		1.0	1.0	0.21	EPA 624		2/21/12 21:47	TMP	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		2/21/12 21:47	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	78.8	%		72-142			EPA 624		2/21/12 21:47	TMP	A
4-Bromofluorobenzene (S)	98.8	%		73-119			EPA 624		2/21/12 21:47	TMP	A
Dibromofluoromethane (S)	90.3	%		74-132			EPA 624		2/21/12 21:47	TMP	A
Toluene-d8 (S)	117	%		75-133			EPA 624		2/21/12 21:47	TMP	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		2/20/12 05:00	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	2/23/12	2/23/12 12:06	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

Lab ID: **9952764010** Date Collected: 2/17/2012 14:00 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-TB-021612** Date Received: 2/17/2012 14:00

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		2/21/12 16:53	TMP	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		2/21/12 16:53	TMP	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		2/21/12 16:53	TMP	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		2/21/12 16:53	TMP	A
cis-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 16:53	TMP	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		2/21/12 16:53	TMP	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		2/21/12 16:53	TMP	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		2/21/12 16:53	TMP	A
Trichloroethene	1.0U	ug/L		1.0	1.0	0.21	EPA 624		2/21/12 16:53	TMP	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		2/21/12 16:53	TMP	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	73.8	%		72-142			EPA 624		2/21/12 16:53	TMP	A
4-Bromofluorobenzene (S)	106	%		73-119			EPA 624		2/21/12 16:53	TMP	A
Dibromofluoromethane (S)	89.4	%		74-132			EPA 624		2/21/12 16:53	TMP	A
Toluene-d8 (S)	118	%		75-133			EPA 624		2/21/12 16:53	TMP	A

Sample Comments:

Anna G Milliken
Technical Manager

ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9952764 HNW039|NWIRP Bethpage - GM-38

PARAMETER QUALIFIERS\FLAGS

[1] The QC sample type MSD for method EPA 624 was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 47.8 and the control limits were 71 to 157.

[2] The QC sample type MS for method EPA 624 was outside the control limits for the analyte Trichloroethene. The % Recovery was reported as 63.9 and the control limits were 71 to 157.

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 __ of __
Courier:
Tracking #: 5205845 ...

9952764

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#: 2031-003

Project Name/#: NWIRP Bethpage GM-38 Monthly O&M 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.:

	40 mL	500 mL	250 mL
**Container Type	CG	PL	PL
**Container Size			
***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	Select VOCs (Method 624) - incl. CCl4	Mercury (Method 245.1)	TSS (SM2540D)	pH (measured in the field)
1	NWIRP-GM-38-PS-RW1-021612		2/16/12	1240			3	1	1	5.98
2	NWIRP-GM-38-PS-RW3-021612	MS/MSD for VOCs, Hg	2/16/12	1300	G	GW	9	3	1	6.06
3	NWIRP-GM-38-PS-ASE-021612			1310	G	GW	3	1	1	6.07
4	NWIRP-GM-38-PS-BFE-021612-1			1325	G	GW	3	1	1	7.01
5	NWIRP-GM-38-PS-TE-021612			1340	G	GW	3	1	1	7.35
6	NWIRP-GM-38-PS-LC1-021612			1355	G	GW	3	1	1	7.61
7	NWIRP-GM-38-PS-LC2-021612			1410	G	GW	3	1	1	7.53
8	NWIRP-GM-38-PS-LC3-021612			1430	G	GW	3	1	1	7.64

Enter Number of Containers Per Analysis

(completed by Sample)
Performed by: [signature]
Cooler Temp: 2
Therm. ID: [illegible]
No. of Coolers:
Notes:

	Y	N
Correct containers?	✓	
Correct sample volume?	✓	
Correct preservation?	✓	
Headspace/Volatiles?		✓
Custody seals Present?		✓
(If present) Seals intact?	✓	
Received on ice?	✓	
COC/Labels complete/accurate?	✓	
Container in good condition?	✓	

Circle appropriate Y or N.

SAMPLED BY (Please Print): G. Gangemi
LOGGED BY(signature): [signature] Date 2/17/12 Time 1630
REVIEWED BY(signature): [signature] 1652

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	2/16/12	1530	2 [signature]	2/17/12	1400
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 [ ] Other PWSID

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

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

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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

Page ___ of ___
Courier:
Tracking #: 8228 8405 7275

9952764

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#:** 2031-003

Project Name/#: NWIRP Bethpage GM-38 Monthly O&M **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 — Enter Number of Containers Per Analysis

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Select VOCs (Method 624) - incl CCl4	Mercury (Method 245.1)	TSS (SM2540D)							pH (measured in the field)
1	NWIRP-GM-38-PS-TE -DUP-021612-7		2/16/12	1440	G	GW	3	1	1							7.35
2	NWIRP-GM-38-TB-21612		2/16/12	1500	G	GW	3									
3																
4																
5																
6																
7																
8																

Receipt Information (completed by Sample ...)
Performed by: [signature] (SIGNATURE)
Cooler Temp: 2
Therm. ID: 77120
No. of Coolers:
Notes:

	Y	N
Correct containers?	✓	
Correct sample volume?	✓	
Correct preservation?	✓	
Headspace/Volatiles?		✓
Circle appropriate Y or N.		
Custody seals Present?		✓
(If present) Seals intact?		✓
Received on ice?	✓	
COC/Labels complete/accurate?	✓	
Container in good condition?	✓	

SAMPLED BY (Please Print): G. Gangemi
LOGGED BY (signature): [signature] 2/17/12 1327
REVIEWED BY (signature): [signature] 2/20/12 852

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature]	2/16/12	1536	2	[signature]	2/17/12	1140
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 [ ] Other PWSID

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

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

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc. Rev 08-2008

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3/7/2012

Ms. Jennifer Good
H&S Environmental
160 East Main Street #2F

Westborough MA 01581

Project Name: Bethpage GM-38 Monthly
Project #: 2031-004
Workorder #: 1202427

Dear Ms. Jennifer Good

The following report includes the data for the above referenced project for sample(s) received on 2/20/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1202427

Work Order Summary

CLIENT:	Ms. Jennifer Good H&S Environmental 160 East Main Street #2F Westborough, MA 01581	**BILL TO:**	Accounts Payable H&S Environmental 160 East Main Street #2F Westborough, MA 01581
PHONE:	508-366-7442	**P.O. #**	12-297
FAX:	508-366-7445	**PROJECT #**	2031-004 Bethpage GM-38 Monthly
DATE RECEIVED:	02/20/2012	**CONTACT:**	Ausha Scott
DATE COMPLETED:	03/06/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	NWIRP-GM-38-AIR-VC11-21712	Modified TO-15	0.5 "Hg	5 psi
01AA	NWIRP-GM-38-AIR-VC11-21712 Lab Du	Modified TO-15	0.5 "Hg	5 psi
02A	NWIRP-GM-38-AIR-VC12-21712	Modified TO-15	5.0 "Hg	5 psi
03A	NWIRP-GM-38-AIR-VC23-21712	Modified TO-15	4.5 "Hg	5 psi
04A	NWIRP-GM-38-AIR-ES-21712	Modified TO-15	3.5 "Hg	5 psi
05A	NWIRP-GM-38-AIR-ES-DUP-21712	Modified TO-15	4.0 "Hg	5 psi
06A	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 03/06/12

Laboratory Director

Certfication numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
H&S Environmental
Workorder# 1202427

Five 6 Liter Summa Canister samples were received on February 20, 2012. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

The Chain of Custody (COC) information for samples NWIRP-GM-38-AIR-VC11-21712, NWIRP-GM-38-AIR-VC12-21712, NWIRP-GM-38-AIR-VC23-21712, NWIRP-GM-38-AIR-ES-21712 and NWIRP-GM-38-AIR-ES-DUP-21712 did not match the entries on the sample tags with regard to sample identification. Therefore the information on the COC was used to process and report the samples.

Analytical Notes

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified (0.2 ppbv for compounds reported at 0.5 ppbv and 0.8 ppbv for compounds reported at 2.0 ppbv) may be false positives.

Dilution was performed on samples NWIRP-GM-38-AIR-VC11-21712 and NWIRP-GM-38-AIR-VC11-21712 Lab Duplicate due to the presence of high level target species.

trans-1,2-Dichloroethene was manually integrated in sample NWIRP-GM-38-AIR-VC11-21712.

Vinyl Chloride was manually integrated in the initial calibration.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV and/or LCS.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-VC11-21712		
Lab ID:	1202427-01A	**Date/Time Analyzed:**	2/23/12 01:14 AM
Date/Time Collecte	2/17/12 10:10 PM	**Dilution Factor:**	5.44
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdm.i / m022227

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	1.7	4.7	15	4.8 J
1,2-Dichloroethane	107-06-2	1.2	3.5	11	8.1 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	11	400
cis-1,2-Dichloroethene	156-59-2	1.3	3.4	11	390
Tetrachloroethene	127-18-4	2.3	5.9	18	970
Toluene	108-88-3	0.50	3.3	10	25
Total Xylenes	9999-9999-015	NA	NA	12	18
trans-1,2-Dichloroethene	156-60-5	1.6	3.4	11	6.6 J
Trichloroethene	79-01-6	2.1	4.7	15	3400
Vinyl Chloride	75-01-4	0.85	2.2	7.0	28

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	104
4-Bromofluorobenzene	460-00-4	75-126	99
Toluene-d8	2037-26-5	74-121	95

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-VC11-21712 Lab Dup		
Lab ID:	1202427-01AA	**Date/Time Analyzed:**	2/23/12 01:52 AM
Date/Time Collecte	2/17/12 10:10 PM	**Dilution Factor:**	5.44
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdm.i / m022228

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	1.7	4.7	15	4.1 J
1,2-Dichloroethane	107-06-2	1.2	3.5	11	5.0 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	11	400
cis-1,2-Dichloroethene	156-59-2	1.3	3.4	11	400
Tetrachloroethene	127-18-4	2.3	5.9	18	880
Toluene	108-88-3	0.50	3.3	10	4.1 J
Total Xylenes	9999-9999-015	NA	NA	12	9.4 J
trans-1,2-Dichloroethene	156-60-5	1.6	3.4	11	6.3 J
Trichloroethene	79-01-6	2.1	4.7	15	3300
Vinyl Chloride	75-01-4	0.85	2.2	7.0	27

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	103
4-Bromofluorobenzene	460-00-4	75-126	96
Toluene-d8	2037-26-5	74-121	93

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-VC12-21712		
Lab ID:	1202427-02A	**Date/Time Analyzed:**	2/22/12 10:44 PM
Date/Time Collecte	2/17/12 10:10 PM	**Dilution Factor:**	1.61
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdm.i / m022223

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.50	1.4	4.4	0.90 J
1,2-Dichloroethane	107-06-2	0.36	1.0	3.2	1.4 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.2	81
cis-1,2-Dichloroethene	156-59-2	0.39	1.0	3.2	78
Tetrachloroethene	127-18-4	0.68	1.7	5.5	95
Toluene	108-88-3	0.15	0.97	3.0	4.9
Total Xylenes	9999-9999-015	NA	NA	3.5	3.2 J
trans-1,2-Dichloroethene	156-60-5	0.47	1.0	3.2	1.7 J
Trichloroethene	79-01-6	0.62	1.4	4.3	800
Vinyl Chloride	75-01-4	0.25	0.66	2.0	9.7

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	103
4-Bromofluorobenzene	460-00-4	75-126	97
Toluene-d8	2037-26-5	74-121	94

eurofins | Air Toxics

EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-VC23-21712		
Lab ID:	1202427-03A	**Date/Time Analyzed:**	2/22/12 11:22 PM
Date/Time Collecte	2/17/12 10:10 PM	**Dilution Factor:**	1.58
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdm.i / m022224

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.49	1.4	4.3	0.52 J
1,2-Dichloroethane	107-06-2	0.35	1.0	3.2	0.74 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.1	2.5 J
cis-1,2-Dichloroethene	156-59-2	0.38	1.0	3.1	2.5 J
Tetrachloroethene	127-18-4	0.66	1.7	5.4	5.0 J
Toluene	108-88-3	0.14	0.95	3.0	0.83 J
Total Xylenes	9999-9999-015	NA	NA	3.4	1.4 J
trans-1,2-Dichloroethene	156-60-5	0.46	1.0	3.1	Not Detected U
Trichloroethene	79-01-6	0.61	1.4	4.2	17
Vinyl Chloride	75-01-4	0.25	0.65	2.0	26

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	100
4-Bromofluorobenzene	460-00-4	75-126	98
Toluene-d8	2037-26-5	74-121	93

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-ES-21712		
Lab ID:	1202427-04A	**Date/Time Analyzed:**	2/22/12 11:59 PM
Date/Time Collecte	2/17/12 10:10 PM	**Dilution Factor:**	1.52
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdm.i / m022225

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.47	1.3	4.1	Not Detected U
1,2-Dichloroethane	107-06-2	0.34	0.98	3.1	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.0	0.87 J
cis-1,2-Dichloroethene	156-59-2	0.36	0.96	3.0	0.86 J
Tetrachloroethene	127-18-4	0.64	1.6	5.2	4.6 J
Toluene	108-88-3	0.14	0.92	2.9	0.93 J
Total Xylenes	9999-9999-015	NA	NA	3.3	1.3 J
trans-1,2-Dichloroethene	156-60-5	0.44	0.96	3.0	Not Detected U
Trichloroethene	79-01-6	0.59	1.3	4.1	12
Vinyl Chloride	75-01-4	0.24	0.62	1.9	Not Detected U

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	102
4-Bromofluorobenzene	460-00-4	75-126	98
Toluene-d8	2037-26-5	74-121	93

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-ES-DUP-21712		
Lab ID:	1202427-05A	**Date/Time Analyzed:**	2/23/12 12:36 AM
Date/Time Collecte	2/17/12 11:00 PM	**Dilution Factor:**	1.55
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdm.i / m022226

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.48	1.4	4.2	Not Detected U
1,2-Dichloroethane	107-06-2	0.35	1.0	3.1	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.1	Not Detected U
cis-1,2-Dichloroethene	156-59-2	0.37	0.98	3.1	Not Detected U
Tetrachloroethene	127-18-4	0.65	1.7	5.2	2.1 J
Toluene	108-88-3	0.14	0.93	2.9	0.50 J
Total Xylenes	9999-9999-015	NA	NA	3.4	Not Detected U
trans-1,2-Dichloroethene	156-60-5	0.45	0.98	3.1	Not Detected U
Trichloroethene	79-01-6	0.60	1.3	4.2	3.9 J
Vinyl Chloride	75-01-4	0.24	0.63	2.0	Not Detected U

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	104
4-Bromofluorobenzene	460-00-4	75-126	96
Toluene-d8	2037-26-5	74-121	96

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	Lab Blank		
Lab ID:	1202427-06A	**Date/Time Analyzed:**	2/22/12 11:17 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdm.i / m022206a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.31	0.87	2.7	0.65 J
1,2-Dichloroethane	107-06-2	0.22	0.65	2.0	0.79 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	2.0	1.5 J
cis-1,2-Dichloroethene	156-59-2	0.24	0.63	2.0	0.63 J
Tetrachloroethene	127-18-4	0.42	1.1	3.4	0.51 J
Toluene	108-88-3	0.092	0.60	1.9	0.47 J
Total Xylenes	9999-9999-015	NA	NA	2.2	1.0 J
trans-1,2-Dichloroethene	156-60-5	0.29	0.63	2.0	0.82 J
Trichloroethene	79-01-6	0.38	0.86	2.7	1.2 J
Vinyl Chloride	75-01-4	0.16	0.41	1.3	0.42 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	101
4-Bromofluorobenzene	460-00-4	75-126	97
Toluene-d8	2037-26-5	74-121	96

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	CCV		
Lab ID:	1202427-07A	**Date/Time Analyzed:**	2/22/12 08:47 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdm.i / m022202a

Compound	CAS#	%Recovery
1,1,2-Trichloroethane	79-00-5	97
1,2-Dichloroethane	107-06-2	107
1,2-Dichloroethene (Total of cis/trans)	540-59-0	92
cis-1,2-Dichloroethene	156-59-2	92
Tetrachloroethene	127-18-4	99
Toluene	108-88-3	90
Total Xylenes	9999-9999-015	96
trans-1,2-Dichloroethene	156-60-5	92
Trichloroethene	79-01-6	97
Vinyl Chloride	75-01-4	94

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	104
4-Bromofluorobenzene	460-00-4	75-126	101
Toluene-d8	2037-26-5	74-121	98

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	LCS		
Lab ID:	1202427-08A	**Date/Time Analyzed:**	2/22/12 09:24 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdm.i / m022203a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	
1,1,2-Trichloroethane	79-00-5			103
1,2-Dichloroethane	107-06-2			111
1,2-Dichloroethene (Total of cis/trans)	540-59-0			105
cis-1,2-Dichloroethene	156-59-2			98
Tetrachloroethene	127-18-4			103
Toluene	108-88-3			94
Total Xylenes	9999-9999-015			100
trans-1,2-Dichloroethene	156-60-5			112
Trichloroethene	79-01-6			106
Vinyl Chloride	75-01-4			101

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	100
4-Bromofluorobenzene	460-00-4	75-126	100
Toluene-d8	2037-26-5	74-121	98

* % Recovery is calculated using unrounded analytical results.

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	LCSD		
Lab ID:	1202427-08AA	**Date/Time Analyzed:**	2/22/12 10:02 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdm.i / m022204a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	
1,1,2-Trichloroethane	79-00-5			104
1,2-Dichloroethane	107-06-2			108
1,2-Dichloroethene (Total of cis/trans)	540-59-0			105
cis-1,2-Dichloroethene	156-59-2			99
Tetrachloroethene	127-18-4			101
Toluene	108-88-3			94
Total Xylenes	9999-9999-015			100
trans-1,2-Dichloroethene	156-60-5			111
Trichloroethene	79-01-6			105
Vinyl Chloride	75-01-4			101

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	100
4-Bromofluorobenzene	460-00-4	75-126	100
Toluene-d8	2037-26-5	74-121	99

* % Recovery is calculated using unrounded analytical results.

March 2012 O&M Data

ALS Environmental

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March 14, 2012

Ms. Jennifer Good
H & S Environmental
160 East Main Street, 2F
Westborough, MA 01581

Certificate of Analysis

Project Name:	**NWIRP Bethpage - GM-38**	Workorder:	**9955732**
Purchase Order:	**2031-003**	Workorder ID:	**HNW040|NWIRP Bethpage GM-38**

Dear Ms. Good,

Enclosed are the analytical results for samples received by the laboratory on Thursday, March 08, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Tonya Hironimus (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

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This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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SAMPLE SUMMARY

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38 Discard Date: 05/13/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9955732001	NWIRP-GM-38-PS-RW1-03712	Water	3/7/12 09:30	3/8/12 09:15	Customer
9955732002	NWIRP-GM-38-PS-RW3-03712	Water	3/7/12 10:00	3/8/12 09:15	Customer
9955732003	NWIRP-GM-38-PS-ASE-03712	Water	3/7/12 10:10	3/8/12 09:15	Customer
9955732004	NWIRP-GM-38-PS-BFE-03712	Water	3/7/12 10:20	3/8/12 09:15	Customer
9955732005	NWIRP-GM-38-PS-TE-03712	Water	3/7/12 10:35	3/8/12 09:15	Customer
9955732006	NWIRP-GM-38-PS-LC1-03712	Water	3/7/12 10:45	3/8/12 09:15	Customer
9955732007	NWIRP-GM-38-PS-LC2-03712	Water	3/7/12 11:00	3/8/12 09:15	Customer
9955732008	NWIRP-GM-38-PS-LC3-03712	Water	3/7/12 11:15	3/8/12 09:15	Customer
9955732009	NWIRP-GM-38-PS-TE-DUP-03712	Water	3/7/12 11:25	3/8/12 09:15	Customer
9955732010	NWIRP-GM-38-TB-03712	Water	3/8/12 09:15	3/8/12 09:15	Customer

Workorder Comments:

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732001** Date Collected: 3/7/2012 09:30 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-RW1-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	10.0U	ug/L		10.0	10.0	2.4	EPA 624		3/13/12 05:03	MES	D
1,1-Dichloroethane	2.6J	ug/L		10.0	10.0	1.9	EPA 624		3/13/12 05:03	MES	D
1,2-Dichloroethane	10.0U	ug/L		10.0	10.0	2.2	EPA 624		3/13/12 05:03	MES	D
1,1-Dichloroethene	5.0J	ug/L		10.0	10.0	1.7	EPA 624		3/13/12 05:03	MES	D
cis-1,2-Dichloroethene	38.4	ug/L		10.0	10.0	2.6	EPA 624		3/13/12 05:03	MES	D
trans-1,2-Dichloroethene	10.0U	ug/L		10.0	10.0	1.2	EPA 624		3/13/12 05:03	MES	D
Tetrachloroethene	78.9	ug/L		10.0	10.0	2.6	EPA 624		3/13/12 05:03	MES	D
1,1,1-Trichloroethane	5.4J	ug/L		10.0	10.0	2.7	EPA 624		3/13/12 05:03	MES	D
Trichloroethene	333	ug/L		10.0	10.0	2.1	EPA 624		3/13/12 05:03	MES	D
Vinyl Chloride	2.7J	ug/L		20.0	20.0	2.4	EPA 624		3/13/12 05:03	MES	D
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101	%		72-142			EPA 624		3/13/12 05:03	MES	D
4-Bromofluorobenzene (S)	99.8	%		73-119			EPA 624		3/13/12 05:03	MES	D
Dibromofluoromethane (S)	110	%		74-132			EPA 624		3/13/12 05:03	MES	D
Toluene-d8 (S)	118	%		75-133			EPA 624		3/13/12 05:03	MES	D
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/9/12 05:30	OA	M
METALS											
Mercury, Total	0.00050 U	mg/L	1,2	0.00050	0.00050	0.00016	EPA 245.1	3/12/12	3/13/12 10:02	MNP	J1

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732002** Date Collected: 3/7/2012 10:00 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-RW3-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	5.0U	ug/L		5.0	5.0	1.2	EPA 624		3/13/12 20:22	MES	A
1,1-Dichloroethane	2.3J	ug/L		5.0	5.0	0.95	EPA 624		3/13/12 20:22	MES	A
1,2-Dichloroethane	5.0U	ug/L		5.0	5.0	1.1	EPA 624		3/13/12 20:22	MES	A
1,1-Dichloroethene	1.2J	ug/L		5.0	5.0	0.85	EPA 624		3/13/12 20:22	MES	A
cis-1,2-Dichloroethene	1.8J	ug/L		5.0	5.0	1.3	EPA 624		3/13/12 20:22	MES	A
trans-1,2-Dichloroethene	5.0U	ug/L		5.0	5.0	0.60	EPA 624		3/13/12 20:22	MES	A
Tetrachloroethene	5.0U	ug/L		5.0	5.0	1.3	EPA 624		3/13/12 20:22	MES	A
1,1,1-Trichloroethane	5.0U	ug/L		5.0	5.0	1.4	EPA 624		3/13/12 20:22	MES	A
Trichloroethene	307	ug/L		5.0	5.0	1.1	EPA 624		3/13/12 20:22	MES	A
Vinyl Chloride	10.0U	ug/L		10.0	10.0	1.2	EPA 624		3/13/12 20:22	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	105	%		72-142			EPA 624		3/13/12 20:22	MES	A
4-Bromofluorobenzene (S)	90.7	%		73-119			EPA 624		3/13/12 20:22	MES	A
Dibromofluoromethane (S)	112	%		74-132			EPA 624		3/13/12 20:22	MES	A
Toluene-d8 (S)	111	%		75-133			EPA 624		3/13/12 20:22	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/9/12 05:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L	1	0.00050	0.00050	0.00016	EPA 245.1	3/12/12	3/13/12 10:06	MNP	D1

Sample Comments:

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732003** Date Collected: 3/7/2012 10:10 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-ASE-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 20:56	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 20:56	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 20:56	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 20:56	MES	A
cis-1,2-Dichloroethene	0.77J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 20:56	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 20:56	MES	A
Tetrachloroethene	0.63J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 20:56	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 20:56	MES	A
Trichloroethene	3.9	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 20:56	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 20:56	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	107	%		72-142			EPA 624		3/13/12 20:56	MES	A
4-Bromofluorobenzene (S)	92.8	%		73-119			EPA 624		3/13/12 20:56	MES	A
Dibromofluoromethane (S)	113	%		74-132			EPA 624		3/13/12 20:56	MES	A
Toluene-d8 (S)	110	%		75-133			EPA 624		3/13/12 20:56	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/9/12 05:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L	1	0.00050	0.00050	0.00016	EPA 245.1	3/12/12	3/13/12 10:07	MNP	D1

Sample Comments:

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732004** Date Collected: 3/7/2012 10:20 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-BFE-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 21:29	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 21:29	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 21:29	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 21:29	MES	A
cis-1,2-Dichloroethene	0.80J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 21:29	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 21:29	MES	A
Tetrachloroethene	0.60J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 21:29	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 21:29	MES	A
Trichloroethene	3.9	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 21:29	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 21:29	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	106	%		72-142			EPA 624		3/13/12 21:29	MES	A
4-Bromofluorobenzene (S)	95.8	%		73-119			EPA 624		3/13/12 21:29	MES	A
Dibromofluoromethane (S)	113	%		74-132			EPA 624		3/13/12 21:29	MES	A
Toluene-d8 (S)	109	%		75-133			EPA 624		3/13/12 21:29	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/9/12 05:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L	1	0.00050	0.00050	0.00016	EPA 245.1	3/12/12	3/13/12 10:08	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732005** Date Collected: 3/7/2012 10:35 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-TE-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 22:03	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 22:03	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 22:03	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 22:03	MES	A
cis-1,2-Dichloroethene	0.96J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 22:03	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 22:03	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 22:03	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 22:03	MES	A
Trichloroethene	0.76J	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 22:03	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 22:03	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	106	%		72-142			EPA 624		3/13/12 22:03	MES	A
4-Bromofluorobenzene (S)	93	%		73-119			EPA 624		3/13/12 22:03	MES	A
Dibromofluoromethane (S)	112	%		74-132			EPA 624		3/13/12 22:03	MES	A
Toluene-d8 (S)	107	%		75-133			EPA 624		3/13/12 22:03	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/9/12 05:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L	1	0.00050	0.00050	0.00016	EPA 245.1	3/12/12	3/13/12 10:11	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732006** Date Collected: 3/7/2012 10:45 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-LC1-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 22:37	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 22:37	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 22:37	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 22:37	MES	A
cis-1,2-Dichloroethene	1.0	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 22:37	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 22:37	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 22:37	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 22:37	MES	A
Trichloroethene	0.46J	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 22:37	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 22:37	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108	%		72-142			EPA 624		3/13/12 22:37	MES	A
4-Bromofluorobenzene (S)	93.8	%		73-119			EPA 624		3/13/12 22:37	MES	A
Dibromofluoromethane (S)	114	%		74-132			EPA 624		3/13/12 22:37	MES	A
Toluene-d8 (S)	110	%		75-133			EPA 624		3/13/12 22:37	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/9/12 05:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L	1	0.00050	0.00050	0.00016	EPA 245.1	3/12/12	3/13/12 10:12	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732007** Date Collected: 3/7/2012 11:00 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-LC2-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 23:10	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 23:10	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 23:10	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 23:10	MES	A
cis-1,2-Dichloroethene	0.95J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 23:10	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 23:10	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 23:10	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 23:10	MES	A
Trichloroethene	1.1	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 23:10	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 23:10	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109	%		72-142			EPA 624		3/13/12 23:10	MES	A
4-Bromofluorobenzene (S)	97.9	%		73-119			EPA 624		3/13/12 23:10	MES	A
Dibromofluoromethane (S)	114	%		74-132			EPA 624		3/13/12 23:10	MES	A
Toluene-d8 (S)	111	%		75-133			EPA 624		3/13/12 23:10	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/9/12 05:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L	1	0.00050	0.00050	0.00016	EPA 245.1	3/12/12	3/13/12 10:13	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732008** Date Collected: 3/7/2012 11:15 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-LC3-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 23:44	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 23:44	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 23:44	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 23:44	MES	A
cis-1,2-Dichloroethene	1.0	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 23:44	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 23:44	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 23:44	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 23:44	MES	A
Trichloroethene	0.47J	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 23:44	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 23:44	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	108	%		72-142			EPA 624		3/13/12 23:44	MES	A
4-Bromofluorobenzene (S)	94	%		73-119			EPA 624		3/13/12 23:44	MES	A
Dibromofluoromethane (S)	112	%		74-132			EPA 624		3/13/12 23:44	MES	A
Toluene-d8 (S)	110	%		75-133			EPA 624		3/13/12 23:44	MES	A
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/9/12 05:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L	1	0.00050	0.00050	0.00016	EPA 245.1	3/12/12	3/13/12 10:15	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732009** Date Collected: 3/7/2012 11:25 Matrix: Water

Sample ID: **NWIRP-GM-38-PS-TE-DUP-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/14/12 00:16	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/14/12 00:16	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/14/12 00:16	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/14/12 00:16	MES	A
cis-1,2-Dichloroethene	0.98J	ug/L		1.0	1.0	0.26	EPA 624		3/14/12 00:16	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/14/12 00:16	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/14/12 00:16	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/14/12 00:16	MES	A
Trichloroethene	0.73J	ug/L		1.0	1.0	0.21	EPA 624		3/14/12 00:16	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/14/12 00:16	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	110	%		72-142			EPA 624		3/14/12 00:16	MES	A
4-Bromofluorobenzene (S)	97	%		73-119			EPA 624		3/14/12 00:16	MES	A
Dibromofluoromethane (S)	117	%		74-132			EPA 624		3/14/12 00:16	MES	A
Toluene-d8 (S)	108	%		75-133			EPA 624		3/14/12 00:16	MES	A
WET CHEMISTRY											
Total Suspended Solids	6	mg/L		5	5	5	SM20-2540 D		3/9/12 05:30	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L	1	0.00050	0.00050	0.00016	EPA 245.1	3/12/12	3/13/12 10:16	MNP	D1

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

Lab ID: **9955732010** Date Collected: 3/8/2012 09:15 Matrix: Water

Sample ID: **NWIRP-GM-38-TB-03712** Date Received: 3/8/2012 09:15

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/14/12 00:49	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/14/12 00:49	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/14/12 00:49	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/14/12 00:49	MES	A
cis-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/14/12 00:49	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/14/12 00:49	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/14/12 00:49	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/14/12 00:49	MES	A
Trichloroethene	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/14/12 00:49	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/14/12 00:49	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109	%		72-142			EPA 624		3/14/12 00:49	MES	A
4-Bromofluorobenzene (S)	92.1	%		73-119			EPA 624		3/14/12 00:49	MES	A
Dibromofluoromethane (S)	116	%		74-132			EPA 624		3/14/12 00:49	MES	A
Toluene-d8 (S)	107	%		75-133			EPA 624		3/14/12 00:49	MES	A

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9955732 HNW040|NWIRP Bethpage GM-38

PARAMETER QUALIFIERS\FLAGS

[1] The LCS associated with this sample failed high at 127%. The mercury content in this sample was below our reporting limit. According to the method, the sample was reported with a qualifier. 03/13/12 JWK

[2] One of the two matrix spike analyses performed on this sample failed to meet acceptable recovery limits. The other matrix spike was within acceptable recovery limits. Matrix interferences are the possible cause for the failure.

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:
Tracking #: 8709 0201 5400

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#: 2031-003
Project Name/#: NWIRP Bethpage GM-38 Monthly O&M
ALS Quote #:

TAT: [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS 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	Select VOCs (Method 624) - incl. CCl4	Mercury (Method 245.1)	TSS (SM2540D)	Enter Number of Containers Per Analysis	pH (measured in the field)
	**Container Type						40 mL	500 mL	250 mL		
	***Container Size						CG	PL	PL		
	**** Preservative						HCL	HNO3	--		
1	NWIRP-GM-38-PS-RW1-03718 MS/MSD for VOCs, Hg		3/7/12	0830	G	GW	9	3	1		6.00
2	NWIRP-GM-38-PS-RW3-03718 MS/MSD for VOCs, Hg			1000	G	GW	3	1	1		6.15
3	NWIRP-GM-38-PS-ASE-03718			1010	G	GW	3	1	1		6.84
4	NWIRP-GM-38-PS-BFE- 03718			1030	G	GW	3	1	1		7.31
5	NWIRP-GM-38-PS-TE- 03718			1035	G	GW	3	1	1		7.53
6	NWIRP-GM-38-PS-LC1- 03718			1045	G	GW	3	1	1		7.60
7	NWIRP-GM-38-PS-LC2-03718			1100	G	GW	3	1	1		7.65
8	NWIRP-GM-38-PS-LC3- 03718			1115	G	GW	3	1	1		7.68
9											
10											

SAMPLED BY (Please Print): G. Gangemi

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	3/7/12	1145	2 ALS	3/8/12	0915
3			4		
5			6		
7			8		
9			10		

LOGGED BY (signature):
REVIEWED BY (signature):

Data Deliverables: Standard; CLP-like; NJ-Reduced; NJ-Full; (other)
EDDs Required? If yes, format type:
DoD Criteria Required?
NPDES/NJPDES Forms? yes
PWSID
State Samples Collected In? MD; NJ; NY [x]; PA; Other

ALS FIELD SERVICES: Pickup; Labor; Composite Sampling; Rental Equipment; Other:

Performed by: [illegible]
Cooler Temp: 4.2
Therm. ID: TH 215
No. of Coolers:
Notes:

Custody seals Present?	Y	N	(5)
(If present) Seals intact?	Y	N	(5)
Received on ice?	Y	N	(5)
COC/Labels complete/accurate?	Y	N	(5)
Container in good condition?	Y	N	(5)
Correct containers?	Y	N	(5)
Correct sample volume?	Y	N	(5)
Correct preservation?	Y	N	(5)
Headspace/Volatiles?	Y	N	(5)

Circle appropriate Y or N.

* G=Grab; C=Composite ** Matrix: Air=Air; DW=Drinking Water; GW=Groundwater; OI=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 06-2008

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.

Page 2 of 2
Courier: 8709 0201
Tracking #: 5400

9955732

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#: 2031-003

Project Name/#: NWIRP Bethpage GM-38 Monthly O&M 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.:

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

ANALYSES/METHOD REQUESTED — Enter Number of Containers Per Analysis

#	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Select VOCs (Method 624) - incl CCl4	Mercury (Method 245.1)	TSS (SM2540D)	pH (measured in the field)
1	NWIRP-GM-38-PS-TE -DUP-03712		3/7/12	1125	G	GW	3	1	1	7.53
2	NWIRP-GM-38-TB-03712 3/8/12 0915		3/7/12	1130	G	GW	3			
3	AM 3/8/12									
4										
5										
6										
7										
8										

Receipt Information (completed by Sample Receiving)
Performed by: AM
Cooler Temp: 4°C
Therm. ID: TH215
No. of Coolers:
Notes:

Circle appropriate Y or N.

Correct containers?	(Y)	N
Correct sample volume?	(Y)	N
Correct preservation?	(Y)	N
Headspace/Volatiles?	Y	(N)
Custody seals Present?	Y	(N)
(if present) Seals intact?	Y	N
Received on ice?	(Y)	N
COC/Labels complete/accurate?	(Y)	N
Container in good condition?	(Y)	N

SAMPLED BY (Please Print): G. Gangemi

LOGGED BY(signature): K. Snow Date: 3/8/12 Time: 1333
REVIEWED BY(signature): [signature] Date: 3/8/12 Time: 1115

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature]	3/7/12	1145	2	Kelli Snow	3/8/12	09
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 [ ]
Other
PWSID

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

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

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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

Rev 08-2008

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3/30/2012

Ms. Jennifer Good
H&S Environmental
160 East Main Street #2F

Westborough MA 01581

Project Name: Bethpage GM-38 Monthly
Project #: 2031-004
Workorder #: 1203230

Dear Ms. Jennifer Good

The following report includes the data for the above referenced project for sample(s) received on 3/12/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager

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WORK ORDER #: 1203230

Work Order Summary

CLIENT:	Ms. Jennifer Good H&S Environmental 160 East Main Street #2F Westborough, MA 01581	**BILL TO:**	Accounts Payable H&S Environmental 160 East Main Street #2F Westborough, MA 01581
PHONE:	508-366-7442	**P.O. #**	12-297
FAX:	508-366-7445	**PROJECT #**	2031-004 Bethpage GM-38 Monthly
DATE RECEIVED:	03/12/2012	**CONTACT:**	Ausha Scott
DATE COMPLETED:	03/29/2012		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	NWIRP-GM-38-AIR-VCI1-	Modified TO-15	4.0 "Hg	5 psi
02A	NWIRP-GM-38-AIR-VC12-	Modified TO-15	3.5 "Hg	5 psi
02AA	NWIRP-GM-38-AIR-VC12- Lab Duplicate	Modified TO-15	3.5 "Hg	5 psi
03A	NWIRP-GM-38-AIR-VC23-	Modified TO-15	3.5 "Hg	5 psi
04A	NWIRP-GM-38-AIR-ES-	Modified TO-15	3.0 "Hg	5 psi
05A	NWIRP-GM-38-AIR-ES-DUP	Modified TO-15	3.5 "Hg	5 psi
06A	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Linda D. Frumarn DATE: 03/29/12

Laboratory Director

Certfication numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
H&S Environmental
Workorder# 1203230

Five 6 Liter Summa Canister samples were received on March 12, 2012. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

Sample collection date was incomplete on the Chain of Custody (COC) for samples NWIRP-GM-38-AIR-VCI1-, NWIRP-GM-38-AIR-VC12-, NWIRP-GM-38-AIR-VC23-, NWIRP-GM-38-AIR-ES- and NWIRP-GM-38-AIR-ES-DUP. The sampling date was taken from the tags.

The Chain of Custody (COC) information for sample NWIRP-GM-38-AIR-VC12- did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified (0.2 ppbv for compounds reported at 0.5 ppbv and 0.8 ppbv for compounds reported at 2.0 ppbv) may be false positives.

Dilution was performed on sample NWIRP-GM-38-AIR-VCI1- due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV and/or LCS.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-VCI1-		
Lab ID:	1203230-01A	**Date/Time Analyzed:**	3/14/12 07:10 PM
Date/Time Collecte	3/8/12 11:10 AM	**Dilution Factor:**	5.17
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdj.i / j031416

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	3.4	5.6	14	Not Detected U
1,2-Dichloroethane	107-06-2	1.1	4.2	10	5.6 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	10	480
cis-1,2-Dichloroethene	156-59-2	1.9	4.1	10	460
Tetrachloroethene	127-18-4	3.8	7.0	18	1100
Toluene	108-88-3	1.2	3.9	9.7	6.4 J
Total Xylenes	9999-9999-015	NA	NA	11	9.3 J
trans-1,2-Dichloroethene	156-60-5	2.3	4.1	10	6.7 J
Trichloroethene	79-01-6	3.1	5.6	14	4200
Vinyl Chloride	75-01-4	1.6	2.6	6.6	28

J = Estimated value.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	107
4-Bromofluorobenzene	460-00-4	75-126	92
Toluene-d8	2037-26-5	74-121	96

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-VC12-		
Lab ID:	1203230-02A	**Date/Time Analyzed:**	3/14/12 05:38 PM
Date/Time Collecte	3/8/12 11:10 AM	**Dilution Factor:**	1.52
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdj.i / j031412

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.99	1.6	4.1	Not Detected U
1,2-Dichloroethane	107-06-2	0.31	1.2	3.1	1.2 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.0	68
cis-1,2-Dichloroethene	156-59-2	0.57	1.2	3.0	68
Tetrachloroethene	127-18-4	1.1	2.1	5.2	200
Toluene	108-88-3	0.35	1.1	2.9	7.6
Total Xylenes	9999-9999-015	NA	NA	3.3	6.8
trans-1,2-Dichloroethene	156-60-5	0.68	1.2	3.0	0.98 J
Trichloroethene	79-01-6	0.92	1.6	4.1	820
Vinyl Chloride	75-01-4	0.47	0.78	1.9	7.3

J = Estimated value.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	103
4-Bromofluorobenzene	460-00-4	75-126	92
Toluene-d8	2037-26-5	74-121	97

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-VC12- Lab Duplicate		
Lab ID:	1203230-02AA	**Date/Time Analyzed:**	3/14/12 07:29 PM
Date/Time Collecte	3/8/12 11:10 AM	**Dilution Factor:**	1.52
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdj.i / j031417

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.99	1.6	4.1	Not Detected U
1,2-Dichloroethane	107-06-2	0.31	1.2	3.1	1.0 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.0	68
cis-1,2-Dichloroethene	156-59-2	0.57	1.2	3.0	69
Tetrachloroethene	127-18-4	1.1	2.1	5.2	190
Toluene	108-88-3	0.35	1.1	2.9	7.1
Total Xylenes	9999-9999-015	NA	NA	3.3	6.7
trans-1,2-Dichloroethene	156-60-5	0.68	1.2	3.0	1.2 J
Trichloroethene	79-01-6	0.92	1.6	4.1	810
Vinyl Chloride	75-01-4	0.47	0.78	1.9	7.6

J = Estimated value.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	108
4-Bromofluorobenzene	460-00-4	75-126	90
Toluene-d8	2037-26-5	74-121	95

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-VC23-		
Lab ID:	1203230-03A	**Date/Time Analyzed:**	3/14/12 05:56 PM
Date/Time Collecte	3/8/12 11:10 AM	**Dilution Factor:**	1.52
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdj.i / j031413

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.99	1.6	4.1	Not Detected U
1,2-Dichloroethane	107-06-2	0.31	1.2	3.1	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.0	1.2 J
cis-1,2-Dichloroethene	156-59-2	0.57	1.2	3.0	1.2 J
Tetrachloroethene	127-18-4	1.1	2.1	5.2	4.6 J
Toluene	108-88-3	0.35	1.1	2.9	0.70 J
Total Xylenes	9999-9999-015	NA	NA	3.3	1.2 J
trans-1,2-Dichloroethene	156-60-5	0.68	1.2	3.0	Not Detected U
Trichloroethene	79-01-6	0.92	1.6	4.1	13
Vinyl Chloride	75-01-4	0.47	0.78	1.9	18

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	109
4-Bromofluorobenzene	460-00-4	75-126	93
Toluene-d8	2037-26-5	74-121	96

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-ES-		
Lab ID:	1203230-04A	**Date/Time Analyzed:**	3/14/12 06:17 PM
Date/Time Collecte	3/8/12 11:10 AM	**Dilution Factor:**	1.49
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdj.i / j031414

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.97	1.6	4.1	Not Detected U
1,2-Dichloroethane	107-06-2	0.31	1.2	3.0	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.0	0.59 J
cis-1,2-Dichloroethene	156-59-2	0.56	1.2	3.0	0.59 J
Tetrachloroethene	127-18-4	1.1	2.0	5.0	3.7 J
Toluene	108-88-3	0.34	1.1	2.8	1.2 J
Total Xylenes	9999-9999-015	NA	NA	3.2	Not Detected U
trans-1,2-Dichloroethene	156-60-5	0.67	1.2	3.0	Not Detected U
Trichloroethene	79-01-6	0.90	1.6	4.0	9.7
Vinyl Chloride	75-01-4	0.46	0.76	1.9	Not Detected U

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	106
4-Bromofluorobenzene	460-00-4	75-126	92
Toluene-d8	2037-26-5	74-121	96

eurofins | Air Toxics

EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	NWIRP-GM-38-AIR-ES-DUP		
Lab ID:	1203230-05A	**Date/Time Analyzed:**	3/14/12 06:52 PM
Date/Time Collecte	3/8/12 11:50 AM	**Dilution Factor:**	1.52
Media:	6 Liter Summa Canister	**Instrument/Filename:**	msdj.i / j031415

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.99	1.6	4.1	Not Detected U
1,2-Dichloroethane	107-06-2	0.31	1.2	3.1	Not Detected U
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	3.0	Not Detected U
cis-1,2-Dichloroethene	156-59-2	0.57	1.2	3.0	Not Detected U
Tetrachloroethene	127-18-4	1.1	2.1	5.2	2.3 J
Toluene	108-88-3	0.35	1.1	2.9	1.1 J
Total Xylenes	9999-9999-015	NA	NA	3.3	0.54 J
trans-1,2-Dichloroethene	156-60-5	0.68	1.2	3.0	Not Detected U
Trichloroethene	79-01-6	0.92	1.6	4.1	4.4
Vinyl Chloride	75-01-4	0.47	0.78	1.9	Not Detected U

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	106
4-Bromofluorobenzene	460-00-4	75-126	93
Toluene-d8	2037-26-5	74-121	96

eurofins | Air Toxics

EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	Lab Blank		
Lab ID:	1203230-06A	**Date/Time Analyzed:**	3/14/12 01:44 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdj.i / j031407c

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	79-00-5	0.65	1.1	2.7	0.86 J
1,2-Dichloroethane	107-06-2	0.21	0.81	2.0	0.84 J
1,2-Dichloroethene (Total of cis/trans)	540-59-0	NA	NA	2.0	Not Detected U
cis-1,2-Dichloroethene	156-59-2	0.37	0.79	2.0	0.65 J
Tetrachloroethene	127-18-4	0.75	1.4	3.4	1.1 J
Toluene	108-88-3	0.23	0.75	1.9	0.87 J
Total Xylenes	9999-9999-015	NA	NA	2.2	Not Detected U
trans-1,2-Dichloroethene	156-60-5	0.45	0.79	2.0	0.98 J
Trichloroethene	79-01-6	0.60	1.1	2.7	1.0 J
Vinyl Chloride	75-01-4	0.31	0.51	1.3	Not Detected U

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	104
4-Bromofluorobenzene	460-00-4	75-126	92
Toluene-d8	2037-26-5	74-121	96

eurofins | Air Toxics

EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	CCV		
Lab ID:	1203230-07A	**Date/Time Analyzed:**	3/14/12 11:59 AM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdj.i / j031403a

Compound	CAS#	%Recovery
1,1,2-Trichloroethane	79-00-5	94
1,2-Dichloroethane	107-06-2	100
1,2-Dichloroethene (Total of cis/trans)	540-59-0	90
cis-1,2-Dichloroethene	156-59-2	89
Tetrachloroethene	127-18-4	89
Toluene	108-88-3	86
Total Xylenes	9999-9999-015	89
trans-1,2-Dichloroethene	156-60-5	90
Trichloroethene	79-01-6	90
Vinyl Chloride	75-01-4	92

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	104
4-Bromofluorobenzene	460-00-4	75-126	96
Toluene-d8	2037-26-5	74-121	100

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EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	LCS		
Lab ID:	1203230-08A	**Date/Time Analyzed:**	3/14/12 12:39 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdj.i / j031404

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	
1,1,2-Trichloroethane	79-00-5			108
1,2-Dichloroethane	107-06-2			114
1,2-Dichloroethene (Total of cis/trans)	540-59-0			109
cis-1,2-Dichloroethene	156-59-2			103
Tetrachloroethene	127-18-4			101
Toluene	108-88-3			101
Total Xylenes	9999-9999-015			103
trans-1,2-Dichloroethene	156-60-5			115
Trichloroethene	79-01-6			106
Vinyl Chloride	75-01-4			108

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	101

* % Recovery is calculated using unrounded analytical results.

eurofins | Air Toxics

EPA METHOD TO-15 GC/MS FULL SCAN
Bethpage GM-38 Monthly

Client ID:	LCSD		
Lab ID:	1203230-08AA	**Date/Time Analyzed:**	3/14/12 12:56 PM
Date/Time Collecte	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdj.i / j031405a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	
1,1,2-Trichloroethane	79-00-5			110
1,2-Dichloroethane	107-06-2			114
1,2-Dichloroethene (Total of cis/trans)	540-59-0			114
cis-1,2-Dichloroethene	156-59-2			108
Tetrachloroethene	127-18-4			102
Toluene	108-88-3			99
Total Xylenes	9999-9999-015			106
trans-1,2-Dichloroethene	156-60-5			121
Trichloroethene	79-01-6			107
Vinyl Chloride	75-01-4			112

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	61-141	110
4-Bromofluorobenzene	460-00-4	75-126	97
Toluene-d8	2037-26-5	74-121	97

* % Recovery is calculated using unrounded analytical results.

March 2012 LTM Data

ALS Environmental

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March 19, 2012

Ms. Jennifer Good
H & S Environmental
160 East Main Street, 2F
Westborough, MA 01581

Certificate of Analysis

Project Name:	**NWIRP Bethpage - GM-38**	Workorder:	**9956129**
Purchase Order:	**2031-005**	Workorder ID:	**HNW041|NWIRP Bethpage - GM-38**

Dear Ms. Good,

Enclosed are the analytical results for samples received by the laboratory on Friday, March 09, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Tonya Hironimus (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

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This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

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SAMPLE SUMMARY

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38 Discard Date: 05/18/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9956129001	NWIRP-GM-38-GW-RW1-MW1	Water	3/8/12 11:05	3/9/12 08:50	Customer
9956129002	NWIRP-GM-38-GW-RW1-MW3-03082012	Water	3/8/12 13:30	3/9/12 08:50	Customer
9956129003	NWIRP-GM-38-GW-RW2-MW1-03072012	Water	3/7/12 11:20	3/9/12 08:50	Customer
9956129004	NWIRP-GM-38-GW-RW3-MW1-03072012	Water	3/7/12 17:50	3/9/12 08:50	Customer
9956129005	NWIRP-GM-38-GW-RW3-MW2-03082012	Water	3/8/12 12:15	3/9/12 08:50	Customer
9956129006	NWIRP-GM-38-GW-RW3-MW3-03072012	Water	3/7/12 14:45	3/9/12 08:50	Customer
9956129007	NWIRP-GM-38-GW-RW3-MW4-03072012	Water	3/7/12 13:15	3/9/12 08:50	Customer
9956129008	NWIRP-GM-38-GW-TP1-03082012	Water	3/8/12 09:00	3/9/12 08:50	Customer
9956129009	NWIRP-GM-38-GW-RW3-MW3-03072012DUP	Water	3/7/12 14:45	3/9/12 08:50	Customer
9956129010	NWIRP-GM-38-FB-03072012	Water	3/7/12 18:50	3/9/12 08:50	Customer
9956129011	NWIRP-GM-38-TB-03072012	Water	3/9/12 08:50	3/9/12 08:50	Customer

Workorder Comments:

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129001** Date Collected: 3/8/2012 11:05 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW1-MW1** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 12:14	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 12:14	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 12:14	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 12:14	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 12:14	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 12:14	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 12:14	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 12:14	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 12:14	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 12:14	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 12:14	MES	A
Chloroform	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 12:14	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 12:14	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 12:14	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 12:14	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 12:14	MES	A
1,1-Dichloroethane	5.2	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 12:14	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 12:14	MES	A
1,1-Dichloroethene	2.7	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 12:14	MES	A
cis-1,2-Dichloroethene	179	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 12:14	MES	A
trans-1,2-Dichloroethene	3.0	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 12:14	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 12:14	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 12:14	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 12:14	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 12:14	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 12:14	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 12:14	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 12:14	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 12:14	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 12:14	MES	A
1,1,1-Trichloroethane	0.96J	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 12:14	MES	A
1,1,2-Trichloroethane	1.0U	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 12:14	MES	A
Trichloroethene	115	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 12:14	MES	A
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 12:14	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 12:14	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	100	%		72-142			EPA 624		3/13/12 12:14	MES	A
4-Bromofluorobenzene (S)	93.2	%		73-119			EPA 624		3/13/12 12:14	MES	A
Dibromofluoromethane (S)	108	%		74-132			EPA 624		3/13/12 12:14	MES	A
Toluene-d8 (S)	114	%		75-133			EPA 624		3/13/12 12:14	MES	A

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129001** Date Collected: 3/8/2012 11:05 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW1-MW1** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Total Suspended Solids	16	mg/L		5	5	5	SM20-2540 D		3/12/12 05:00	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:10	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129002** Date Collected: 3/8/2012 13:30 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW1-MW3-03082012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 12:47	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 12:47	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 12:47	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 12:47	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 12:47	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 12:47	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 12:47	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 12:47	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 12:47	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 12:47	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 12:47	MES	A
Chloroform	0.73J	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 12:47	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 12:47	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 12:47	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 12:47	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 12:47	MES	A
1,1-Dichloroethane	8.4	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 12:47	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 12:47	MES	A
1,1-Dichloroethene	1.8	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 12:47	MES	A
cis-1,2-Dichloroethene	0.68J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 12:47	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 12:47	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 12:47	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 12:47	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 12:47	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 12:47	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 12:47	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 12:47	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 12:47	MES	A
Tetrachloroethene	0.65J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 12:47	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 12:47	MES	A
1,1,1-Trichloroethane	1.8	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 12:47	MES	A
1,1,2-Trichloroethane	0.70J	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 12:47	MES	A
Trichloroethene	2.2	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 12:47	MES	A
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 12:47	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 12:47	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	100	%		72-142			EPA 624		3/13/12 12:47	MES	A
4-Bromofluorobenzene (S)	94.8	%		73-119			EPA 624		3/13/12 12:47	MES	A
Dibromofluoromethane (S)	110	%		74-132			EPA 624		3/13/12 12:47	MES	A
Toluene-d8 (S)	112	%		75-133			EPA 624		3/13/12 12:47	MES	A

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129002** Date Collected: 3/8/2012 13:30 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW1-MW3-03082012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Total Suspended Solids	5	mg/L		5	5	5	SM20-2540 D		3/12/12 05:00	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:11	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129003** Date Collected: 3/7/2012 11:20 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW2-MW1-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 13:19	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 13:19	MES	A
Benzene	0.22J	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 13:19	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 13:19	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 13:19	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 13:19	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 13:19	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 13:19	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 13:19	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 13:19	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 13:19	MES	A
Chloroform	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 13:19	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 13:19	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 13:19	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 13:19	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 13:19	MES	A
1,1-Dichloroethane	0.50J	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 13:19	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 13:19	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 13:19	MES	A
cis-1,2-Dichloroethene	0.34J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 13:19	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 13:19	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 13:19	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 13:19	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 13:19	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 13:19	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 13:19	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 13:19	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 13:19	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 13:19	MES	A
Toluene	0.19J	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 13:19	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 13:19	MES	A
1,1,2-Trichloroethane	1.0U	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 13:19	MES	A
Trichloroethene	0.67J	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 13:19	MES	A
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 13:19	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 13:19	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.6	%		72-142			EPA 624		3/13/12 13:19	MES	A
4-Bromofluorobenzene (S)	91.9	%		73-119			EPA 624		3/13/12 13:19	MES	A
Dibromofluoromethane (S)	110	%		74-132			EPA 624		3/13/12 13:19	MES	A
Toluene-d8 (S)	111	%		75-133			EPA 624		3/13/12 13:19	MES	A

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129003** Date Collected: 3/7/2012 11:20 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW2-MW1-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Total Suspended Solids	6	mg/L		5	5	5	SM20-2540 D		3/12/12 05:00	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:12	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129004** Date Collected: 3/7/2012 17:50 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW1-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 13:53	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 13:53	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 13:53	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 13:53	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 13:53	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 13:53	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 13:53	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 13:53	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 13:53	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 13:53	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 13:53	MES	A
Chloroform	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 13:53	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 13:53	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 13:53	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 13:53	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 13:53	MES	A
1,1-Dichloroethane	0.90J	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 13:53	MES	A
1,2-Dichloroethane	0.43J	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 13:53	MES	A
1,1-Dichloroethene	0.47J	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 13:53	MES	A
cis-1,2-Dichloroethene	0.37J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 13:53	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 13:53	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 13:53	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 13:53	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 13:53	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 13:53	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 13:53	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 13:53	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 13:53	MES	A
Tetrachloroethene	1.0	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 13:53	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 13:53	MES	A
1,1,1-Trichloroethane	0.58J	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 13:53	MES	A
1,1,2-Trichloroethane	1.0U	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 13:53	MES	A
Trichloroethene	59.0	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 13:53	MES	A
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 13:53	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 13:53	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.9	%		72-142			EPA 624		3/13/12 13:53	MES	A
4-Bromofluorobenzene (S)	92.9	%		73-119			EPA 624		3/13/12 13:53	MES	A
Dibromofluoromethane (S)	110	%		74-132			EPA 624		3/13/12 13:53	MES	A
Toluene-d8 (S)	113	%		75-133			EPA 624		3/13/12 13:53	MES	A

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129004** Date Collected: 3/7/2012 17:50 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW1-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:13	MNP	D1

Sample Comments:

The TSS was run and this same sample was chosen to have a DUP run on it. The batch blank failed and the DUP failed therefore this sample would need to be reanalyzed, though no sample remained for reanalysis. Due to this, no TSS result was able to be provided for this sample. TMH 3/19/12

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129005** Date Collected: 3/8/2012 12:15 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW2-03082012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 14:26	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 14:26	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 14:26	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 14:26	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 14:26	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 14:26	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 14:26	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 14:26	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 14:26	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 14:26	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 14:26	MES	A
Chloroform	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 14:26	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 14:26	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 14:26	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 14:26	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 14:26	MES	A
1,1-Dichloroethane	0.41J	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 14:26	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 14:26	MES	A
1,1-Dichloroethene	0.27J	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 14:26	MES	A
cis-1,2-Dichloroethene	1.3	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 14:26	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 14:26	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 14:26	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 14:26	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 14:26	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 14:26	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 14:26	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 14:26	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 14:26	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 14:26	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 14:26	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 14:26	MES	A
1,1,2-Trichloroethane	0.32J	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 14:26	MES	A
Trichloroethene	96.5	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 14:26	MES	A
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 14:26	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 14:26	MES	A

Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*	*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	99.7	%		72-142	EPA 624		3/13/12 14:26	MES	A
4-Bromofluorobenzene (S)	91.5	%		73-119	EPA 624		3/13/12 14:26	MES	A
Dibromofluoromethane (S)	109	%		74-132	EPA 624		3/13/12 14:26	MES	A
Toluene-d8 (S)	113	%		75-133	EPA 624		3/13/12 14:26	MES	A

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129005** Date Collected: 3/8/2012 12:15 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW2-03082012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Total Suspended Solids	8	mg/L		5	5	5	SM20-2540 D		3/14/12 05:00	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:14	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129006** Date Collected: 3/7/2012 14:45 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW3-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 16:07	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 16:07	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 16:07	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 16:07	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 16:07	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 16:07	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 16:07	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 16:07	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 16:07	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 16:07	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L	1,2	2.0	2.0	0.28	EPA 624		3/13/12 16:07	MES	A
Chloroform	0.42J	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 16:07	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 16:07	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 16:07	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 16:07	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 16:07	MES	A
1,1-Dichloroethane	3.3	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 16:07	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 16:07	MES	A
1,1-Dichloroethene	1.9	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 16:07	MES	A
cis-1,2-Dichloroethene	2.1	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 16:07	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 16:07	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 16:07	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 16:07	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 16:07	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 16:07	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 16:07	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 16:07	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 16:07	MES	A
Tetrachloroethene	0.72J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 16:07	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 16:07	MES	A
1,1,1-Trichloroethane	0.84J	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 16:07	MES	A
1,1,2-Trichloroethane	1.0U	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 16:07	MES	A
Trichloroethene	312	ug/L		5.0	5.0	1.1	EPA 624		3/14/12 11:50	MES	G
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 16:07	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 16:07	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101	%		72-142			EPA 624		3/13/12 16:07	MES	A
4-Bromofluorobenzene (S)	94.6	%		73-119			EPA 624		3/13/12 16:07	MES	A
Dibromofluoromethane (S)	109	%		74-132			EPA 624		3/13/12 16:07	MES	A
Toluene-d8 (S)	114	%		75-133			EPA 624		3/13/12 16:07	MES	A

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129006** Date Collected: 3/7/2012 14:45 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW3-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	101	%		72-142			EPA 624		3/14/12 11:50	MES	G
4-Bromofluorobenzene (S)	99.4	%		73-119			EPA 624		3/14/12 11:50	MES	G
Dibromofluoromethane (S)	108	%		74-132			EPA 624		3/14/12 11:50	MES	G
Toluene-d8 (S)	118	%		75-133			EPA 624		3/14/12 11:50	MES	G
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/14/12 05:00	OA	M
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:15	MNP	J1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129007** Date Collected: 3/7/2012 13:15 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW4-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 15:00	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 15:00	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 15:00	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 15:00	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 15:00	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 15:00	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 15:00	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 15:00	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 15:00	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 15:00	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 15:00	MES	A
Chloroform	0.38J	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 15:00	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 15:00	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 15:00	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 15:00	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 15:00	MES	A
1,1-Dichloroethane	1.8	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 15:00	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 15:00	MES	A
1,1-Dichloroethene	0.21J	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 15:00	MES	A
cis-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 15:00	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 15:00	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 15:00	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 15:00	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 15:00	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 15:00	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 15:00	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 15:00	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 15:00	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 15:00	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 15:00	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 15:00	MES	A
1,1,2-Trichloroethane	1.0U	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 15:00	MES	A
Trichloroethene	4.6	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 15:00	MES	A
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 15:00	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 15:00	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101	%		72-142			EPA 624		3/13/12 15:00	MES	A
4-Bromofluorobenzene (S)	92.2	%		73-119			EPA 624		3/13/12 15:00	MES	A
Dibromofluoromethane (S)	110	%		74-132			EPA 624		3/13/12 15:00	MES	A
Toluene-d8 (S)	113	%		75-133			EPA 624		3/13/12 15:00	MES	A

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129007** Date Collected: 3/7/2012 13:15 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW4-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Total Suspended Solids	5	mg/L		5	5	5	SM20-2540 D		3/14/12 05:00	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:20	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129008** Date Collected: 3/8/2012 09:00 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-TP1-03082012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 15:34	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 15:34	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 15:34	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 15:34	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 15:34	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 15:34	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 15:34	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 15:34	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 15:34	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 15:34	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 15:34	MES	A
Chloroform	0.74J	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 15:34	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 15:34	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 15:34	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 15:34	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 15:34	MES	A
1,1-Dichloroethane	3.7	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 15:34	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 15:34	MES	A
1,1-Dichloroethene	1.2	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 15:34	MES	A
cis-1,2-Dichloroethene	53.3	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 15:34	MES	A
trans-1,2-Dichloroethene	0.87J	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 15:34	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 15:34	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 15:34	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 15:34	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 15:34	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 15:34	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 15:34	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 15:34	MES	A
Tetrachloroethene	4.7	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 15:34	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 15:34	MES	A
1,1,1-Trichloroethane	0.57J	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 15:34	MES	A
1,1,2-Trichloroethane	1.0U	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 15:34	MES	A
Trichloroethene	38.1	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 15:34	MES	A
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 15:34	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 15:34	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	100	%		72-142			EPA 624		3/13/12 15:34	MES	A
4-Bromofluorobenzene (S)	91.8	%		73-119			EPA 624		3/13/12 15:34	MES	A
Dibromofluoromethane (S)	110	%		74-132			EPA 624		3/13/12 15:34	MES	A
Toluene-d8 (S)	109	%		75-133			EPA 624		3/13/12 15:34	MES	A

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129008** Date Collected: 3/8/2012 09:00 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-TP1-03082012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
WET CHEMISTRY											
Total Suspended Solids	7	mg/L		5	5	5	SM20-2540 D		3/14/12 05:00	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:21	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129009** Date Collected: 3/7/2012 14:45 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW3-03072012D** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 16:41	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 16:41	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 16:41	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 16:41	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 16:41	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 16:41	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 16:41	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 16:41	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 16:41	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 16:41	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 16:41	MES	A
Chloroform	0.42J	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 16:41	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 16:41	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 16:41	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 16:41	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 16:41	MES	A
1,1-Dichloroethane	3.3	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 16:41	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 16:41	MES	A
1,1-Dichloroethene	1.9	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 16:41	MES	A
cis-1,2-Dichloroethene	2.1	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 16:41	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 16:41	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 16:41	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 16:41	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 16:41	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 16:41	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 16:41	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 16:41	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 16:41	MES	A
Tetrachloroethene	0.69J	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 16:41	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 16:41	MES	A
1,1,1-Trichloroethane	0.87J	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 16:41	MES	A
1,1,2-Trichloroethane	1.0U	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 16:41	MES	A
Trichloroethene	325	ug/L		5.0	5.0	1.1	EPA 624		3/14/12 12:23	MES	B
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 16:41	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 16:41	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101	%		72-142			EPA 624		3/13/12 16:41	MES	A
4-Bromofluorobenzene (S)	93.6	%		73-119			EPA 624		3/13/12 16:41	MES	A
Dibromofluoromethane (S)	110	%		74-132			EPA 624		3/13/12 16:41	MES	A
Toluene-d8 (S)	113	%		75-133			EPA 624		3/13/12 16:41	MES	A

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129009** Date Collected: 3/7/2012 14:45 Matrix: Water

Sample ID: **NWIRP-GM-38-GW-RW3-MW3-03072012D** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	102	%		72-142			EPA 624		3/14/12 12:23	MES	B
4-Bromofluorobenzene (S)	97.9	%		73-119			EPA 624		3/14/12 12:23	MES	B
Dibromofluoromethane (S)	110	%		74-132			EPA 624		3/14/12 12:23	MES	B
Toluene-d8 (S)	118	%		75-133			EPA 624		3/14/12 12:23	MES	B
WET CHEMISTRY											
Total Suspended Solids	5U	mg/L		5	5	5	SM20-2540 D		3/14/12 05:00	OA	E
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:22	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129010** Date Collected: 3/7/2012 18:50 Matrix: Water

Sample ID: **NWIRP-GM-38-FB-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 10:34	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 10:34	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 10:34	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 10:34	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 10:34	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 10:34	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 10:34	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 10:34	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 10:34	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 10:34	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 10:34	MES	A
Chloroform	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 10:34	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 10:34	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 10:34	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 10:34	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 10:34	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 10:34	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 10:34	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 10:34	MES	A
cis-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 10:34	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 10:34	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 10:34	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 10:34	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 10:34	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 10:34	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 10:34	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 10:34	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 10:34	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 10:34	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 10:34	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 10:34	MES	A
1,1,2-Trichloroethane	1.0U	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 10:34	MES	A
Trichloroethene	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 10:34	MES	A
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 10:34	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 10:34	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*			*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.7	%		72-142			EPA 624		3/13/12 10:34	MES	A
4-Bromofluorobenzene (S)	95.2	%		73-119			EPA 624		3/13/12 10:34	MES	A
Dibromofluoromethane (S)	108	%		74-132			EPA 624		3/13/12 10:34	MES	A
Toluene-d8 (S)	114	%		75-133			EPA 624		3/13/12 10:34	MES	A

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129010** Date Collected: 3/7/2012 18:50 Matrix: Water

Sample ID: **NWIRP-GM-38-FB-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
METALS											
Mercury, Total	0.00050 U	mg/L		0.00050	0.00050	0.00016	EPA 245.1	3/15/12	3/15/12 12:23	MNP	D1

Sample Comments:

Anna G Milliken
Technical Manager

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID: **9956129011** Date Collected: 3/9/2012 08:50 Matrix: Water

Sample ID: **NWIRP-GM-38-TB-03072012** Date Received: 3/9/2012 08:50

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	30.0U	ug/L		30.0	30.0	2.4	EPA 624		3/13/12 10:01	MES	A
Acrylonitrile	5.0U	ug/L		5.0	5.0	0.89	EPA 624		3/13/12 10:01	MES	A
Benzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 10:01	MES	A
Bromodichloromethane	1.0U	ug/L		1.0	1.0	0.13	EPA 624		3/13/12 10:01	MES	A
Bromoform	2.0U	ug/L		2.0	2.0	0.21	EPA 624		3/13/12 10:01	MES	A
Bromomethane	2.0U	ug/L		2.0	2.0	0.27	EPA 624		3/13/12 10:01	MES	A
Carbon Tetrachloride	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 10:01	MES	A
Chlorobenzene	1.0U	ug/L		1.0	1.0	0.11	EPA 624		3/13/12 10:01	MES	A
Chlorodibromomethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 10:01	MES	A
Chloroethane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 10:01	MES	A
2-Chloroethylvinyl ether	2.0U	ug/L		2.0	2.0	0.28	EPA 624		3/13/12 10:01	MES	A
Chloroform	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 10:01	MES	A
Chloromethane	1.0U	ug/L		1.0	1.0	0.25	EPA 624		3/13/12 10:01	MES	A
1,2-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.20	EPA 624		3/13/12 10:01	MES	A
1,3-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 10:01	MES	A
1,4-Dichlorobenzene	1.0U	ug/L		1.0	1.0	0.15	EPA 624		3/13/12 10:01	MES	A
1,1-Dichloroethane	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 10:01	MES	A
1,2-Dichloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 10:01	MES	A
1,1-Dichloroethene	1.0U	ug/L		1.0	1.0	0.17	EPA 624		3/13/12 10:01	MES	A
cis-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 10:01	MES	A
trans-1,2-Dichloroethene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 10:01	MES	A
1,2-Dichloropropane	1.0U	ug/L		1.0	1.0	0.24	EPA 624		3/13/12 10:01	MES	A
cis-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 10:01	MES	A
trans-1,3-Dichloropropene	1.0U	ug/L		1.0	1.0	0.14	EPA 624		3/13/12 10:01	MES	A
1,3-Dichloropropene, Total	1.0U	ug/L		1.0	1.0	0.19	EPA 624		3/13/12 10:01	MES	A
Ethylbenzene	1.0U	ug/L		1.0	1.0	0.16	EPA 624		3/13/12 10:01	MES	A
Methylene Chloride	1.0U	ug/L		1.0	1.0	0.32	EPA 624		3/13/12 10:01	MES	A
1,1,2,2-Tetrachloroethane	1.0U	ug/L		1.0	1.0	0.22	EPA 624		3/13/12 10:01	MES	A
Tetrachloroethene	1.0U	ug/L		1.0	1.0	0.26	EPA 624		3/13/12 10:01	MES	A
Toluene	1.0U	ug/L		1.0	1.0	0.12	EPA 624		3/13/12 10:01	MES	A
1,1,1-Trichloroethane	1.0U	ug/L		1.0	1.0	0.27	EPA 624		3/13/12 10:01	MES	A
1,1,2-Trichloroethane	1.0U	ug/L		1.0	1.0	0.30	EPA 624		3/13/12 10:01	MES	A
Trichloroethene	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 10:01	MES	A
Trichlorofluoromethane	1.0U	ug/L		1.0	1.0	0.21	EPA 624		3/13/12 10:01	MES	A
Vinyl Chloride	2.0U	ug/L		2.0	2.0	0.24	EPA 624		3/13/12 10:01	MES	A

Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*	*Method*	*Prepared*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102	%		72-142	EPA 624		3/13/12 10:01	MES	A
4-Bromofluorobenzene (S)	97.7	%		73-119	EPA 624		3/13/12 10:01	MES	A
Dibromofluoromethane (S)	111	%		74-132	EPA 624		3/13/12 10:01	MES	A
Toluene-d8 (S)	114	%		75-133	EPA 624		3/13/12 10:01	MES	A

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

Lab ID:	**9956129011**	Date Collected:	3/9/2012 08:50	Matrix:	Water
Sample ID:	**NWIRP-GM-38-TB-03072012**	Date Received:	3/9/2012 08:50		

Parameters	Results	Units	Footnotes	LOQ	LOD	DL	Method	Prepared	Analyzed	By	Cntr

Sample Comments:

Anna G Milliken
Technical Manager

ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9956129 HNW041|NWIRP Bethpage - GM-38

PARAMETER QUALIFIERS\FLAGS

[1] The QC sample type MS for method EPA 624 was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 305.

[2] The QC sample type MSD for method EPA 624 was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 305.

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

TLK

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:
Tracking #: 8705 2403 6960

* 9 9 5 6 1 2 9 *

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#: 2031-005
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

Enter Number of Containers Per Analysis

	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)
1	NWIRP-GM-38-GW-RW1-MW1- ~~MS/MSD for VOCs, Hg~~		3/8/12	1105	G	GW	3	1	1
2	NWIRP-GM-38-GW-RW1-MW3- 03082012		3/8/12	1330	G	GW	3	1	1
3	NWIRP-GM-38-GW-RW2-MW1- 03072012		3/7/12	1120	G	GW	3	1	1
4	NWIRP-GM-38-GW-RW3-MW1- 03072012		3/7/12	1750	G	GW	3	1	1
5	NWIRP-GM-38-GW-RW3-MW2- 03082012		3/8/12	1215	G	GW	3	1	1
6	NWIRP-GM-38-GW-RW3-MW3- 03072012	MS/MSD for VOCs, Hg	3/7/12	1445	G	GW	9	3	1
7	NWIRP-GM-38-GW-RW3-MW4- 03072012		3/7/12	1315	G	GW	3	1	1
8	NWIRP-GM-38-GW-TP1- 03082012		3/8/12	0900	G	GW	3	1	1

Receipt Information (completed by Sample Receiving)
Performed by: [signature]
Cooler Temp: 3°C
Therm. ID: TH215
No. of Coolers:
Notes:

Correct containers?	(Y)	N
Correct sample volume?	(Y)	N
Correct preservation?	(Y)	N
Headspace/Volatiles?	Y	(N)
Custody seals Present?	Y	(N)
(If present) Seals intact?	Y	N
Received on ice?	(Y)	N
COC/Labels complete/accurate?	(Y)	N
Container in good condition?	(Y)	N

Circle appropriate Y or N.

SAMPLED BY (Please Print): Stacey Lee
LOGGED BY(signature): [signature] Date 3/9/12 Time 1814
REVIEWED BY(signature): [signature] 3/12/12 1814

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	Stacey Lee H&S	3/8/12	1500	2	[signature] ALS	3/9/12	0850
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 [ ] Other PWSID

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

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

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipo; WW=Wastewater

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

Rev 08-2008

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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 2 of 2
Courier:
Tracking #: 8705 2403 6960
COC# 9956129

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#: 2031-005

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 — Enter Number of Containers Per Analysis

	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)
1	NWIRP-GM-38-GW-RW3-MW3-03072012DUP		3/7/12	1445	G	GW	3	1	1
2	NWIRP-GM-38-FB-03072012		3/7/12	1050	G	GW	3	1	
3	NWIRP-GM-38-TB-03072012				G	GW	3		
4					G	GW			
5					G	GW			
6					G	GW			
7					G	GW			
8					G	GW			

Receipt Information (completed by Sample Receiving)
Performed by: (initial here) [initials]
Cooler Temp: 3°C
Therm. ID: TH215
No. of Coolers:
Notes:

Circle appropriate Y or N.

Correct containers?	(Y)	N
Correct sample volume?	(Y)	N
Correct preservation?	(Y)	N
Headspace/Volatiles?	Y	(N)
Custody seals Present?	Y	(N)
(If present) Seals intact?	Y	N
Received on ice?	(Y)	N
COC/Labels complete/accurate?	(Y)	N
Container in good condition?	(Y)	N

SAMPLED BY (Please Print):
LOGGED BY(signature): [signature] DATE 3/9/12 TIME [initials]
REVIEWED BY(signature): [signature] DATE 3/12/12 TIME 1214

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1			2 [signature] ALS	3/9/12	0850
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: AI=Air; DW=Drinking Water; GW=Groundwater; OI=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