2018 OPERABLE UNIT 2 GROUNDWATER INVESTIGATION RE132D1, RE132D2, RE132D3, RE132D4, RE132D5, RE132D6, RE132D7 (VPB166) INSTALLATION REPORT

NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
SITE 1 OPERABLE UNIT 2
BETHPAGE, NY

Prepared for:

Department of the Navy
Naval Facilities Engineering Command, Atlantic
9324 Virginia Avenue
Building Z-140
Norfolk, Virginia 23511

July 2020

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Prepared for:

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9324 Virginia Avenue
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Contract Number: N62470-11-D-8013
CONTRACT TASK ORDER WE15

July 2020

Brian Caldwell

Brian Caldwell
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List of Acronyms and Abbreviations

AOC	Area of Concern
bgs	below ground surface
COR	Continuously Operating Reference
EPA	Environmental Protection Agency, United States
ft	feet
GOCO	Government-Owned Contractor-Operated
GPS	Global Positioning System
IDW	Investigation Derived Waste
IR	Installation Restoration
Katahdin	Katahdin Analytical Services
NAD	North American Datum
NAVD	North American Vertical Datum
NAVFAC	Naval Facilities Engineering Command
NG	Northrop Grumman
NTU	nephelometric turbidity units
NWIRP	Naval Weapons Industrial Reserve Plant
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
OU	Operable Unit
PCBs	Polychlorinated Biphenyls
PCE	Tetrachloroethene
POTW	Publicly Owned Treatment Works
PPE	Personal Protective Equipment
PVC	Polyvinylchloride
SAP	Sampling and Analysis Plan
SVOC	Semivolatile Organic Compounds
TCE	Trichloroethene
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TOC	Total Organic Carbon
UFP	United Federal Programs
US	United States

VOC	Volatile Organic Compounds
VPB	Vertical Profile Boring

1.0 PROJECT BACKGROUND

Resolution Consultants has prepared this Data Summary Report for the Naval Facilities Engineering Command (NAVFAC), Mid-Atlantic under contract task order WE15 Contract N62470-11-D-8013. This report describes the installation of seven (7) monitoring wells in 2018 and one initial groundwater monitoring event in 2018 for the Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage Operable Unit (OU) 2 Site 1 off property plume. NWIRP Bethpage is located in east-central Nassau County, Long Island, New York, approximately 30 miles east of New York City (Figure 1). The location of wells RE132D1, RE132D2, RE132D3, RE132D4, RE132D5, RE132D6 and RE132D7 are shown in Figure 2.

1.1 Scope and Objectives

This report provides information on the installation of monitoring wells RE132D1, RE132D2, RE132D3, RE132D4, RE132D5, RE132D6 and RE132D7 associated with Vertical Profile Boring (VPB) 166. The purpose of this investigation was to ascertain contaminant levels and depths in the off-property plume area south of Hempstead Turnpike, north of Southern State Parkway, and east of Hicksville Road and to better define the southwestern leading edge of the RE108 hotspot. The location of wells RE132D1 – RE132D7, as well as other VPBs and monitoring well locations, is shown in Figure 2.

The field investigation included completing seven monitoring wells, well development, soil/groundwater analysis, groundwater samples, and surveying. Field tasks were conducted in 2018 in accordance with the *United Federal Programs Sampling and Analysis Plan (UFP SAP)*, Bethpage, New York (Resolution, 2013a). In addition, the work adhered to the following UFP SAP Addendums: *Groundwater Sampling Using Low Stress (Low Flow) Purging and Sampling Protocol* (Resolution Consultants, 2013b) and *Installation of Vertical Profile Borings and Monitoring Wells* (Resolution Consultants, 2013c).

Documentation of these activities is included in Appendix A of this report.

1.2 Site History

NWIRP Bethpage is in the Hamlet of Bethpage, Town of Oyster Bay, New York. Since its inception in 1941, the plant's primary mission was the research, prototyping, testing, design, engineering, fabrication, and primary assembly of military aircraft. The facilities at NWIRP included four plants used for assembly and prototype testing, a group of quality control laboratories, two warehouse complexes (north and south), a salvage storage area, water recharge basins, the Industrial Wastewater Treatment Plant, and several smaller support buildings.

The Navy's property originally totaled 109.5 acres and was formerly a Government-Owned Contractor-Operated (GOCO) facility that was operated by Northrop Grumman (NG) until September 1998. Prior to 2002, the NWIRP property was bordered on the north, west, and south by current or former NG facilities, and on the east by a residential neighborhood. By March 2008, approximately 100 acres of NWIRP property were transferred to Nassau County in three separate actions. The remaining 9 acres and access easements were retained by the Navy to continue remedial efforts at Installation Restoration (IR) Site 1 – Former Drum Marshalling Area and Site 4 – Former Underground Storage Tanks (Area of Concern [AOC] 22). A parcel of land connecting the two sites was also retained. Currently, the 9-acre parcel of NWIRP is bordered on the east by the residential neighborhood and on the north, south, and west by Steel Equities; however, a small portion is still owned by Nassau County. Access to the NWIRP is from South Oyster Bay Road.

1.3 Geology and Hydrogeology

1.3.1 Depositional Environment

Previous sequence stratigraphic studies of the New Jersey and New York Coastal Plains have shown that facies successions in the region can largely be explained by global sea level oscillations and sediment supply. The Turonian age sea level changes resulted in several phases of seaward progradation and landward retrogradation that affected the deposition and preservation of lithologic sequences in the Magothy. Periods of elevated or low sea level have a distinct effect on shoreline position and the types of deltaic facies that are deposited on the coastal plain. During high sea level, marine to distal deltaic facies tend to form. In contrast, during periods of low relative sea level, marginal to nonmarine deltaic facies are deposited.

Changes in sediment supply resulting from the tectonic uplift and weathering of the ancestral Appalachians during the Albian stage (approximately 100 million years ago) also influenced depositional environments in the region. The large influx of coarse sediments is reflected in the rapid seaward progradation of the shoreline and extensive delta plain deposits (Magothy Formation) on the New Jersey Coastal Plain.

1.3.2 Stratigraphy

Overburden at the site consists of well over 1,000 feet (ft) of unconsolidated deposits overlying crystalline bedrock of the Hartland Formation. Overburden is divided into four geologic units in descending order: the upper Pleistocene deposits, the Magothy Formation, the clay member of the Raritan Formation ("Raritan Clay") and the Lloyd Sand member of the Raritan Formation ("Lloyd Sand") (Geraghty and Miller, 1994).

The upper Pleistocene consists of till and outwash deposits of medium to coarse sand and gravel with lenses of fine sand, silt and clay (Smolensky and Feldman, 1988); these deposits form the Upper Glacial Aquifer. The continental deposits are considerably thicker than previously thought, ranging from 50 – 300 ft. Directly underlying this unit is the Magothy Formation with a thickness of 650 to 900 ft that extends to a depth of 700 to 1,000 ft below ground surface (bgs), as observed at the former NWIRP and extending southeast to areas south of Southern State Parkway. Locally at VPB166, the bottom of the Magothy (top of the Raritan Clay) is encountered at approximately 953 feet bgs. The Magothy is characterized by fine to medium sands and silts interbedded with zones of clays, silty sands and sandy clays. Sand and gravel lenses are found in some areas between depths of 600 and 880 ft bgs; these deposits form the main groundwater producing zones of the Magothy Aquifer

Investigations performed by the Navy since 2012 indicate that the bottom of the Magothy (top of the Raritan Clay) can extend to depths of 700 to greater than 1,000 ft bgs. The top of the Raritan Clay deepens to the south-southeast, as evidenced by clay depths of 1,000 ft bgs (or more) in borings installed off property. The Raritan Clay Unit is of continental origin and consists of clay, silty clay, clayey silt, and fine silty sand. This member acts as a confining layer over the Lloyd Sand Unit. The Lloyd Sand Unit is also of continental origin, having been deposited in a large fresh water lacustrine environment. The material consists of fine to coarse-grained sands, gravel, inter-bedded clay, and silty sand. These deposits form the Lloyd Aquifer.

1.3.3 Hydrogeology

The Upper Glacial Aquifer and the Magothy Aquifer comprise the aquifers of interest at the NWIRP. Regionally, these formations are generally considered to form a common, interconnected aquifer as the coarse nature of each unit near their contact and the lack of any regionally confining clay unit allows for the unrestricted flow of groundwater between the formations.

The Magothy Aquifer is the major source of public water in Nassau County. The most productive water bearing zones are the discontinuous lenses of sand and gravel that occur within the siltier matrix. The major water-bearing zones are coarse sand and gravel lenses located in the lower portion of the Magothy. Because of the presence of intermittent clay layers and the depths, the Magothy Aquifer is commonly regarded to function overall as an unconfined aquifer at shallow depths and a confined aquifer at greater depths. The drilling program at the NWIRP has revealed that clay zones beneath the facility are common but laterally discontinuous. No confining clay units of facility-wide extent have been encountered.

Groundwater is encountered at an average depth of approximately 50 ft bgs at the facility. Historically, because of pumping and recharge at the facility, groundwater depths have been measured to range

from 40 to 60 ft bgs. Depth to water in the vicinity of the RE132 series wells is approximately 30 - 34 feet bgs, as measured on 12/13/2018 and 12/17/2018. The groundwater flow in the area is to the south-southeast.

Considerable heterogeneity exists in the subsurface due to alternating depositional environments that resulted from changes in sea level and sediment supply. Laterally continuous fluvial sands and distributary mouth bars are inferred to represent high permeability units and conduits for groundwater flow/contaminant transport, however the continuity of those units is variable. Fine grained muds deposited during maximum flooding appear to correlate to contamination data peaks, potentially acting as storage units by adsorption to fine-grained muds.

2.0 FIELD PROGRAM

Seven monitoring wells were installed in the vicinity of VPB166 between January 24, 2018 and July 11, 2018. Field investigation activities consisted of drilling, well installation, well development, sampling, soil/groundwater analysis, and surveying. Drilling during this investigation was performed by Delta Well and Pump Company of Ronkonkoma, New York. A description of these tasks is provided below

2.1 Drilling and Well Construction

Monitoring wells RE132D1 – RE132D7 were installed using mud rotary drilling techniques (Figure 2). The depth of monitoring wells RE132D1 through RE132D7 ranged from 245 to 763 ft. Well construction details are summarized in Table 1. The boring logs for RE132 series wells with lithologic descriptions of the well screen intervals are included in Appendix A. *2017 OU2 Groundwater Investigation Data Summary Report VPB166* (Resolution Consultants, 2018) documents the installation of VPB166 including detailed lithologic descriptions, continuous gamma plot and multiple Volatile Organic Compounds (VOC) sample results over the entire boring length. The gamma and trichloroethene (TCE)/tetrachloroethene (PCE) plot for VPB166, which also depicts the well screen interval at RE132 series wells, is included in Appendix A.

Prior to installing the monitoring wells, the screen intervals were determined based on intervals with the highest VOC concentrations as measured in the VPB166 hydropunch samples and coincident intervals with the highest apparent permeability based on the VPB166 gamma logs and geologist logs. During the monitoring well installation, split spoon samples were collected every 5 ft in the screen interval. One soil sample per monitoring well was analyzed for Total Organic Carbon (TOC) via United States (US) Environmental Protection Agency (EPA) series SW-846 method 9060A by Katahdin Analytical Services (Katahdin). Data validation of TOC data was performed by Resolution Consultants. Data validation packages and analytical data tables are included in Appendix A.

Wells were constructed of 4-inch diameter, Schedule 80, National Sanitation Foundation-approved polyvinylchloride (PVC) riser pipe and 0.010-slot well screen. The wells were completed at the surface with a 12-inch diameter steel curb box. The well risers were set below grade and fit with lockable J plugs. Detailed monitoring well construction diagrams are included in Appendix A.

2.2 Well Development

Following installation, wells were developed to evacuate silts and other fine-grained materials and to establish the filter pack to promote a hydraulic connection between the wells and the surrounding aquifer. Well development was not initiated until at least 24 hours after well installation.

The well screens were developed using a combination of air lifting, manual surging, and pumping with a submersible pump. Turbidity was monitored during development to determine stabilization. In compliance with New York State Department of Environmental Conservation (NYSDEC) policy, wells are developed until turbidity was less than 50 nephelometric turbidity units (NTUs) if possible. Table 2 summarizes total pumped volume from air and pump development and final turbidity.

2.3 Sampling

Following development, the wells were allowed to stabilize for at least 2 weeks prior to groundwater sampling in accordance with low flow sampling procedures. The wells were purged using a bladder pump with a drop tube intake placed at the approximate midpoint of the screened interval. The following water quality parameters were continuously measured: water temperature, pH, conductivity, oxidation-reduction potential, dissolved oxygen and turbidity. Groundwater analytical samples were collected when water quality parameters stabilized. Samples were analyzed for VOCs via method 8260C and 1,4-dioxane via Method 8270D SIM by Katahdin. The flow rate for sample collection was 200 mL/minute. All development and purge water was managed as investigation derived waste (IDW). Groundwater sample logs and data validation packages are included in Appendix A.

Monitoring wells were sampled by Resolution Consultants on December 13, 2018 and December 17, 2018. Analytical results and stabilized field parameters are summarized in Table 3 and 4, respectively. Data validation is documented in Appendix A. RE132 series monitoring wells will be included in quarterly sampling as part of the Navy's ongoing Environmental Restoration Program.

2.4 Decontamination and Investigation Derived Waste

Resolution Consultants utilized dedicated and disposable sampling equipment when possible to avoid the potential for cross-contamination of samples. The sampling equipment included dedicated plastic scoops, disposable polyethylene tubing, disposable gloves, and laboratory supplied sample bottles. Hand held equipment and split spoons were decontaminated using Luminox and water wash, a potable water rinse, followed by a distilled water rinse. Water was collected in 5-gallon pails or 55-gallon drums. Non dedicated sampling equipment was decontaminated as outlined in the UFP SAP

Addendum - *Groundwater Sampling Using Low Stress (Low Flow) Purging and Sampling Protocol* (Resolution Consultants, 2013b).

As part of the IDW management practices and in accordance with the SAP, the investigation waste (consisting of soil cuttings, drilling muds, IDW fluids, and personal protective equipment [PPE]) generated during the groundwater monitoring well installation and sampling was containerized and staged at NWIRP Bethpage.

IDW solids were containerized in roll offs. Representative samples from each roll off were submitted to Katahdin for analysis of:

- Target Compound List (TCL) VOCs
- TCL Semi-volatile Organic Compounds (SVOCs)
- Toxicity Characteristic Leaching Procedure (TCLP) Metals
- Polychlorinated Biphenyls (PCBs)
- Total petroleum hydrocarbons
- Corrosivity
- Ignitability
- Reactive Cyanide
- Reactive Sulfide
- Paint Filter

IDW fluid generated during well development and purging was containerized in frac tanks and stored at NWIRP Bethpage for characterization and ultimate disposal to the Publicly Owned Treatment Works (POTW), in accordance with the facilities existing discharge permit. A representative water sample was collected from each frac tank and submitted to Katahdin for analysis of VOCs via Method SW 624, pH via Method SW 9040B, PCBs via Method 8082 and Total Metals via Method SW 846. All analytical criteria were met for disposal of water.

2.5 Surveying

A survey of the monitoring well locations was conducted at the end of fieldwork by C. T. Male, Inc., of Latham, NY, under the direct supervision of Resolution Consultants. The locations were tied into the existing base map developed for this investigation. The survey elevation is referenced to the North American Vertical Datum (NAVD) 1988 and has a vertical accuracy of 0.01 foot. Vertical control

is based on observations of the Continuously Operating Reference (COR) Stations Queens and Central Islip. The horizontal location is referenced to the North American Datum (NAD) 1983 (2011) NY. Long Island Zone 3104 and has an accuracy of 0.1 foot. Local horizontal and vertical control is based on Global Positioning System (GPS) observations using the NYSNet Real Time Network.

A table of survey data (latitude/longitude, northing/easting, elevations of ground, rim and PVC) and a survey map is included in Appendix A, Section 6.

3.0 REFERENCES

Geraghty and Miller, Inc., 1994. *Remedial Investigation Report, Grumman Aerospace Corporation, Bethpage, New York*. Revised September 1994.

Resolution Consultants, 2013a. *United Federal Programs Sampling and Analysis Plan*, *Site OU-2 Offsite Trichloroethene (TCE) Groundwater Plume Investigation, Bethpage, New York*. April 2013.

Resolution Consultants, 2013b. UFP SAP Addendum, *Groundwater Sampling Using Low Stress (Low* Flow) Purging and Sampling Protocol. November 2013.

Resolution Consultants, 2013c. *UFP SAP Addendum, Installation of Vertical Profile Borings and Monitoring Wells*. December 2013.

Resolution Consultants, 2018. *2017 OU2 Groundwater Investigation Data Summary Report VPB166, Bethpage, NY*. December 2018.

Smolensky, D., and Feldman, S., 1988. *Geohydrology of the Bethpage-Hicksville-Levittown Area, Long Island, New York, U.S.* Geological Survey Water-Resourced Investigations Report 88-4135, 25 pp.

NEW YORK PROFESSIONAL GEOLOGIST SEAL

As a New York-licensed Professional Geologist, I have reviewed and approve this Well Installation Data Summary Report for Monitoring Wells RE132D1, RE132D2, RE132D3, RE132D4, RE132D5, RE132D6 and RE132D7 - Groundwater Investigation at Naval Industrial Reserve Plant Bethpage Operable Unit 2, Site 1, and seal it in accordance with Article 145 Section 7209 of the New York State Education Laws. In sealing this document, I certify it was prepared under my direction, the geological information contained in it is true to the best of my knowledge and the geological methods and procedures included herein are consistent with currently accepted geological practices.

It is a violation of this law for any person to alter the contained drawings or the report in any way, unless he or she is acting under the direction of a NY-licensed Professional Geologist.

Name: Brian E. Caldwell
NY PG License Number: 000511
State: New York

Brian Caldwell
Signature:

June 14 2020
Date:

Tables

TABLE 1
MONITORING WELL CONSTRUCTION SUMMARY
2018 OU2 GROUNDWATER INVESTIGATION
NWIRP BETHPAGE, NY

MONITORING WELL	WELL COMPLETION DATE	GROUND ELEVATION (MSL)	PVC ELEVATION (INNER CASING) (MSL)	WELL DEPTH (ft bgs)	CASING DEPTH (ft bgs)	SCREEN INTERVAL (ft bgs)	SUMP DEPTH INTERVAL (ft bgs)	BORING DEPTH (ft bgs)
RE132D1	2/1/2018	79.61	79.51	245	53	220-240	240-245	258
RE132D2	7/11/2018	80.02	79.56	355	53	330-350	350-355	368
RE132D3	6/22/2018	79.93	79.43	525	53	500-520	520-525	538
RE132D4	5/25/2018	80.00	79.60	585	53	560-580	580-585	598
RE132D5	4/26/2018	79.93	79.42	635	53	610-630	630-635	648
RE132D6	3/30/2018	79.09	79.10	710	53	685-705	705-710	721
RE132D7	2/23/2018	79.64	79.54	763	53	743-758	758-763	775

MSL - mean sea level
ft bgs - feet below ground surface

TABLE 2
MONITORING WELL DEVELOPMENT SUMMARY
2018 OU2 GROUNDWATER INVESTIGATION
NWIRP BETHPAGE, NY

MONITORING WELL	AIR DEVELOPMENT		PUMP DEVELOPMENT			APPROX. TOTAL DEVELOPMENT VOLUME (GAL)	FINAL TURBIDITY (NTUs)
	DATE	APPROX. VOLUME (GAL)	DATE	FINAL PUMP DEPTH (FT BGS)	APPROX. VOLUME (GAL)		
RE132D6	7/18/2018	7,000	8/8/2018	703	4000	11,000	12.36
RE132D7	7/19/2018	trace	8/9/18, 8/10/18, 8/13/18, 8/14/18, 8/15/18	758	1600	1,600	482.3*
RE132D1	7/19/2018	4,000	8/7/2018	238	3760	7,760	6.12
RE132D5	7/23/2018	1,000	8/1/18, 8/2/2018	628	6000	7,000	24.23
RE132D4	7/24/2018	5,000	7/31/2018	578	5400	10,400	14.16
RE132D3	7/25/2018	6,000	7/30/2018	518	4000	10,000	13.45
RE132D2	7/26/2018	5,400	7/27/2018	348	4800	10,200	15.40

GAL - gallon
FT BGS - feet below ground surface
NTUs - Nephelometric Turbidity Units
* Air development was unsuccessful at RE132D7; turbidity remained elevated after pump development.

TABLE 3
ANALYTICAL DATA SUMMARY
[2018] OU2 GROUNDWATER INVESTIGATION

Location		NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE132D1	RE132D2	RE132D2	RE132D3
Sample Date			12/13/2018	12/17/2018	12/17/2018	12/17/2018
Sample ID			RE132D1-GW-121318	RE132D2-GW-121718	DUP01-GW-121718	RE132D3-GW-121718
Sample type code			N	N	FD	N
Units ug/L	**Method**					
1,1,1-TRICHLOROETHANE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2,2-TETRACHLOROETHANE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	8260 C	5	**7**	**2.7**	**2.7**	**4.1**
1,1,2-TRICHLOROETHANE	8260 C	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1-DICHLOROETHANE	8260 C	5	**1.1**	<0.5 U	<0.5 U	<0.5 U
1,1-DICHLOROETHENE	8260 C	5	**1.7 J**	<0.5 UJ	**0.45 J**	**0.71 J**
1,2,4-TRICHLOROBENZENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	8260 C	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	8260 C	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROBENZENE	8260 C	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHANE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHENE, TOTAL	8260 C	5	**2.4**	**0.32 J**	**2.3**	**1.7 J**
1,2-DICHLOROPROPANE	8260 C	1	<0.5 U	<0.5 U	**2.1**	<0.5 U
1,3-DICHLOROBENZENE	8260 C	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,4-DICHLOROBENZENE	8260 C	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,4-DIOXANE	8270D_SIM	NL	**4.5**	**10**	**0.28**	**11**
2-BUTANONE	8260 C	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	8260 C	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	8260 C	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	8260 C	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
BENZENE	8260 C	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMODICHLOROMETHANE	8260 C	50	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOFORM	8260 C	50	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOMETHANE	8260 C	5	<1 U	<1 U	<1 U	<1 U
CARBON DISULFIDE	8260 C	60	<1.1 U	<0.5 U	<0.5 U	<0.5 U
CARBON TETRACHLORIDE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CHLOROBENZENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CHLOROETHANE	8260 C	5	<1 U	<1 U	<1 U	<1 U
CHLOROFORM	8260 C	7	<1.9 U	<0.5 U	<0.5 U	<0.5 U
CHLOROMETHANE	8260 C	5	<1 UJ	<1 UJ	<1 UJ	<1 UJ
CIS-1,2-DICHLOROETHENE	8260 C	5	**2.4**	**0.32 J**	**2.3**	**1.7**
CIS-1,3-DICHLOROPROPENE	8260 C	0.4	***<0.5 U***	***<0.5 U***	***<0.5 U***	***<0.5 U***
CYCLOHEXANE	8260 C	NL	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ
DIBROMOCHLOROMETHANE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DICHLORODIFLUOROMETHANE	8260 C	5	**0.9 J**	**1.8 J**	<1 U	**1.2 J**
ETHYLBENZENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
ISOPROPYLBENZENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
M- AND P-XYLENE	8260 C	NL	<1 U	<1 U	<1 U	<1 U
METHYL ACETATE	8260 C	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	8260 C	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
METHYL TERT-BUTYL ETHER	8260 C	10	**1.9 J**	<0.5 UJ	<0.5 UJ	<0.5 UJ
METHYLENE CHLORIDE	8260 C	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	8260 C	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
STYRENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	8260 C	5	**3.4**	<0.5 U	**6**	<0.5 U
TOLUENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	8260 C	0.4	***<0.5 U***	***<0.5 U***	***<0.5 U***	***<0.5 U***
TRICHLOROETHENE	8260 C	5	**130**	**3.5 J**	**6.8**	**59**
TRICHLOROFLUOROMETHANE	8260 C	5	<1 U	<1 U	<1 U	<1 U
VINYL CHLORIDE	8260 C	2	<1 U	<1 U	<1 U	<1 U
XYLENES, TOTAL	8260 C	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

TABLE 3
ANALYTICAL DATA SUMMARY
[2018] OU2 GROUNDWATER INVESTIGATION

Location		NYSDEC Groundwater Guidance or Standard Value (Note 1)	RE132D4	RE132D5	RE132D6	RE132D7
Sample Date			12/13/2018	12/13/2018	12/13/2018	12/17/2018
Sample ID			RE132D4-GW-121318	RE132D5-GW-121318	RE132D6-GW-121318	RE132D7-GW-121718
Sample type code			N	N	N	N
Units ug/L	**Method**					
1,1,1-TRICHLOROETHANE	8260 C	5	<0.5 U	**0.49 J**	**0.71 J**	**0.22 J**
1,1,2,2-TETRACHLOROETHANE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	8260 C	5	**7.4**	**11**	**27**	**8.7**
1,1,2-TRICHLOROETHANE	8260 C	1	<0.5 U	**0.46 J**	**1.2**	**0.52 J**
1,1-DICHLOROETHANE	8260 C	5	**0.52 J**	**0.85 J**	**2.2**	**0.76 J**
1,1-DICHLOROETHENE	8260 C	5	**1.9 J**	**3.6 J**	**12 J**	**2.4 J**
1,2,4-TRICHLOROBENZENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	8260 C	0.04	***<0.75 U***	***<0.75 U***	***<0.75 U***	***<0.75 U***
1,2-DIBROMOETHANE	8260 C	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROBENZENE	8260 C	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHANE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,2-DICHLOROETHENE, TOTAL	8260 C	5	**3.5**	**2.4**	**4.5**	**2.1**
1,2-DICHLOROPROPANE	8260 C	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,3-DICHLOROBENZENE	8260 C	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,4-DICHLOROBENZENE	8260 C	3	<0.5 U	<0.5 U	<0.5 U	<0.5 U
1,4-DIOXANE	8270D_SIM	NL	**14**	**8.8**	**12**	**2.8**
2-BUTANONE	8260 C	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
2-HEXANONE	8260 C	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
4-METHYL-2-PENTANONE	8260 C	NL	<2.5 U	<2.5 U	<2.5 U	<2.5 U
ACETONE	8260 C	50	<2.5 U	<2.5 U	<2.5 U	<2.5 U
BENZENE	8260 C	1	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMODICHLOROMETHANE	8260 C	50	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOFORM	8260 C	50	<0.5 U	<0.5 U	<0.5 U	<0.5 U
BROMOMETHANE	8260 C	5	<1 U	<1 U	<1 U	<1 U
CARBON DISULFIDE	8260 C	60	<1 U	<1.1 U	<1.1 U	<0.5 U
CARBON TETRACHLORIDE	8260 C	5	**0.36 J**	**0.89 J**	**1.4**	**0.95 J**
CHLOROBENZENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
CHLOROETHANE	8260 C	5	<1 U	<1 U	<1 U	<1 U
CHLOROFORM	8260 C	7	<1 U	<1.1 U	<1.4 U	**1.2**
CHLOROMETHANE	8260 C	5	<1 UJ	<1 UJ	<1 UJ	<1 UJ
CIS-1,2-DICHLOROETHENE	8260 C	5	**3.5**	**2.4**	**4.5**	**2.1**
CIS-1,3-DICHLOROPROPENE	8260 C	0.4	***<0.5 U***	***<0.5 U***	***<0.5 U***	***<0.5 U***
CYCLOHEXANE	8260 C	NL	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ
DIBROMOCHLOROMETHANE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
DICHLORODIFLUOROMETHANE	8260 C	5	**0.91 J**	**1.6 J**	<1 U	<1 U
ETHYLBENZENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
ISOPROPYLBENZENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
M- AND P-XYLENE	8260 C	NL	<1 U	<1 U	<1 U	<1 U
METHYL ACETATE	8260 C	NL	<0.75 U	<0.75 U	<0.75 U	<0.75 U
METHYL CYCLOHEXANE	8260 C	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
METHYL TERT-BUTYL ETHER	8260 C	10	<0.5 UJ	<0.5 UJ	<0.5 UJ	<0.5 UJ
METHYLENE CHLORIDE	8260 C	5	<2.5 U	<2.5 U	<2.5 U	<2.5 U
O-XYLENE	8260 C	NL	<0.5 U	<0.5 U	<0.5 U	<0.5 U
STYRENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TETRACHLOROETHENE	8260 C	5	**3.3**	<0.5 U	**1.9**	<0.5 U
TOLUENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,2-DICHLOROETHENE	8260 C	5	<0.5 U	<0.5 U	<0.5 U	<0.5 U
TRANS-1,3-DICHLOROPROPENE	8260 C	0.4	***<0.5 U***	***<0.5 U***	***<0.5 U***	***<0.5 U***
TRICHLOROETHENE	8260 C	5	**220**	**120**	**1200**	**440**
TRICHLOROFLUOROMETHANE	8260 C	5	<1 U	<1 U	<1 U	<1 U
VINYL CHLORIDE	8260 C	2	<1 U	<1 U	<1 U	<1 U
XYLENES, TOTAL	8260 C	5	<1.5 U	<1.5 U	<1.5 U	<1.5 U

TABLE 3
ANALYTICAL DATA SUMMARY
(2018) OU2 GROUNDWATER INVESTIGATION

Notes:

1 New York State Department of Environmental Conservation Division of Water Technical and Operation Guidance series (6 NYCRR 700-706, Part 703.5 summarized in TOGS 1.1.1)
Ambient water quality standards and groundwater effluent limitations, class GA; NL = Not Listed

NA = not analyzed

Bold = Detected; ***Bold and Italics*** =Not detected exceeds NYS Groundwater Standards or guidance value

Yellow highlighted values exceed Groundwater Standards or guidance value

Sample type codes: N - normal environmental sample, FD - field duplicate

U = The analyte was not detected and was reported as less than the LOD or as defined by the customer. The LOD has been adjusted for any dilution or concentration of the sample.

UJ = The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.

J = The reported result was an estimated value with an unknown bias.

LOD = limit of detection.

TABLE 4
STABILIZED FIELD PARAMETERS
2018 OU2 GROUNDWATER INVESTIGATION
NWIRP BETHPAGE, NY

Well	Date	Temperature (°C)	pH	Specific Conductance (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Depth to water (ft bgs)	Purge Flow rate (ml/min)
RE132D1	12/13/2018	15.13	4.95	0.193	0.31	251.5	13.3	30.30	600
RE132D2	12/17/2018	15.33	4.78	0.097	0.48	208.8	49.4	30.62	600
RE132D3	12/17/2018	15.08	5.36	0.101	0.46	217.7	155	32.62	600
RE132D4	12/13/2018	15.20	4.90	0.109	3.31	310.7	6.62	32.15	600
RE132D5	12/13/2018	14.39	6.01	0.107	0.51	149.7	68.8	33.68	600
RE132D6	12/13/2018	14.18	4.51	0.062	3.39	280.5	10.9	31.82	550
RE132D7	12/17/2018	14.88	5.47	0.058	5.04	184.8	326	32.95	600

Figures

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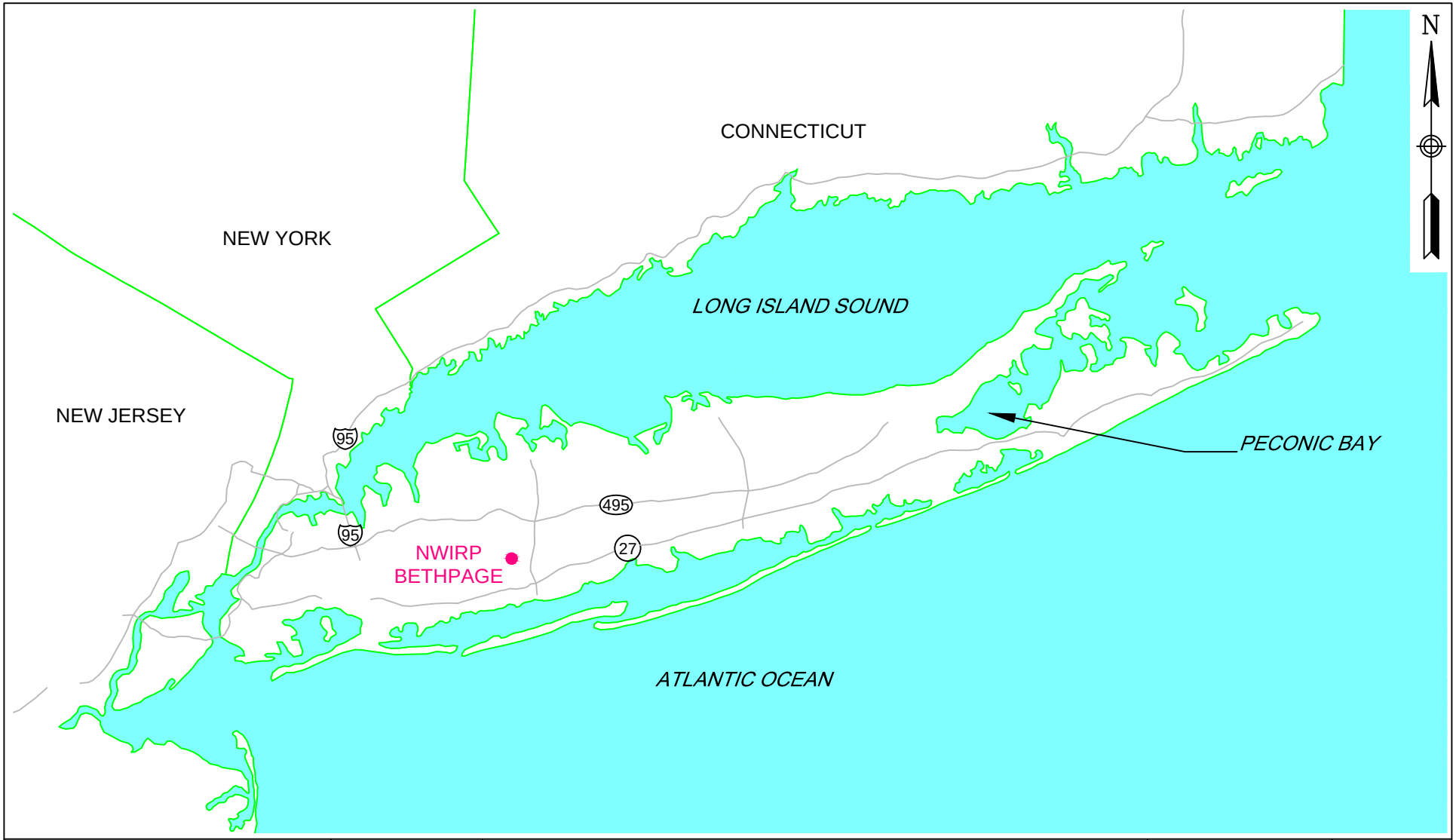


0 15 30

SCALE IN MILES

NAVFAC

GENERAL LOCATION MAP
NWIRP BETHPAGE
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D-8013	WE15
APPROVED BY --	DATE --
APPROVED BY --	DATE --
FIGURE NO. 1	REV 0

C:\Users\hunte\Desktop\tmp1\IBP\Location Maps\F2 RE132 2018 08 20 R1.mxd

Former Naval Weapons Industrial Reserve Plant

Former Northrop Grumman Site

Inset: RE132D1 through RE132D7 Locations

VPB76 VPB129 TT101D TT101D1 TT101D2

RE132D1 RE132D2 RE132D3 RE132D4 RE132D5 RE132D6 RE132D7 VPB166

RW5

RE114D1 RE114D2

RW6

0 375 750 Feet

N

PWD-7438

Bethpage

Plainedge

South Farmingdale

Levittown

North Massapequa

North Wantagh

0 750 1,500 3,000 Feet

Legend

- Monitoring Well
- Vertical Profile Boring
- Vertical Profile Boring - Proposed
- Water Supply Well
- Extraction Well

RE132D1 THROUGH RE132D7 LOCATION MAP
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

CONTRACT NUMBER	CTO NUMBER
N62470-11-D8013	WE15
APPROVED BY: PS	DATE: 5/30/2020
APPROVED BY: —	DATE: —
FIGURE NO.: 2	REV: 0

Appendices

Appendix A

RE132D1, RE132D2, RE132D3, RE132D4, RE132D5, RE132D6, RE132D7

Section 1

Boring Logs

Resolution Consultants

Boring Log

BORING #: RE132D1
Sheet 1 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.61	**Well Screen Interval (ft):** 220-240
Start Date: 1/24/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 2/1/2018	**Northing:** 203062.29 **Easting:** 1125662.4	**Total Depth (ft):** 258.0

Casing installed with auger rig: 1/10/2018.

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
0					0-223 ft bgs: See VPB166 for Descriptions		10" Diameter Steel Casing
50							Bentonite Grout
100							4" Diameter Schedule 80 PVC Riser
150							

Resolution Consultants

Boring Log

BORING #: RE132D1
Sheet 2 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.61	**Well Screen Interval (ft):** 220-240
Start Date: 1/24/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 2/1/2018	**Northing:** 203062.29 **Easting:** 1125662.4	**Total Depth (ft):** 258.0

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
158–258					0-223 ft bgs: See VPB166 for Descriptions *(continued)*		4" Diameter Schedule 80 PVC Riser *(continued)*
							#00 Filter Sand
							#1 Filter Sand
222–224	0		ML		Very dark grey (10YR 3/1) SILT		
228–230	0		CL SC		Very dark Gray (10yr 3/1) lean CLAY Gray (10YR 5/1) Clayey SAND		4" Diameter Schedule 80 PVC, 10 Slot Well Screen (220-240 ft bgs)
234–236	0		SC-SM CL		Gray (10YR 6/1) Silty SAND mixed with Clay Very Dark Gray (10YR 3/1) Lean CLAY		
238–240	0		OL ML		Dark Brown (10yr 3/3) LIGNITE and wood Very dark grey (10YR 3/1) SILT, trace amount of lean Clay		Sump
							#1 Sand to Bottom

End of boring at 258.0 ft. bgs.

Resolution Consultants

Boring Log

BORING #: RE132D2
Sheet 1 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 80.02	**Well Screen Interval (ft):** 330-350
Start Date: 7/2/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 7/11/2018	**Northing:** 203115.9 **Easting:** 1125692.33	**Total Depth (ft):** 368.0

Casing installed with auger rig:

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
0					0-333 ft bgs: See VPB166 for Descriptions		10" Diameter Steel Casing
50							
100							Bentonite Grout
150							
200							
250							

Resolution Consultants

Boring Log

BORING #: RE132D2
Sheet 2 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 80.02	**Well Screen Interval (ft):** 330-350
Start Date: 7/2/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 7/11/2018	**Northing:** 203115.9 **Easting:** 1125692.33	**Total Depth (ft):** 368.0

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
250					0-333 ft bgs: See VPB166 for Descriptions *(continued)*		4" Diameter Schedule 80 PVC Riser
252							
254							
256							
258							
260							
262							
264							
266							
268							
270							
272							
274							
276							
278							
280							
282							
284							
286							
288							
290							
292							
294							
296							
298							
300							
302							
304							#00 Filter Sand
306							
308							
310							
312							
314							
316							
318							#1 Filter Sand
320							
322							
324							
326							
328							
330							
332							
334	0		SP		Light yellowish brown (10YR 6/4) medium subangular SAND, trace Silt, layer black (10YR 2/1) organic material		
336							
338	0		SP/SM		Gray (7.5 YR 5/1) medium subangular SAND, some Silt, trace muscovite		4" Diameter Schedule 80 PVC, 10 Slot Well Screen (330-350 ft bgs)
340							
342							
344	0.1		SP		Grayish brown (10YR 5/2) medium subangular SAND, hard packed trace Silt, trace muscovite		
346							
348	0		SP		Gray (7.5YR 5/1) medium subangular SAND, trace Silt and dark gray (5YR 4/1) sandy pyritized nodules and black (10YR 12/1) lignite		
350							
352							Sump
354							
356							
358							
360							
362							#1 Sand to Bottom
364							
366							
368					End of boring at 368.0 ft. bgs.		

Resolution Consultants

Boring Log

BORING #: RE132D3
Sheet 1 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.93	**Well Screen Interval (ft):** 500-520
Start Date: 6/11/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 6/22/2018	**Northing:** 203115.53 **Easting:** 1125709.2	**Total Depth (ft):** 538.0

Casing installed with auger rig: 5/4/2018.

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
0 50 100 150 200 250 300 350 400					0-508 ft bgs: See VPB166 for Descriptions		10" Diameter Steel Casing Bentonite Grout 4" Diameter Schedule 80 PVC Riser

Resolution Consultants

Boring Log

BORING #: RE132D3
Sheet 2 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.93	**Well Screen Interval (ft):** 500-520
Start Date: 6/11/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 6/22/2018	**Northing:** 203115.53 **Easting:** 1125709.2	**Total Depth (ft):** 538.0

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
438					0-508 ft bgs: See VPB166 for Descriptions *(continued)*		4" Diameter Schedule 80 PVC Riser *(continued)*
440							
442							
444							
446							
448							
450							
452							
454							
456							
458							
460							
462							
464							
466							
468							#00 Filter Sand
470							
472							
474							
476							
478							
480							
482							
484							
486							#1 Filter Sand
488							
490							
492							
494							
496							
498							
500							
502							
504							
506							
508	0		SP/SM		Light brownish gray (10YR 6/2) poorly graded medium sub-angular SAND, trace Silt		4" Diameter Schedule 80 PVC, 10 Slot Well Screen (500-520 ft bgs)
510							
512							
514	0		SP/SM		Light brownish gray (10YR 6/2) poorly graded medium sub-angular SAND, trace Silt, some lamination. Thin lense at top of interval consisting of very pale brown (10YR 7/3) fat clay.		
516							
518	0		SP/SM		Light gray (10YR 7/2) poorly graded medium sub-angular SAND, trace Silt, lamination of stronger concentrations of silt		Sump
520							
522							
524							
526							
528							
530							
532							#1 Sand to Bottom
534							
536							
538							

End of boring at 538.0 ft. bgs.

Resolution Consultants

Boring Log

BORING #: RE132D4
Sheet 1 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 80.00	**Well Screen Interval (ft):** 560-580
Start Date: 5/14/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 5/25/2018	**Northing:** 203115.82 **Easting:** 1125724.32	**Total Depth (ft):** 598.0

Casing installed with auger rig: 5/2/2018 - 5/3/2018.

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
0					0-563 ft bgs: See VPB166 for Descriptions		10" Diameter Steel Casing
50							
100							
150							
200							Bentonite Grout
250							
300							
350							
400							4" Diameter Schedule 80 PVC Riser
450							

Resolution Consultants

Boring Log

BORING #: RE132D4
Sheet 2 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 80.00	**Well Screen Interval (ft):** 560-580
Start Date: 5/14/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 5/25/2018	**Northing:** 203115.82 **Easting:** 1125724.32	**Total Depth (ft):** 598.0

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
478					0-563 ft bgs: See VPB166 for Descriptions *(continued)*		4" Diameter Schedule 80 PVC Riser *(continued)*
480							
482							
484							
486							
488							
490							
492							
494							
496							
498							
500							
502							
504							#00 Filter Sand
506							
508							
510							
512							
514							
516							
518							
520							
522							
524							
526							
528							
530							
532							
534							#1 Filter Sand
536							
538							
540							
542							
544							
546							
548							
550							
552							
554							
556							
558							
560							
562							
564	1		SP/SM		Grayish orange (10YR 7/4) fine SAND, trace Silt		
566							
568							
570	0.8		SP/SM		Pale yelowish brown (10YR 6/2) fine SAND, trace Silt		4" Diameter Schedule 80 PVC, 10 Slot Well Screen (560-580 ft bgs)
572							
574	0.2		SP/SM		Light gray (10YR 7/1) fine SAND, trace Silt		
576							
578							
580	1		SP/SM		Pale brown (10YR 7/4) med-fine SAND, trace Silt		Sump
582							
584							
586							
588							
590							
592							#1 Sand to Bottom
594							
596							
598							

End of boring at 598.0 ft. bgs.

Resolution Consultants

Boring Log

BORING #: RE132D5
Sheet 1 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.93	**Well Screen Interval (ft):** 610-630
Start Date: 4/11/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 4/26/2018	**Northing:** 203082.1 **Easting:** 1125717.09	**Total Depth (ft):** 648.0

Casing installed with auger rig: 1/4/2018 & 1/8/2018.

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
0 50 100 150 200 250 300 350 400 450 500					0-618 ft bgs: See VPB166 for Descriptions		10" Diameter Steel Casing Bentonite Grout 4" Diameter Schedule 80 PVC Riser #00 Filter Sand

Resolution Consultants

Boring Log

BORING #: RE132D5
Sheet 2 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.93	**Well Screen Interval (ft):** 610-630
Start Date: 4/11/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 4/26/2018	**Northing:** 203082.1 **Easting:** 1125717.09	**Total Depth (ft):** 648.0

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
520					0-618 ft bgs: See VPB166 for Descriptions *(continued)*		#00 Filter Sand *(continued)*
522							
524							
526							
528							
530							
532							
534							
536							
538							
540							
542							
544							
546							
548							
550							
552							
554							
556							
558							
560							
562							
564							
566							
568							
570							
572							
574							#1 Filter Sand
576							
578							
580							
582							
584							
586							
588							
590							
592							
594							
596							
598							
600							
602							
604							
606							
608							
610							
612							
614							
616							
618			SP/SM		Light brown fine-medium SAND, trace Silt, trace clay		
620	0						4" Diameter Schedule 80 PVC, 10 Slot Well Screen (610-630 ft bgs)
622							
624	0		SP/SM		Light brown fine-medium SAND, trace Silt		
626							
628			SP/SM		Light brown fine-medium SAND, trace Silt		
630	0						Sump
632							
634							
636							
638							
640							
642							#1 Sand to Bottom
644							
646							
648							

End of boring at 648.0 ft. bgs.

Resolution Consultants

Boring Log

BORING #: RE132D6
Sheet 1 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** V. Varricchio
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.09	**Well Screen Interval (ft):** 685-705
Start Date: 3/9/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 3/30/2018	**Northing:** 203033.49 **Easting:** 1125662.48	**Total Depth (ft):** 721.0

Casing installed with auger rig: 1/16/2018.

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
0					0-688 ft bgs: See VPB166 for Descriptions		10" Diameter Steel Casing
50							
100							
150							Bentonite Grout
200							
250							
300							
350							
400							
450							4" Diameter Schedule 80 PVC Riser
500							
550							
600							

Resolution Consultants

Boring Log

BORING #: RE132D6
Sheet 2 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** V. Varricchio
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.09	**Well Screen Interval (ft):** 685-705
Start Date: 3/9/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 3/30/2018	**Northing:** 203033.49 **Easting:** 1125662.48	**Total Depth (ft):** 721.0

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
622					0-688 ft bgs: See VPB166 for Descriptions *(continued)*		4" Diameter Schedule 80 PVC Riser *(continued)*
624							
626							
628							
630							
632							
634							
636							
638							
640							
642							
644							
646							
648							
650							
652							#00 Filter Sand
654							
656							
658							
660							
662							
664							
666							
668							
670							
672							#1 Filter Sand
674							
676							
678							
680							
682							
684							
686							
688	0		SW		Light gray (10YR 7/2) well graded fine to coarse subangular SAND, trace fine subangular Gravel		
690							
692							
694	0		GP		White (10 YR 8/1) to Brown (10YR 5/3) poorly grade fine subangular GRAVEL, some well graded medium to coarse subangular Sand		4" Diameter Schedule 80 PVC, 10 Slot Well Screen (685-705 ft bgs)
696							
698	0		SW		Light gray (10YR 7/2) well graded fine to coarse subangular SAND, trace fine subangular Gravel		
700							
702							
704	0		GM		Light gray (10YR 7/2) Silty poorly graded fine subangular GRAVEL, trace coarse subangular Sand		
706							
708							Sump
710							
712							
714							
716							#1 Sand to Bottom
718							
720							

End of boring at 721.0 ft. bgs.

Resolution Consultants

Boring Log

BORING #: RE132D7
Sheet 1 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.64	**Well Screen Interval (ft):** 743-758
Start Date: 2/12/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 2/23/2018	**Northing:** 203047.55 **Easting:** 1125662.2	**Total Depth (ft):** 775.0

Casing installed with auger rig: 1/11/2018 - 1/12/2018.

DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
0 50 100 150 200 250 300 350 400 450 500 550 600 650					0-743 ft bgs: See VPB166 for Descriptions		10" Diameter Steel Casing Bentonite Grout 4" Diameter Schedule 80 PVC Riser

Resolution Consultants

Boring Log

BORING #: RE132D7
Sheet 2 of 2

Client: Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic		**Logged By:** F. Bell
Location: Poe Place & Wadsworth Ave, Bethpage, NY		**Drilling Company:** Delta Well & Pump
Project #: 60266526	**Ground Elevation (msl):** 79.64	**Well Screen Interval (ft):** 743-758
Start Date: 2/12/2018	**Drilling Method:** Auger (0-50' bgs) Mud Rotary (>50' bgs)	**Water Level (ft):**
Finish Date: 2/23/2018	**Northing:** 203047.55 **Easting:** 1125662.2	**Total Depth (ft):** 775.0

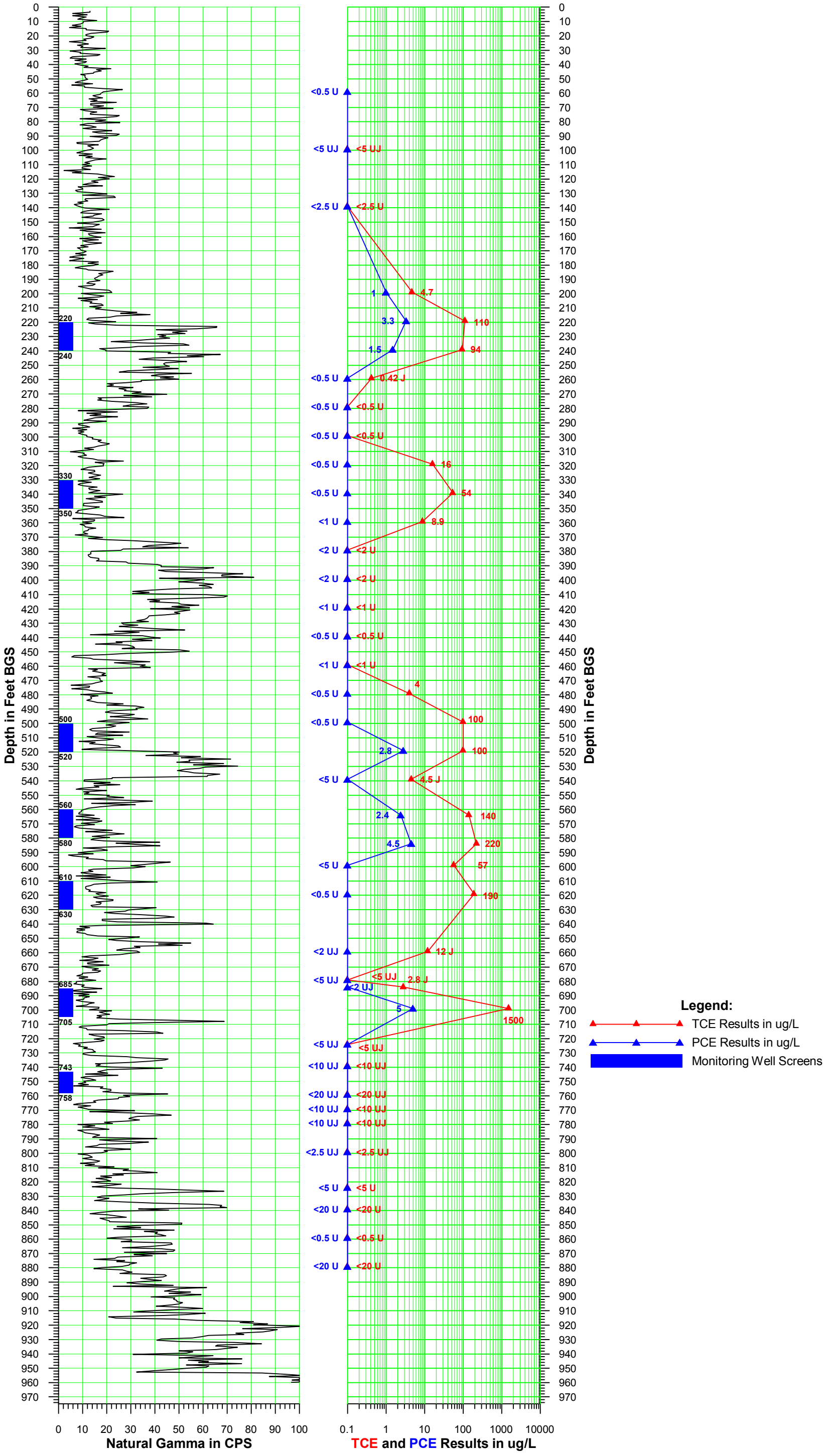
DEPTH (ft)	PID (ppm)	Formation	USCS	GRAPHIC LOG	MATERIAL DESCRIPTION	Well Completion	Well Construction
676					0-743 ft bgs: See VPB166 for Descriptions *(continued)*		4" Diameter Schedule 80 PVC Riser *(continued)*
678							
680							
682							
684							
686							
688							
690							
692							
694							
696							
698							#00 Filter Sand
700							
702							
704							
706							
708							
710							
712							
714							
716							
718							
720							
722							
724							#1 Filter Sand
726							
728							
730							
732							
734							
736							
738							
740							
742							
744	0		SP		Light Grey (5Y, 7/1) fine - medium poorly graded SAND, trace white silt		
746							
748							
750	0		SP		Light Grey (5Y, 7/1) fine poorly graded SAND, trace white Silt		4" Diameter Schedule 80 PVC, 10 Slot Well Screen (743-758 ft bgs)
752							
754	0		SW/SP		Light Grey (5Y, 7/1) well graded fine-med subangular SAND, with few fine subrounded Gravel; 1inch layer white (5Y, 8/1) ductile CLAY		
756							
758							
760							Sump
762							
764							
766							
768							
770							#1 Sand to Bottom
772							
774							

End of boring at 775.0 ft. bgs.

Section 2

VPB166 Gamma and TCE/PCE Plot

Vertical Profile Boring VPB-166
Downward Run - October 22, 2017
Validated Analytical Data



Section 3

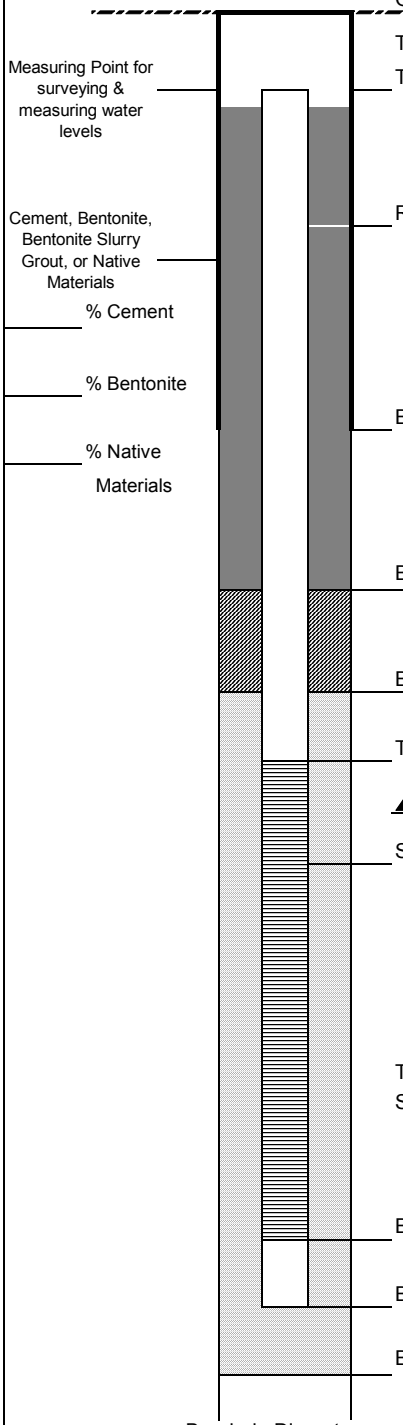
Monitoring Well Construction Logs

RESOLUTION CONSULTANTS

Client: NAVFAC	Project Number: 60266526	***WELL ID: 132D1***	
Site Location: NWIRP BETHPAGE, NY			
Well Location: Poe Place & Wadsworth Ave, Bethpage, NY		Date Installed: 2/1/18	
Method: MUD ROTARY		Inspector: F. Bell	
Coords: Northing: 203062.29	Easting: 1125662.40	Contractor: DELTA WELL & PUMP	

MONITORING WELL CONSTRUCTION DETAIL

* Casing installed with Auger rig 1/10/2018.



	Depth from G.S. (feet)	Elevation(feet) Datum
Ground Surface (G.S.)	0.00	79.61
Top of 12 inch diameter Steel Curb Box		
Top of Riser Pipe fit with locking j-plug	0.10	79.51
Riser Pipe:		
Length: 220		
Inside Diameter (ID): 4 inch		
Type of Material: PVC		
Bottom of 10 inch diameter Steel Surface Casing	53	26.6
Bottom of Bentonite Grout	179	-99.4
Bottom of #00 Filter Sand/Top of #1 Filter Sand	190	-110.4
Top of Screen	220	-140.4
▲ Stabilized Water Level		
Screen:		
Length: 20 ft		
Inside Diameter (ID): 4 inch		
Slot Size: 10		
Type of Material: PVC		
Type/Size of Sand: #1		
Sand Pack Thickness: 79		
Bottom of Screen	240	-160.4
Bottom of Sump:	245	-165.4
Bottom of Borehole	258	-178.4

Borehole Diameter: 10 inch

Approved: _____ Signature _____ Date

Describe Measuring Point:

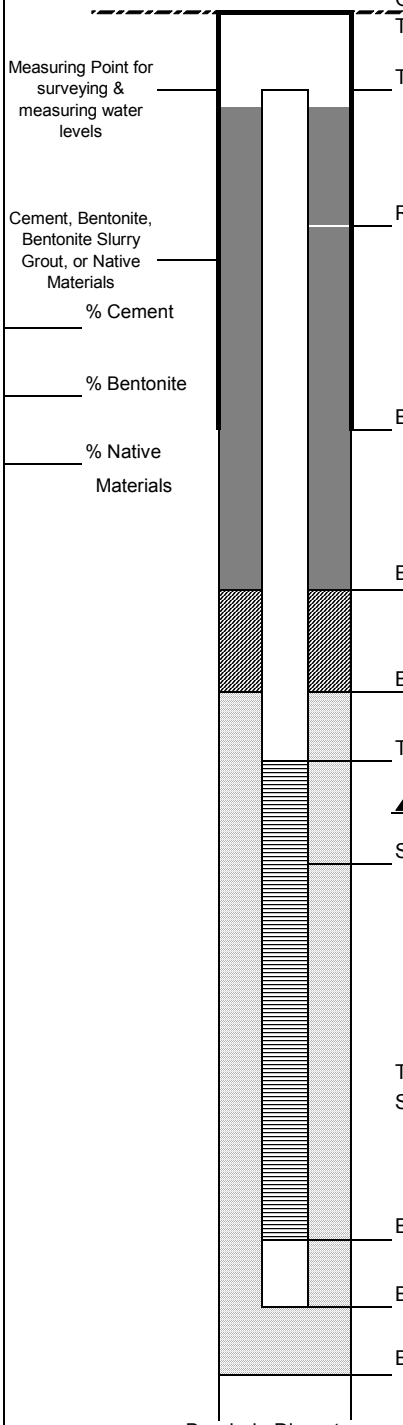
Ground Surface

RESOLUTION CONSULTANTS

Client: NAVFAC	Project Number: 60266526	***WELL ID: 132D2***	
Site Location: NWIRP BETHPAGE, NY			
Well Location: Poe Place & Wadsworth Ave, Bethpage, NY		Date Installed: 7/11/18	
Method: MUD ROTARY		Inspector: F. Bell	
Coords: Northing: 203115.90	Easting: 1125692.33	Contractor: DELTA WELL & PUMP	

MONITORING WELL CONSTRUCTION DETAIL

* Casing installed with Auger rig 5/7/2018.



	Depth from G.S. (feet)	Elevation(feet) Datum
Ground Surface (G.S.)	0.00	80.02
Top of 12 inch diameter Steel Curb Box		
Top of Riser Pipe fit with locking j-plug	0.06	79.56
Riser Pipe:		
Length: 330		
Inside Diameter (ID): 4 inch		
Type of Material: PVC		
Bottom of 10 inch diameter Steel Surface Casing	53	27.0
Bottom of Bentonite Grout	302	-222.0
Bottom of #00 Filter Sand/Top of #1 Filter Sand	308	-228.0
Top of Screen	330	-250.0
▲ Stabilized Water Level		
Screen:		
Length: 20 ft		
Inside Diameter (ID): 4 inch		
Slot Size: 10		
Type of Material: PVC		
Type/Size of Sand: #1		
Sand Pack Thickness: 66		
Bottom of Screen	350	-270.0
Bottom of Sump:	355	-275.0
Bottom of Borehole	368	-288.0

Borehole Diameter: 10 inch

Approved: _____ Signature _____ Date

Describe Measuring Point:

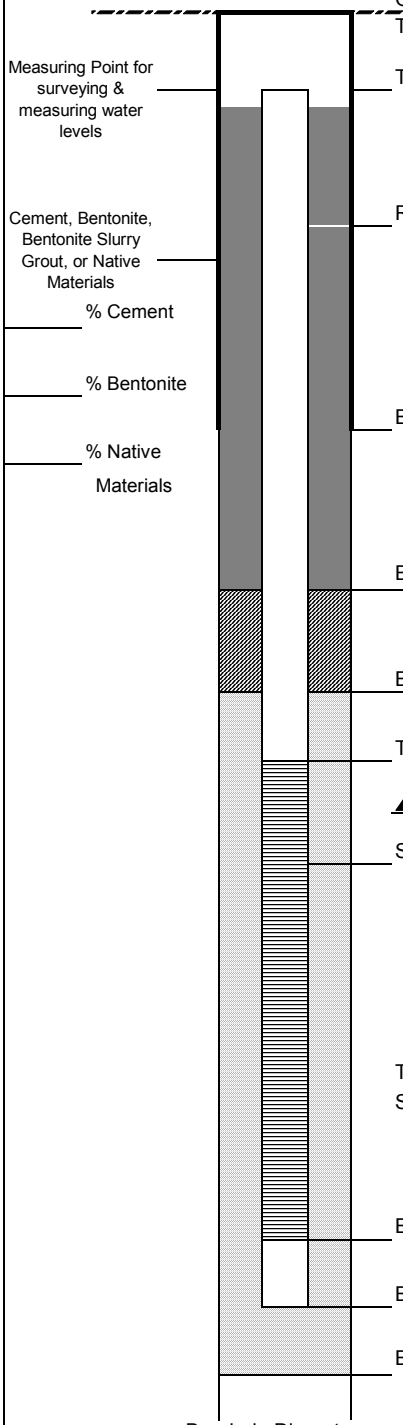
Ground Surface

RESOLUTION CONSULTANTS

Client: NAVFAC	Project Number: 60266526	***WELL ID: 132D3***
Site Location: NWIRP BETHPAGE, NY		
Well Location: Poe Place & Wadsworth Ave, Bethpage, NY		Date Installed: 6/22/2018
Method: MUD ROTARY		Inspector: F. Bell
Coords: Northing: 203115.53	Easting: 1125709.20	Contractor: DELTA WELL & PUMP

MONITORING WELL CONSTRUCTION DETAIL

* Casing installed with Auger rig 5/4/2018.



	Depth from G.S. (feet)	Elevation(feet) Datum
Ground Surface (G.S.)	0.00	79.93
Top of 12 inch diameter Steel Curb Box		
Top of Riser Pipe fit with locking j-plug	0.50	79.43
Riser Pipe:		
Length: 500		
Inside Diameter (ID): 4 inch		
Type of Material: PVC		
Bottom of 10 inch diameter Steel Surface Casing	53	26.9
Bottom of Bentonite Grout	462	-382.1
Bottom of #00 Filter Sand/Top of #1 Filter Sand	473	-393.1
Top of Screen	500	-420.1
▲ Stabilized Water Level		
Screen:		
Length: 20 ft		
Inside Diameter (ID): 4 inch		
Slot Size: 10		
Type of Material: PVC		
Type/Size of Sand: #1		
Sand Pack Thickness: 76		
Bottom of Screen	520	-440.1
Bottom of Sump:	525	-445.1
Bottom of Borehole	538	-458.1

Borehole Diameter: 10 inch

Approved:

Signature

Date

Describe Measuring Point:

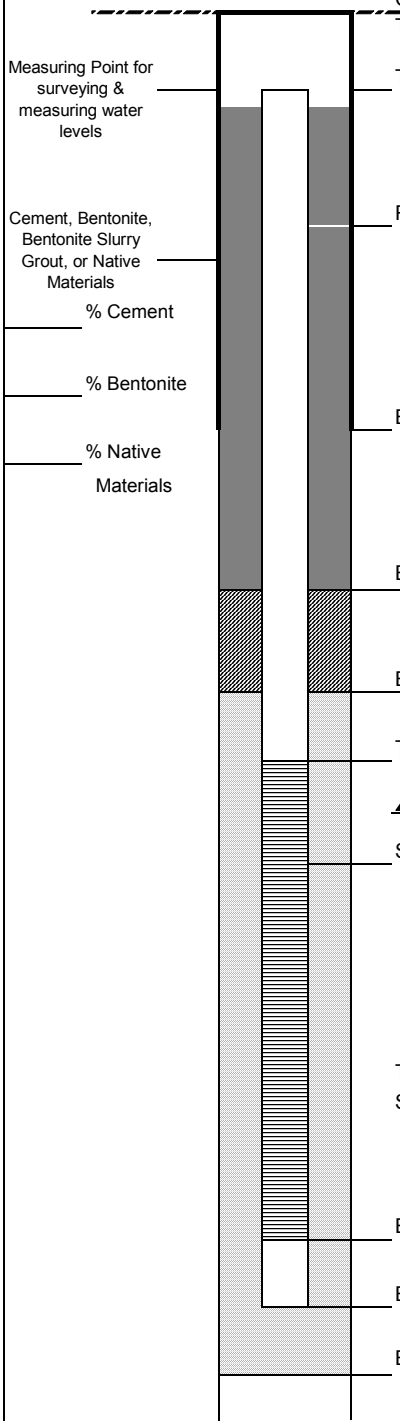
Ground Surface

RESOLUTION CONSULTANTS

Client: NAVFAC	Project Number: 60266526	***WELL ID: 132D4***
Site Location: NWIRP BETHPAGE, NY		
Well Location: Poe Place & Wadsworth Ave, Bethpage, NY		Date Installed: 5/25/2018
Method: MUD ROTARY		Inspector: F. Bell
Coords: Northing: 203115.82	Easting: 1125724.32	Contractor: DELTA WELL & PUMP

MONITORING WELL CONSTRUCTION DETAIL

* Casing installed with Auger rig 5/2/2018 - 5/3/2018.



	Depth from G.S. (feet)	Elevation(feet) Datum
Ground Surface (G.S.)	0.00	80.00
Top of 12 inch diameter Steel Curb Box		
Top of Riser Pipe fit with locking j-plug	0.40	79.60
Riser Pipe:		
Length: 560		
Inside Diameter (ID): 4 inch		
Type of Material: PVC		
Bottom of 10 inch diameter Steel Surface Casing	53	27.0
Bottom of Bentonite Grout	500	-420.0
Bottom of #00 Filter Sand/Top of #1 Filter Sand	507	-427.0
Top of Screen	560	-480.0
▲ Stabilized Water Level		
Screen:		
Length: 20 ft		
Inside Diameter (ID): 4 inch		
Slot Size: 10		
Type of Material: PVC		
Type/Size of Sand: #1		
Sand Pack Thickness: 98		
Bottom of Screen	580	-500.0
Bottom of Sump:	585	-505.0
Bottom of Borehole	598	-518.0

Borehole Diameter: 10 inch

Approved: _____ Signature _____ Date

Describe Measuring Point:

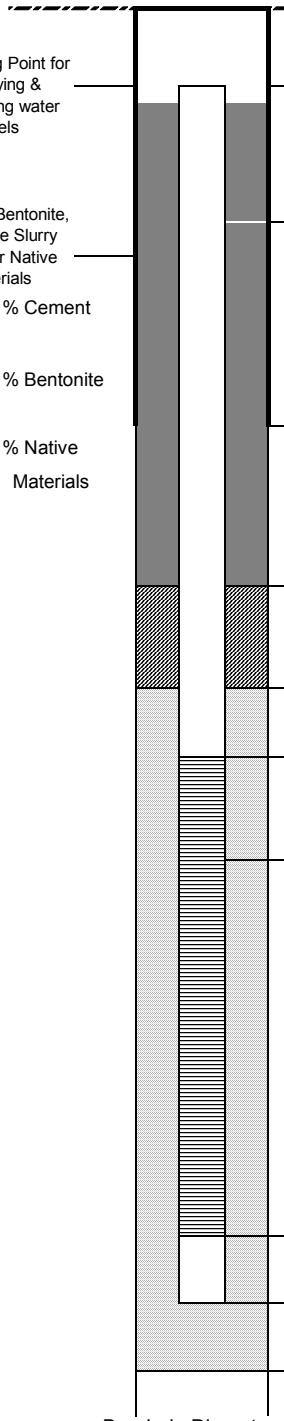
Ground Surface

RESOLUTION CONSULTANTS

Client: NAVFAC	Project Number: 60266526	***WELL ID: 132D5***	
Site Location: NWIRP BETHPAGE, NY			
Well Location: Poe Place & Wadsworth Ave, Bethpage, NY		Date Installed: 4/26/2018	
Method: MUD ROTARY		Inspector: F. Bell	
Coords: Northing: 203082.10	Easting: 1125717.09	Contractor: DELTA WELL & PUMP	

MONITORING WELL CONSTRUCTION DETAIL

* Casing installed with Auger rig 1/4/2018 & 1/8/2018.



	Depth from G.S. (feet)	Elevation(feet) Datum
Ground Surface (G.S.)	0.00	79.93
Top of 12 inch diameter Steel Curb Box		
Top of Riser Pipe fit with locking j-plug	0.51	79.42
Riser Pipe:		
Length: 610		
Inside Diameter (ID): 4 inch		
Type of Material: PVC		
Bottom of 10 inch diameter Steel Surface Casing	53.0	26.9
Bottom of Bentonite Grout	378	-298.1
Bottom of #00 Filter Sand/Top of #1 Filter Sand	540	-460.1
Top of Screen	610	-530.1
▲ Stabilized Water Level		
Screen:		
Length: 20 ft		
Inside Diameter (ID): 4 inch		
Slot Size: 10		
Type of Material: PVC		
Type/Size of Sand: #1		
Sand Pack Thickness: 270		
Bottom of Screen	630	-550.1
Bottom of Sump:	635	-555.1
Bottom of Borehole	648	-568.1

Borehole Diameter: 10 inch

Approved:

Signature

Date

Describe Measuring Point:

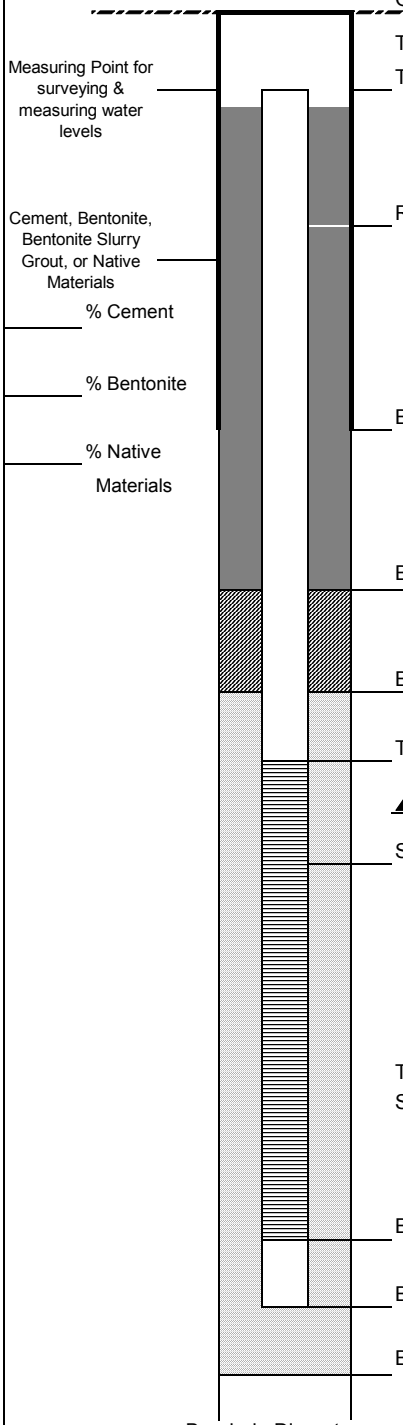
Ground Surface

RESOLUTION CONSULTANTS

Client: NAVFAC	Project Number: 60266526	***WELL ID: 132D6***	
Site Location: NWIRP BETHPAGE, NY			
Well Location: Poe Place & Wadsworth Ave, Bethpage, NY		Date Installed: 3/30/18	
Method: MUD ROTARY		Inspector: V. Varricchio	
Coords: Northing: 203033.49	Easting: 1125662.48	Contractor: DELTA WELL & PUMP	

MONITORING WELL CONSTRUCTION DETAIL

* Casing installed with Auger rig 1/16/2018.



	Depth from G.S. (feet)	Elevation(feet) Datum
Ground Surface (G.S.)	0.00	79.09
Top of 12 inch diameter Steel Curb Box		
Top of Riser Pipe fit with locking j-plug	0.01	79.10
Riser Pipe:		
Length: 685		
Inside Diameter (ID): 4 inch		
Type of Material: PVC		
Bottom of 10 inch diameter Steel Surface Casing	53	26.1
Bottom of Bentonite Grout	645	-565.9
Bottom of #00 Filter Sand/Top of #1 Filter Sand	660	-580.9
Top of Screen	685	-605.9
▲ Stabilized Water Level		
Screen:		
Length: 20 ft		
Inside Diameter (ID): 4 inch		
Slot Size: 10		
Type of Material: PVC		
Type/Size of Sand: #1		
Sand Pack Thickness: 76		
Bottom of Screen	705	-625.9
Bottom of Sump:	710	-630.9
Bottom of Borehole	721	-641.9

Borehole Diameter: 10 inch

Approved:

Describe Measuring Point:

Ground Surface

Signature

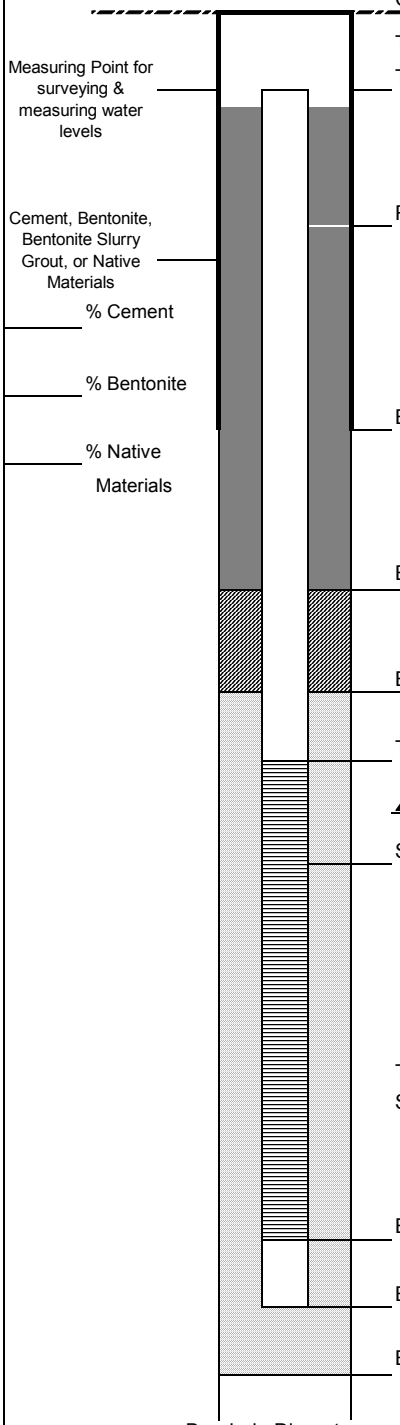
Date

RESOLUTION CONSULTANTS

Client: NAVFAC	Project Number: 60266526	***WELL ID: 132D7***
Site Location: NWIRP BETHPAGE, NY		
Well Location: Poe Place & Wadsworth Ave, Bethpage, NY		Date Installed: 2/23/18
Method: MUD ROTARY		Inspector: F. Bell
Coords: Northing: 203047.55	Easting: 1125662.2	Contractor: DELTA WELL & PUMP

MONITORING WELL CONSTRUCTION DETAIL

* Casing installed with Auger rig 1/11/2018 - 1/12/2018.



	Depth from G.S. (feet)	Elevation(feet) Datum
Ground Surface (G.S.)	0.00	79.64
Top of 12 inch diameter Steel Curb Box		
Top of Riser Pipe fit with locking j-plug	0.10	79.54
Riser Pipe:		
Length: 743		
Inside Diameter (ID): 4 inch		
Type of Material: PVC		
Bottom of 10 inch diameter Steel Surface Casing	53	26.6
Bottom of Bentonite Grout	691	-611.4
Bottom of #00 Filter Sand/Top of #1 Filter Sand	703	
Top of Screen	743	-663.4
▲ Stabilized Water Level		
Screen:		
Length: 15 ft		
Inside Diameter (ID): 4 inch		
Slot Size: 10		
Type of Material: PVC		
Type/Size of Sand: #1		
Sand Pack Thickness: 84		
Bottom of Screen	758	-678.4
Bottom of Sump:	763	-683.4
Bottom of Borehole	775	-695.4

Borehole Diameter: 10 inch

Approved:

Signature

Date

Describe Measuring Point:

Ground Surface

Section 4

Groundwater Sample Log Sheets

Well ID: RE132D1

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 12/13/18 Time: Start 0940 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: POE PL
Weather Conds: 30s, SNOW Collector(s): S. WRIGHT

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 245 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 30.18 ft d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Conductivity ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15A102400
HACH	2900 Q	

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
0955	—	8.53	0.172	28.37	5.35	107.5	—	300	30.31	CLEAR/NONE
1000		14.76	0.200	3.51	5.07	139.5	—	600	30.30	CLEAR/NONE
1005		15.10	0.195	1.11	4.97	176.3	17.6	600	30.30	CLEAR/NONE
1010		15.07	0.194	0.63	4.96	191.6	—	600	30.30	CLEAR/NONE
1015		15.07	0.195	0.49	4.95	208.3	—	600	30.30	CLEAR/NONE
1020	5	15.04	0.194	0.43	4.95	217.8	20.5	600	30.30	CLEAR/NONE

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

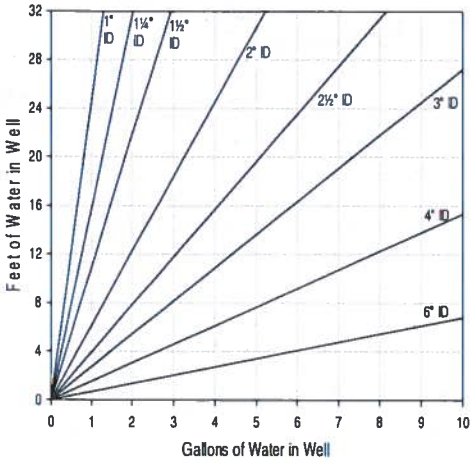
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE132D1-GW-121318	40-mL vials	3	HCl	VOCs	1100
RE132D1-GW-121318	1-L amber	2	none	1,4-Dioxane	1100

Comments

Signature _____ Date 12-13-18

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RG13201

(continued from front)

Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1025		15.12	0.196	0.39	4.94	228.3	—	600	30.30	CLEAR/NONE
1030		15.08	0.195	0.35	4.96	233.2	—	600	30.30	CLEAR/NONE
1035		15.14	0.195	0.33	4.95	238.5	16.7	600	30.30	CLEAR/NONE
1040		15.16	0.194	0.31	4.95	241.5	—	600	30.30	CLEAR/NONE
1045	10	15.14	0.194	0.30	4.96	245.8	—	600	30.30	CLEAR/NONE
1050		15.16	0.193	0.31	4.95	248.9	13.3	600	30.30	CLEAR/NONE
1055		15.15	0.193	0.30	4.95	249.5	—	600	30.30	CLEAR/NONE
1100	13.5	15.13	0.193	0.31	4.95	251.5	—	600	30.30	CLEAR/NONE
1100								200		Sampled

Well ID: RE13202

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 12/17/18 | Time: Start 820 am/pm
Project No: 60266526 | Finish 1045 am/pm
Site Location: Poe Place
Weather Conds: 40s, SUN | Collector(s): SW/CF/PK

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 245 ft | c. Length of Water Column _____ ft (a-b) | Casing Diameter/Material 4-inch PVC

b. Water Table Depth 30.62 ft | d. Calculated System Volume (see back) 13.1 gal. | 20 screen length (ft)

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Conductivity ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	09D1000185
HACH	2100 Q	

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
910	ON									
0920	-	15.09	0.101	1.00	4.13	281.9	17.3	600	30.62	CLEAR/NONE
0925		15.09	0.098	0.73	4.26	265.5	-	600	30.62	CLEAR/NONE
0930		15.12	0.098	0.59	4.35	247.0	-	600	30.62	CLEAR/NONE
0935		15.10	0.097	0.55	4.45	238.0	21.3	600	30.62	CLEAR/NONE
0940		15.12	0.097	0.55	4.50	235.2	-	600	30.62	CLEAR/NONE

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

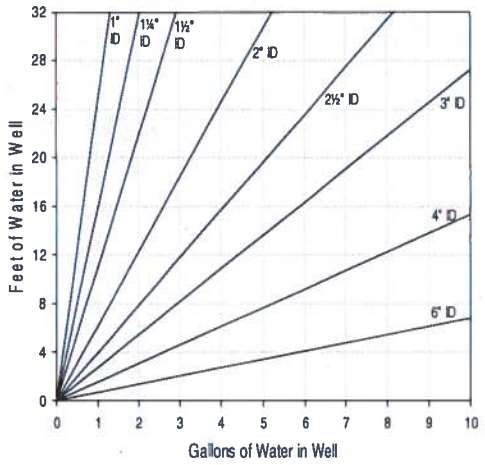
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE13202-GW-121718	40-mL vials	3	HCl	VOCs	1045
RE13202-GW-121718	1-L amber	2	none	1,4-Dioxane	1045

Comments + MS/MSD

Signature _____ Date 12-17-18

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE3202

(continued from front)

Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
0945	5	15.18	0.097	0.55	4.55	232.8	40.3	600	30.62	CLEAR/NONE
0950		15.33	0.098	0.58	4.59	229.9	—	600	30.62	SL. CLOUDY/NONE
0955		15.29	0.097	0.62	4.63	226.5	—	600	30.62	SL. CLOUDY/NONE
1000		15.31	0.097	0.58	4.67	222.9	73.9	600	30.62	SL. CLOUDY/NONE
1005		15.33	0.097	0.55	4.71	218.5	—	600	30.62	SL. CLOUDY/NONE
1010		15.38	0.097	0.52	4.72	215.7	—	600	30.62	SL. CLOUDY/NONE
1015	10	15.39	0.097	0.51	4.73	213.7	69.2	600	30.62	SL. CLOUDY/NONE
1020		15.20	0.097	0.50	4.73	212.4	—	600	30.62	SL. CLOUDY/NONE
1025		15.27	0.097	0.47	4.73	211.8	-	600	30.62	SL. CLOUDY/NONE
1030		15.18	0.096	0.48	4.73	211.3	51.6	600	30.62	CLEAR/NONE
1035		15.28	0.097	0.48	4.77	209.8	—	600	30.62	CLEAR/NONE
1040		15.33	0.097	0.48	4.78	208.8	49.4	600	30.62	CLEAR/NONE
1045								200		sample

RESOLUTION CONSULTANTS

Well ID: RE132D3

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage
Project No: 60266526
Site Location: Poe Place
Weather Conds: 40s, SUN
Date: 12 / 17 / 18
Time: Start 0910 am/pm
Finish ____ am/pm
Collector(s): SW/CF/RK

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 35.5 ft
b. Water Table Depth 32.59 ft
c. Length of Water Column ____ ft (a-b)
d. Calculated System Volume (see back) 13.1 gal.
Casing Diameter/Material 4-inch PVC
20 screen length (ft)

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)
- Temperature ± 3%
- pH ± 0.1 unit
- Conductivity ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)
Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15A102400
HACH	2100Q	

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
0915	ON									
0930		13.98	0.107	26.65	4.36	227.2	19.2	600	32.62	CLEAR/NONE
0935		14.48	0.103	1.92	5.33	215.8	—	600	32.62	CLEAR/NONE
0940		14.75	0.105	1.22	5.59	204.1	—	600	32.62	CLEAR/NONE
0945		15.00	0.100	0.78	5.33	206.3	352	600	32.62	CLEAR/NONE
0950		15.11	0.100	0.72	5.32	209.0	—	600	32.62	CLEAR/NONE

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

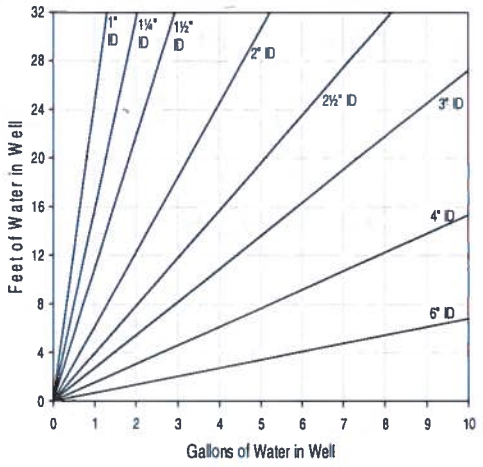
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE132D3-GW-121718	40-mL vials	3	HCl	VOCs	1105
RE132D3-GW-121718	1-L amber	2	none	1,4-Dioxane	1100

Comments: tubing just bottom

Signature: Paul Karuth
Date: 12-17-18

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE13LD3

(continued from front) Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
0955	5	15.04	0.100	0.67	5.31	213.5	—	600	32.62	CLOUDY/NONE
1000		15.01	0.099	0.66	5.31	217.1	263	600	32.62	CLOUDY/NONE
1005		14.97	0.099	0.60	5.32	219.4	—	600	32.62	CLOUDY/NONE
1010		14.97	0.099	0.55	5.32	220.6	—	600	32.62	CLOUDY/NONE
1015		14.98	0.100	0.54	5.32	222.3	183	600	32.62	CLOUDY/NONE
1020		14.81	0.100	0.52	5.33	223.1	—	600	32.62	CLOUDY/NONE
1025	10	14.96	0.100	0.51	5.34	217.4	—	600	32.62	CLOUDY/NONE
1030		14.83	0.099	0.51	5.36	219.5	165	600	32.62	CLOUDY/NONE
1035		14.82	0.099	0.050	5.35	219.3	163			
1040		14.82	0.099	0.50	5.36	219.0	160	600	32.62	
1045		14.89	0.100	0.47	5.36	218.3	159			
1050	14	15.08	0.101	0.46	5.36	217.7	155			
1100								200		Sample

RESOLUTION CONSULTANTS

Well ID: RE132D4

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 12/13/18 Time: Start 1400 am/pm
Project No: 60266526 Finish ____ am/pm
Site Location: POE PL
Weather Conds: 30s, RAIN Collector(s): S. WRIGHT

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length ~~495~~ ft c. Length of Water Column 463 ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 32.07 ft d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Conductivity ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	15A102400
HACH	2100Q	

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1405	–	10.07	0.097	17.21	5.73	199.1	–	600	32.11	CLEAR/NONE
1410		15.09	0.107	5.92	5.49	204.3	–	600	32.12	CLEAR/NONE
1415		15.15	0.108	3.01	5.38	215.9	7.35	600	32.13	CLEAR/NONE
1420		15.15	0.109	3.10	5.09	243.4	–	600	32.14	CLEAR/NONE
1425		15.21	0.109	3.70	4.93	269.6	–	600	32.15	CLEAR/NONE
1430	5	15.22	0.107	3.59	4.92	280.9	9.66	600	32.15	CLEAR/NONE

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

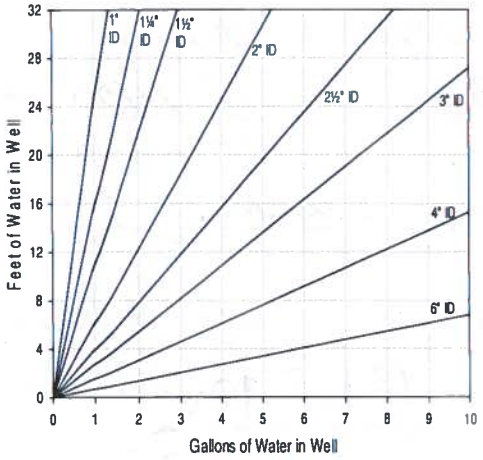
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE132D4-GW-121318	40-mL vials	3	HCl	VOCs	1515
RE132D4-GW-121318	1-L amber	2	none	1,4-Dioxane	1515

Comments

Signature Date 12-13-18

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE13204

(continued from front)

Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1435		15.23	0.109	3.57	4.92	288.1	—	600	32.15	CLEAR/NONE
1440		15.20	0.108	3.52	4.91	296.1	—	600	32.15	CLEAR/NONE
1445		15.21	0.109	3.53	4.90	300.8	11.2	600	32.15	CLEAR/NONE
1450		15.23	0.107	3.40	4.90	304.8	—	600	32.15	CLEAR/NONE
1455	10	15.23	0.107	3.38	4.90	308.4	—	600	32.15	CLEAR/NONE
1500		15.22	0.108	3.32	4.90	310.8	6.62	600	32.15	CLEAR/NONE
1505		15.21	0.109	3.29	4.90	312.5	—	600	32.15	CLEAR/NONE
1510	13.5	15.20	0.109	3.31	4.90	310.7	—	600	32.15	CLEAR/NONE
1515								200		Sample

Well ID: RE13205

RESOLUTION CONSULTANTS

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 12/13/18 Time: Start 1320 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: Poe
Weather Conds: Overcast, light drizzle 40° Collector(s): _____

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 32.43 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 6.35 ft d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Conductivity ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	09K 100185
HACH	2100Q	

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1350	OH							500		
1405		14.70	0.123	0.87	6.20	149.8		600	33.62	
1410		14.60	0.122	0.79	6.11	147.1				
1415	5gal	14.61	0.124	0.76	6.14	146.6			33.62	
1420		14.26	0.123	0.71	6.12	146.2	135			
1425		14.54	0.122	0.68	6.15	145.4			33.65	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

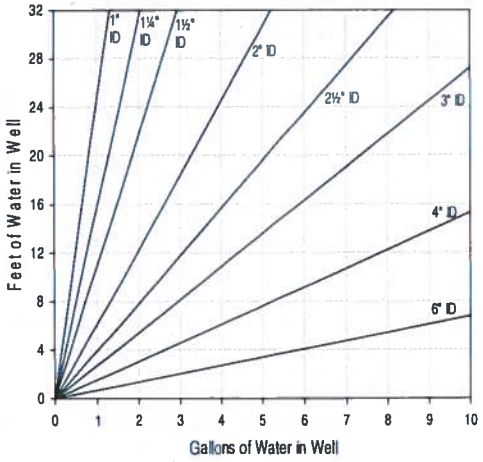
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE13205-GW-121318	40-mL vials	3	HCl	VOCs	1510
	1-L amber	2	none	1,4-Dioxane	

Comments: hit bottom with tubing

Signature: Paul Kneeth Date: 12/13/18

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE13205

(continued from front)

Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1430		14.57	0.119	0.64	6.12	145.8	117	600	33.68	
1435		14.46	0.118	0.62	6.11	146.8	111			
1440	10 gal	14.36	0.114	0.57	6.07	147.2	89.7		33.68	
1445		14.46	0.116	0.57	6.04	147.2	78.8	600		
1450		14.55	0.112	0.56	6.04	147.8	73.1			
1455		14.55	0.113	0.54	6.00	148.9	75.0			
1500	13 gal	14.59	0.107	0.51	6.01	149.7	68.8	600	33.68	NONE
1510								200		Sample

RESOLUTION CONSULTANTS

Well ID: RC 13206

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage Date: 12 / 13 / 18 Time: Start 900 am/pm
Project No: 60266526 Finish _____ am/pm
Site Location: POE PLACE
Weather Conds: cloudy flurries 30° Collector(s): _____

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 710 ft c. Length of Water Column _____ ft (a-b) Casing Diameter/Material 4-inch PVC

b. Water Table Depth 31.85 ft d. Calculated System Volume (see back) 13.1 gal. 20 screen length (ft)

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)

- Temperature ± 3%
- pH ± 0.1 unit
- Conductivity ± 3%
- Turbidity ± 10%
- ORP ± 10mV
- Drawdown < 0.3'
- D.O. ± 10% (values >0.5 mg/L)

Remove a minimum 1 screen volume

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	09D100185
HACH	2100Q	18020C064417

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
925	ON							550		
945		14.01	0.058	3.61	4.78	193.9				problems w/ alarm
955	5gal	13.80	0.058	3.83	4.67	209.2			31.83	
1000		13.89	0.059	3.76	4.60	223.6	10.4	550		
1005		14.03	0.059	3.85	4.60	233.0				
1010		14.12	0.059	3.75	4.60	240.6		550	31.83	

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

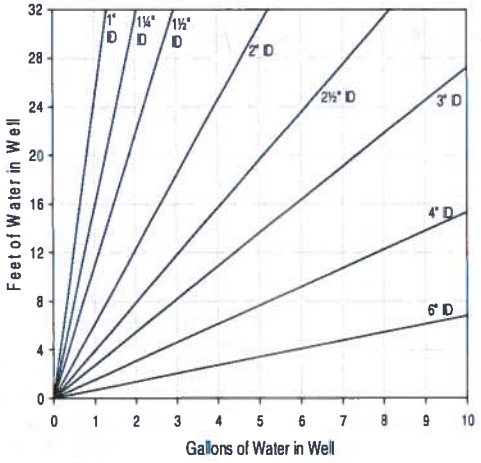
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
	40-mL vials	3	HCl	VOCs	1050
	1-L amber	2	none	1,4-Dioxane	

Comments _____

Signature Paul Kaucher Date 12/13/18

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE 13206

(continued from front)

Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1025		14.19	0.060	3.72	4.52	253.0		550	31.83	
1020		14.04	0.060	3.69	4.56	257.6	13.2			
1025	10 gal	14.07	0.060	3.58	4.55	263.7	10.4			
1030		14.09	0.060	3.56	4.53	269.8	10.4	550	31.82	
1035		14.09	0.061	3.45	4.52	276.2	11.3			
1040	13 gal	14.18	0.062	3.39	4.51	280.5	10.9			
1050								260		sample

RESOLUTION CONSULTANTS

Well ID: RE132D7

Low Flow Ground Water Sample Collection Record

Client: Navy NWIRP Bethpage | Date: 12/17/18 | Time: Start 1030 am/pm | Finish ____ am/pm
Project No: 60266526
Site Location: Poe Place
Weather Conds: 40's Sun | Collector(s): CFoster, PKareth, SWright

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 275 ft | c. Length of Water Column 740.68 ft (a-b) | Casing Diameter/Material 4-inch PVC
b. Water Table Depth 34.32 ft | d. Calculated System Volume (see back) 9.8 gal. | 15 screen length (ft)

2. WELL PURGE DATA

a. Purge Method: Geotech bladder pump with drop tube assembly

b. Acceptance Criteria defined (see workplan)
- Temperature ± 3% | - Turbidity ± 10% | - D.O. ± 10% (values >0.5 mg/L)
- pH ± 0.1 unit | - ORP ± 10mV | Remove a minimum 1 screen volume
- Conductivity ± 3% | - Drawdown < 0.3'

c. Field Testing Equipment used:

	Make	Model	Serial Number
	YSI	556	11562-4m 18A01
	QED	MP10	1843
	Heron	Dipper-T	24881-T

Time (24hr)	Volume Removed (gallons)	Temp. (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1040		15.15	0.071	8.73	6.46	117.0		500	33.00	
1045		15.51	0.072	8.18	6.50	121.2		500	33.00	
1050		15.49	0.072	8.20	6.53	122.4	36.0	500	32.98	
1055		15.38	0.075	7.98	6.52	129.3	247	500	32.95	
1100		15.21	0.076	7.86	6.13	139.5	225	500	32.90	
1105		14.61	0.071	7.53	5.83	154.1	242	500	32.92	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

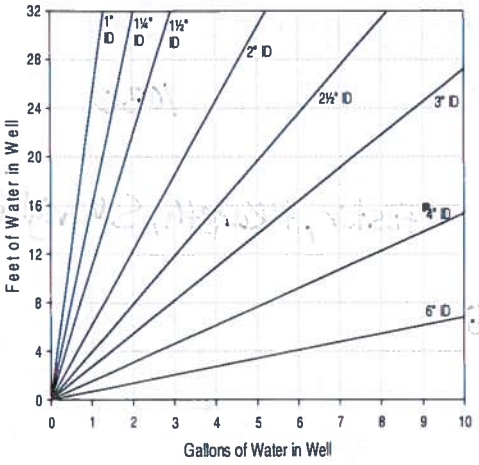
3. SAMPLE COLLECTION: Method: Geotech bladder pump with drop tube assembly

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
RE132D7-GW-121718	40-mL vials	3	HCl	VOCs	1150
RE132D7-GW-121718	1-L amber	2	none	1,4-Dioxane	1150

Comments

Signature [signature] Date 12/17/18

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

One screen volume (4-inch well)

15 ft = 37.1 L / 9.8 G
20 ft = 49.4 L / 13.1 G
25 ft = 61.8 L / 16.3 G
30 ft = 74.3 L / 19.6 G
40 ft = 99.2 L / 26.1 G
50 ft = 123.6 L / 32.6 G

Well ID: RE13207

(continued from front) Time (24 hr)	Volume Removed (gallons)	Temp (°C)	Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Flow Rate (mL/min)	Depth to water (ft)	Color/Odor
1110		15.49	0.065	6.74	5.69	150.0	457	500	32.90	white, cloudy
1115	5	15.29	0.061	6.53	5.59	147.8	471	500	32.90	
1120		15.73	0.061	6.16	5.61	151.2	422	500	32.92	
1125		15.53	0.060	5.83	5.57	161.9	343	500	32.95	
1130		14.81	0.059	5.89	5.54	166.9	322	500	32.92	
1135		5.44	0059	5.27	5.51	175.7	324	500	32.90	
1140		14.84	0.058	5.20	5.45	182.1	312	575	32.92	
1145		14.88	0.058	5.04	5.47	184.8	306	600	32.95	
1150								200		Sample

Section 5

Analytical Data Validation

The following soil samples were collected for total organic carbon analysis:

RE132D1 233-235 ft bgs on 1/26/2018

RE132D3 513-515 ft bgs on 6/15/2018

RE132D4 578-580 ft bgs on 5/22/2018

RE132D5 613-615 ft bgs on 4/20/2018

RE132D6 698-700 ft bgs on 3/27/2018

The following groundwater samples were collected:

RE132D1, RE132D4, RE132D5, and RE132D6 on 12/13/2018

RE132D2, RE132D3 and RE132D7 on 12/17/2018

DATA VALIDATION REPORT

Project:	Regional Groundwater Investigation — NWIRP Bethpage
Laboratory:	Katahdin Analytical
Sample Delivery Groups:	SL0822, SL5536, SL4876, SL3600, SL5535, SL4877, SL4289, SL9587, SL8003, and SL8886
Analyses/Method:	Total Organic Carbon (TOC) by U.S. EPA SW-846 Method 9060A
Validation Level:	2
Project Number:	0888812477.SA.DV
Prepared by:	Dana Miller/Resolution Consultants

SUMMARY

This report summarizes data review findings for samples listed below, collected by Resolution Consultants from the Regional Groundwater Investigation — NWIRP Bethpage site in accordance with the following Sampling and Analysis Plans:

- *Sampling and Analysis Plan, Bethpage, New York.* (Resolution Consultants April 2013).
- *UFP SAP Addendum, Installation of Vertical Profile Borings and Monitoring Wells, Operable Unit 2, NWIRP Bethpage, New York.* (Resolution Consultants November 2013).
- *UFP SAP Addendum, Inclusion of Additional Target Analytes for Volatile Organics Analyses, NWIRP Bethpage OU2, Bethpage, New York*. (Resolution Consultants August 2014).

Sample ID	Lab ID	Matrix/Sample Type	Analysis
RE132D1-SOIL-012618-233-235	SL0822	Soil	9060A
RE132D6-SOIL-032718-698-700	SL2630	Soil	9060A
RE134D4-SOIL-042418-673-675	SL3600	Soil	9060A
RE132D5-SOIL-042018-613-615	SL3600	Soil	9060A
RE134D3-SOIL-051018-603-605	SL4289	Soil	9060A
RE132D4-SOIL-052218-578-580	SL4876	Soil	9060A
RE134D2-SOIL-052918-513-515	SL4877	Soil	9060A
RE134D1-SOIL-061818-333-335	SL5535	Soil	9060A
RE132D3-SOIL-061518-513-515	SL5536	Soil	9060A
RE135D2-SOIL-082018-553-555	SL8003	Soil	9060A

Sample ID	Lab ID	Matrix/Sample Type	Analysis
RE135D3-SOIL-D-090718	SL8886	Soil	9060A
RE135D3-SOIL-090718-643-645	SL8886	Soil	9060A
RE135D1-SOIL-092718-413-415	SL9587	Soil	9060A

Data validation activities were conducted using the following guidance documents: *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, specifically Method 9060A, Total Organic Carbon* (U.S. EPA, 1996), *Method SM5310B, Total Organic Carbon by High-Temperature Combustion, U.S. Environmental Protection Agency (U.S. EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review* (NFG, January 2010, and Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 4.2 (October 2010). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following parameters (where applicable to the method):

✓	Data completeness (chain-of-custody)/sample integrity
✓	Holding times and sample preservation
NA	Gas chromatography/Mass spectrometer performance checks
NA	Initial calibration/continuing calibration verification
✓	Laboratory blanks/equipment blanks/field blanks/trip blanks
NA	Surrogate spike recoveries
✓	Matrix spike and/or matrix spike duplicate results
✓	Laboratory control sample / laboratory control sample duplicate results
✓	Field duplicates
NA	Internal standards
✓	Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. Acceptable data parameters for which all criteria were met and no qualification was performed, and non-conformance or other issues that were noted during validation, but did not result in qualification of data are not discussed further.

Qualifications Actions

The data was reviewed independently from the laboratory to assess data quality. TOC was detected in the equipment blank but professional judgement was used not to qualify the associated sample as undetected. All analytes detected at concentrations less than the limit of quantitation but greater than the method detection limit were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation. No results were qualified during this review and are considered usable by the project for their intended purpose, according to U.S. Environmental Protection Agency and Department of Defense guidelines. Attachment A, Table A-1 provides final results after data review.

ATTACHMENTS

Attachment A: Table A-1, Final Results after Data Review

Attachment A
Final Results after Data Review

Table A-1
Final Results after Data Review
Regional Groundwater Investigation NWIRP Bethpage

Method	CAS No.	Analyte	Units	Sample Location: RE132D1 Sample ID: RE132D1-SOIL-012618-233-235 Sample Date: 01/26/2018 Sample Type: Soil	Sample Location: RE132D3 Sample ID: RE132D3-SOIL-061518-513-515 Sample Date: 06/15/2018 Sample Type: Soil
9060A	-28	TOTAL ORGANIC CARBON	UG_G	**4000**	**960**

Method	CAS No.	Analyte	Units	Sample Location: RE132D4 Sample ID: RE132D4-SOIL-052218-578-580 Sample Date: 05/22/2018 Sample Type: Soil	Sample Location: RE132D5 Sample ID: RE132D5-SOIL-042018-613-615 Sample Date: 04/20/2018 Sample Type: Soil
9060A	-28	TOTAL ORGANIC CARBON	UG_G	**960**	**420 J**

Method	CAS No.	Analyte	Units	Sample Location: RE132D6 Sample ID: RE132D6-SOIL-032718-698-700 Sample Date: 03/27/2018 Sample Type: Soil	Sample Location: RE134D1 Sample ID: RE134D1-SOIL-061818-333-335 Sample Date: 06/18/2018 Sample Type: Soil
9060A	-28	TOTAL ORGANIC CARBON	UG_G	**940**	**480 J**

Method	CAS No.	Analyte	Units	Sample Location: RE134D2 Sample ID: RE134D2-SOIL-052918-513-515 Sample Date: 05/29/2018 Sample Type: Soil	Sample Location: RE134D3 Sample ID: RE134D3-SOIL-051018-603-605 Sample Date: 05/10/2018 Sample Type: Soil
9060A	-28	TOTAL ORGANIC CARBON	UG_G	**1000**	**440 J**

Table A-1
Final Results after Data Review
Regional Groundwater Investigation NWIRP Bethpage

Method	CAS No.	Analyte	Units	Sample Location: RE134D4 Sample ID: RE134D4-SOIL-042418-673-675 Sample Date: 04/24/2018 Sample Type: Soil	Sample Location: RE135D1 Sample ID: RE135D1-SOIL-092718-413-415 Sample Date: 09/27/2018 Sample Type: Soil
9060A	-28	TOTAL ORGANIC CARBON	UG_G	**230 J**	**620 J**

Method	CAS No.	Analyte	Units	Sample Location: RE135D2 Sample ID: RE135D2-SOIL-082018-553-555 Sample Date: 08/20/2018 Sample Type: Soil	Sample Location: RE135D3 Sample ID: RE135D3-SOIL-090718-643-645 Sample Date: 09/07/2018 Sample Type: Soil
9060A	-28	TOTAL ORGANIC CARBON	UG_G	**1400**	**660 J**

Method	CAS No.	Analyte	Units	Sample Location: RE135D3 Sample ID: RE135D3-SOIL-D-090718 Sample Date: 09/07/2018 Sample Type: Field Duplicate
9060A	-28	TOTAL ORGANIC CARBON	UG_G	**580**

Notes:
ID = Identification
UG_G = Micrograms per gram
J = Estimated value – value was below the limit of quantitation.

DATA VALIDATION REPORT

Project:	Regional Groundwater Investigation — Naval Weapons Industrial Reserve Plant Bethpage
Laboratory:	Katahdin Analytical
Sample Delivery Groups:	TL2424 and TL2604
Analyses/Method:	Volatile Organic Compounds by United States Environmental Protection Agency (U.S. EPA) SW-846 Method 8260C, and 1,4-Dioxane by U.S. EPA SW-846 Method 8270D via Selective Ion Monitoring
Validation Level:	Stage 3 Validation Electronic and Manual
Project Number:	0888812477.SA.DV
Prepared by:	Dana Miller/Resolution Consultants Completed on: 03/07/2019

SUMMARY

This report summarizes data review findings for the December 2018 groundwater sampling event (samples listed below) collected by Resolution Consultants from the Regional Groundwater Investigation — Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage Site on 13, 17, and 18 December 2018 in accordance with the following Uniform Federal Policy (UFP) Sampling and Analysis Plans:

- *Sampling and Analysis Plan, Bethpage, New York.* (Resolution Consultants April 2013).
- *UFP SAP Addendum, Installation of Vertical Profile Borings and Monitoring Wells, Operable Unit 2, NWIRP Bethpage, New York.* (Resolution Consultants November 2013).
- *UFP SAP Addendum, Inclusion of Additional Target Analytes for Volatile Organics Analyses, NWIRP Bethpage OU2, Bethpage, New York*. (Resolution Consultants August 2014).

Sample Identification	Matrix/Sample Type	Analysis
TB01-WQ-121318	Trip blank	8260C
RE132D6-GW-121318	Groundwater	8260C/8270D_SIM
RE132D6-GW-121318	Groundwater	8260C/8270D_SIM
RE132D1-GW-121318	Groundwater	8260C/8270D_SIM
RE132D5-GW-121318	Groundwater	8260C/8270D_SIM
RE132D5-GW-121318	Groundwater	8260C/8270D_SIM
RE132D4-GW-121318	Groundwater	8260C/8270D_SIM
RE132D4-GW-121318	Groundwater	8260C/8270D_SIM
TB02-WQ-121818	Trip blank	8260C

Sample Identification	Matrix/Sample Type	Analysis
RE134D1-GW-121818	Groundwater	8260C/8270D_SIM
RE134D2-GW-121818	Groundwater	8260C/8270D_SIM
RE134D2-GW-121818	Groundwater	8260C/8270D_SIM
RE134D3-GW121818	Groundwater	8260C/8270D_SIM
RE134D3-GW121818	Groundwater	8260C/8270D_SIM
RE134D4-GW121818	Groundwater	8260C/8270D_SIM
RE132D2-GW-121718	Groundwater	8260C/8270D_SIM
RE132D3-GW-121718	Groundwater	8260C/8270D_SIM
RE132D7-GW-121718	Groundwater	8260C/8270D_SIM
RE132D7-GW-121718	Groundwater	8260C/8270D_SIM
RE135D1-GW-121718	Groundwater	8260C/8270D_SIM
RE135D1-GW-121718	Groundwater	8260C/8270D_SIM
RE135D2-GW-121718	Groundwater	8260C/8270D_SIM
RE135D3-GW-121718	Groundwater	8260C/8270D_SIM
DUP01-GW-121718	Duplicate of RE135D3-DW-121718	8260C/8270D_SIM
FB01-WQ-121818	Field blank	8260C/8270D_SIM

Note:
SIM = Selective Ion Monitoring

Data validation activities were conducted using the following guidance documents: *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, specifically Method 8260C, Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry* (U.S. EPA 2006), *SW-846 Method 8270D, Semi volatile Organic Compounds by Gas Chromatograph/Mass Spectrometry* (U.S. EPA 2014), *National Functional Guidelines for Superfund Organic Methods Data Review* (U.S. EPA January 2017), *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (U.S. EPA January 2009), *Department of Defense (DoD) General Data Validation Guidelines (DoD February 2018), and DoD Quality Systems Manual for Environmental Laboratories*, Version 4.2 (DoD October 2010). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements, and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following parameters (where applicable to the method):

- ✓ Data completeness (chain-of-custody)/sample integrity
- ✓ Holding times and sample preservation

- ✓ Gas chromatography/Mass spectrometer performance checks
- ✗ Initial calibration /initial calibration verification /continuing calibration verification
- ✗ Laboratory blanks/field blanks/trip blanks
- ✓ Surrogate spike recovery
- ✗ Matrix spike and/or matrix spike duplicate result
- ✓ Laboratory control sample /laboratory control sample duplicate result
- ✓ Field duplicate
- ✓ Internal standard
- ✓ Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. Acceptable data parameters for which all criteria were met, no qualification was performed, and/or non-conformance or other issues that were noted during validation, but did not result in qualification of data are not discussed further. The symbol (✗) indicates that a QC non-conformance resulted in the qualification of data. Any QC non-conformance that resulted in the qualification of data is discussed below.

RESULTS

Initial Calibration/Initial Calibration Verification/Continuing Calibration Verification

The ICAL is evaluated to ensure that the instrument was capable of producing acceptable qualitative and quantitative data prior to the analysis of samples. The ICV is evaluated to assess the accuracy of ICAL standards. The CCV is evaluated to determine whether the instrument was within acceptable calibration throughout the period in which the samples were analyzed. Failure of the CCV indicates that the ICAL is no longer valid and should trigger recalibration and reanalysis of the associated samples in the analytical sequence. The ICAL and CCV calibration criteria were meet. Data qualification to the analytes associated with the specific ICV was as follows:

Initial Calibration Verification Recovery Non-Conformance:

Criteria	Actions	
	Detected Results	Non-Detected Results
Recovery >120%	J	UJ
Recovery < 80%	J	UJ

Notes:
J = Estimated value UJ = Undetected and estimated

ICV non-conformances are summarized in Attachment A in Tables A-1.

Laboratory Blanks/Field Blanks/Trip Blanks

Laboratory blanks, field blanks, and trip blanks were analyzed with samples to assess contamination imparted by sample preparation and/or analysis. All results associated with a particular blank were evaluated to determine whether there was an inherent variability in the data, or if a problem was an isolated occurrence that did not affect the data. Samples were flagged in accordance with *DoD General Data Validation Guidelines Module 1* (shown below) where detections were not believed to be site-related.

Blank Non-Conformance Chart:

Blank Result	Sample Result	Validated Modified Result	Validated DL/LOD/LOQ Adjustment	Validation Qualifier(s)
Detect (none)	Non-Detect	No Change to Sample Result	None	None
Detect ≤ LOQ	Detect ≤ LOD	Report at LOD	Adjust DL to LOD	U
Detect ≤ LOQ	Detect ≤ LOQ and > LOD	Report at LOQ	Adjust DL and LOD to LOQ	U
Detect ≤ LOQ	Detect > LOQ but ≤ 5X blank	No Change to Sample Result	Adjust DL/LOD/LOQ to sample concentration	U
Detect ≤ LOQ	Detect > LOQ and > 5X blank	No Change to Sample Result	Adjust DL/LOD/LOQ to sample concentration	None
Detect > LOQ	Detect ≤ the LOD	Report at LOD	Adjust DL to LOD	U
Detect > LOQ	Detect ≤ the LOQ and > LOD	Report at LOQ	Adjust DL and LOD to LOQ	U
Detect > LOQ	Detect > the LOQ and ≤ blank	Report at LOQ	Adjust DL/LOD/LOQ to blank concentration	U

Blank Result	Sample Result	Validated Modified Result	Validated DL/LOD/LOQ Adjustment	Validation Qualifier(s)
Detect > LOQ	Detect > the LOQ and ≤ 5X blank	No Change to Sample Result	Adjust DL/LOD/LOQ to sample concentration	U
Detect > LOQ	Detect > 5X blank	No Change to Sample Result	Adjust DL/LOD/LOQ to sample concentration	None

Notes:
LOD = Limit of detection
LOQ = Limit of quantitation
DL = Detection limit
U = Undetected

Blank non-conformance is summarized in Attachment A in Table A-2.

Matrix Spike/Matrix Spike Duplicate Results

MS/MSDs are generated to provide information about the effect of each sample matrix on the sample preparation and the measurement methodology. MS/MSD percent %Rs assess the effect of the sample matrix on the accuracy of the analytical results and %Rs above the laboratory control limit could indicate a potential high result bias while %Rs below QC limits could indicate a potential low result bias. The relative percent differences (RPDs) between the MS and MSD results are evaluated to assess sample precision. The MS/MSD %Rs and RPDs were reviewed for conformance with the QC acceptance criteria. Data qualification to the analytes associated with the specific MS/MSD non-conformances were as follows:

Matrix Spike/Matrix Spike Duplicate Non-Conformances Chart:

Criteria	Action	
	Detected Compounds	Non-Detected Compounds
%R or RPD > Upper Limit	J	No qualification
20% ≤ %R < Lower Limit	J	UJ
%R < 20%	J	Rejected

Notes:
%R = Percent recovery
RPD = Relative percent difference
J = Estimated
UJ = Undetected and estimated

MS/MSD non-conformances are summarized in Attachment A in Table A-3.

Qualification Actions

The data were reviewed independently from the laboratory to assess data quality. All compounds detected at concentrations less than the limit of quantitation but greater than the method detection limit were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation. Any sample that was analyzed at a dilution because of high concentrations of target or non-target analytes was checked to confirm that the results and/or sample-specific limit of quantitation and limit of detections were adjusted accordingly by the laboratory.

No results were rejected; therefore, analytical completeness was calculated to be 100 percent. Data not qualified during data review are considered usable by the project. The remaining results qualified as estimated may be high or low, but the data are usable for their intended purpose, according to U.S. EPA and Department of Defense guidelines. Attachment B provides a summary of all qualified results during this data review.

ATTACHMENTS

Attachment A: Non-Conformance Summary Table
Attachment B: Qualified Results Summary after Data Review
Attachemnt C: Analytical Data Results

Attachment A
Non-Conformance Summary Table

Table A-1 Initial Calibration Verification Non-Conformance							
SDG	**Method**	**Analyte**	**ICV ID**	**%R**	**%R Limit**	**Associated Samples**	**Qualifiers**
TL2424	8260C	Chloromethane	S0264A.D	**128.45**	80-120	All associated samples with this SDG	Detects: J Non-detects: UJ
TL2424	8260C	1,1-dichloroethene	S0264A.D	**122.54**	80-120	All associated samples with this SDG	Detects: J Non-detects: UJ
TL2424	8260C	Methyl tert-butyl ether	S0264A.D	**121.87**	80-120	All associated samples with this SDG	Detects: J Non-detects: UJ
TL2424	8260C	Cyclohexane	S0264A.D	**125.52**	80-120	All associated samples with this SDG	Detects: J Non-detects: UJ
TL2604	8260C	Chloromethane	S0264A.D	**128.45**	80-120	All associated samples with this SDG	Detects: J Non-detects: UJ
TL2604	8260C	1,1-dichloroethene	S0264A.D	**122.54**	80-120	All associated samples with this SDG	Detects: J Non-detects: UJ
TL2604	8260C	Methyl tert-butyl ether	S0264A.D	**121.87**	80-120	All associated samples with this SDG	Detects: J Non-detects: UJ
TL2604	8260C	Cyclohexane	S0264A.D	**125.52**	80-120	All associated samples with this SDG	Detects: J Non-detects: UJ

Notes:

SDG = Sample delivery group
ICV = Initial calibration verification
ID = Identification
%R = Percent recovery
J = Estimated value; calibration was outside control limits.
UJ = Undetected and estimated; calibration was outside control limits

Table A-2 Blank Non-Conformance					
SDG	**Blank**	**Lab Sample ID**	**Analyte**	**Blank Results (UG_L)**	**Detected Associated Sample Qualified U**
TL2424	TB01-WQ-121318	TL2424-1	1,2-Dichloroethane	0.27	RE132D1-GW-121318
TL2424	TB01-WQ-121318	TL2424-1	1,2-Dichloroethane	0.27	RE132D4-GW-121318
TL2424	TB01-WQ-121318	TL2424-1	1,2-Dichloroethane	0.27	RE132D5-GW-121318
TL2424	TB01-WQ-121318	TL2424-1	Chloroform	0.42	RE132D4-GW-121318
TL2424	WG243226-2	WG243226-2	1,2-Dichloroethane	0.3	RE132D1-GW-121318
TL2424	WG243226-2	WG243226-2	1,2-Dichloroethane	0.3	RE132D4-GW-121318
TL2424	WG243226-2	WG243226-2	1,2-Dichloroethane	0.3	RE132D5-GW-121318
TL2424	WG243226-2	WG243226-2	1,2-Dichloroethane	0.3	TB01-WQ-121318

Notes:
SDG = Sample delivery group
ID = Identification
UG_L = Micrograms per liter
U = Associated samples qualified undetected "U" due to blank detections.

Table A-3 Matrix Spike/Matrix Spike Duplicate Percent Recovery Non-Conformance								
SDG	**Method**	**Spiked Sample ID**	**Analyte**	**Sample Result (UG_L)**	**MS %R**	**MSD %R**	**%R Limit**	**Qualifier**
TI2604	8260C	RE132D2-GW-121718	1,2-Dichloroethene, total	0.32	**124**	113	84-121	J
TI2604	8260C	RE132D2-GW-121718	Dichlorodifluoromethane	1.8	**198**	**184**	30-155	J
TI2604	8260C	RE132D2-GW-121718	Trichloroethene	3.5	**135**	116	70-125	J

Notes:
SDG = Sample delivery group
ID = Identification
UG_L = Micrograms per liter
MS = Matrix spike
MSD = Matrix spike duplicate
%R = Percent recovery
Bold = %R outside the 10-90% control limits
J = Analyte in associated sample qualified estimated "J" because %R is lower than the control limit and may be biased low.

Attachment B
Qualified Results Summary after Data Review

Table B-1
Qualified Summary Results after Data Review

SDG	Sample ID	Lab ID	Sample Date	DF	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Final Qualifier	RC
TL2604	DUP01-GW-121718	TL2604-8	12/17/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	DUP01-GW-121718	TL2604-8	12/17/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	DUP01-GW-121718	TL2604-8	12/17/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2604	DUP01-GW-121718	TL2604-8	12/17/2018	1	1,1-DICHLOROETHENE	0.45	UG_L	J	J	J	c
TL2604	FB01-WQ-121818	TL2604-9	12/18/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	FB01-WQ-121818	TL2604-9	12/18/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	FB01-WQ-121818	TL2604-9	12/18/2018	1	CHLOROMETHANE	1	UG_L	U	J	UJ	c
TL2604	RE134D1-GW-121818	TL2604-10	12/18/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	RE134D1-GW-121818	TL2604-10	12/18/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	RE134D1-GW-121818	TL2604-10	12/18/2018	1	CHLOROMETHANE	1	UG_L	U	J	UJ	c
TL2604	RE134D1-GW-121818	TL2604-10	12/18/2018	1	1,1-DICHLOROETHENE	0.5	UG_L	U	J	UJ	c
TL2604	RE134D2-GW-121818	TL2604-11	12/18/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	RE134D2-GW-121818	TL2604-11	12/18/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	RE134D2-GW-121818	TL2604-11	12/18/2018	1	CHLOROMETHANE	1	UG_L	U	J	UJ	c
TL2604	RE134D2-GW-121818	TL2604-11	12/18/2018	1	1,1-DICHLOROETHENE	0.75	UG_L	J	J	J	c
TL2604	FB01-WQ-121818	TL2604-9	12/18/2018	1	1,1-DICHLOROETHENE	0.5	UG_L	U	J	UJ	c
TL2424	RE132D1-GW-121318	TL2424-3	12/13/2018	1	1,2-DICHLOROETHANE	0.5	UG_L	J	U	U	bt
TL2424	RE132D1-GW-121318	TL2424-3	12/13/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2424	RE132D1-GW-121318	TL2424-3	12/13/2018	1	METHYL TERT-BUTYL ETHER	1.9	UG_L		J	J	c
TL2424	RE132D1-GW-121318	TL2424-3	12/13/2018	1	CHLOROFORM	1.9	UG_L		U	U	bt
TL2424	RE132D1-GW-121318	TL2424-3	12/13/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2424	RE132D1-GW-121318	TL2424-3	12/13/2018	1	CARBON DISULFIDE	1.1	UG_L	B	U	U	bt,bl
TL2424	RE132D1-GW-121318	TL2424-3	12/13/2018	1	1,1-DICHLOROETHENE	1.7	UG_L		J	J	c
TL2604	RE132D2-GW-121718	TL2604-2	12/17/2018	1	CYCLOHEXANE	0.5	UG_L	UM	J	UJ	c
TL2604	RE132D2-GW-121718	TL2604-2	12/17/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	UM	J	UJ	c
TL2604	RE132D2-GW-121718	TL2604-2	12/17/2018	1	1,2-DICHLOROETHENE, TOTAL	0.32	UG_L	JM	J	J	m
TL2604	RE134D3-GW121818	TL2604-12	12/18/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	RE134D3-GW121818	TL2604-12	12/18/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	RE134D3-GW121818	TL2604-12	12/18/2018	1	CHLOROMETHANE	1	UG_L	U	J	UJ	c
TL2604	RE134D3-GW121818	TL2604-12	12/18/2018	1	CARBON DISULFIDE	1.1	UG_L	B	U	U	bl
TL2604	RE134D3-GW121818	TL2604-12	12/18/2018	1	1,1-DICHLOROETHENE	4.6	UG_L		J	J	c
TL2604	RE134D3-GW121818	TL2604-12	12/18/2018	1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	490	UG_L	E	J	J	e
TL2604	RE134D3-GW121818	TL2604-12	12/18/2018	1	TRICHLOROETHENE	200	UG_L	E	J	J	e
TL2604	RE134D3-GW121818	TL2604-12DL	12/18/2018	2	CYCLOHEXANE	1	UG_L	U	J	UJ	c
TL2604	RE134D3-GW121818	TL2604-12DL	12/18/2018	2	METHYL TERT-BUTYL ETHER	1	UG_L	U	J	UJ	c
TL2604	RE134D3-GW121818	TL2604-12DL	12/18/2018	2	CHLOROMETHANE	2	UG_L	UL	J	UJ	c
TL2604	RE132D2-GW-121718	TL2604-2	12/17/2018	1	CHLOROMETHANE	1	UG_L	UMM	J	UJ	c
TL2604	RE132D2-GW-121718	TL2604-2	12/17/2018	1	1,1-DICHLOROETHENE	0.5	UG_L	UM	J	UJ	c
TL2604	RE132D2-GW-121718	TL2604-2	12/17/2018	1	DICHLORODIFLUOROMETHANE	1.8	UG_L	JMM	J	J	m
TL2604	RE132D2-GW-121718	TL2604-2	12/17/2018	1	TRICHLOROETHENE	3.5	UG_L	M	J	J	m
TL2604	RE132D3-GW-121718	TL2604-3	12/17/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	RE132D3-GW-121718	TL2604-3	12/17/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c

Table B-1
Qualified Summary Results after Data Review

SDG	Sample ID	Lab ID	Sample Date	DF	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Final Qualifier	RC
TL2604	RE132D3-GW-121718	TL2604-3	12/17/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2604	RE132D3-GW-121718	TL2604-3	12/17/2018	1	1,1-DICHLOROETHENE	0.71	UG_L	J	J	J	c
TL2604	RE134D3-GW121818	TL2604-12DL	12/18/2018	2	1,1-DICHLOROETHENE	3.2	UG_L		J	J	c
TL2604	RE134D4-GW121818	TL2604-13	12/18/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	RE134D4-GW121818	TL2604-13	12/18/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	RE134D4-GW121818	TL2604-13	12/18/2018	1	CHLOROMETHANE	1	UG_L	U	J	UJ	c
TL2604	RE134D4-GW121818	TL2604-13	12/18/2018	1	1,1-DICHLOROETHENE	0.5	UG_L	U	J	UJ	c
TL2604	RE135D1-GW-121718	TL2604-5RA	12/17/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2424	RE132D4-GW-121318	TL2424-5	12/13/2018	1	1,2-DICHLOROETHANE	0.5	UG_L	J	U	U	bt
TL2424	RE132D4-GW-121318	TL2424-5	12/13/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2424	RE132D4-GW-121318	TL2424-5	12/13/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2424	RE132D4-GW-121318	TL2424-5	12/13/2018	1	CHLOROFORM	1	UG_L	J	U	U	bt
TL2424	RE132D4-GW-121318	TL2424-5	12/13/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2424	RE132D4-GW-121318	TL2424-5	12/13/2018	1	CARBON DISULFIDE	1	UG_L	B	U	U	bt,bl
TL2424	RE132D4-GW-121318	TL2424-5	12/13/2018	1	1,1-DICHLOROETHENE	1.9	UG_L		J	J	c
TL2424	RE132D5-GW-121318	TL2424-4	12/13/2018	1	1,2-DICHLOROETHANE	0.5	UG_L	J	U	U	bt
TL2424	RE132D5-GW-121318	TL2424-4	12/13/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2424	RE132D5-GW-121318	TL2424-4	12/13/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2424	RE132D5-GW-121318	TL2424-4	12/13/2018	1	CHLOROFORM	1.1	UG_L		U	U	bt
TL2424	RE132D5-GW-121318	TL2424-4	12/13/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2424	RE132D5-GW-121318	TL2424-4	12/13/2018	1	CARBON DISULFIDE	1.1	UG_L	B	U	U	bt,bl
TL2424	RE132D5-GW-121318	TL2424-4	12/13/2018	1	1,1-DICHLOROETHENE	3.6	UG_L		J	J	c
TL2604	RE135D1-GW-121718	TL2604-5RA	12/17/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	RE135D1-GW-121718	TL2604-5RA	12/17/2018	1	CHLOROMETHANE	1	UG_L	U	J	UJ	c
TL2604	RE135D1-GW-121718	TL2604-5RA	12/17/2018	1	1,1-DICHLOROETHENE	0.5	UG_L	U	J	UJ	c
TL2604	RE135D2-GW-121718	TL2604-6	12/17/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	RE135D2-GW-121718	TL2604-6	12/17/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	RE135D2-GW-121718	TL2604-6	12/17/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2604	RE135D2-GW-121718	TL2604-6	12/17/2018	1	1,1-DICHLOROETHENE	0.5	UG_L	U	J	UJ	c
TL2424	RE132D6-GW-121318	TL2424-2	12/13/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2424	RE132D6-GW-121318	TL2424-2	12/13/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2424	RE132D6-GW-121318	TL2424-2	12/13/2018	1	CHLOROFORM	1.4	UG_L		U	U	bt
TL2424	RE132D6-GW-121318	TL2424-2	12/13/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2424	RE132D6-GW-121318	TL2424-2	12/13/2018	1	CARBON DISULFIDE	1.1	UG_L	B	U	U	bt,bl
TL2424	RE132D6-GW-121318	TL2424-2	12/13/2018	1	1,1-DICHLOROETHENE	12	UG_L		J	J	c
TL2604	RE132D7-GW-121718	TL2604-4	12/17/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	RE132D7-GW-121718	TL2604-4	12/17/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	RE135D3-GW-121718	TL2604-7	12/17/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	RE135D3-GW-121718	TL2604-7	12/17/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	RE135D3-GW-121718	TL2604-7	12/17/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2604	RE135D3-GW-121718	TL2604-7	12/17/2018	1	1,1-DICHLOROETHENE	0.5	UG_L	U	J	UJ	c
TL2424	TB01-WQ-121318	TL2424-1	12/13/2018	1	1,2-DICHLOROETHANE	0.5	UG_L	J	U	U	bl

Table B-1
Qualified Summary Results after Data Review

SDG	Sample ID	Lab ID	Sample Date	DF	Analyte	Result	Units	Lab Qualifier	Validator Qualifier	Final Qualifier	RC
TL2424	TB01-WQ-121318	TL2424-1	12/13/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2424	TB01-WQ-121318	TL2424-1	12/13/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2424	TB01-WQ-121318	TL2424-1	12/13/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2424	TB01-WQ-121318	TL2424-1	12/13/2018	1	CARBON DISULFIDE	1.2	UG_L	B	U	U	bl
TL2604	RE132D7-GW-121718	TL2604-4	12/17/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2604	RE132D7-GW-121718	TL2604-4	12/17/2018	1	1,1-DICHLOROETHENE	2.4	UG_L		J	J	c
TL2604	RE132D7-GW-121718	TL2604-4	12/17/2018	1	TRICHLOROETHENE	550	UG_L	E	J	J	e
TL2604	RE132D7-GW-121718	TL2604-4DL	12/17/2018	10	CYCLOHEXANE	5	UG_L	U	J	UJ	c
TL2604	RE132D7-GW-121718	TL2604-4DL	12/17/2018	10	METHYL TERT-BUTYL ETHER	5	UG_L	U	J	UJ	c
TL2604	RE132D7-GW-121718	TL2604-4DL	12/17/2018	10	CHLOROMETHANE	10	UG_L	U	J	UJ	c
TL2604	RE132D7-GW-121718	TL2604-4DL	12/17/2018	10	1,1-DICHLOROETHENE	5	UG_L	U	J	UJ	c
TL2424	TB01-WQ-121318	TL2424-1	12/13/2018	1	1,1-DICHLOROETHENE	0.5	UG_L	U	J	UJ	c
TL2604	TB02-WQ-121818	TL2604-1	12/18/2018	1	CYCLOHEXANE	0.5	UG_L	U	J	UJ	c
TL2604	TB02-WQ-121818	TL2604-1	12/18/2018	1	METHYL TERT-BUTYL ETHER	0.5	UG_L	U	J	UJ	c
TL2604	TB02-WQ-121818	TL2604-1	12/18/2018	1	CHLOROMETHANE	1	UG_L	UL	J	UJ	c
TL2604	TB02-WQ-121818	TL2604-1	12/18/2018	1	1,1-DICHLOROETHENE	0.5	UG_L	U	J	UJ	c

Notes:
SDG = Sample delivery group
ID = Identification
DF = Dilution factor
RC = Reason code
UG_L = Micrograms per liter
U = ***Undetected*** — The analyte was analyzed but undetected at the listed limit of quantitation or was qualified as undetected during data review due to blank artifacts.
J = ***Estimated Value*** — One or more quality control parameters were outside control limits or the analyte concentration was less than the limit of quantitation.
UJ = ***Undetected*** **and estimated**— The analyte was analyzed but undetected at the listed limit of quantitation; one or more quality control parameters were outside control limits.

Qualification Reason Code:
bl = Lab blank contamination
bt = Trip blank contamination
c = Initial calibration verification outside control limits
m = Matrix spike recovery

Attachment C
Analytical Data Results

December 2018
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

			Sample Delivery Group	TL2424		
			Lab Identification	TL2424-1		
			Sample Identification	TB01-WQ-121318		
			Sample Date	12/13/2018		
			Matrix	Trip Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	bl
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1.2	U	bl
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.42	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	1.4	J	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L			

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

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		Sample Delivery Group		TL2424		
		Lab Identification		TL2424-2		
		Sample Identification		RE132D6-GW-121318		
		Sample Date		12/13/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.71	J	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	27		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	1.2		
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	2.2		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	12	J	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	4.5		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1.1	U	bt,bl
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	1.4		
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	1.4	U	bt
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	4.5		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	1.9		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	1200		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	12		

Notes:

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		Sample Delivery Group		TL2424		
		Lab Identification		TL2424-3		
		Sample Identification		RE132D1-GW-121318		
		Sample Date		12/13/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	7		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	1.1		
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1.7	J	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	bt
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.4		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1.1	U	bt,bl
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	1.9	U	bt
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.4		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.9	J	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	1.9	J	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	3.4		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	130		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	4.5		

Notes:

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		Sample Delivery Group		TL2424		
		Lab Identification		TL2424-4		
		Sample Identification		RE132D5-GW-121318		
		Sample Date		12/13/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.49	J	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	11		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.46	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.85	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	3.6	J	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	bt
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.4		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1.1	U	bt,bl
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.89	J	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	1.1	U	bt
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.4		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1.6	J	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	120		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	8.8		

Notes:

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			Sample Delivery Group	TL2424		
			Lab Identification	TL2424-5		
			Sample Identification	RE132D4-GW-121318		
			Sample Date	12/13/2018		
			Matrix	Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	7.4		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.52	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	1.9	J	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	bt
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	3.5		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1	U	bt,bl
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.36	J	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	1	U	bt
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	3.5		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.91	J	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	3.3		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	220		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	14		

Notes:

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			Sample Delivery Group	TL2604		
			Lab Identification	TL2604-1		
			Sample Identification	TB02-WQ-121818		
			Sample Date	12/18/2018		
			Matrix	Trip Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	1.5	J	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L			

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

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		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-10		
		Sample Identification		RE134D1-GW-121818		
		Sample Date		12/18/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.7	J	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	5.6		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	1.2		

Notes:

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		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-11		
		Sample Identification		RE134D2-GW-121818		
		Sample Date		12/18/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	20		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.24	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.75	J	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.2		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.2		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	9.2		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	130		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	16		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-12		
		Sample Identification		RE134D3-GW121818		
		Sample Date		12/18/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	300		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.34	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	4.6	J	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	4.8		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	1.1	U	bl
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.37	J	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	4.8		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	0.36	J	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	42		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	160		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	19		

Notes:

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NA = Not applicable
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		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-13		
		Sample Identification		RE134D4-GW121818		
		Sample Date		12/18/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	120		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	0.68	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.68	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	3.7		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	13		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	2.5		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

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		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-2		
		Sample Identification		RE132D2-GW-121718		
		Sample Date		12/17/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	2.7		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	0.32	J	m
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.32	J	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1.8	J	m
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	3.5	J	m
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	10		

Notes:

UG_L = Micrograms per liter
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		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-3		
		Sample Identification		RE132D3-GW-121718		
		Sample Date		12/17/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	4.1		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.71	J	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1.7	J	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	1.7		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1.2	J	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	59		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	11		

Notes:

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Final Results after Data Review
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		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-4		
		Sample Identification		RE132D7-GW-121718		
		Sample Date		12/17/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.22	J	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	8.7		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.52	J	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.76	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	2.4	J	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.1		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.95	J	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	1.2		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.1		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	440		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	2.8		

Notes:

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Final Results after Data Review
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		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-5RA		
		Sample Identification		RE135D1-GW-121718		
		Sample Date		12/17/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	1.1		
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.44		

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

December 2018
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-6		
		Sample Identification		RE135D2-GW-121718		
		Sample Date		12/17/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.56	J	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	2.1		
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.35		

Notes:

UG_L = Micrograms per liter
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December 2018
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-7		
		Sample Identification		RE135D3-GW-121718		
		Sample Date		12/17/2018		
		Matrix		Groundwater		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	3		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.4		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	2.4		
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.4		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	6.4		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	7.4		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.28		

Notes:

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December 2018
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

		Sample Delivery Group		TL2604		
		Lab Identification		TL2604-8		
		Sample Identification		DUP01-GW-121718		
		Sample Date		12/17/2018		
		Matrix		Field Duplicate		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	2.7		
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.45	J	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	2.3		
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	2.1		
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	2.3		
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	6		
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	6.8		
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.28		

Notes:
UG_L = Micrograms per liter
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December 2018
Final Results after Data Review
NWIRP Bethpage OU 2 Regional Groundwater Investigation

			Sample Delivery Group	TL2604		
			Lab Identification	TL2604-9		
			Sample Identification	FB01-WQ-121818		
			Sample Date	12/18/2018		
			Matrix	Field Blank		
Method	**Analyte**	**CAS No**	**Units**	Result	Qual	RC
8260C	1,1,1-TRICHLOROETHANE	71-55-6	UG_L	0.5	U	
8260C	1,1,2,2-TETRACHLOROETHANE	79-34-5	UG_L	0.5	U	
8260C	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	UG_L	0.5	U	
8260C	1,1,2-TRICHLOROETHANE	79-00-5	UG_L	0.5	U	
8260C	1,1-DICHLOROETHANE	75-34-3	UG_L	0.5	U	
8260C	1,1-DICHLOROETHENE	75-35-4	UG_L	0.5	UJ	c
8260C	1,2,4-TRICHLOROBENZENE	120-82-1	UG_L	0.5	U	
8260C	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	UG_L	0.75	U	
8260C	1,2-DIBROMOETHANE	106-93-4	UG_L	0.5	U	
8260C	1,2-DICHLOROBENZENE	95-50-1	UG_L	0.5	U	
8260C	1,2-DICHLOROETHANE	107-06-2	UG_L	0.5	U	
8260C	1,2-DICHLOROETHENE, TOTAL	540-59-0	UG_L	1	U	
8260C	1,2-DICHLOROPROPANE	78-87-5	UG_L	0.5	U	
8260C	1,3-DICHLOROBENZENE	541-73-1	UG_L	0.5	U	
8260C	1,4-DICHLOROBENZENE	106-46-7	UG_L	0.5	U	
8260C	2-BUTANONE	78-93-3	UG_L	2.5	U	
8260C	2-HEXANONE	591-78-6	UG_L	2.5	U	
8260C	4-METHYL-2-PENTANONE	108-10-1	UG_L	2.5	U	
8260C	ACETONE	67-64-1	UG_L	2.5	U	
8260C	BENZENE	71-43-2	UG_L	0.5	U	
8260C	BROMODICHLOROMETHANE	75-27-4	UG_L	0.5	U	
8260C	BROMOFORM	75-25-2	UG_L	0.5	U	
8260C	BROMOMETHANE	74-83-9	UG_L	1	U	
8260C	CARBON DISULFIDE	75-15-0	UG_L	0.5	U	
8260C	CARBON TETRACHLORIDE	56-23-5	UG_L	0.5	U	
8260C	CHLOROBENZENE	108-90-7	UG_L	0.5	U	
8260C	CHLOROETHANE	75-00-3	UG_L	1	U	
8260C	CHLOROFORM	67-66-3	UG_L	0.5	U	
8260C	CHLOROMETHANE	74-87-3	UG_L	1	UJ	c
8260C	CIS-1,2-DICHLOROETHENE	156-59-2	UG_L	0.5	U	
8260C	CIS-1,3-DICHLOROPROPENE	10061-01-5	UG_L	0.5	U	
8260C	CYCLOHEXANE	110-82-7	UG_L	0.5	UJ	c
8260C	DIBROMOCHLOROMETHANE	124-48-1	UG_L	0.5	U	
8260C	DICHLORODIFLUOROMETHANE	75-71-8	UG_L	1	U	
8260C	ETHYLBENZENE	100-41-4	UG_L	0.5	U	
8260C	ISOPROPYLBENZENE	98-82-8	UG_L	0.5	U	
8260C	M- AND P-XYLENE	108-38-3/106-42	UG_L	1	U	
8260C	METHYL ACETATE	79-20-9	UG_L	0.75	U	
8260C	METHYL CYCLOHEXANE	108-87-2	UG_L	0.5	U	
8260C	METHYL TERT-BUTYL ETHER	1634-04-4	UG_L	0.5	UJ	c
8260C	METHYLENE CHLORIDE	75-09-2	UG_L	2.5	U	
8260C	O-XYLENE	95-47-6	UG_L	0.5	U	
8260C	STYRENE	100-42-5	UG_L	0.5	U	
8260C	TETRACHLOROETHENE	127-18-4	UG_L	0.5	U	
8260C	TOLUENE	108-88-3	UG_L	0.5	U	
8260C	TRANS-1,2-DICHLOROETHENE	156-60-5	UG_L	0.5	U	
8260C	TRANS-1,3-DICHLOROPROPENE	10061-02-6	UG_L	0.5	U	
8260C	TRICHLOROETHENE	79-01-6	UG_L	0.5	U	
8260C	TRICHLOROFLUOROMETHANE	75-69-4	UG_L	1	U	
8260C	VINYL CHLORIDE	75-01-4	UG_L	1	U	
8260C	XYLENES, TOTAL	1330-20-7	UG_L	1.5	U	
8270D_SIM	1,4-DIOXANE	123-91-1	UG_L	0.18	U	

Notes:

UG_L = Micrograms per liter
NA = Not applicable
Qual = Final qualifiers (See Attachment A)
RC = Reason codes (See Attachment B)

Attachment A
Final Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual quantitation limit necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Attachment B
Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
bm	Missing Blank Information
bt	Trip blank contamination
c	Calibration issue
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
dt	Dissolved result > total over limit
e	Ether interference
ej	Above calibration range; result estimated.
f	Presumed contamination from FB or ER.
fd	Field duplicate RPDs
h	Holding times
hs	Headspace greater than 6mm in all sample vials
i	Internal standard areas
ii	Injection internal standard area or retention time exceedance
it	Instrument Tune
k	Estimated Maximum Possible Concentrations (EMPC)
l	LCS recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
mc	Deviation from the method
md	MS/MSD precision
nb	Negative laboratory blank contamination
p	Chemical preservation issue
p-h	Uncertainty near detection limit (< Reporting Limit), historical reason code applied.
pe	Post Extraction Spike
q	Quantitation issue
r	Dual column RPD
rt	SIM ions not within + 2 seconds
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature Preservation Issue
x	Low % solids
y	Serial dilution results
z	ICS results

Section 6

Survey

NONE :XREFS

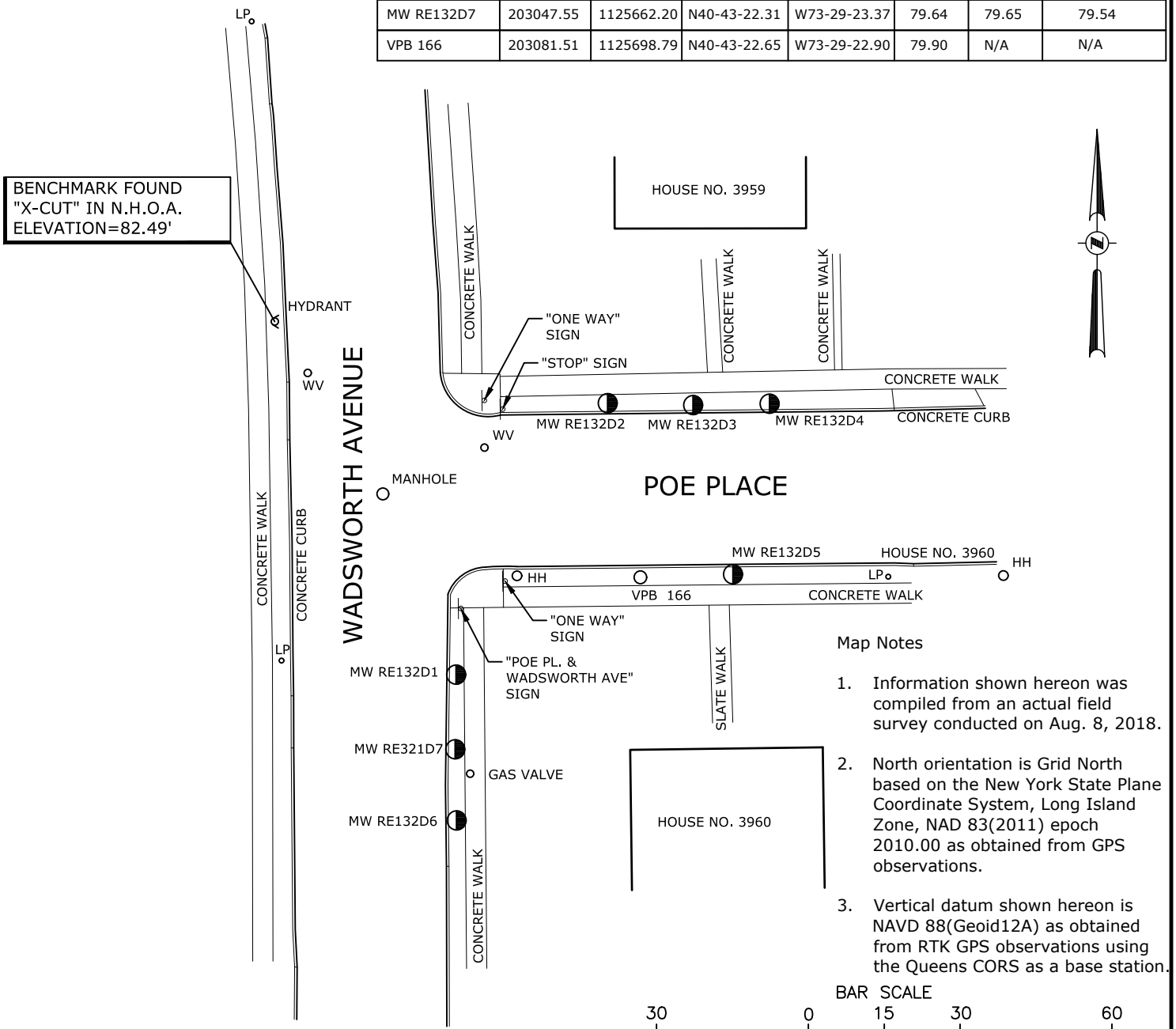
UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

LEGEND

HH	ELECTRIC HANDHOLE
LP	LIGHT POLE
MW RE109D3	MONITOR WELL
VPB	VERTICAL PROFILE BORING
WV	WATER VALVE

Description	Northing	Easting	Latitude	Longitude	Ground	Top of Casing	Top of PVC (4")
MW RE132D1	203062.29	1125662.40	N40-43-22.46	W73-29-23.37	79.61	79.56	79.51
MW RE132D2	203115.90	1125692.33	N40-43-22.99	W73-29-22.98	80.02	79.94	79.56/80.01(12")
MW RE132D3	203115.53	1125709.20	N40-43-22.98	W73-29-22.76	79.93	79.90	79.43/79.94(12")
MW RE132D4	203115.82	1125724.32	N40-43-22.99	W73-29-22.56	80.00	79.96	79.60/80.03(12")
MW RE132D5	203082.10	1125717.09	N40-43-22.65	W73-29-22.66	79.93	80.04	79.42/79.95(12")
MW RE132D6	203033.49	1125662.48	N40-43-22.18	W73-29-23.37	79.09	79.51	79.10
MW RE132D7	203047.55	1125662.20	N40-43-22.31	W73-29-23.37	79.64	79.65	79.54
VPB 166	203081.51	1125698.79	N40-43-22.65	W73-29-22.90	79.90	N/A	N/A

BENCHMARK FOUND
"X-CUT" IN N.H.O.A.
ELEVATION=82.49'



Map Notes

1. Information shown hereon was compiled from an actual field survey conducted on Aug. 8, 2018.
2. North orientation is Grid North based on the New York State Plane Coordinate System, Long Island Zone, NAD 83(2011) epoch 2010.00 as obtained from GPS observations.
3. Vertical datum shown hereon is NAVD 88(Geoid12A) as obtained from RTK GPS observations using the Queens CORS as a base station.

BAR SCALE

30 0 15 30 60

1 inch = 30 ft.

DWG NO. 18-396

Date	RECORD OF WORK	Appr.
8/17/18	MISC. REVISION	

Drafter: MDD | Checker:

Appr. by: WJN | Proj. No. 14.4121

MONITOR WELL SURVEY LOCATION
RE132D1, RE 132D2, RE132D3, RE132D4, RE132D5
RE132D6, RE132D7 AND VPB 166
NO. 3959 AND NO. 3960 POE PLACE

TOWN OF LEVITTOWN | NASSAU COUNTY, NEW YORK

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518.786.7400 * FAX 518.786.7299

SCALE: 1"=30' | DATE:AUGUST 8, 2018

CAD DWG. FILE NAME: K:\Projects\144121\Survey\Drawings and Maps\2018 DRAWINGS\2018 MW RE 132 POE PLACE SITE.dwg