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INTERIM DATA SUMMARY REPORT FOR GROUNDWATER POLYCHLORINATED BIPHENYL INVESTIGATION AT SITE 1 FORMER DRUM MARSHALLING AREA NWIRP BETHPAGE NY

7/1/2013

TETRA TECH

INTERIM
DATA SUMMARY REPORT
GROUNDWATER

PCB INVESTIGATION AT SITE 1 - FORMER DRUM MARSHALLING AREA

Naval Weapons Industrial Reserve Plant
Bethpage, New York

Naval Facilities Engineering Command
Mid-Atlantic

CONTRACT NUMBER N62470-08-D-1001
Contract Task Order WE44

July 2013

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DATA SUMMARY REPORT
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PCB INVESTIGATION AT SITE 1 -
FORMER DRUM MARSHALLING AREA

NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

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TABLE OF CONTENTS

SECTION **PAGE**

ACRONYMS A-1

1.0 INTRODUCTION 1-1
1.1 SCOPE AND OBJECTIVES 1-1
1.2 REPORT ORGANIZATION 1-2

2.0 BACKGROUND 2-1
2.1 SITE DESCRIPTION 2-1
2.2 ENVIRONMENTAL SETTING 2-2
2.2.1 Topography and Drainage 2-2
2.2.2 Geology and Soils 2-2
2.2.3 Hydrogeology 2-2

3.0 FIELD INVESTIGATION 3-1
3.1 FIELD AND SAMPLING ACTIVITIES 3-1
3.1.1 Soil Borings 3-1
3.1.2 Monitoring Well Installation and Development 3-2
3.1.3 Groundwater Flow and Sampling 3-3
3.1.4 Surveying 3-4

4.0 FINDINGS AND ANALYTICAL RESULTS 4-1
4.1 INTRODUCTION 4-1
4.2 GEOLOGY AND HYDROGEOLOGY 4-1
4.3 GROUNDWATER SAMPLING RESULTS 4-2
4.3.1 Groundwater Test Kit Results 4-2
4.3.2 Monitoring Well Sampling Results 4-2

5.0 CONCLUSIONS AND RECOMMENDATIONS 5-1

REFERENCES R-1

APPENDICES - (SEE ATTACHED CD)

A Field Forms, Boring Logs, and Documentation
B Survey Data
C Chain of Custody Forms and Analytical Results
D Validation Summaries

TABLES

3-1 Monitoring Well Construction Details
3-2 Groundwater Elevation Summary
3-3 Groundwater Sample Summary
4-1 Field Test Kit and Laboratory Chromium Results
4-2 Analytical Detections – Monitoring Wells

FIGURES

1-1 General Location Map
1-2 Site Location Map
2-1 Site 1 Layout Map
3-1 Monitoring Well Location Map
4-1 Cross Section Location Map
4-2 Geologic Cross Section A-A'
4-3 Geologic Cross Section B-B'
4-4 Geologic Cross Section C-C'
4-5 Shallow Potentiometric Surface Map – April 2013
4-6 Intermediate Potentiometric Surface Map – April 2013
4-7 Deep Potentiometric Surface Map – April 2013
4-8 Groundwater Analytical Detections – Shallow Monitoring Wells
4-9 Groundwater Analytical Detections – Intermediate Monitoring Wells
4-10 Groundwater Analytical Detections – Deep Monitoring Wells

ACRONYMS

AOC	Area of Concern
bgs	below ground surface
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLEAN	Comprehensive Long-Term Environmental Action Navy
CTO	Contract Task Order
ER	Environmental Restoration
FS	Feasibility Study
ft/day	feet per day
GOCO	Government-Owned Contractor-Operated
gpm	gallons per minute
HNUS	Halliburton NUS
HSA	Hollow Stem Auger
IDW	Investigation-Derived Waste
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
MS/MSD	matrix spike/matrix spike duplicate
NAVFAC	Naval Facilities Engineering Command Mid-Atlantic
NGC	Northrop Grumman Corporation
NTU	Nephelometric Turbidity Unit
NWIRP	Naval Weapons Industrial Reserve Plant
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORP	Oxygen Reduction Potential
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethene
PVC	Polyvinyl chloride
QA	Quality Assurance
RCRA	Resource Conservation and Recovery Act
SAP	Sampling and Analysis Plan
TCE	Trichloroethene
Tetra Tech	Tetra Tech, Inc.
UFP	Uniform Federal Policy
VOC	Volatile organic compound
µg/L	microgram per liter

1.0 INTRODUCTION

This Data Summary Report was prepared by Tetra Tech, Inc. (Tetra Tech) for the Naval Facilities Engineering Command (NAVFAC) - Mid-Atlantic under the U.S. Navy's Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract number N62470-08-D-1001, Contract Task Order (CTO) WE44. This Data Summary Report presents the groundwater investigative activities conducted at Site 1 – Former Drum Marshalling Area from October 2012 through April 2013 at the Naval Weapons Industrial Reserve Plant (NWIRP) located in Bethpage, New York (Figures 1-1 and 1-2). The investigative activities consisted of the advancement of soil borings, downhole geophysical logging, monitoring well installation and development, and groundwater sampling. Procedures, methods, and rational are presented in the Uniform Federal Policy (UFP) Sampling and Analysis Plan (SAP) (Tetra Tech, 2010) and two Interim Data Summary Reports which included subsequent SAP Addendums (Tetra Tech, 2011 and Tetra Tech, 2012). Groundwater investigation activities were conducted in accordance with the Navy Environmental Restoration (ER) Program under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and New York State Department of Environmental Conservation (NYSDEC) Resource Conservation and Recovery Act (RCRA) permit number NYD003995198.

1.1 SCOPE AND OBJECTIVES

This document summarizes the groundwater investigation activities conducted at the NWIRP Bethpage Site 1 – Former Drum Marshalling Area from October 2012 through April 2013. The primary objectives of the investigation were to further define the extent of polychlorinated biphenyls (PCBs) and hexavalent chromium in groundwater and investigate potential upgradient source areas (former sludge drying beds, NWIRP recharge basins, and former Grumman recharge basins).

Groundwater sampling conducted at Site 1 in November 2010, March 2011, and January 2012 indicated concentrations of PCBs near or above New York State Department of Health (NYSDOH) maximum contaminant levels (MCLs) of 0.5 micrograms per liter (µg/L) and hexavalent chromium was also detected at concentrations ranging from 5 to 158 µg/L. Additional shallow and intermediate monitoring wells were installed in October and November 2012 upgradient of Site 1 to investigate potential sources and further define the extent of PCB impacted groundwater.

The field activities are detailed in Section 3.0 of this report. The field work conducted from October 2012 through April 2013 is summarized as follows:

- Advanced soil borings
- Gamma logging of borings for lithology

- Installed eight new monitoring wells
- Developed twelve monitoring wells
- Sampled forty-six monitoring wells in November 2012 and nineteen monitoring wells in February 2013 for PCBs, volatile organic compounds (VOCs), metals (iron and chromium), and hexavalent chromium
- Surveyed ten monitoring wells
- Collect synoptic rounds of groundwater levels in November 2012 and April 2013.

1.2 REPORT ORGANIZATION

This Data Summary Report provides general implementation information and the approach used in conducting the groundwater investigation activities from October 2012 through April 2013 at Site 1. The report consists of five sections. Section 1.0 provides an introduction. Section 2.0 provides the facility background and environmental setting. Section 3.0 provides a summary of the field activities. Section 4.0 presents the findings and analytical results, and Section 5.0 presents the conclusion and recommendations.

2.0 BACKGROUND

2.1 SITE DESCRIPTION

The Navy's Bethpage facility is located in east-central Nassau County, Long Island, New York, approximately 30 miles east of New York City (Figure 1-1). Established in 1943, the property known as NWIRP Bethpage was originally situated on 109 acres entirely within the Northrop Grumman Aerospace complex. NWIRP Bethpage was a Government-Owned Contractor Operated (GOCO) facility that was operated by the Northrop Grumman Corporation (NGC) until September 1998. Since 1998, the Navy transferred 100 acres to Nassau County. The remaining 9-acre parcel is being retained by the Navy for environmental investigations and remediation. Other than environmental investigation and cleanup work, there are no operations conducted on the Navy's property that generate hazardous waste.

Site 1 - Former Drum Marshalling Area is located in the eastern portion of the Navy's 9-acre parcel. Site 1 is mostly an open area, which in the past included above ground storage tanks (Areas of Concern [AOC] 23), a sanitary settling tank, and sludge drying beds (AOC 35). All these structures were located in the northern portion of the site, as well as a few scattered metal storage buildings. Site 1 is relatively flat except for a 4-foot vegetated windrow located along the eastern end of the site, and a mounded area which partially buries the abandoned sanitary settling tank. The Site is enclosed by a perimeter fence along the north, west and south, with a facility perimeter fence bounding the Site from a residential neighborhood to the east.

In 2012, construction activities at the facility altered a portion of the Site's surficial features. A section of fence in the southern half of Site 1 was removed and the area was paved with asphalt or covered with gravel mix. The unpaved portion was then re-fenced to restrict access to the site. In addition, the vegetated windrow in the eastern portion of Site 1 was extended further south. Figure 2-1 provides a site layout and aerial view with the new changes.

Site 1 originally consisted of two former drum marshalling pads located in the center of the Site that were used to store drums containing waste materials from operations at Plant No. 3 and potentially other wastes from operations at the facility. Transformers and a PCB-filled autoclave were also stored at the site. Underlying most of Site 1 is approximately 120 abandoned cesspools that were designed to discharge sanitary waste waters from Plant No. 3. It is possible that non-sanitary wastes may have been discharged into this system. The cesspools were approximately 10 feet in diameter and 16 feet deep. Based on field observations, the cesspools are currently filled with soil. The drum marshalling areas and extent of the leach field were the original extent of Site 1.

Due to proximity, similar contamination, and potential need for remedial actions, AOC 23, AOC 35, and dry-wells 20-08 and 34-07 were subsequently included as a part of Site 1.

The existing groundwater monitoring well network at Site 1 consist of forty-three monitoring wells extending from approximately 650 feet north to 250 feet south of the Site 1 boundaries. Groundwater flow is generally to the south-southeast across the Site.

2.2 ENVIRONMENTAL SETTING

2.2.1 Topography and Drainage

NWIRP Bethpage is located in an area underlain by permeable glacial deposits and characterized by limited surface water drainage features. Normal precipitation at the facility is expected to infiltrate rapidly into the soil. NWIRP recharge basins, which receive storm water runoff, are located in the northeastern portion of the facility, north of Site 1. NWIRP Bethpage occupies a relatively flat, inter-moraine area, and has very little topographic relief.

2.2.2 Geology and Soils

NWIRP Bethpage is underlain by approximately 1,100 feet of unconsolidated sediments that overlie crystalline bedrock (Isbister, 1966). The unconsolidated sediments consist of four distinct geologic units: (in descending order) Upper Glacial Formation, Magothy Formation, Raritan Clay, and Lloyd Sand Formation. The 30- to 45-foot-thick Upper Glacial Formation consists chiefly of coarse sands and gravels. The Upper Magothy Formation consists primarily of coarse sands to a depth of approximately 100 feet, below which finer sands and silts predominate along with some clay layers. These clay layers are common but laterally discontinuous; no individual clay horizon of regional extent has been observed in the Upper Magothy Formation. The 100- to 150-foot-thick Raritan Clay underlies the Magothy Formation at a depth of approximately 700 to 800 feet below ground surface (bgs). The underlying Lloyd Sand Formation is approximately 300 feet thick.

2.2.3 Hydrogeology

Most of Long Island is bisected by an east-west-trending regional groundwater divide. NWIRP Bethpage occupies an area lying south of the divide. Groundwater is in contact with the Upper Glacial and Upper Magothy Formations beneath the facility, and may be considered a common unconfined aquifer. The glacial deposits are characterized by a high primary porosity (exceeding 30 percent) and high permeability. The high permeability of the glacial deposits allows for the rapid recharge of precipitation to

the underlying Magothy (Isbister, 1966; McClymonds and Franke, 1972). The number and thickness of clay lenses increase with depth in the Magothy Formation; however, the horizontally discontinuous nature of these units prevents any one of them from functioning as a competent aquitard or confining unit.

Groundwater beneath the Site flows in a general southerly direction toward the Atlantic Ocean. Across the facility, the horizontal hydraulic gradient and groundwater velocity in the unconfined common aquifer averages 5.3 feet per mile and 0.3 foot per day (ft/day), respectively [Halliburton NUS (HNUS), 1993]. Subtle vertical hydraulic gradients occur in a downward direction. Groundwater in the deeper portion of the Magothy is the primary source of potable water in Nassau County. Groundwater is encountered at a depth of approximately 50 feet bgs at the facility. Historically, because of pumping and recharge at the facility, groundwater has been measured from depths ranging from 40 to 60 feet bgs.

Prior to 1998, the groundwater flow dynamics beneath the NWIRP and Grumman were complex. A total of 16 deep production wells (7 on the NWIRP and 9 on Grumman property) existed and were screened in the Magothy, each yielding approximately 1,200 gallons per minute (gpm). All of the production wells on the Navy's property have been abandoned. The extracted water was mostly used for non-contact single pass cooling and then discharged into recharge basins located on Navy and Northrop Grumman property. Based on extraction and recharge rates and well locations, groundwater on the Navy property flowed predominately west and southwest. In addition, the production wells extracted groundwater from depths of approximately 500 feet bgs and the water was recharged in nearby surficial recharge basins. The extraction from the production wells and near surface recharge resulted in vertical gradients at the Site. Grumman continues to operate production wells (as well as a groundwater containment system) south of NWIRP Bethpage. The production wells and groundwater containment system operates with a combined flow rate of approximately 3,800 gpm.

The Magothy aquifer is a major source of public water in Nassau County. The aquifer is commonly regarded to function overall as an unconfined aquifer at shallow depths and a confined aquifer at deeper depths. The most productive water bearing zones are the discontinuous lenses of sand and gravel that occur within the generally siltier matrix. The major water-bearing zone is the basal gravel. This aquifer is highly conductive. For example, as presented in the 1994 Feasibility Study (FS) for Site 1, the pumping of production well PW-11 located on the Navy's property at nearly 1,000 gpm for 72 hours during pumping test no. 2 produced little or no measurable drawdown in the nearby observation wells or other production wells.

3.0 FIELD INVESTIGATION

3.1 FIELD AND SAMPLING ACTIVITIES

This additional PCB field investigation was conducted to address the following objectives (Interim Data Summary Report and SAP Addendum, Tetra Tech, 2012):

- Investigate potential upgradient sources of PCB- and hexavalent chromium-contaminated groundwater north of Site 1, the NWIRP recharge basins, and former sludge drying beds.
- Further monitor the occurrence of PCBs, chromium and hexavalent chromium in groundwater to support future remedy evaluations and determine whether Site 1 is a statistically significant source of PCBs detected in groundwater.

The field sampling activities conducted during the investigation included the advancement of soil borings, permanent monitoring well installation and development, sampling of new and existing monitoring wells, and surveying. These activities were conducted to meet the project objectives presented above and determine a path forward for further investigation.

The following subsections summarize the field investigation activities and identify the sampling locations and type of samples that were collected during the investigation.

3.1.1 Soil Borings

In October and November 2012, soil borings were advanced at five new monitoring well locations using hollow stem auger (HSA) drilling methods. The soil boring locations (BPS1-TT-MW310S, -MW311I, -MW312I, - MW313S, and -MW314S) are presented on Figure 3-1 and the boring logs and gamma logs are presented in Appendix A. Soil cuttings generated during drilling were screened with a photoionization detector and logged. Split spoon samples were collected at select intervals to log and confirm subsurface geology. Gamma logging was also conducted at these locations to further interpret lithology at depths ranging from 65 or 170 feet bgs, and determine proper well screen placement.

All soil cuttings were containerized and treated as Investigation Derived Waste (IDW). After waste characterization was complete, the soils were transported and disposed of off-site at an approved disposal facility by the IDW subcontractor.

3.1.2 Monitoring Well Installation and Development

Eight monitoring wells were installed at five locations using HSA drilling methods from October through November 2012. Three monitoring well locations (BPS1-TT-MW310, –MW311, and –MW312) were installed just south of Aerospace Boulevard and two monitoring well locations (BPS1-TT-MW313 and -MW314) were installed east of the NWIRP recharge basins. The MW311, MW312, and MW314 were installed as well clusters, which included a shallow water table monitoring well and an intermediate monitoring well at each location. The MW310 and MW313 well locations only included the installation of one shallow monitoring well. Shallow monitoring well screen intervals ranged from 53 to 67.5 feet bgs and intermediate monitoring well screen intervals ranged from 144 to 170 feet bgs. The monitoring well locations are presented on Figure 3-1 and the construction details are provided in Table 3-1.

Each monitoring well was constructed with a 2-inch diameter, 10-foot, 0.010-inch slot, schedule 40 polyvinyl chloride (PVC) screen and riser pipe. A #1 silica sand pack was installed to a minimum of 3 feet above the screened interval. Above the sand, a bentonite seal was installed to a minimum thickness of 3 feet. The seal was allowed to hydrate prior to grouting. Bentonite cement grout was then tremie piped into the borehole while the augers were incrementally pulled up until the grout was 2 feet bgs. Protective steel stick-up casings were installed at each monitoring well. Monitoring well construction logs are presented in Appendix A.

The eight newly installed monitoring wells were developed using airlifting and/or submersible pump methods. Development of the intermediate monitoring wells consisted of airlifting followed by surging/purging with a submersible pump (Grundfos) while the development of the shallow monitoring wells was by surging/purging with a submersible pump (Grundfos). During well development, groundwater parameters were measured every 20 minutes and included: pH, specific conductivity, temperature, turbidity, and oxygen reduction potential (ORP). Development was concluded after parameter stabilization was achieved and approximately 250 gallons of water was purged from each shallow monitoring well and a minimum of 600 gallons was purged at each intermediate monitoring well.

Four additional monitoring wells were redeveloped during this investigation. Three of these wells (BPS1-TT-MW302S, -MW306S, and –MW307S) showed indications of slow recharge during initial purging and sampling attempts and sediment was encountered in the well casings. To ensure collection of a good groundwater sample, better aquifer connectivity, and remove sediment in these wells, each well was purged with a surge block to loosen fine grained material and sediment. A Grundfos Rediflo pump was then used to purge approximately 125 gallons of water to clear out any fine grained sediment. BPS1-HN-MW27I, which was discovered at Site 1 in November 2012 had not been purged or sampled in several years and was also redeveloped to ensure collection of a good groundwater sample. Approximately 175

gallons was purged during development at MW27I. BPS1-HN-MW27S was also discovered near MW27I, but well integrity was questionable and likely installed to shallow for the current water table at Site 1 as it was found to be dry. Monitoring well development records are presented in Appendix A. Development water was containerized and treated as IDW.

3.1.3 Groundwater Flow and Sampling

In November 2012, groundwater samples were collected from 46 monitoring wells using low flow sampling techniques. Additional groundwater samples were collected from 19 monitoring wells in February 2013. A Grundfos Rediflo pump was used for groundwater purging and sample collection activities. Groundwater geochemical parameters and turbidity measurements were recorded at each monitoring well during purging and parameter stabilization was required before groundwater samples were collected. Groundwater samples were collected for VOC, PCB, and metal analysis by a fixed based laboratory. Each monitoring well was field tested for hexavalent chromium, except for TTAOC22-MW10, -MW11, BPS1-TT-MW302S, -MW305D, -MW306S, and –MW307S in November 2012 and TTAOC22-MW06, -MW10, -MW11, and BPS1-HN-MW27I in February 2013. In general, monitoring wells which had test kit results exhibiting hexavalent chromium concentration greater than 0.02 milligrams per liter (mg/L) had a sample collected for analysis by a fixed based lab to confirm the field result. Groundwater sample log sheets and low flow purge data sheets are presented in Appendix A.

The hexavalent chromium field test kit followed the HACH Method 8023 (1,5-Diphenylcarbohydrazide Method) using a HACH DR/890 colorimeter and associated ChromaVer 3 Chromium Reagent Powder Pillows. During testing two vials were filled with groundwater, one of which was the blank and the other was the sample in which the ChromaVer 3 Chromium Reagent Powder Pillow was added. If the groundwater was turbid (>50 Nephelometric Turbidity Units [NTUs]) an Acid Reagent Powder Pillow was added to the blank sample to calibrate the colorimeter. After 5 minutes the blank sample vial was then run to zero out the colorimeter which was followed by the sample vial with the chromium reagent, to provide the final result.

Deviations from the original work plan occurred during these two sampling events. TTAOC22-MW05 was originally planned to be sampled, but due to ongoing commercial renovations in Plant 3, the monitoring well was abandoned and replaced by TTAOC22-MW11 for the groundwater sampling events.

Quality Assurance (QA) samples were taken during groundwater sampling and included rinsate blanks, source water blanks, field duplicates, matrix spike/matrix duplicated (MS/MSD), and trip blanks. QA sample log sheets are presented in Appendix A.

Purge water generated during monitoring well sampling was containerized, sampled, and disposed of as IDW.

On November 16, 2012 and April 8, 2013 synoptic groundwater levels were collected. In November 2012, BPS1-TT-MW303S was the only monitoring well from which a water level was not recorded due to accessibility issues at that time. Table 3-2 provides a summary of the groundwater elevations at Site 1 (see Appendix A for Groundwater Level Measurement Sheets).

3.1.4 Surveying

The eight newly installed monitoring wells, two additional monitoring wells, and the area easement surveys around the monitoring wells were surveyed by BANC3, a New York State licensed surveyor, on March 18 and 19, 2013. Each location was surveyed for horizontal position and vertical components including both ground surface and top of casing elevations for each monitoring well location. Horizontal measurements were accurate to 0.1 foot while vertical elevation measurements were accurate to 0.01 foot at each location. The area surveys consisted of four horizontal survey points bounding the area around a monitoring well or monitoring well cluster not on Navy property for easement notifications and agreements. A summary of the survey results can be found in Appendix B.

4.0 FINDINGS AND ANALYTICAL RESULTS

4.1 INTRODUCTION

Results from this additional PCB field investigation consisted of geologic observations, hydrogeological findings, and field test kit and fixed-based laboratory analytical results of groundwater and surface water samples. The following subsections describe the findings and analytical results.

4.2 GEOLOGY AND HYDROGEOLOGY

The geology encountered in the study area was variable both horizontally and vertically. Medium to course sand and gravel was consistently observed in the upper 30 feet of each boring. Below 30 feet, fine grained silty sands predominate along with some clay layers that range in thickness from a few inches to one or two feet thick.

A cross section location map (Figure 4-1) illustrates the lithology across the study area. Figure 4-2 presents Cross Section A-A' which runs north to south through the study area. Figures 4-3 and 4-4 present Cross Sections B-B' and C-C' which run east to west, approximately 400 feet apart, with each cross section interpreted through three downgradient soil borings/monitoring well locations.

Lithological data collected from soil cores, split spoon samples, and gamma logs were used to interpret the subsurface lithology at Site 1. By using comparisons of the visually logged lithology and gamma ray signatures from adjacent soil borings, most of the silt and clay units/layers observed above 150 feet bgs appear to be locally discontinuous.

AT BPS1-TT-MW313S the geology in the screened interval deviated slightly from that seen at other shallow monitoring wells at Site 1. Below 61 feet bgs at this location, the sand appears to have significantly higher clay content.

The newly installed upgradient monitoring wells along Aerospace Boulevard were installed to a maximum depth of 170 feet bgs and no significant silt or clay units were encountered during the drilling. A few very thin clay lenses were observed and are likely discontinuous, but could have a local impact on downward migration of contaminants.

The April 2013 groundwater potentiometric surface for shallow, intermediate, and deep monitoring wells are presented on Figures 4-5, 4-6, and 4-7, respectively. Based on the groundwater level measurements, a slight downward vertical gradient is observed between shallow and deeper monitoring wells and a south to southeast groundwater flow is apparent at Site 1. The April 2013 water level measurements were

slightly lower in elevation than the November 2012 water level measurements. However, overall local groundwater flow remained similar. Since December 2010 water levels have fluctuated by 2.5 feet, with the highest water level elevations occurring in January 2012. Further evidence of current lower water level elevations was observed at BPS1-HN-MW27S which was installed in 1991 and found to be dry during the November 2012 and February 2013 sampling events.

4.3 GROUNDWATER SAMPLING RESULTS

4.3.1 Groundwater Test Kit Results

Hexavalent chromium field test kits were used during the November 2012 and February 2013 sampling events. Table 4-1 provides a summary of the field test kit results at each well location along with the corresponding fixed-based laboratory results for total chromium and hexavalent chromium.

The relationship between the field test kit and fixed based laboratory results for hexavalent chromium showed good correlation in the January 2012, November 2012 and February 2013 sampling events. A couple of test kit results from the November 2012 sampling event showed anomalies which did not correlate well with the lab results and previous sampling results. The results at BPS1-TT-MW303I1 show the biggest discrepancy and can be potentially explained by the very high turbidity observed in this monitoring well. The other two monitoring wells with anomalous test kit results included BPS1-TT-MW303D and BPS1-TT-MW307D. Based on evaluation of the data and field notes, these anomalous test kit results may have been caused from slight procedural errors during the actual field testing.

Excluding these anomalous results, the hexavalent chromium test kit results ranged from non-detect to 170 µg/L. The detection limit for this test kit method is 10 µg/L. Concentrations of hexavalent chromium in groundwater greater than 20 µg/L (two times the detection limit) were observed at five monitoring well locations BPS1-TT-MW301D (81.1 µg/L), -MW304I1 (21.5 µg/L), -MW304I2 (152 µg/L), –MW308D (82.2 µg/L), –MW309I (55.1 µg/L), –MW314I (22.9 µg/L), and TTAOC22-MW10 (158 µg/L).

4.3.2 Monitoring Well Sampling Results

The groundwater samples collected from the 46 monitoring wells in November 2012 and the 19 monitoring wells in February 2013 were analyzed for VOCs, PCBs, total chromium and iron by TriMatrix Laboratories of Grand Rapids, Michigan. Select monitoring wells were also sampled for hexavalent chromium and filtered samples for chromium and iron were collected at monitoring wells exhibiting high turbidity. Table 4-2 provides a summary of the analytical results with the associated Federal and NYSDOH MCLs for each detected compound for comparison. Figures 4-8, 4-9, and 4-10 provide a

summary of the distribution and concentrations of the detected compounds in the shallow, intermediate, and deep monitoring wells, respectively.

Aroclor-1242 and/or Aroclor-1248 were detected by the laboratory in the groundwater samples. The laboratory indicated that a conclusive PCB Aroclor identification was not possible due to the signature interference and/or weathering of the PCBs. Validation of the laboratory results indicated that both Aroclor-1242 and Aroclor-1248 have several common peaks and similar patterns in their standard chromatograms. Because of these similarities, it was difficult to determine the predominant Aroclor or how to precisely quantify each Aroclor separately. Therefore the laboratory reported a single Aroclor mixture, either Aroclor-1242 or Aroclor-1248. A “weathering effect” or degradation of compounds within the specific mixtures is also a likely factor in precisely identifying the Aroclor mixture present. Despite these complexities, validation concluded that an Aroclor mixture is present in the affected samples. Due to the uncertainties differentiating Aroclor-1242 and Aroclor-1248, detected Aroclors will be treated as a single Aroclor and referenced in the following text as PCBs.

November 2012 Sampling Results

During the November 2012 sampling event PCBs were detected in 35 of the 46 groundwater samples, with 19 samples exhibiting concentrations of PCBs exceeding the Federal and NYSDOH MCL of 0.5 µg/L. Of the 17 monitoring wells located upgradient of Site 1, PCBs were detected in all but 4 monitoring wells (BPS1-TT-MW309D, -MW310S, -MW312S, and -MW313S). Of the 13 upgradient monitoring wells with PCB detections 4 were above the MCL, including the highest observed PCB detection of 9.9 µg/L at BPS1-TT-MW301S. One onsite monitoring well (BPS1-HN-MW27I) exhibited a PCB concentration of 1.2 µg/L, exceeding MCLs. Two of the four monitoring wells on the downgradient edge of the Site 1 boundary (BPS1-FW-MW03, and -HN-MW29I) exhibited PCB concentrations exceeding MCLs at 2.3 µg/L and 1.5 µg/L, respectively. Of 16 downgradient monitoring wells with PCB detections 12 were above the MCL. PCBs were detected in 2 of the 3 side gradient (west of Site 1) monitoring wells (TTAOC22-MW06 and -MW10) with -MW10 exhibiting the highest PCB concentration of 0.48 µg/L.

PCB concentrations exceeded the MCL in 3 of the 20 shallow monitoring wells across the study area. Sampling results from the intermediate and deep monitoring wells exhibited MCL exceedances of PCBs in 16 out of 26 groundwater samples.

A total of 19 VOCs were detected in the groundwater samples collected in November 2012, with 4 VOCs (cis-1,2-dichloroethene, tetrachloroethene [PCE], trichloroethene [TCE], and 1,4-dioxane) exceeding the corresponding NYSDOH and/or Federal MCLs. Cis-1,2-dichloroethene exceeded the NYSDOH MCL of 5 µg/L at BPS1-FW-MW01 (22 µg/L), BPS1-TT-MW304I1 (21 µg/L), and BPS1-TT-MW305I (9.4 µg/L). Six

groundwater samples exhibited concentrations of PCE above the MCL ranging from 5.2 (BPS1-TT-MW305I) to 100 µg/L (BPS1-FW-MW01). Seven groundwater samples exhibited concentrations of TCE above the MCL of 5 µg/L ranging from 5.5 (BPS1-TT-MW302D) to 3,400 µg/L (BPS1-TT-MW305I).

Groundwater samples were collected from 28 of the 46 monitoring wells and analyzed for hexavalent chromium by the fixed-based laboratory. Hexavalent chromium was detected in 16 of these 28 groundwater samples. Of the 22 monitoring wells where both laboratory analysis and field test kit samples were collected the results show good correlation. This correlation supports the absence of hexavalent chromium observed at the 18 monitoring wells without laboratory results for hexavalent chromium. Hexavalent chromium concentrations >10 µg/L (detection limit of test kit method) were observed in seven monitoring wells BPS1-TT-MW301D (81.1 µg/L), BPS1-TT-MW304I1 (21.5 µg/L), BPS1-TT-MW304I2 (152 µg/L), BPS1-TT-MW309I (55.1 µg/L) BPS1-TT-MW314I (22.9 µg/L), TTAOC22-MW10 (158 µg/L), and TTAOC22-MW11 (18.3 µg/L). Total chromium was detected in all 46 of the groundwater samples and only exceeded the MCL of 100 µg/L at TTAOC22-MW10 (160 µg/L). Historically total chromium was detected above the MCL at BPS1-TT-MW304I2.

February 2013 Sampling Results

During the February 2013 sampling event PCBs were detected in 12 of the 19 groundwater samples collected. Three samples exhibited concentrations of PCBs exceeding the Federal and NYSDOH MCL of 0.5 µg/L. The highest PCB concentration was detected at BPS1-TT-MW309S at 0.82 µg/L.

TCE was the only VOC found to exceeded NYSDOH and/or Federal MCL of 5 µg/L during the February 2013 sampling event. It was detected in 10 of the 19 groundwater samples and only exceeded the MCL at TTAOC22-MW10 (66 µg/L).

Hexavalent chromium samples were collected from 9 monitoring wells and analyzed by the fixed-based laboratory. Hexavalent chromium was detected in 6 of these 9 groundwater samples. . Elevated (>10 µg/L) hexavalent chromium concentrations were observed in monitoring wells BPS1-TT-MW301D (73.4 µg/L), BPS1-TT-MW308D (82.22 µg/L), BPS1-TT-MW314I (21.9 µg/L), TTAOC22-MW10 (111 µg/L), and TTAOC22-MW11 (12 µg/L). Total chromium was detected in all 19 groundwater samples and exceeded the MCL of 100 µg/L at one monitoring well location, TTAOC22-MW10 (110 µg/L).

Table 4-2 provides a comparison of the hexavalent chromium field test kits and laboratory results for hexavalent chromium and total chromium samples. Hexavalent chromium field test kit results showed good correlation with the fixed-based laboratory results for concentrations that exceeded 20 µg/L. When comparing the total chromium results above 25 µg/L to the hexavalent chromium results (field test kit and

fixed-based laboratory) at each well location, the concentrations also correlated well, indicating that if elevated concentrations of total chromium is detected in groundwater, most likely it is in the hexavalent form. The one anomaly was observed at BPS1-TT-MW304I2 from November 2012 where total chromium was detected at 21 µg/L compared to hexavalent chromium at 152 µg/L. This anomaly in monitoring well BPS1-TT-MW304I2 was only observed in the November 2012 sampling event, as previous sampling events have indicated both chromium and hexavalent chromium concentrations consistently ranging from 166 to 200 µg/L at this monitoring well.

Appendix C provides the chain of custody forms and analytical results of the groundwater samples sent for fixed based lab analysis. Appendix D provides the validation summaries of the groundwater samples sent for fixed based lab analysis.

5.0 CONCLUSIONS

Conclusions based on the PCB investigation activities from October 2012 through April 2013 are as follows:

1. In April 2013, potentiometric surface mapping of groundwater from the water table to a depth of approximately 300 feet bgs indicate groundwater flow is to the south to southeast across Site 1 and the eastern portion of the former NWIRP. This is consistent with previous groundwater flow mapping.

2. PCBs were detected in 35 of the 46 monitoring well samples as a part of the investigation. Groundwater from 19 of these monitoring wells showed PCB concentrations above the Federal and NYSDOH MCL of 0.5 µg/L.

    - Of the 17 monitoring wells upgradient of Site 1, PCBs were detected in 13 samples with 4 samples exceeding the MCL including the highest detection of PCBs at BPS1-TTMW301S (9.9 µg/L), located just north of Site 1.
    - Of the 25 monitoring wells downgradient of Site 1, PCBs were detected in 19 samples with 15 samples exceeding the MCL.
    - Of the 20 shallow (water table) monitoring wells sampled, 3 of these wells have shown PCB concentrations above the MCL.
    - Of the 17 intermediate (100 to 200 ft bgs) and 9 deep (200 to 300 ft bgs) monitoring wells sampled, 16 of these wells have shown PCB concentrations above the MCL.

3. Hexavalent chromium was evaluated in 38 of the 46 monitoring well samples using field test kits, of which 28 samples were submitted for laboratory confirmation of detections and non-detections.
    - Hexavalent chromium was confirmed in 16 of the 28 groundwater samples submitted for laboratory analysis, and there was reasonable correlation with the test kit results.
    - Hexavalent chromium concentrations exceeded the MCL of 100 µg/L in 2 monitoring wells BPS1-TT-MW304I2 (152 µg/L) and TTAOC22-MW10 (158 µg/L).

4. Four VOCs (cis-1,2-dichloroethene, tetrachloroethene [PCE], trichloroethene [TCE], and 1,4-dioxane) have been detected in groundwater samples at concentrations above MCLs.

    - TCE concentrations exceeded the MCL of 5 µg/L in 7 monitoring wells with the highest concentrations observed in BPS1-TT-MW305I (3,400 µg/L), BPS1-TT-MW305D (200 µg/L), and TTAOC22-MW10 (86 µg/L).

- PCE concentrations exceeded the MCL of 5 µg/L in 6 monitoring wells with concentrations ranging from 5.2 (BPS1-TT-MW305I) to 100 µg/L (BPS1-FW-MW01).
- Cis-1,2-dichloroethene exceeded the MCL of 5 µg/L at BPS1-FW-MW01 (22 µg/L), BPS1-TT-MW304I1 (21 µg/L), and BPS1-TT-MW305I (9.4 µg/L).

Based on the groundwater investigation activities from May 2010 through February 2013, enough groundwater data has been collected to proceed to a Remedial Investigation (RI) Addendum for Site 1. Further evaluation of groundwater contamination at Site 1 will be presented in the RI Addendum. This RI Addendum will include a human health risk assessment, provide an updated conceptual site model (CSM), and support future remedial evaluations at Site 1.

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TABLES

TABLE 3-1
MONITORING WELL CONSTRUCTION DETAILS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHAPGE, NEW YORK

Monitoring Well ID	Installation Date	Total Depth (feet bgs)	Screened Interval Depth (feet bgs)	Reference Elevation TOC (feet MSL)	Ground Surface Elevation (feet MSL)
TTAOC22-MW06	9/7/2004	62	52 - 62		
TTAOC22-MW10	9/8/2004	60	49 - 59		
TTAOC22-MW11	9/9/2004	64	53 - 63		
BPS1-FW-MW01	NA	63.5[1]	48.5-63.5[1]	126.10	123.57
BPS1-FW-MW02	NA	64[1]	49-64[1]	126.85	124.23
BPS1-FW-MW03	NA	67[1]	52-67[1]	125.46	122.86
BPS1-HN-MW27I	11/4/1991	110	100-110	126.51	124.43
BPS1-HN-MW29I	11/26/1991	130.5	120-130	115.37	116.06
BPS1-TT-MW301S	11/10/2010	61	51-61	126	126.38
BPS1-TT-MW301I	11/12/2010	140	130-140	125.56	126.04
BPS1-TT-MW301D	10/29/2010	220	210-220	125.93	126.32
BPS1-TT-MW302S	10/30/2010	51	41-51	116.01	116.32
BPS1-TT-MW302I1	10/26/2010	120	110-120	115.91	116.32
BPS1-TT-MW302I2	10/18/2010	150	140-150	115.91	116.33
BPS1-TT-MW302D	10/16/2010	213	203-213	116.08	116.35
BPS1-TT-MW303S	8/18/2010	56	46-56	115.65	116.06
BPS1-TT-MW303I1	10/19/2010	105	95-105	115.83	116.08
BPS1-TT-MW303I2	10/17/2010	156	146-156	115.89	116.15
BPS1-TT-MW303D	10/14/2010	218	208-218	115.94	116.20
BPS1-TT-MW304S	11/13/2010	53	43-53	119.13	116.49
BPS1-TT-MW304I1	11/11/2010	112	102-112	119.27	116.77
BPS1-TT-MW304I2	11/1/2010	150	140-150	119.18	116.70
BPS1-TT-MW304D	10/27/2010	190	180-190	119.19	116.67
BPS1-TT-MW305S	11/22/2011	50	40-50	116.04	116.52
BPS1-TT-MW305I	11/29/2011	200	190-200	116.16	116.38
BPS1-TT-MW305D	11/21/2011	296	286-296	115.94	116.25
BPS1-TT-MW306S	12/8/2011	60	50-60	117.82	115.33
BPS1-TT-MW306I	12/6/2011	199	189-199	117.76	115.45
BPS1-TT-MW306D	11/28/2011	294	284-294	118.06	115.59
BPS1-TT-MW307S	11/11/2011	50.5	40.5-50.5	114.39	114.59
BPS1-TT-MW307I	11/18/2011	198	188-198	114.16	114.67
BPS1-TT-MW307D	11/11/2011	286	276-286	114.42	114.85
BPS1-TT-MW308S	11/14/2011	64	54-64	131.05	128.59
BPS1-TT-MW308I	11/15/2011	166	156-166	130.73	128.58
BPS1-TT-MW308D	10/31/2011	260	250-260	130.98	128.78
BPS1-TT-MW309S	11/9/2011	63	53-63	131.77	129.41
BPS1-TT-MW309I	11/8/2011	170	160-170	131.83	129.44
BPS1-TT-MW309D	10/20/2011	262	252-262	131.52	129.42
BPS1-TT-MW310S	10/9/2012	68	57.5-67.5	129.5	127.42
BPS1-TT-MW311S	10/22/2012	65	55-65	130.23	128.01
BPS1-TT-MW311I	10/18/2012	170	160-170	130.34	128.23
BPS1-TT-MW312S	10/26/2012	63	53-63	129.81	127.74
BPS1-TT-MW312I	10/25/2012	170	160-170	129.95	127.72
BPS1-TT-MW313S	11/1/2012	63	53-63	129.76	127.48
BPS1-TT-MW314S	10/16/2012	65	55-65	128.6	126.15
BPS1-TT-MW314I	10/12/2012	154	144-154	128.69	126.28
BPS1-RA-MW02	NA	68	58-68	122.152	122.506
BPS1-RA-MW04	NA	68	58-68	NA	NA

NOTES:
bgs : below ground surface
MW : Monitoring Well
MSL : Mean Sea Level
NA : Not Available
TOC : Top of Casing
[1] Top of Casing Measurement

TABLE 3-2
GROUNDWATER ELEVATION SUMMARY
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

Well	Total Depth (feet bgs)	Screened Interval Depth (feet bgs)	Dec. 2010 Water Level (feet BTOC)	Mar. 2011 Water Level (feet BTOC)	Jan. 2012 Water Level (feet BTOC)	Nov. 2012 Water Level (feet BTOC)	April 2013 Water Level (feet BTOC)	Ground Surface Elevation (feet MSL)	Previous TOC Elevation (feet MSL)	Current TOC Elevation (feet MSL)	Dec. 2010 Water Level (feet MSL)	Mar. 2011 Water Level (feet MSL)	Jan. 2012 Water Level (feet MSL)	Nov. 2012 Water Level (feet MSL)	April 2013 Water Level (feet MSL)	COMMENTS
TTAOC22-MW06	62	52 - 62	--	--	--	46.67	--	--	--		--	--	--	--	--	Added to sampling Nov. 2012
TTAOC22-MW10	60	49 - 59	--	--	--	45.02	45.16	--	--		--	--	--	--	--	Added to sampling Nov. 2012
TTAOC22-MW11	64	53 - 63	--	--	--	48.8	48.95	--	--		--	--	--	--	--	Added to sampling Nov. 2012
BPS1-FW-MW01	63.5	48.5-63.5[1]	53.89	54.52	52.25	54.59	54.49	123.57	--	126.1	72.21	71.58	73.85	71.51	71.61	
BPS1-FW-MW02	64	49-64[1]	54.53	55.15	52.89	55.19	55.13	124.23	--	126.85	72.32	71.70	73.96	71.66	71.72	
BPS1-FW-MW03	67	52-67[1]	53.02	53.64	51.39	53.66	53.65	122.86	--	125.46	72.44	71.82	74.07	71.80	71.81	
BPS1-HN-MW27I	110	100-110	--	--	--	54.45	54.41	124.43	--	126.51	--	--	--	72.06	72.10	Discovered Nov. 2012
BPS1-HN-MW29I	130.5	120-130	43.82	44.34	42.15	44.4	44.39	116.06	--	115.37	71.55	71.03	73.22	70.97	70.98	
BPS1-HN-MW29D	220	210-220	44.04	44.53	42.33	--	44.62	116.07	--	115.5	71.46	70.97	73.17	--	70.88	
BPS1-TT-MW301S	62	51-61	55.77	56.06	51.24	53.51	53.63	126.38	128.88	126.00	73.11	72.82	74.76	72.49	72.37	Converted to flushmount Dec. 2011
BPS1-TT-MW301I	140	130-140	55.71	56.07	51.08	53.45	53.39	126.04	128.48	125.56	72.77	72.41	74.48	72.11	72.17	Converted to flushmount Dec. 2011
BPS1-TT-MW301D	220	210-220	56.48	56.91	51.81	54.2	54.08	126.32	128.9	125.93	72.42	71.99	74.12	71.73	71.85	Converted to flushmount Dec. 2011
BPS1-TT-MW302S	51	41-51	44	44.61	42.38	44.61	44.7	116.32	--	116.01	72.01	71.40	73.63	71.40	71.31	
BPS1-TT-MW302I1	120	110-120	44.07	44.63	42.43	44.63	44.75	116.32	--	115.91	71.84	71.28	73.48	71.28	71.16	
BPS1-TT-MW302I2	150	140-150	44.36	44.88	42.69	44.91	45	116.33	--	115.91	71.55	71.03	73.22	71.00	70.91	
BPS1-TT-MW302D	213	203-213	44.66	45.18	42.96	45.16	45.28	116.35	--	116.08	71.42	70.90	73.12	70.92	70.80	
BPS1-TT-MW303S	58	46-56	43.71	44.36	42.13	--	44.39	116.06	--	115.65	71.94	71.29	73.52	--	71.26	
BPS1-TT-MW303I1	105	95-105	44.15	44.74	42.5	44.76	44.78	116.08	--	115.83	71.68	71.09	73.33	71.07	71.05	
BPS1-TT-MW303I2	156	146-156	44.53	45.05	42.84	45.11	45.16	116.15	--	115.89	71.36	70.84	73.05	70.78	70.73	
BPS1-TT-MW303D	218	208-218	44.71	45.21	43.01	45.26	45.32	116.2	--	115.94	71.23	70.73	72.93	70.68	70.62	
BPS1-TT-MW304S	53	43-53	47.66	48.26	46.03	48.33	48.27	116.49	--	119.13	71.47	70.87	73.10	70.80	70.86	
BPS1-TT-MW304I1	112	102-112	47.91	48.54	46.26	48.58	48.49	116.77	--	119.27	71.36	70.73	73.01	70.69	70.78	
BPS1-TT-MW304I2	150	140-150	48.16	48.72	46.45	48.75	48.7	116.7	--	119.18	71.02	70.46	72.73	70.43	70.48	
BPS1-TT-MW304D	190	180-190	48.32	48.86	46.6	48.93	48.87	116.67	--	119.19	70.87	70.33	72.59	70.26	70.32	
BPS1-TT-MW305S	50	40-50	--	--	42.96	45.09	45.23	116.52	--	116.04	--	--	73.08	70.95	70.81	
BPS1-TT-MW305I	200	190-200	--	--	43.55	45.65	45.85	116.38	--	116.16	--	--	72.61	70.51	70.31	
BPS1-TT-MW305D	296	286-296	--	--	43.78	45.94	46.16	116.25	--	115.94	--	--	72.16	70.00	69.78	
BPS1-TT-MW306S	60	50-60	--	--	44.9	47.16	47.18	115.33	--	117.82	--	--	72.92	70.66	70.64	
BPS1-TT-MW306I	199	189-199	--	--	45.34	44.5	47.64	115.45	--	117.76	--	--	72.42	73.26	70.12	
BPS1-TT-MW306D	294	284-294	--	--	46.04	44.95	48.35	115.59	--	118.06	--	--	72.02	73.11	69.71	
BPS1-TT-MW307S	50.5	40.5-50.5	--	--	41.81	46.82	44	114.59	--	114.39	--	--	72.58	67.57	70.39	
BPS1-TT-MW307I	198	188-198	--	--	42.21	47.53	44.47	114.67	--	114.16	--	--	71.95	66.63	69.69	
BPS1-TT-MW307D	286	276-286	--	--	42.66	48.26	44.96	114.85	--	114.42	--	--	71.76	66.16	69.46	
BPS1-TT-MW308S	64	54-64	--	--	55.54	58.2	57.91	128.586	--	131.05	--	--	75.51	72.85	73.14	
BPS1-TT-MW308I	166	156-166	--	--	55.7	58.16	58.02	128.58	--	130.73	--	--	75.03	72.57	72.71	
BPS1-TT-MW308D	260	250-260	--	--	56.27	58.69	58.53	128.78	--	130.98	--	--	74.71	72.29	72.45	
BPS1-TT-MW309S	63	53-63	--	--	55.82	58.15	58.18	129.41	--	131.77	--	--	75.95	73.62	73.59	
BPS1-TT-MW309I	170	160-170	--	--	56.45	58.93	58.78	129.44	--	131.83	--	--	75.38	72.90	73.05	
BPS1-TT-MW309D	262	252-262	--	--	56.39	58.88	58.68	129.42	--	131.52	--	--	75.13	72.64	72.84	
BPS1-TT-MW310S	68	57.5-67.5	--	--	--	55.96	55.86	127.42	--	129.5	--	--	--	73.54	73.64	
BPS1-TT-MW311S	65	55-65	--	--	--	56.93	56.81	128.01	--	130.23	--	--	--	73.30	73.42	
BPS1-TT-MW311I	170	160-170	--	--	--	57.23	57.09	128.23	--	130.34	--	--	--	73.11	73.25	
BPS1-TT-MW312S	63	53-63	--	--	--	56.14	56.14	127.74	--	129.81	--	--	--	73.67	73.67	
BPS1-TT-MW312I	170	160-170	--	--	--	56.91	56.84	127.72	--	129.95	--	--	--	73.04	73.11	
BPS1-TT-MW313S	63	53-63	--	--	--	56.39	56.28	127.48	--	129.76	--	--	--	73.37	73.48	
BPS1-TT-MW314S	65	55-65	--	--	--	56.89	56.73	126.15	--	128.6	--	--	--	71.71	71.87	
BPS1-TT-MW314I	154	144-154	--	--	--	57.8	56.95	126.28	--	128.69	--	--	--	70.89	71.74	
BPS1-RA-MW02	68	58-68	49.46	49.93	47.79	--	--	--	--	122.47	73.01	72.54	74.68	--	--	Paved over summer 2012
BPS1-RA-MW04	68	58-68	43.34	43.91	--	--	--	--	--	--	--	--	--	--	--	Covered with sloughing dirt fall 2011

Notes:
bgs : below ground surface
BTOC : Below top of casing
MSL : Mean sea level
[1] Top of Casing Measurement

TABLE 3-3
GROUNDWATER SAMPLE SUMMARY
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

Well	Total Depth (feet bgs)	Screened Interval Depth (feet bgs)	Analysis	Notes
November 2012 Sampling Event				
TTAOC22-MW06	62	52 - 62	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
TTAOC22-MW10	60	49 - 59	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
TTAOC22-MW11	64	53 - 63	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-FW-MW01	63.5	48.5-63.5	VOCs, PCBs, Total Fe and Cr	Fast flow rate due to stalling pump
BPS1-FW-MW02	64	49-64	VOCs, PCBs, Total Fe and Cr	
BPS1-FW-MW03	67	52-67	VOCs, PCBs, Total Fe and Cr	Fast flow rate due to stalling pump
BPS1-HN-MW27I	110	100-110	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-HN-MW29I	130.5	120-130	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW301S	62	51-61	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW301I	140	130-140	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW301D	220	210-220	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW302S	51	41-51	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	Fast flow rate due to stalling pump
BPS1-TT-MW302I1	120	110-120	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW302I2	150	140-150	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW302D	213	203-213	VOCs, PCBs, Total Fe and Cr	pH would not stabilize
BPS1-TT-MW303S	58	46-56	VOCs, PCBs, Total Fe and Cr	Fast flow rate due to stalling pump
BPS1-TT-MW303I1	105	95-105	VOCs, PCBs, Total Fe and Cr, Dissolved Fe and Cr, Cr^{6+}	Cr^{6+} test result likely erroneous due to turbidity
BPS1-TT-MW303I2	156	146-156	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW303D	218	208-218	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW304S	53	43-53	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW304I1	112	102-112	VOCs, PCBs, Total Fe and Cr, Dissolved Fe and Cr, Cr^{6+}	
BPS1-TT-MW304I2	150	140-150	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW304D	190	180-190	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW305S	50	40-50	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW305I	200	190-200	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW305D	296	286-296	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW306S	60	50-60	VOCs, PCBs, Total Fe and Cr, Dissolved Fe and Cr, Cr^{6+}	Fast flow rate due to stalling pump
BPS1-TT-MW306I	199	189-199	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW306D	294	284-294	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW307S	50.5	40.5-50.5	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW307I	198	188-198	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW307D	286	276-286	VOCs, PCBs, Total Fe and Cr, Dissolved Fe and Cr	Low pH
BPS1-TT-MW308S	64	54-64	VOCs, PCBs, Total Fe and Cr, Dissolved Fe and Cr	Fast flow rate due to stalling pump
BPS1-TT-MW308I	166	156-166	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW308D	260	250-260	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW309S	63	53-63	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW309I	170	160-170	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW309D	262	252-262	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW310S	68	57.5-67.5	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	Specific Conductivity elevated
BPS1-TT-MW311S	65	55-65	VOCs, PCBs, Total Fe and Cr, Dissolved Fe and Cr, Cr^{6+}	Elevated turbidity, and Fast flow rate due to stalling pump
BPS1-TT-MW311I	170	160-170	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW312S	63	53-63	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW312I	170	160-170	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW313S	63	53-63	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW314S	65	55-65	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW314I	154	144-154	VOCs, PCBs, Total Fe and Cr	Fast flow rate due to stalling pump

TABLE 3-3
GROUNDWATER SAMPLE SUMMARY
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

Well	Total Depth (feet bgs)	Screened Interval Depth (feet bgs)	Analysis	Notes
February 2013 Sampling Event				
TTAOC22-MW06	62	52 - 62	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
TTAOC22-MW10	60	49 - 59	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
TTAOC22-MW11	64	53 - 63	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-HN-MW27I	110	100-110	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW301D	220	210-220	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW308S	64	54-64	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW308I	166	156-166	VOCs, PCBs, Total Fe and Cr, Dissolved Fe and Cr	
BPS1-TT-MW308D	260	250-260	VOCs, PCBs, Total Fe and Cr, Cr^{6}+	
BPS1-TT-MW309S	63	53-63	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW309I	170	160-170	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW309D	262	252-262	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW310S	68	57.5-67.5	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW311S	65	55-65	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW311I	170	160-170	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW312S	63	53-63	VOCs, PCBs, Total Fe and Cr, Cr^{6+}	
BPS1-TT-MW312I	170	160-170	VOCs, PCBs, Total Fe and Cr, Dissolved Fe and Cr	
BPS1-TT-MW313S	63	53-63	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW314S	65	55-65	VOCs, PCBs, Total Fe and Cr	
BPS1-TT-MW314I	154	144-154	VOCs, PCBs, Total Fe and Cr, Cr^{6}+	

Notes:

bgs : below ground surface
VOCs : Volatile Organic Compounds
PCBs : Polychlorinated Biphenyls
Fe and Cr : Iron and Chromium
Cr^{6+} : Hexavalent Chromium

TABLE 4-1
FIELD TEST KIT AND LABORATORY CHROMIUM RESULTS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHAPGE, NEW YORK

		November 2012			February 2013		
Monitoring Well ID	**Screened Interval Depth (feet bgs)**	**Hexavalent Chromium Test Kit[1] Result (µg/L)**	**Hexavalent Chromium Lab Analytical Result (µg/L)**	**Total Chromium Lab Analytical Result (µg/L)**	**Hexavalent Chromium Test Kit[1] Result (µg/L)**	**Hexavalent Chromium Lab Analytical Result (µg/L)**	**Total Chromium Lab Analytical Result (µg/L)**
TTAOC22-MW06	52 - 62	30	ND	2.4	--	ND	1.9
TTAOC22-MW10	49 - 59	--	**158**	**160**	--	**111**	**110**
TTAOC22-MW11	53 - 63	--	**18.3**	48	--	**12**	39
BPS1-FW-MW01	48.5-63.5	ND	--	4.2	--	--	--
BPS1-FW-MW02	49-64	10	--	7.8	--	--	--
BPS1-FW-MW03	52-67	10	--	5.7	--	--	--
BPS1-HN-MW27I	100-110	80	**6.4 J**	8.8	--	**5.4**	12
BPS1-HN-MW29I	120-130	100	0.7 J	11.0	--	--	--
BPS1-TT-MW301S	51-61	50	1.2	2.8	--	--	--
BPS1-TT-MW301I	130-140	60	**6.1**	7.8	--	--	--
BPS1-TT-MW301D	210-220	110	**81.1**	82	80	**73.4**	65
BPS1-TT-MW302S	41-51	--	0.4 J	1.1	--	--	--
BPS1-TT-MW302I1	110-120	10	--	4	--	--	--
BPS1-TT-MW302I2	140-150	20	2.9	8	--	--	--
BPS1-TT-MW302D	203-213	10	--	1.4	--	--	--
BPS1-TT-MW303S	46-56	20	--	3.8	--	--	--
BPS1-TT-MW303I1	95-105	620*	ND	4.9	--	--	--
BPS1-TT-MW303I2	146-156	10	ND	11	--	--	--
BPS1-TT-MW303D	208-218	100	--	62	--	--	--
BPS1-TT-MW304S	43-53	10	--	2.4	--	--	--
BPS1-TT-MW304I1	102-112	30	**21.5**	30	--	--	--
BPS1-TT-MW304I2	140-150	170	**152**	21 J	--	--	--
BPS1-TT-MW304D	180-190	ND	--	2.2	--	--	--
BPS1-TT-MW305S	40-50	ND	--	1.7	--	--	--
BPS1-TT-MW305I	190-200	20	ND	4.5	--	--	--
BPS1-TT-MW305D	286-296	--	ND	1.7	--	--	--
BPS1-TT-MW306S	50-60	--	0.6 J	4.6	--	--	--
BPS1-TT-MW306I	189-199	ND	ND	2.5	--	--	--
BPS1-TT-MW306D	284-294	10	--	3.1	--	--	--
BPS1-TT-MW307S	40.5-50.5	--	ND	1.6	--	--	--
BPS1-TT-MW307I	188-198	120	ND	5.5	--	--	--
BPS1-TT-MW307D	276-286	40	--	13	--	--	--
BPS1-TT-MW308S	54-64	ND	--	36	ND	--	14
BPS1-TT-MW308I	156-166	ND	--	30	ND	--	29
BPS1-TT-MW308D	250-260	10	--	81	90	**82.2**	82
BPS1-TT-MW309S	53-63	ND	--	6.4	10	--	5.3
BPS1-TT-MW309I	160-170	60	**55.1**	61	10	--	55
BPS1-TT-MW309D	252-262	20	ND	4	ND	ND	1.6
BPS1-TT-MW310S	57.5-67.5	20	ND	11	10	--	16
BPS1-TT-MW311S	55-65	20	2.6	14	ND	--	18
BPS1-TT-MW311I	160-170	20	ND	5.8	10	--	0.73 J
BPS1-TT-MW312S	53-63	10	ND	21	20	ND	11
BPS1-TT-MW312I	160-170	ND	**5.7**	14	10	--	12
BPS1-TT-MW313S	53-63	10	--	9.7	10	--	1.8
BPS1-TT-MW314S	55-65	10	--	4.2	10	--	4.7
BPS1-TT-MW314I	144-154	30	**22.9**	33	40	**21.9**	37

Notes:
µg/L : micrograms per liter
bgs : below ground surface
ND : Non Detect
J : Estimated Value
-- : Not sampled
[1] Field test kits followed Hach Method 8023
* Turbidity Interference

TABLE 4-2
ANALYTICAL DETECTIONS MONITORING WELLS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	BPS1-FW-MW01-20121114	BPS1-FW-MW02-20121114	BPS1-FW-MW03-20121114	BPS1-HN-MW27I-20121114	BPS1-HN-MW27I-20130218	BPS1-HN-MW29I-20121114	BPS1-TT-MW301S-20121113	BPS1-TT-MW301I-20121113
Sample Interval (feet bgs)				**48.5-63.5**	**49-64**	**52-67**	**100 - 110**	**100 - 110**	**120-130**	**51-61**	**130-140**
VOLATILES (µg/L)											
1,1,1-TRICHLOROETHANE	71-55-6	200	5	3.2	0.57 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	76-13-1	NE	50	0.9 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	75-34-3	NE	5	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	75-35-4	7	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	123-91-1	NE	50	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
BENZENE	71-43-2	5	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOMETHANE	74-83-9	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	56-23-5	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	67-66-3	NE	50	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	74-87-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	**22**	0.34 J	0.22 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	75-71-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	100-41-4	700	5	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
ISOPROPYLBENZENE	98-82-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ACETATE	79-20-9	NE	50	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	1634-04-4	NE	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	127-18-4	5	5	**100**	**43**	**77**	0.5 U	0.5 U	0.67 J	0.5 U	0.5 U
TRICHLOROETHENE	79-01-6	5	5	**9.4**	3.7	2.8	0.5 U	0.5 U	0.26 J	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE	75-69-4	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)											
AROCLOR-1242	53469-21-9	0.5	0.5	0.08 U	0.091 U	0.17 U	0.08 U	0.085 U	0.086 U	0.8 U	0.08 U
AROCLOR-1248	12672-29-6	0.5	0.5	0.45 J	0.091 U	**2.3**	**1.2**	**0.61 J**	**1.5**	**9.9**	**0.73**
METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	4.2	7.8	5.7	8.8	12	11	2.8	7.8
IRON	7439-89-6	NE	300	**900**	**280**	**840**	120	68	**1900**	44	56
HEXAVALENT CHROMIUM	18540-29-9	100[3]	100[3]	NA	NA	NA	6.4 J	5.4	0.7 J	1.2	6.1
DISSOLVED METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	NA	NA
IRON	7439-89-6	NE	300	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
MCL : Maximum Contaminant Level
NYSDOH : New York State Department of Health
bgs : below ground surface
µg/L : micrograms per liter
U : Non Detect
J : Estimated Value
R : Rejected Value
NA : Not Analyzed
NE : Not Established
Bolded and shaded value indicates exceedance of Federal or NYSDOH MCLs
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website at http://www.epa.gov/safewater/contaminants/index.html#primary
[2] (NYSDOH, 2004) New York Public Supply Regulations, 10 NYCRR Part 5, Subpart 5-1 Public Water Systems, Table 3-Organic Chemicals Maximum Contaminant Level Determination and Table 9D - Organic Chemicals - Principal Organic Contaminants, from the NYSDOH website at http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm
[3] There is no promulgated Hexavalent Chromium standard. Total Chromium MCL used instead.

TABLE 4-2
ANALYTICAL DETECTIONS MONITORING WELLS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	BPS1-TT-MW301D-20121113	BPS1-TT-MW301D-20121113-D	BPS1-TT-MW301D-20130221	BPS1-TT-MW301D-20130221-D	BPS1-TT-MW302S-20121115	BPS1-TT-MW302I1-20121101	BPS1-TT-MW302I2-20121105	BPS1-TT-MW302D-20121101
Sample Interval (feet bgs)				**210-220**	**210-220**	**210-220**	**210-220**	**41-51**	**110-120**	**140-150**	**203-213**
VOLATILES (µg/L)											
1,1,1-TRICHLOROETHANE	71-55-6	200	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6 J	0.5 U	0.35 J
1,1,2-TRICHLOROTRIFLUOROETHANE	76-13-1	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.31 J	0.5 U	0.5 U
1,1-DICHLOROETHANE	75-34-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2	0.5 U	0.25 J
1,1-DICHLOROETHENE	75-35-4	7	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3
1,4-DIOXANE	123-91-1	NE	50	25 UR	25 UR	25 UR	25 UR	25 UR	21 J	25 UR	25 UR
BENZENE	71-43-2	5	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOMETHANE	74-83-9	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	56-23-5	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	67-66-3	NE	50	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.15 J	0.2 U	0.13 J
CHLOROMETHANE	74-87-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	75-71-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
ETHYLBENZENE	100-41-4	700	5	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
ISOPROPYLBENZENE	98-82-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ACETATE	79-20-9	NE	50	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 UJ
METHYL TERT-BUTYL ETHER	1634-04-4	NE	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	127-18-4	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.37 J	0.25 J	0.5 U	0.38 J
TRICHLOROETHENE	79-01-6	5	5	0.68 J	0.62 J	0.43 J	0.43 J	1.3	3.1	1.8	**5.5**
TRICHLOROFLUOROMETHANE	75-69-4	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)											
AROCLOR-1242	53469-21-9	0.5	0.5	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1248	12672-29-6	0.5	0.5	**0.67**	**0.69**	**0.56**	**0.6**	0.18 J	**1.1**	**1.5**	**0.93**
METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	82	76	65 J	65 J	1.1	4	8	1.4
IRON	7439-89-6	NE	300	14	19	12	13	92	22	100	19
HEXAVALENT CHROMIUM	18540-29-9	100[3]	100[3]	81.1	82.4	73.4 J	75.4 J	0.4 J	NA	2.9	NA
DISSOLVED METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	NA	NA
IRON	7439-89-6	NE	300	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
MCL : Maximum Contaminant Level
NYSDOH : New York State Department of Health
bgs : below ground surface
µg/L : micrograms per liter
U : Non Detect
J : Estimated Value
R : Rejected Value
NA : Not Analyzed
NE : Not Established
Bolded and shaded value indicates exceedance of Federal or NYSDOH MCLs
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website at http://www.epa.gov/safewater/contaminants/index.html#primary
[2] (NYSDOH, 2004) New York Public Supply Regulations, 10 NYCRR Part 5, Subpart 5-1 Public Water Systems, Table 3-Organic Chemicals Maximum Contaminant Level Determination and Table 9D - Organic Chemicals - Principal Organic Contaminants, from the NYSDOH website at http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm
[3] There is no promulgated Hexavalent Chromium standard. Total Chromium MCL used instead.

TABLE 4-2
ANALYTICAL DETECTIONS MONITORING WELLS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	BPS1-TT-MW303S-20121101	BPS1-TT-MW303I1-20121102	BPS1-TT-MW303I2-20121105	BPS1-TT-MW303D-20121105	BPS1-TT-MW304S-20121106	BPS1-TT-MW304I1-20121106	BPS1-TT-MW304I2-20121108	BPS1-TT-MW304D-20121109
Sample Interval (feet bgs)				**46-56**	**95-105**	**146-156**	**208-218**	**43-53**	**102-112**	**140-150**	**180-190**
VOLATILES (µg/L)											
1,1,1-TRICHLOROETHANE	71-55-6	200	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	76-13-1	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	75-34-3	NE	5	0.5 U	1	0.5 U	0.5 U	0.5 U	1.5	0.5 U	0.5 U
1,1-DICHLOROETHENE	75-35-4	7	5	0.5 U	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	123-91-1	NE	50	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
BENZENE	71-43-2	5	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOMETHANE	74-83-9	NE	5	0.5 U	0.66 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	56-23-5	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	67-66-3	NE	50	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	74-87-3	NE	5	0.5 U	0.43 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	0.5 U	1.6	0.5 U	0.5 U	0.5 U	**21**	1.9	0.5 U
DICHLORODIFLUOROMETHANE	75-71-8	NE	5	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U
ETHYLBENZENE	100-41-4	700	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
ISOPROPYLBENZENE	98-82-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ACETATE	79-20-9	NE	50	1 UJ	0.88 J	1 U	1 U	1 U	1 U	1 U	0.93 U
METHYL TERT-BUTYL ETHER	1634-04-4	NE	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	127-18-4	5	5	1.9	**46**	0.72 J	0.5 U	0.5 U	**23**	3.1	0.5 U
TRICHLOROETHENE	79-01-6	5	5	1.6	**10**	1.1	0.45 J	0.5 U	**5.6**	0.87 J	0.5 U
TRICHLOROFLUOROMETHANE	75-69-4	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)											
AROCLOR-1242	53469-21-9	0.5	0.5	0.08 U	**3**	0.16 U	0.16 U	0.08 U	0.08 U	0.16 U	0.32 U
AROCLOR-1248	12672-29-6	0.5	0.5	0.18 J	0.16 U	**2 J**	**2.2**	0.08 U	**1.5**	**2.5**	**3.9**
METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	3.8	4.9	11	62	2.4	30	21	2.2
IRON	7439-89-6	NE	300	60	**4800**	90	**2000**	14	**500**	120	16
HEXAVALENT CHROMIUM	18540-29-9	100[3]	100[3]	NA	1 U	1 U	NA	NA	21.5	152	NA
DISSOLVED METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	NA	0.7 J	NA	NA	NA	22	NA	NA
IRON	7439-89-6	NE	300	NA	260	NA	NA	NA	8.2 J	NA	NA

Notes:
MCL : Maximum Contaminant Level
NYSDOH : New York State Department of Health
bgs : below ground surface
µg/L : micrograms per liter
U : Non Detect
J : Estimated Value
R : Rejected Value
NA : Not Analyzed
NE : Not Established
Bolded and shaded value indicates exceedance of Federal or NYSDOH MCLs
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website at http://www.epa.gov/safewater/contaminants/index.html#primary
[2] (NYSDOH, 2004) New York Public Supply Regulations, 10 NYCRR Part 5, Subpart 5-1 Public Water Systems, Table 3-Organic Chemicals Maximum Contaminant Level Determination and Table 9D - Organic Chemicals - Principal Organic Contaminants, from the NYSDOH website at http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm
[3] There is no promulgated Hexavalent Chromium standard. Total Chromium MCL used instead.

TABLE 4-2
ANALYTICAL DETECTIONS MONITORING WELLS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	BPS1-TT-MW305S-20121115	BPS1-TT-MW305S-20121115-DUP	BPS1-TT-MW305I-20121108	BPS1-TT-MW305I-20121108-DUP	BPS1-TT-MW305D-20121115	BPS1-TT-MW306S-20121116	BPS1-TT-MW306I-20121108	BPS1-TT-MW306D-20121108
Sample Interval (feet bgs)				**40-50**	**40-50**	**190-200**	**190-200**	**286-296**	**50-60**	**189-199**	**284-294**
VOLATILES (µg/L)											
1,1,1-TRICHLOROETHANE	71-55-6	200	5	0.5 U	0.5 U	0.65 J	0.59 J	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	76-13-1	NE	50	0.5 U	0.5 U	1.6	1.4	0.44 J	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	75-34-3	NE	5	0.5 U	0.5 U	4.5	4.6	0.56 J	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	75-35-4	7	5	0.5 U	0.5 U	1.9	2	0.96 J	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	123-91-1	NE	50	25 UR	25 UR	**70 J**	**81 J**	25 UR	25 UR	25 UR	25 UR
BENZENE	71-43-2	5	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOMETHANE	74-83-9	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	56-23-5	5	5	0.5 U	0.5 U	0.42 J	0.42 J	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	67-66-3	NE	50	0.2 U	0.2 U	0.29 J	0.3 J	0.18 J	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	74-87-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	0.5 U	0.5 U	**9.4**	**8.4**	0.32 J	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	75-71-8	NE	5	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.22 J	0.5 U	0.5 UJ	0.5 UJ
ETHYLBENZENE	100-41-4	700	5	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U
ISOPROPYLBENZENE	98-82-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ACETATE	79-20-9	NE	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	1634-04-4	NE	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	127-18-4	5	5	0.5 U	0.5 U	**5.2**	**5**	1.8	0.32 J	0.5 U	0.31 J
TRICHLOROETHENE	79-01-6	5	5	0.5 U	0.5 U	**3400**	**3300**	**200**	0.5 U	0.46 J	1.5
TRICHLOROFLUOROMETHANE	75-69-4	NE	50	0.5 U	0.5 U	0.88 J	0.85 J	1.2	0.5 U	0.5 U	0.5 U
PCBS (µg/L)											
AROCLOR-1242	53469-21-9	0.5	0.5	0.08 U	0.08 U	0.08 U	0.16 U	0.08 U	0.08 U	0.16 U	0.16 U
AROCLOR-1248	12672-29-6	0.5	0.5	0.08 U	0.08 U	**1.1 J**	**1.1 J**	0.08 U	0.55 U	**2.7 J**	**1.1 J**
METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	1.7	1.7	4.5	3.8	1.7	4.6	2.5	3.1
IRON	7439-89-6	NE	300	58	68	**770**	**630**	91	**960**	25	39
HEXAVALENT CHROMIUM	18540-29-9	100[3]	100[3]	NA	NA	1 U	NA	1 U	0.6 J	1 U	NA
DISSOLVED METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	NA	NA	NA	NA	NA	0.48 J	NA	NA
IRON	7439-89-6	NE	300	NA	NA	NA	NA	NA	9.5 J	NA	NA

Notes:
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NA : Not Analyzed
NE : Not Established
Bolded and shaded value indicates exceedance of Federal or NYSDOH MCLs
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website at http://www.epa.gov/safewater/contaminants/index.html#primary
[2] (NYSDOH, 2004) New York Public Supply Regulations, 10 NYCRR Part 5, Subpart 5-1 Public Water Systems, Table 3-Organic Chemicals Maximum Contaminant Level Determination and Table 9D - Organic Chemicals - Principal Organic Contaminants, from the NYSDOH website at http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm
[3] There is no promulgated Hexavalent Chromium standard. Total Chromium MCL used instead.

TABLE 4-2
ANALYTICAL DETECTIONS MONITORING WELLS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	BPS1-TT-MW307S-20121116	BPS1-TT-MW307I-20121106	BPS1-TT-MW307I-20121106-DUP	BPS1-TT-MW307D-20121106	BPS1-TT-MW308S-20121112	BPS1-TT-MW308S-20130220	BPS1-TT-MW308I-20121112	BPS1-TT-MW308I-20130221
Sample Interval (feet bgs)				**40.5-50.5**	**188-198**	**188-198**	**276-286**	**54-64**	**54-64**	**156-166**	**156-166**
VOLATILES (µg/L)											
1,1,1-TRICHLOROETHANE	71-55-6	200	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.21 J	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	76-13-1	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	75-34-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	75-35-4	7	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	123-91-1	NE	50	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
BENZENE	71-43-2	5	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOMETHANE	74-83-9	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	56-23-5	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	67-66-3	NE	50	0.12 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	74-87-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	75-71-8	NE	5	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	100-41-4	700	5	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
ISOPROPYLBENZENE	98-82-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ACETATE	79-20-9	NE	50	1 U	1 U	1 U	1 U	1.2 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	1634-04-4	NE	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	127-18-4	5	5	0.69 J	1	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	79-01-6	5	5	0.41 J	0.71 J	0.86 J	0.5 U	0.81 J	0.84 J	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE	75-69-4	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)											
AROCLOR-1242	53469-21-9	0.5	0.5	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.085 U	0.08 U
AROCLOR-1248	12672-29-6	0.5	0.5	0.042 U	0.33	0.36	0.31	0.17 J	0.15 J	0.32	0.35
METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	1.6	5.5	6.7	13	36	14	30	29
IRON	7439-89-6	NE	300	100	99	110	**1100**	**1600**	**440**	**3200**	**880**
HEXAVALENT CHROMIUM	18540-29-9	100[3]	100[3]	1 U	1 U	NA	NA	NA	NA	NA	NA
DISSOLVED METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	NA	NA	NA	0.23 J	8.2	NA	NA	7.5
IRON	7439-89-6	NE	300	NA	NA	NA	10	23	NA	NA	37 U

Notes:
MCL : Maximum Contaminant Level
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NA : Not Analyzed
NE : Not Established
Bolded and shaded value indicates exceedance of Federal or NYSDOH MCLs
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website at http://www.epa.gov/safewater/contaminants/index.html#primary
[2] (NYSDOH, 2004) New York Public Supply Regulations, 10 NYCRR Part 5, Subpart 5-1 Public Water Systems, Table 3-Organic Chemicals Maximum Contaminant Level Determination and Table 9D - Organic Chemicals - Principal Organic Contaminants, from the NYSDOH website at http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm
[3] There is no promulgated Hexavalent Chromium standard. Total Chromium MCL used instead.

TABLE 4-2
ANALYTICAL DETECTIONS MONITORING WELLS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	BPS1-TT-MW308D-20121113	BPS1-TT-MW308D-20130220	BPS1-TT-MW309S-20121112	BPS1-TT-MW309S-20130220	BPS1-TT-MW309I-20121112	BPS1-TT-MW309I-20130220	BPS1-TT-MW309D-20121113	BPS1-TT-MW309D-20130221
Sample Interval (feet bgs)				**250-260**	**250-260**	**53-63**	**53-63**	**160-170**	**160-170**	**252-262**	**252-262**
VOLATILES (µg/L)											
1,1,1-TRICHLOROETHANE	71-55-6	200	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	76-13-1	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.45 J	0.26 J
1,1-DICHLOROETHANE	75-34-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.23 J	0.18 J
1,1-DICHLOROETHENE	75-35-4	7	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	123-91-1	NE	50	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
BENZENE	71-43-2	5	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOMETHANE	74-83-9	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	56-23-5	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	67-66-3	NE	50	0.2 U	0.14 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	74-87-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	75-71-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	100-41-4	700	5	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
ISOPROPYLBENZENE	98-82-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ACETATE	79-20-9	NE	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	1634-04-4	NE	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	127-18-4	5	5	0.69 J	0.75 J	0.5 U	0.5 U	0.5 U	0.5 U	1.1	1.1
TRICHLOROETHENE	79-01-6	5	5	0.95 J	0.82 J	0.83 J	0.52 J	0.23 J	0.21 J	1.6	1.4
TRICHLOROFLUOROMETHANE	75-69-4	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)											
AROCLOR-1242	53469-21-9	0.5	0.5	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U	0.086 U	0.08 U
AROCLOR-1248	12672-29-6	0.5	0.5	0.056 J	0.089 U	**0.9**	0.82	0.41	0.27	0.086 U	0.08 U
METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	81	82 J	6.4	5.3	61	55	4	1.6
IRON	7439-89-6	NE	300	35	180	43	30 U	91	47	220	150
HEXAVALENT CHROMIUM	18540-29-9	100[3]	100[3]	NA	82.2 J	NA	NA	55.1	NA	1 U	1 U
DISSOLVED METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	NA	NA	NA	NA	NA	NA	NA	NA
IRON	7439-89-6	NE	300	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
MCL : Maximum Contaminant Level
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J : Estimated Value
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[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website at http://www.epa.gov/safewater/contaminants/index.html#primary
[2] (NYSDOH, 2004) New York Public Supply Regulations, 10 NYCRR Part 5, Subpart 5-1 Public Water Systems, Table 3-Organic Chemicals Maximum Contaminant Level Determination and Table 9D - Organic Chemicals - Principal Organic Contaminants, from the NYSDOH website at http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm
[3] There is no promulgated Hexavalent Chromium standard. Total Chromium MCL used instead.

TABLE 4-2
ANALYTICAL DETECTIONS MONITORING WELLS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	BPS1-TT-MW310S-20121114	BPS1-TT-MW310S-20121114-DUP	BPS1-TT-MW310S-20130221	BPS1-TT-MW311S-20121115	BPS1-TT-MW311S-20130219	BPS1-TT-MW311I-20121115	BPS1-TT-MW311I-20130219	BPS1-TT-MW312S-20121109
Sample Interval (feet bgs)				**57.5 - 67.5**	**57.5 - 67.5**	**57.5 - 67.5**	**55 - 65**	**55 - 65**	**160 - 170**	**160 - 170**	**53 - 63**
VOLATILES (µg/L)											
1,1,1-TRICHLOROETHANE	71-55-6	200	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	76-13-1	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	75-34-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	75-35-4	7	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	123-91-1	NE	50	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
BENZENE	71-43-2	5	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOMETHANE	74-83-9	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	56-23-5	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	67-66-3	NE	50	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.43 J	0.52 J	0.2 U
CHLOROMETHANE	74-87-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	75-71-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	100-41-4	700	5	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
ISOPROPYLBENZENE	98-82-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ACETATE	79-20-9	NE	50	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	0.96 U
METHYL TERT-BUTYL ETHER	1634-04-4	NE	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.4	4.3	0.5 U
TETRACHLOROETHENE	127-18-4	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	79-01-6	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.46 J	0.73 J	0.5 U
TRICHLOROFLUOROMETHANE	75-69-4	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)											
AROCLOR-1242	53469-21-9	0.5	0.5	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1248	12672-29-6	0.5	0.5	0.08 U	0.08 U	0.08 U	0.17 J	0.19 J	0.28	0.32 J	0.08 U
METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	11	9.4	16	14	18	5.8	0.73 J	21
IRON	7439-89-6	NE	300	**2900**	**3600**	220	**1800**	180	130	78	**3000**
HEXAVALENT CHROMIUM	18540-29-9	100[3]	100[3]	1 UJ	0.8 J	NA	2.6	NA	1 U	NA	1 U
DISSOLVED METALS (µg/L)											
CHROMIUM	7440-47-3	100	100	NA	NA	NA	4.9	NA	NA	NA	NA
IRON	7439-89-6	NE	300	NA	NA	NA	26	NA	NA	NA	NA

Notes:
MCL : Maximum Contaminant Level
NYSDOH : New York State Department of Health
bgs : below ground surface
µg/L : micrograms per liter
U : Non Detect
J : Estimated Value
R : Rejected Value
NA : Not Analyzed
NE : Not Established
Bolded and shaded value indicates exceedance of Federal or NYSDOH MCLs
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website at http://www.epa.gov/safewater/contaminants/index.html#primary
[2] (NYSDOH, 2004) New York Public Supply Regulations, 10 NYCRR Part 5, Subpart 5-1 Public Water Systems, Table 3-Organic Chemicals Maximum Contaminant Level Determination and Table 9D - Organic Chemicals - Principal Organic Contaminants, from the NYSDOH website at http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm
[3] There is no promulgated Hexavalent Chromium standard. Total Chromium MCL used instead.

TABLE 4-2
ANALYTICAL DETECTIONS MONITORING WELLS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	BPS1-TT-MW312S-20130220	BPS1-TT-MW312I-20121109	BPS1-TT-MW312I-20130220	BPS1-TT-MW313S-20121114	BPS1-TT-MW313S-20130221	BPS1-TT-MW314S-20121113	BPS1-TT-MW314S-20130219	BPS1-TT-MW314I-20121114	BPS1-TT-MW314I-20130219
Sample Interval (feet bgs)				**53 - 63**	**160 - 170**	**160 - 170**	**53 - 63**	**53 - 63**	**55 - 65**	**55 - 65**	**144 - 154**	**144 - 154**
VOLATILES (µg/L)												
1,1,1-TRICHLOROETHANE	71-55-6	200	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	76-13-1	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	75-34-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	75-35-4	7	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	123-91-1	NE	50	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
BENZENE	71-43-2	5	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOMETHANE	74-83-9	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	56-23-5	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	67-66-3	NE	50	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	74-87-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	75-71-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	100-41-4	700	5	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
ISOPROPYLBENZENE	98-82-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ACETATE	79-20-9	NE	50	1 U	0.99 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	1634-04-4	NE	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	127-18-4	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	79-01-6	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE	75-69-4	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)												
AROCLOR-1242	53469-21-9	0.5	0.5	0.094 U	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1248	12672-29-6	0.5	0.5	0.094 U	0.14 J	0.16 J	0.08 U	0.08 U	0.37	0.37	0.29	0.27
METALS (µg/L)												
CHROMIUM	7440-47-3	100	100	11	14	12	9.7	1.8	4.2	4.7	33	37
IRON	7439-89-6	NE	300	**420**	120	**1200**	310	180	**350**	**450**	85	**650**
HEXAVALENT CHROMIUM	18540-29-9	100[3]	100[3]	1 U	5.7	NA	NA	NA	NA	NA	22.9 J	21.9
DISSOLVED METALS (µg/L)												
CHROMIUM	7440-47-3	100	100	NA	NA	6.5	NA	NA	NA	NA	NA	NA
IRON	7439-89-6	NE	300	NA	NA	17 U	NA	NA	NA	NA	NA	NA

Notes:
MCL : Maximum Contaminant Level
NYSDOH : New York State Department of Health
bgs : below ground surface
µg/L : micrograms per liter
U : Non Detect
J : Estimated Value
R : Rejected Value
NA : Not Analyzed
NE : Not Established
Bolded and shaded value indicates exceedance of Federal or NYSDOH MCLs
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website at http://www.epa.gov/safewater/contaminants/index.html#primary
[2] (NYSDOH, 2004) New York Public Supply Regulations, 10 NYCRR Part 5, Subpart 5-1 Public Water Systems, Table 3-Organic Chemicals Maximum Contaminant Level Determination and Table 9D - Organic Chemicals - Principal Organic Contaminants, from the NYSDOH website at http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm
[3] There is no promulgated Hexavalent Chromium standard. Total Chromium MCL used instead.

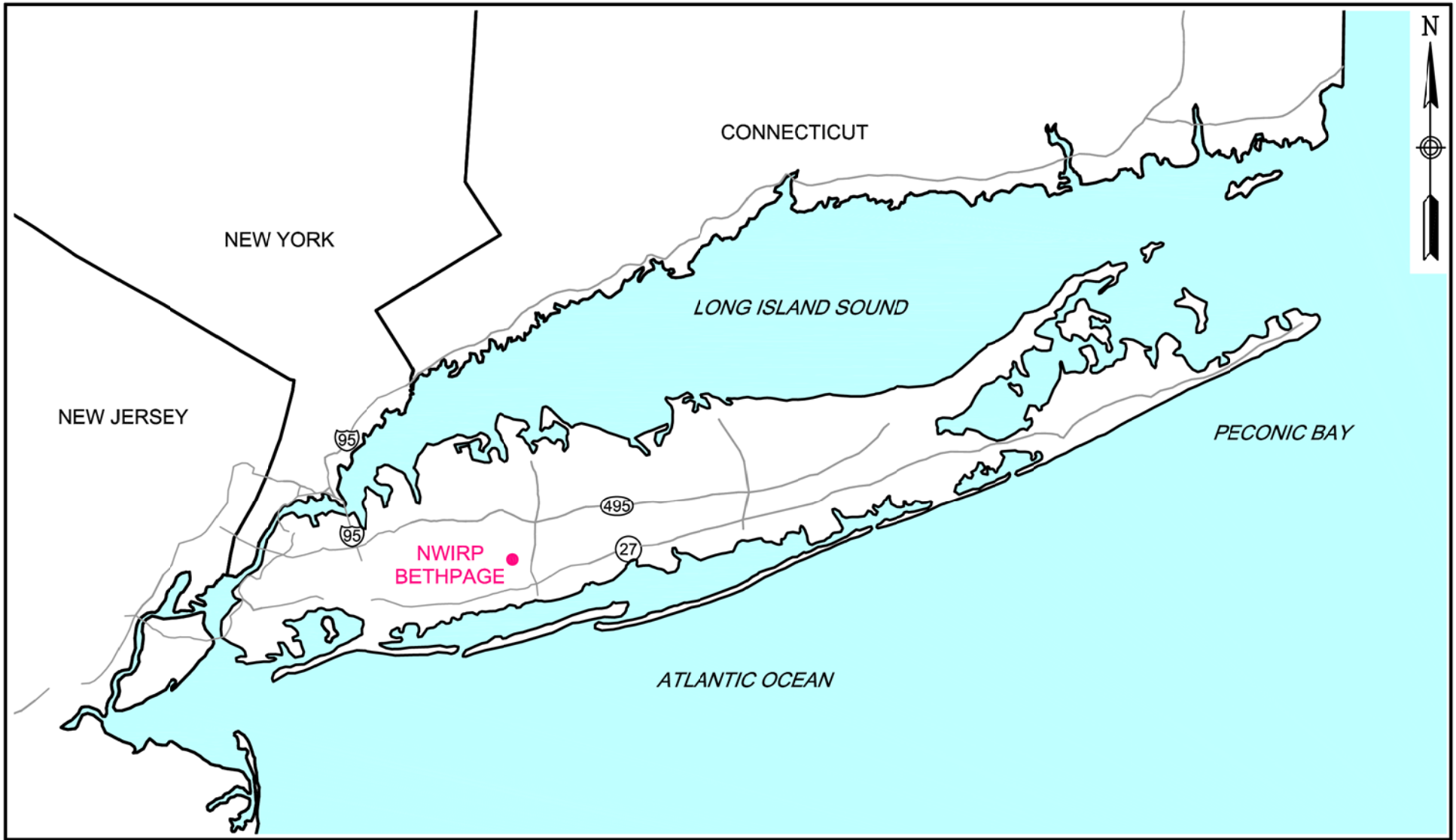
TABLE 4-2
ANALYTICAL DETECTIONS MONITORING WELLS
SITE 1 - FORMER DRUM MARSHALLING AREA
NWIRP BETHPAGE, NEW YORK

	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	TTAOC22-MW06-20121115	TTAOC22-MW06-20130218	TTAOC22-MW10-20121115	TTAOC22-MW10-20130218	TTAOC22-MW11-20121116	TTAOC22-MW11-20130218
Sample Interval (feet bgs)				**52 - 62**	**52 - 62**	**49 - 59**	**49 - 59**	**53 - 63**	**53 - 63**
VOLATILES (µg/L)									
1,1,1-TRICHLOROETHANE	71-55-6	200	5	0.5 U	0.16 J	0.2 J	0.21 J	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	76-13-1	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	75-34-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	75-35-4	7	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	123-91-1	NE	50	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
BENZENE	71-43-2	5	5	0.39 J	0.24 J	0.2 U	0.2 U	0.2 U	0.2 U
BROMOMETHANE	74-83-9	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	56-23-5	5	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	67-66-3	NE	50	0.2 U	0.2 U	0.38 J	0.29 J	0.2 U	0.2 U
CHLOROMETHANE	74-87-3	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	75-71-8	NE	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	100-41-4	700	5	0.7 J	0.26 J	0.5 UJ	0.5 U	0.5 UJ	0.5 U
ISOPROPYLBENZENE	98-82-8	NE	5	1.6	1.9	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ACETATE	79-20-9	NE	50	1 U	1.1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	1634-04-4	NE	10	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	127-18-4	5	5	0.5 U	0.5 U	0.83 J	1	0.5 U	0.23 J
TRICHLOROETHENE	79-01-6	5	5	0.33 J	0.36 J	**86**	**66**	0.94 J	0.64 J
TRICHLOROFLUOROMETHANE	75-69-4	NE	50	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)									
AROCLOR-1242	53469-21-9	0.5	0.5	0.08 U	0.08 U	0.094 U	0.08 U	0.08 U	0.089 U
AROCLOR-1248	12672-29-6	0.5	0.5	0.041 J	0.08 U	0.48	0.24 J	0.24 U	0.089 U
METALS (µg/L)									
CHROMIUM	7440-47-3	100	100	2.4	1.9	**160**	**110 J**	48	39
IRON	7439-89-6	NE	300	**28000**	**38000**	**1600**	**2600**	**7000**	**680**
HEXAVALENT CHROMIUM	18540-29-9	100[3]	100[3]	1 U	1 U	**158**	**111 J**	18.3 J	12
DISSOLVED METALS (µg/L)									
CHROMIUM	7440-47-3	100	100	NA	NA	NA	NA	NA	NA
IRON	7439-89-6	NE	300	NA	NA	NA	NA	NA	NA

Notes:
MCL : Maximum Contaminant Level
NYSDOH : New York State Department of Health
bgs : below ground surface
µg/L : micrograms per liter
U : Non Detect
J : Estimated Value
R : Rejected Value
NA : Not Analyzed
NE : Not Established
Bolded and shaded value indicates exceedance of Federal or NYSDOH MCLs
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website at http://www.epa.gov/safewater/contaminants/index.html#primary
[2] (NYSDOH, 2004) New York Public Supply Regulations, 10 NYCRR Part 5, Subpart 5-1 Public Water Systems, Table 3-Organic Chemicals Maximum Contaminant Level Determination and Table 9D - Organic Chemicals - Principal Organic Contaminants, from the NYSDOH website at http://www.health.state.ny.us/environmental/water/drinking/part5/subpart5.htm
[3] There is no promulgated Hexavalent Chromium standard. Total Chromium MCL used instead.

FIGURES

112G00622\0510\112G00622CM01.DWG 08/02/10 MKB



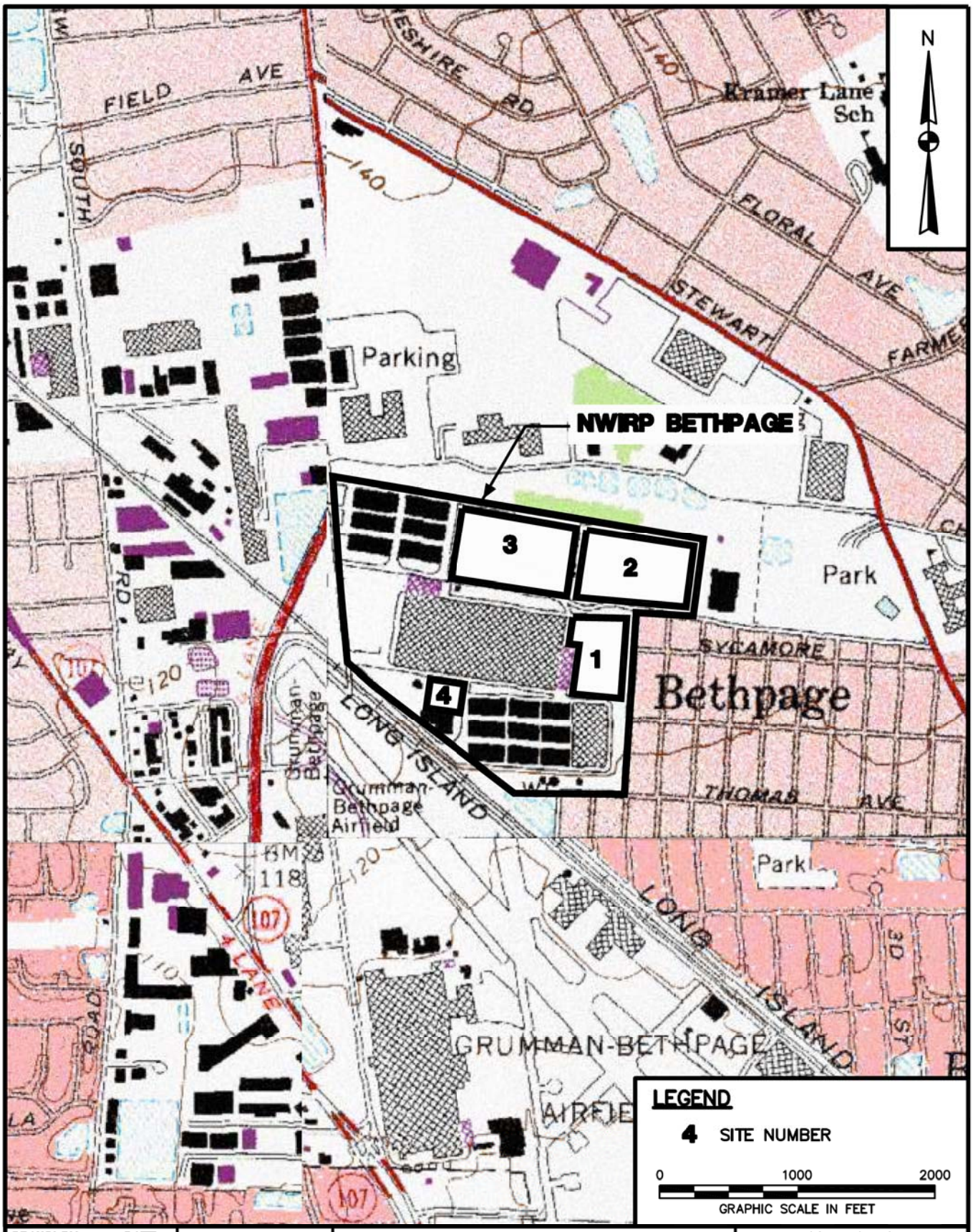
0 15 30
SCALE IN MILES

TETRA TECHNUS, INC.

GENERAL LOCATION MAP
NWIRP BETHPAGE
BETHPAGE, NEW YORK

SCALE	NOT TO SCALE
FILE	112G00622CM01
REV 0	DATE 08/02/10
FIGURE NUMBER	FIGURE 1-1

ACAD: 0804CM02.dwg 06/13/07 MF PIT



DRAWN BY MF DATE 6/13/07	Tetra Tech NUS, Inc.	SITE LOCATION MAP SITE 1 NWIRP BETHPAGE BETHPAGE, NEW YORK	CONTRACT NO. 0804
CHECKED BY DATE			OWNER NO.
REVISED BY DATE			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1-2 REV. 0

FORM CADD NO. TTNUS-AV.DWG - REV 1 -9/10/98

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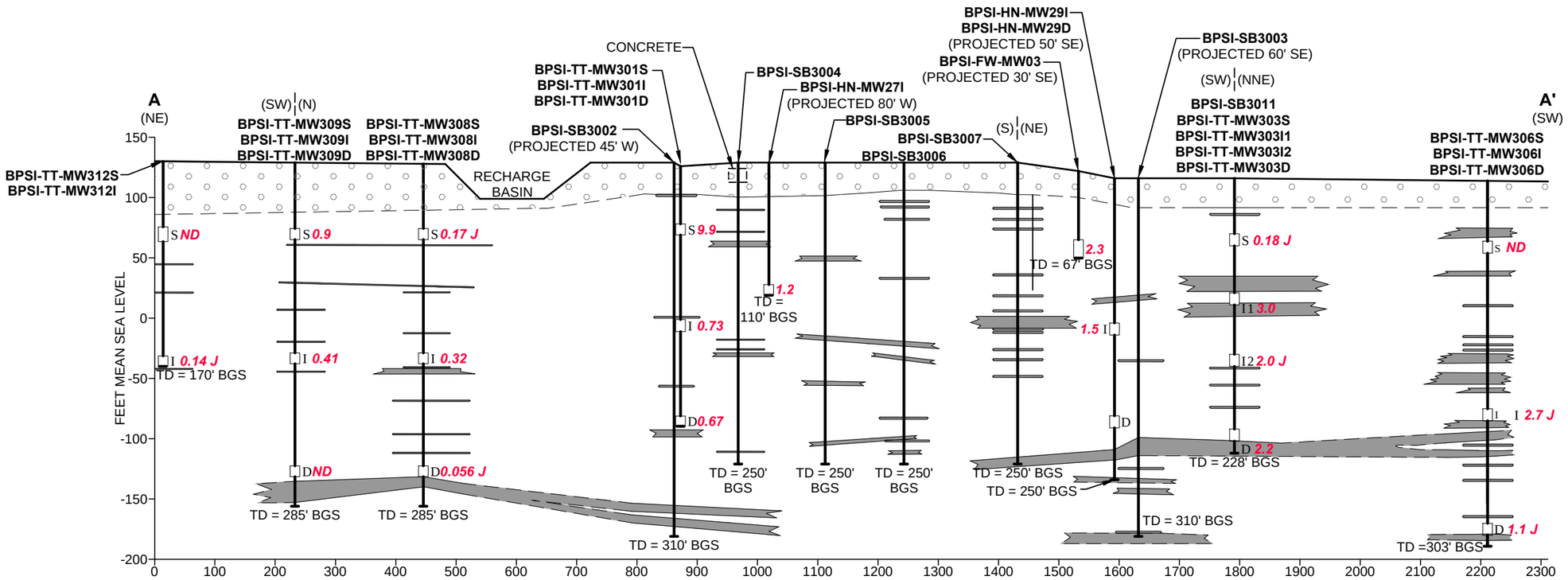
112G02230\DE.TM.DR\112G02230GS01.DWG 04/22/13 MKB



LEGEND

	SAND AND GRAVEL		GROUND SURFACE (APPROXIMATED TO BE FLAT)
	SAND WITH VARYING AMOUNTS OF SILT, CLAY, AND GRAVEL		SILT OR CLAY LAYER (DASHED WHERE INFERRED)
	CLAY, CLAYEY SILT, OR SILT		SILT OR CLAY LENS (FEW INCHES THICK)
BPSI-SB3011	SOIL BORING	S 0.21	MONITORING WELL SCREEN AND NOVEMBER 2012 TOTAL PCBs IN MICROGRAMS PER LITER (µg/L)
BPSI-TT-MW303S	MONITORING WELL	TD = 250' BGS	TOTAL DEPTH FEET BELOW GROUND SURFACE (BGS)
(PROJECTED 50' NW)	PROJECTED DISTANCE AND DIRECTION TO CROSS SECTION LINE	*ND*	NON-DETECT
		J	ESTIMATED VALUE

200
100
0
VERTICAL SCALE IN FEET

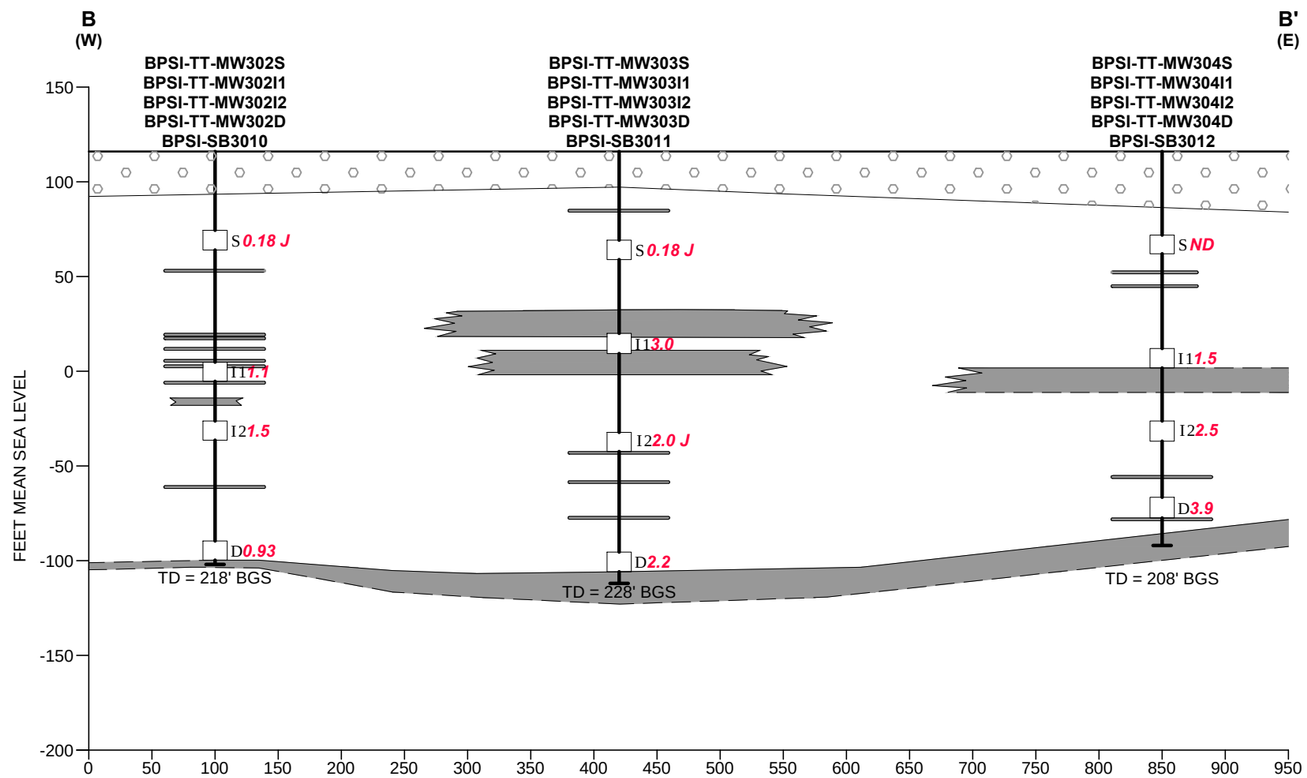
0 200 400
HORIZONTAL SCALE IN FEET

TETRA TECH

GEOLOGIC CROSS SECTION A – A'
SITE 1 – FORMER DRUM MARSHALLING AREA
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
BETHPAGE, NEW YORK

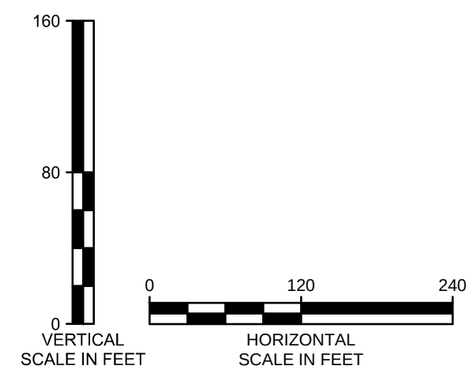
FILE	SCALE
112G02230GS01	AS NOTED
FIGURE NUMBER: FIGURE 4–2	REV: 0 / DATE: 04/22/13

112G02230\DE.TM.DR\112G02230GS02.DWG 03/25/13 MKB



LEGEND

	SAND AND GRAVEL
	SAND WITH VARYING AMOUNTS OF SILT, CLAY, AND GRAVEL
	CLAY, CLAYEY SILT, OR SILT
BPSI-SB3011	SOIL BORING
BPSI-TT-MW303S	MONITORING WELL
(PROJECTED 50' NW)	PROJECTED DISTANCE AND DIRECTION TO CROSS SECTION LINE
	GROUND SURFACE (APPROXIMATED TO BE FLAT)
	SILT OR CLAY LAYER (DASHED WHERE INFERRED)
	SILT OR CLAY LENS (FEW INCHES THICK)
S *0.21*	MONITORING WELL SCREEN AND NOVEMBER 2012 TOTAL PCBs IN MICROGRAMS PER LITER (µg/L)
TD = 250' BGS	TOTAL DEPTH FEET BELOW GROUND SURFACE (BGS)
ND	NON-DETECT
J	ESTIMATED VALUE

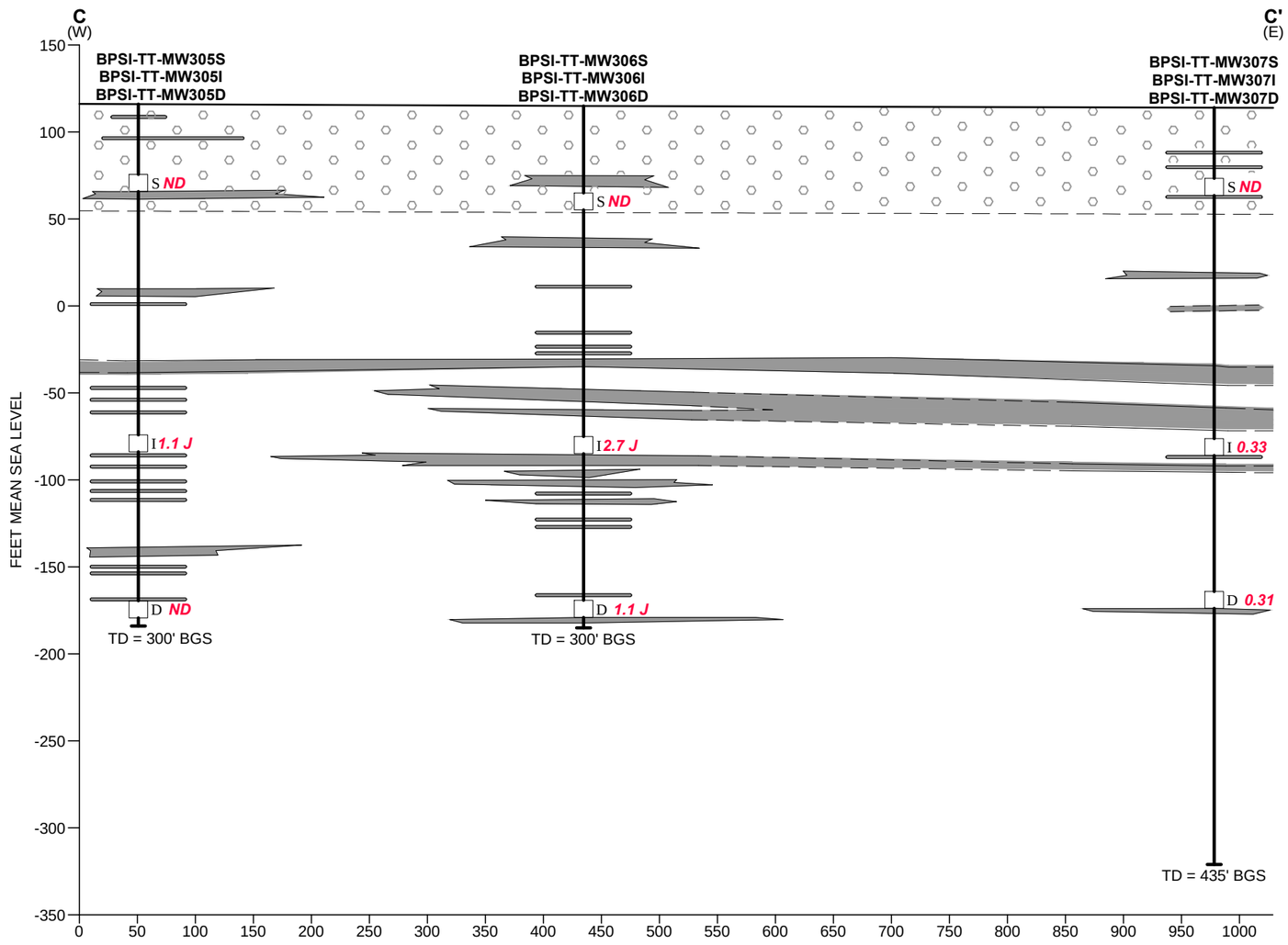


TETRA TECH

GEOLOGIC CROSS SECTION B – B'
SITE 1 – FORMER DRUM
MARSHALLING AREA
NAVAL WEAPONS INDUSTRIAL
RESERVE PLANT
BETHPAGE, NEW YORK

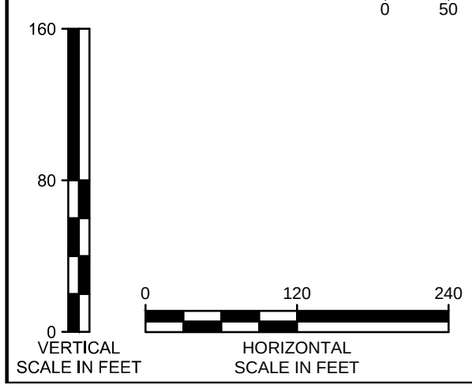
FILE 112G02230GS02	SCALE AS NOTED
FIGURE NUMBER FIGURE 4–3	REV 0 / DATE 03/25/13

112G02230\DE.TM.DR\112G02230GS03.DWG 03/25/13 MKB



LEGEND

	SAND AND GRAVEL
	SAND WITH VARYING AMOUNTS OF SILT, CLAY, AND GRAVEL
	CLAY, CLAYEY SILT, OR SANDY CLAY
BPSI-TT-MW305S	MONITORING WELL
	GROUND SURFACE (APPROXIMATED TO BE FLAT)
	SILT OR CLAY LAYER (DASHED WHERE INFERRED)
	SILT OR CLAY LENS (FEW INCHES THICK)
S *0.54*	MONITORING WELL SCREEN AND NOVEMBER 2012 TOTAL PCBs IN MICROGRAMS PER LITER (µg/L)
TD = 250' BGS	TOTAL DEPTH FEET BELOW GROUND SURFACE (BGS)
ND	NON-DETECT
J	ESTIMATED VALUE



TETRA TECH

GEOLOGIC CROSS SECTION C – C'
SITE 1 – FORMER DRUM
MARSHALLING AREA
NAVAL WEAPONS INDUSTRIAL
RESERVE PLANT
BETHPAGE, NEW YORK

FILE	SCALE
112G02230GS03	AS NOTED
FIGURE NUMBER	REV / DATE
FIGURE 4–4	0 / 03/25/13

TETRA TECH

Shallow Pontentiometric Surface Map
April 2013
Site 1-Former Drum Marshalling Area
NWIRP Bethpage
Bethpage,New York

FILE	112G02230	SCALE	AS NOTED
FIGURE NO.	FIGURE 4-5	REV	DATE 6/6/13

P:\GIS files\Bethpage\MAP DOCS\MXD\Bethpage Site1 pcb site1 pot shallow 043013.mxd MMC 060613

P:\GIS_files\Bethpage\MAP DOCS\MXD\Bethpage_Site1_pcb site1_pot_intermediate_043013.mxd MMC 060613

TETRA TECH

Intermediate Pontentiometric Surface Map
April 2013
Site 1-Former Drum Marshalling Area
NWIRP Bethpage
Bethpage,New York

FILE	112G02230	SCALE AS NOTED
FIGURE NO.	FIGURE 4-6	REV / DATE 6/6/13

P:\GIS_files\Bethpage\MAP DOCS\MXD\Bethpage_Site1_pcb site1_pot_deep_043013.mxd MMC 060613

Legend

- Existing Monitoring Well
- Groundwater Contour (Feet MSL)
- Groundwater Contour Inferred (Feet MSL

0 125 250 500 Feet

TETRA TECH

Deep Pontentiometric Surface Map
April 2013
Site 1-Former Drum Marshalling Area
NWIRP Bethpage
Bethpage,New York

FILE	112G02230	SCALE AS NOTED
FIGURE NO.	FIGURE 4-7	REV / DATE 6/6/13

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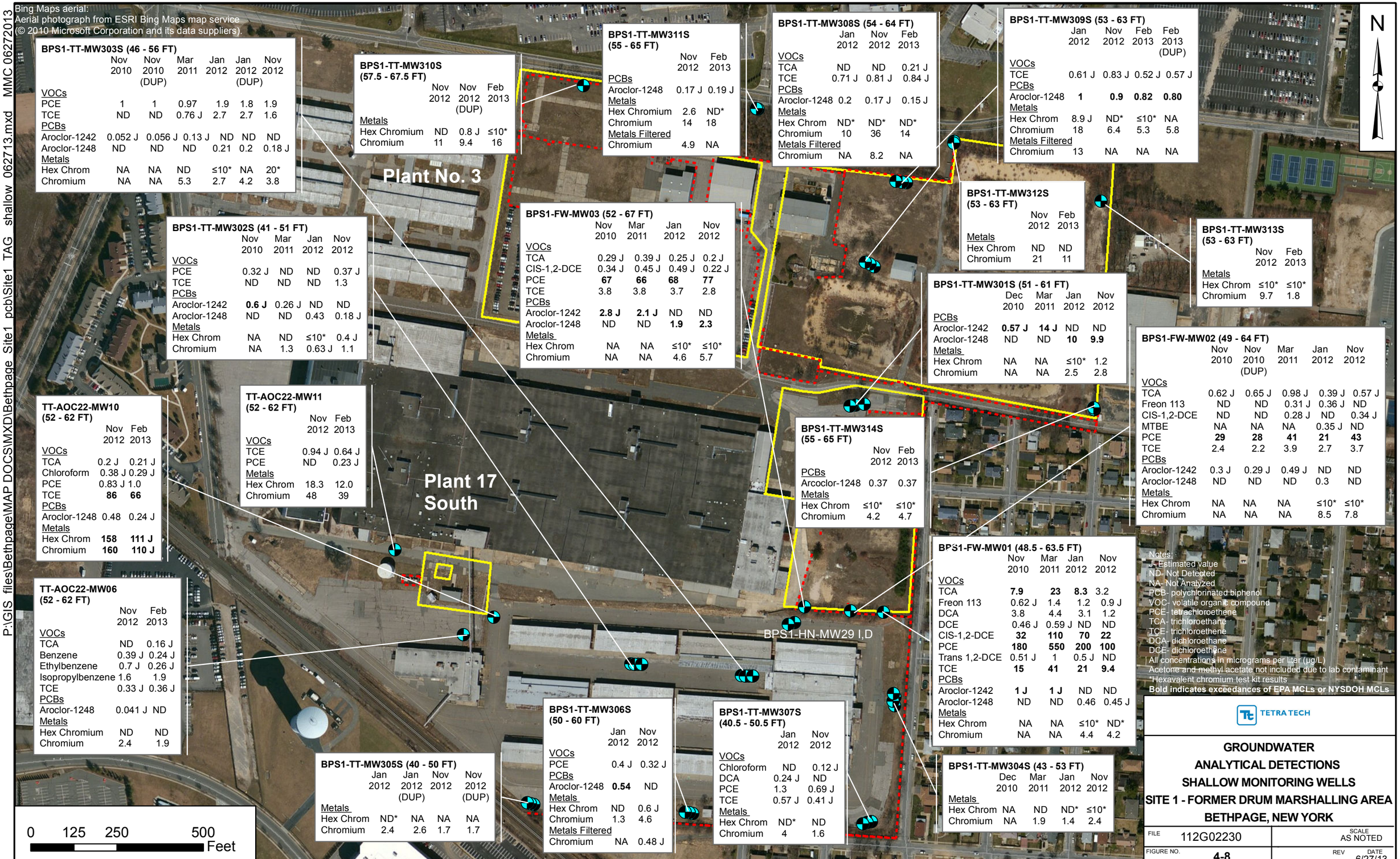

BPS1-TT-MW303S (46 - 56 FT)

	Nov 2010	Nov 2010 (DUP)	Mar 2011	Jan 2012	Jan 2012 (DUP)	Nov 2012
VOCs						
PCE	1	1	0.97	1.9	1.8	1.9
TCE	ND	ND	0.76 J	2.7	2.7	1.6
PCBs						
Aroclor-1242	0.052 J	0.056 J	0.13 J	ND	ND	ND
Aroclor-1248	ND	ND	ND	0.21	0.2	0.18 J
Metals						
Hex Chrom	NA	NA	ND	≤10*	NA	20*
Chromium	NA	NA	5.3	2.7	4.2	3.8

BPS1-TT-MW310S (57.5 - 67.5 FT)

	Nov 2012	Nov 2012 (DUP)	Feb 2013
Metals			
Hex Chromium	ND	0.8 J	≤10*
Chromium	11	9.4	16

BPS1-TT-MW311S (55 - 65 FT)

	Nov 2012	Feb 2013
PCBs		
Aroclor-1248	0.17 J	0.19 J
Metals		
Hex Chromium	2.6	ND*
Chromium	14	18
Metals Filtered		
Chromium	4.9	NA

BPS1-TT-MW308S (54 - 64 FT)

	Jan 2012	Nov 2012	Feb 2013
VOCs			
TCA	ND	ND	0.21 J
TCE	0.71 J	0.81 J	0.84 J
PCBs			
Aroclor-1248	0.2	0.17 J	0.15 J
Metals			
Hex Chrom	ND*	ND*	ND*
Chromium	10	36	14
Metals Filtered			
Chromium	NA	8.2	NA

BPS1-TT-MW309S (53 - 63 FT)

	Jan 2012	Nov 2012	Feb 2013	Feb 2013 (DUP)
VOCs				
TCE	0.61 J	0.83 J	0.52 J	0.57 J
PCBs				
Aroclor-1248	**1**	**0.9**	**0.82**	**0.80**
Metals				
Hex Chrom	8.9 J	ND*	≤10*	NA
Chromium	18	6.4	5.3	5.8
Metals Filtered				
Chromium	13	NA	NA	NA

BPS1-TT-MW302S (41 - 51 FT)

	Nov 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
PCE	0.32 J	ND	ND	0.37 J
TCE	ND	ND	ND	1.3
PCBs				
Aroclor-1242	**0.6 J**	0.26 J	ND	ND
Aroclor-1248	ND	ND	0.43	0.18 J
Metals				
Hex Chrom	NA	ND	≤10*	0.4 J
Chromium	NA	1.3	0.63 J	1.1

BPS1-FW-MW03 (52 - 67 FT)

	Nov 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
TCA	0.29 J	0.39 J	0.25 J	0.2 J
CIS-1,2-DCE	0.34 J	0.45 J	0.49 J	0.22 J
PCE	**67**	**66**	**68**	**77**
TCE	3.8	3.8	3.7	2.8
PCBs				
Aroclor-1242	**2.8 J**	**2.1 J**	ND	ND
Aroclor-1248	ND	ND	**1.9**	**2.3**
Metals				
Hex Chrom	NA	NA	≤10*	≤10*
Chromium	NA	NA	4.6	5.7

BPS1-TT-MW312S (53 - 63 FT)

	Nov 2012	Feb 2013
Metals		
Hex Chrom	ND	ND
Chromium	21	11

BPS1-TT-MW313S (53 - 63 FT)

	Nov 2012	Feb 2013
Metals		
Hex Chrom	≤10*	≤10*
Chromium	9.7	1.8

BPS1-TT-MW301S (51 - 61 FT)

	Dec 2010	Mar 2011	Jan 2012	Nov 2012
PCBs				
Aroclor-1242	**0.57 J**	**14 J**	ND	ND
Aroclor-1248	ND	ND	**10**	**9.9**
Metals				
Hex Chrom	NA	NA	≤10*	1.2
Chromium	NA	NA	2.5	2.8

BPS1-FW-MW02 (49 - 64 FT)

	Nov 2010	Nov 2010 (DUP)	Mar 2011	Jan 2012	Nov 2012
VOCs					
TCA	0.62 J	0.65 J	0.98 J	0.39 J	0.57 J
Freon 113	ND	ND	0.31 J	0.36 J	ND
CIS-1,2-DCE	ND	ND	0.28 J	ND	0.34 J
MTBE	NA	NA	NA	0.35 J	ND
PCE	**29**	**28**	**41**	**21**	**43**
TCE	2.4	2.2	3.9	2.7	3.7
PCBs					
Aroclor-1242	0.3 J	0.29 J	0.49 J	ND	ND
Aroclor-1248	ND	ND	ND	0.3	ND
Metals					
Hex Chrom	NA	NA	NA	≤10*	≤10*
Chromium	NA	NA	NA	8.5	7.8

TT-AOC22-MW10 (52 - 62 FT)

	Nov 2012	Feb 2013
VOCs		
TCA	0.2 J	0.21 J
Chloroform	0.38 J	0.29 J
PCE	0.83 J	1.0
TCE	**86**	**66**
PCBs		
Aroclor-1248	0.48	0.24 J
Metals		
Hex Chrom	**158**	**111 J**
Chromium	**160**	**110 J**

TT-AOC22-MW11 (52 - 62 FT)

	Nov 2012	Feb 2013
VOCs		
TCE	0.94 J	0.64 J
PCE	ND	0.23 J
Metals		
Hex Chrom	18.3	12.0
Chromium	48	39

BPS1-TT-MW314S (55 - 65 FT)

	Nov 2012	Feb 2013
PCBs		
Arcoclor-1248	0.37	0.37
Metals		
Hex Chrom	≤10*	≤10*
Chromium	4.2	4.7

TT-AOC22-MW06 (52 - 62 FT)

	Nov 2012	Feb 2013
VOCs		
TCA	ND	0.16 J
Benzene	0.39 J	0.24 J
Ethylbenzene	0.7 J	0.26 J
Isopropylbenzene	1.6	1.9
TCE	0.33 J	0.36 J
PCBs		
Aroclor-1248	0.041 J	ND
Metals		
Hex Chromium	ND	ND
Chromium	2.4	1.9

BPS1-FW-MW01 (48.5 - 63.5 FT)

	Nov 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
TCA	**7.9**	**23**	**8.3**	3.2
Freon 113	0.62 J	1.4	1.2	0.9 J
DCA	3.8	4.4	3.1	1.2
DCE	0.46 J	0.59 J	ND	ND
CIS-1,2-DCE	**32**	**110**	**70**	**22**
PCE	**180**	**550**	**200**	**100**
Trans 1,2-DCE	0.51 J	1	0.5 J	ND
TCE	**15**	**41**	**21**	**9.4**
PCBs				
Aroclor-1242	**1 J**	**1 J**	ND	ND
Aroclor-1248	ND	ND	0.46	0.45 J
Metals				
Hex Chrom	NA	NA	≤10*	ND*
Chromium	NA	NA	4.4	4.2

BPS1-TT-MW306S (50 - 60 FT)

	Jan 2012	Nov 2012
VOCs		
PCE	0.4 J	0.32 J
PCBs		
Aroclor-1248	**0.54**	ND
Metals		
Hex Chrom	ND	0.6 J
Chromium	1.3	4.6
Metals Filtered		
Chromium	NA	0.48 J

BPS1-TT-MW307S (40.5 - 50.5 FT)

	Jan 2012	Nov 2012
VOCs		
Chloroform	ND	0.12 J
DCA	0.24 J	ND
PCE	1.3	0.69 J
TCE	0.57 J	0.41 J
Metals		
Hex Chrom	ND*	ND
Chromium	4	1.6

BPS1-TT-MW305S (40 - 50 FT)

	Jan 2012	Jan 2012 (DUP)	Nov 2012	Nov 2012 (DUP)
Metals				
Hex Chrom	ND*	NA	NA	NA
Chromium	2.4	2.6	1.7	1.7

BPS1-TT-MW304S (43 - 53 FT)

	Dec 2010	Mar 2011	Jan 2012	Nov 2012
Metals				
Hex Chrom	NA	ND	ND*	≤10*
Chromium	NA	1.9	1.4	2.4

Notes:
J- Estimated value
ND- Not Detected
NA- Not Analyzed
PCB- polychlorinated biphenol
VOC- volatile organic compound
PCE- tetrachloroethene
TCA- trichloroethane
TCE- trichloroethene
DCA- dichloroethane
DCE- dichloroethene
All concentrations in micrograms per liter (µg/L)
Acetone and methyl acetate not included due to lab contaminant
*Hexavalent chromium test kit results
Bold indicates exceedances of EPA MCLs or NYSDOH MCLs

TETRA TECH

GROUNDWATER ANALYTICAL DETECTIONS SHALLOW MONITORING WELLS SITE 1 - FORMER DRUM MARSHALLING AREA BETHPAGE, NEW YORK

FILE	112G02230	SCALE	AS NOTED
FIGURE NO.	4-8	REV	DATE 6/27/13

aps aerial:
hotograph from ESRI Bing Maps map service
0 Microsoft Corporation and its data suppliers).

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BPS1-TT-MW303I2 (146 - 156 FT)

	Nov 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
PCE	2.1	1.5	0.94 J	0.72 J
TCE	2.6	1.9	1.6	1.1
Freon 11	0.23 J	ND	ND	ND
PCBs				
Aroclor-1242	**3.4 J**	**2.3 J**	ND	ND
Aroclor-1248	ND	ND	**2.4**	**2 J**
Metals				
Hex Chrom	NA	NA	ND	ND
Chromium	NA	NA	2.4	11

BPS1-TT-MW302I1 (110 - 120 FT)

	Nov 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
DCA	ND	ND	0.45 J	1.2
TCA	ND	0.19 J	0.35 J	0.6 J
PCE	ND	0.19 J	0.29 J	0.25 J
TCE	0.55 J	0.76 J	1.7	3.1
Chloroform	ND	ND	ND	0.15 J
Freon 113	ND	ND	ND	0.31 J
1,4-Dioxane	ND	ND	ND	21 J
PCBs				
Aroclor-1242	**2 J**	**1.9 J**	ND	ND
Aroclor-1248	ND	ND	**1.2**	**1.1**
Metals				
Hex Chrom	NA	NA	≤10*	≤10*
Chromium	NA	NA	1.4	4

BPS1-TT-MW302I2 (140 - 150 FT)

	Nov 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
TCE	0.88 J	1.1 J	1.8	1.8
PCBs				
Aroclor-1242	**2.6 J**	**1.8 J**	ND	ND
Aroclor-1248	ND	ND	**1.9**	**1.5**
Metals				
Hex Chrom	NA	NA	≤10*	2.9
Chromium	NA	NA	5.1	8

BPS1-TT-MW311I (160 - 170 FT)

	Nov 2012	Feb 2013
VOCs		
Chloroform	0.43 J	0.52 J
MTBE	5.4	4.3
TCE	0.46 J	0.73 J
PCBs		
Aroclor-1248	0.28	0.32 J
Metals		
Hex Chrom	ND	≤10*
Chromium	5.8	0.73 J

BPS1-TT-MW308I (156 - 166 FT)

	Jan 2012	Nov 2012	Feb 2013
PCBs			
Aroclor-1242	**0.52**	ND	ND
Aroclor-1248	ND	0.32	0.35
Metals			
Hex Chrom	ND*	ND*	ND*
Chromium	10	30	29
Metals Filtered			
Chromium	NA	NA	7.5

BPS1-TT-MW309I (160 - 170 FT)

	Jan 2012	Nov 2012	Feb 2013
VOCs			
TCE	ND	0.23 J	0.21 J
PCBs			
Aroclor-1242	0.43	ND	ND
Aroclor-1248	ND	0.41	0.27
Metals			
Hex Chrom	47.7	55.1	≤10*
Chromium	49	61	55

BPS1-TT-MW312I (160 - 170 FT)

	Nov 2012	Feb 2013
PCBs		
Aroclor-1248	0.14 J	0.16 J
Metals		
Chromium	14	12
Hex Chrom	5.7	≤10*
Metals Filtered		
Chromium	NA	6.5

BPS1-HN-MW29I (120 - 130 FT)

	Dec 2010	Mar 2011	Jan 2012	Jan 2012 (DUP)	Nov 2012
VOCs					
PCE	1.3	0.58 J	0.49 J	0.46 J	0.67 J
TCE	0.57 J	0.40 J	ND	ND	0.26 J
PCBs					
Aroclor-1242	**0.94 J**	**1.2 J**	ND	ND	ND
Aroclor-1248	ND	ND	**0.63**	**0.66**	**1.5**
Metals					
Hex Chrom	NA	1.1	≤10*	NA	0.7 J
Chromium	NA	2	5.5	5.2	11

BPS1-TT-MW301I (130 - 140 FT)

	Dec 2010	Mar 2011	Jan 2012	Nov 2012
VOCs	ND	ND	ND	ND
PCBs				
Aroclor-1242	**0.69 J**	**0.73 J**	**0.79**	ND
Aroclor-1248	ND	ND	ND	**0.73**
Metals				
Hex Chrom	NA	4.5	5.3	6.1
Chromium	NA	7.7	7	7.8

BPS1-HN-MW27I

	Nov 2012	Feb 2013
PCBs		
Aroclor-1248	**1.2**	**0.61 J**
Metals		
Hex Chrom	6.4	5.4
Chromium	8.8	12

BPS1-TT-MW314I (144 - 154 FT)

	Nov 2012	Feb 2013
PCBs		
Aroclor-1248	0.29	0.27
Metals		
Hex Chrom	22.9	21.9
Chromium	33	37

BPS1-TT-MW303I1 (95 - 105 FT)

	Nov 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
DCA	1.7	2.4	1.6	1
DCE	2	2.7	1.6	1.1
Bromomethane	ND	ND	ND	0.66 J
Chloromethane	ND	ND	ND	0.43 J
CIS-1,2-DCE	1.9	3.4	2	1.6
Freon 11	0.3 J	ND	ND	ND
Freon 12	0.28 J	ND	ND	ND
PCE	**79**	**120**	**83**	**46**
TCE	**17**	**25**	**18**	**10**
PCBs				
Aroclor-1242	**3.9 J**	**2.8 J**	**3.9**	ND
Aroclor-1248	ND	ND	ND	**3**
Metals				
Hex Chrom	NA	1.1	ND*	ND
Chromium	NA	2	5.8	4.9
Metals Filtered				
Chromium	NA	ND	0.23 J	0.7 J

BPS1-TT-MW304I2 (140 - 150 FT)

	Nov 2010	Mar 2011	Jan 2012	Jan 2012 (DUP)	Nov 2012
VOCs					
TCA	0.64 J	0.31 J	0.26 J	0.23 J	ND
DCA	0.51 J	ND	ND	ND	ND
CIS-1,2-DCE	**8.8**	3.1	2.7	2.8	1.9
PCE	**17**	4.8	**5.5**	**5.5**	3.1
TCE	**5.4**	1.4	1.7	1.8	0.87 J
PCBs					
Aroclor-1242	**1.7 J**	**2.6 J**	ND	ND	ND
Aroclor-1248	ND	ND	**1.5**	**1.6**	**2.5**
Metals					
Hex Chrom	NA	**166**	**181**	**182**	**152**
Chromium	NA	**180**	**200**	**170**	**21 J**

BPS1-TT-MW306I (189 - 199 FT)

	Jan 2012	Nov 2012
VOCs		
TCE	0.54 J	0.46 J
PCBs		
Aroclor-1248	**1.8**	**2.7 J**
Metals		
Hex Chrom	ND	ND
Chromium	2.3	2.5

BPS1-TT-MW305I (190 - 200 FT)

	Jan 2012	Nov 2012	Nov 2012 (DUP)
VOCs			
TCA	0.28 J	0.65 J	0.59 J
DCA	2.7	4.5	4.6
DCE	1.3	1.9	2
CIS-1,2-DCE	4.7	**9.4**	**8.4**
PCE	3.3	**5.2**	**5**
TCE	**3,900**	**3,400**	**3,300**
Carbon Tet	0.49 J	0.42 J	0.42 J
Chloroform	0.27 J	0.29 J	0.3 J
Freon 113	1.1	1.6	1.4
Freon 11	0.91 J	0.88 J	0.85 J
1,4 Dioxane	ND	70 J	81 J
PCBs			
Aroclor-1248	**1.3**	**1.1 J**	**1.1 J**
Metals			
Hex Chrom	ND*	ND	20*
Chromium	3.5	4.5	3.8

BPS1-TT-MW307I (188 - 198 FT)

	Jan 2012	Nov 2012	Nov 2012 (DUP)
VOCs			
DCA	0.23 J	ND	ND
Carbon Disulfide	0.2 J	ND	ND
PCE	1.1	1	1.1
TCE	1.8	0.71 J	0.86 J
PCBs			
Aroclor-1248	**0.84**	0.33	0.36
Metals			
Hex Chrom	ND	ND	NA
Chromium	12	5.5	6.7

BPS1-TT-MW304I1 (102 - 112 FT)

	Dec 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
TCA	**15**	**6.1**	1.7	1.9
DCA	**6.9**	3.1	1.6	1.5
DCE	1	0.35 J	ND	ND
CIS-1,2-DCE	**85**	**35**	**6**	**21**
PCE	**93**	**54**	**25**	**23**
Trans-1,2-DCE	0.7 J	0.26 J	ND	ND
TCE	**27**	**11**	4.1	**5.6**
Freon 113	0.44 J	ND	ND	ND
PCBs				
Aroclor-1242	**0.5 J**	**0.89 J**	ND	ND
Aroclor-1248	ND	ND	**0.97**	**1.5**
Metals				
Hex Chrom	NA	58	35.5	21.5
Chromium	NA	55	38	30
Metals Filtered				
Chromium	NA	NA	NA	22

Notes:
J- Estimated value
ND- Not Detected
NA- Not Analyzed
PCB- polychlorinated biphenol
VOC- volatile organic compound
PCE- tetrachloroethene
TCA- trichloroethane
TCE- trichloroethene
DCA- dichloroethane
DCE- dichloroethene
All concentrations in micrograms per liter (µg/L)
Acetone and methyl acetate not included due to lab contaminant
*Hexavalent chromium test kit results
Bold indicates exceedances of EPA MCLs or NYSDOH MCLs

TETRA TECH

GROUNDWATER
ANALYTICAL DETECTIONS
INTERMEDIATE MONITORING WELLS
SITE 1-FORMER DRUM MARSHALLING AREA
BETHPAGE, NEW YORK

FILE	112G02230	SCALE	AS NOTED
FIGURE NO.	4-9	REV / DATE	6/27/13

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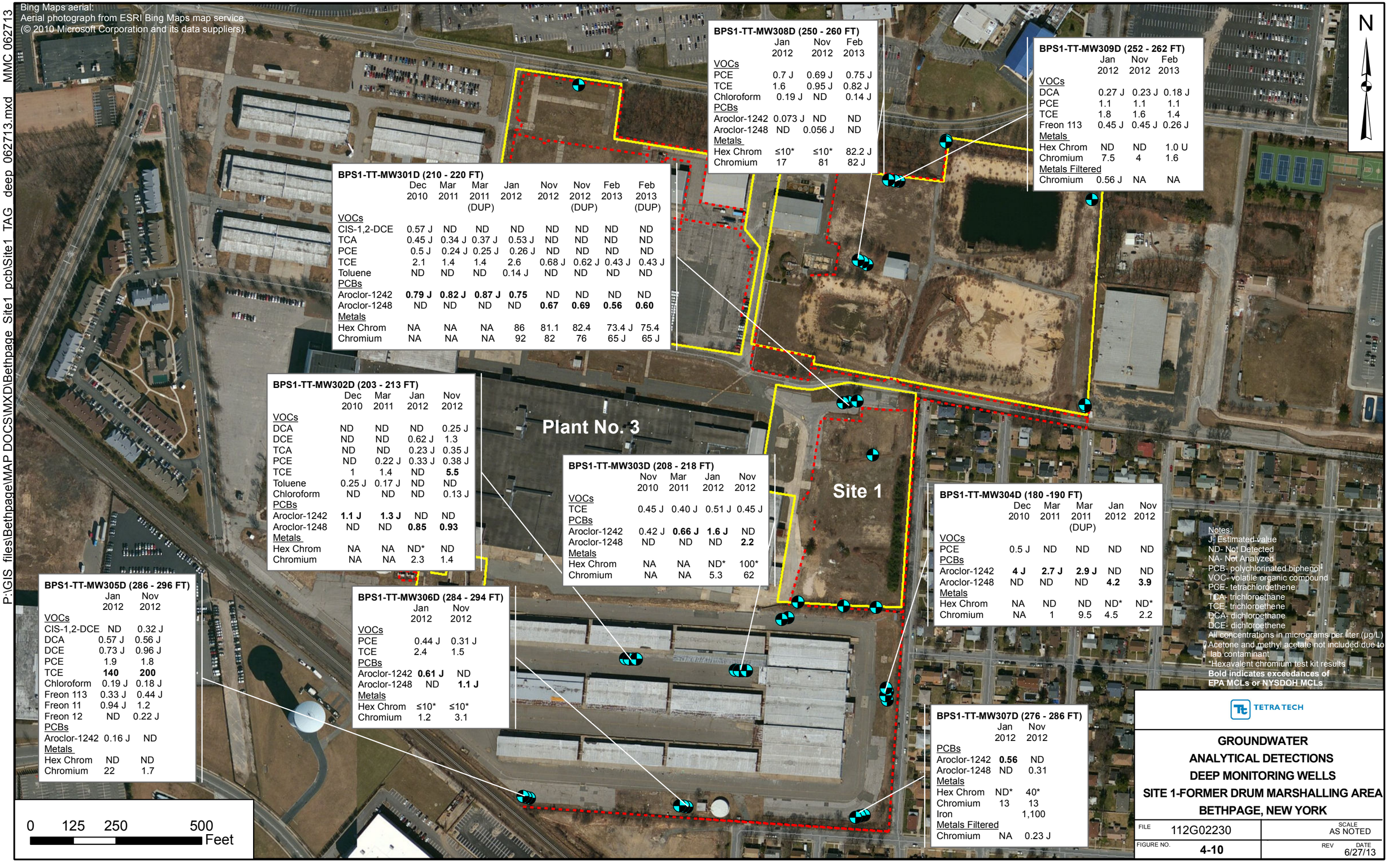


BPS1-TT-MW308D (250 - 260 FT)

	Jan 2012	Nov 2012	Feb 2013
VOCs			
PCE	0.7 J	0.69 J	0.75 J
TCE	1.6	0.95 J	0.82 J
Chloroform	0.19 J	ND	0.14 J
PCBs			
Aroclor-1242	0.073 J	ND	ND
Aroclor-1248	ND	0.056 J	ND
Metals			
Hex Chrom	≤10*	≤10*	82.2 J
Chromium	17	81	82 J

BPS1-TT-MW309D (252 - 262 FT)

	Jan 2012	Nov 2012	Feb 2013
VOCs			
DCA	0.27 J	0.23 J	0.18 J
PCE	1.1	1.1	1.1
TCE	1.8	1.6	1.4
Freon 113	0.45 J	0.45 J	0.26 J
Metals			
Hex Chrom	ND	ND	1.0 U
Chromium	7.5	4	1.6
Metals Filtered			
Chromium	0.56 J	NA	NA

BPS1-TT-MW301D (210 - 220 FT)

	Dec 2010	Mar 2011	Mar 2011 (DUP)	Jan 2012	Nov 2012	Nov 2012 (DUP)	Feb 2013	Feb 2013 (DUP)
VOCs								
CIS-1,2-DCE	0.57 J	ND	ND	ND	ND	ND	ND	ND
TCA	0.45 J	0.34 J	0.37 J	0.53 J	ND	ND	ND	ND
PCE	0.5 J	0.24 J	0.25 J	0.26 J	ND	ND	ND	ND
TCE	2.1	1.4	1.4	2.6	0.68 J	0.62 J	0.43 J	0.43 J
Toluene	ND	ND	ND	0.14 J	ND	ND	ND	ND
PCBs								
Aroclor-1242	**0.79 J**	**0.82 J**	**0.87 J**	**0.75**	ND	ND	ND	ND
Aroclor-1248	ND	ND	ND	ND	**0.67**	**0.69**	**0.56**	**0.60**
Metals								
Hex Chrom	NA	NA	NA	86	81.1	82.4	73.4 J	75.4
Chromium	NA	NA	NA	92	82	76	65 J	65 J

BPS1-TT-MW302D (203 - 213 FT)

	Dec 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
DCA	ND	ND	ND	0.25 J
DCE	ND	ND	0.62 J	1.3
TCA	ND	ND	0.23 J	0.35 J
PCE	ND	0.22 J	0.33 J	0.38 J
TCE	1	1.4	ND	**5.5**
Toluene	0.25 J	0.17 J	ND	ND
Chloroform	ND	ND	ND	0.13 J
PCBs				
Aroclor-1242	**1.1 J**	**1.3 J**	ND	ND
Aroclor-1248	ND	ND	**0.85**	**0.93**
Metals				
Hex Chrom	NA	NA	ND*	ND
Chromium	NA	NA	2.3	1.4

BPS1-TT-MW303D (208 - 218 FT)

	Nov 2010	Mar 2011	Jan 2012	Nov 2012
VOCs				
TCE	0.45 J	0.40 J	0.51 J	0.45 J
PCBs				
Aroclor-1242	0.42 J	**0.66 J**	**1.6 J**	ND
Aroclor-1248	ND	ND	ND	**2.2**
Metals				
Hex Chrom	NA	NA	ND*	100*
Chromium	NA	NA	5.3	62

BPS1-TT-MW304D (180 -190 FT)

	Dec 2010	Mar 2011	Mar 2011 (DUP)	Jan 2012	Nov 2012
VOCs					
PCE	0.5 J	ND	ND	ND	ND
PCBs					
Aroclor-1242	**4 J**	**2.7 J**	**2.9 J**	ND	ND
Aroclor-1248	ND	ND	ND	**4.2**	**3.9**
Metals					
Hex Chrom	NA	ND	ND	ND*	ND*
Chromium	NA	1	9.5	4.5	2.2

BPS1-TT-MW305D (286 - 296 FT)

	Jan 2012	Nov 2012
VOCs		
CIS-1,2-DCE	ND	0.32 J
DCA	0.57 J	0.56 J
DCE	0.73 J	0.96 J
PCE	1.9	1.8
TCE	**140**	**200**
Chloroform	0.19 J	0.18 J
Freon 113	0.33 J	0.44 J
Freon 11	0.94 J	1.2
Freon 12	ND	0.22 J
PCBs		
Aroclor-1242	0.16 J	ND
Metals		
Hex Chrom	ND	ND
Chromium	22	1.7

BPS1-TT-MW306D (284 - 294 FT)

	Jan 2012	Nov 2012
VOCs		
PCE	0.44 J	0.31 J
TCE	2.4	1.5
PCBs		
Aroclor-1242	**0.61 J**	ND
Aroclor-1248	ND	**1.1 J**
Metals		
Hex Chrom	≤10*	≤10*
Chromium	1.2	3.1

BPS1-TT-MW307D (276 - 286 FT)

	Jan 2012	Nov 2012
PCBs		
Aroclor-1242	**0.56**	ND
Aroclor-1248	ND	0.31
Metals		
Hex Chrom	ND*	40*
Chromium	13	13
Iron		1,100
Metals Filtered		
Chromium	NA	0.23 J

Notes:
J- Estimated value
ND- Not Detected
NA- Not Analyzed
PCB- polychlorinated biphenol
VOC- volatile organic compound
PCE- tetrachloroethene
TCA- trichloroethane
TCE- trichloroethene
DCA- dichloroethane
DCE- dichloroethene
All concentrations in micrograms per liter (µg/L)
Acetone and methyl acetate not included due to lab contaminant
*Hexavalent chromium test kit results
Bold indicates exceedances of EPA MCLs or NYSDOH MCLs

TETRA TECH

GROUNDWATER
ANALYTICAL DETECTIONS
DEEP MONITORING WELLS
SITE 1-FORMER DRUM MARSHALLING AREA
BETHPAGE, NEW YORK

FILE	112G02230	SCALE	AS NOTED
FIGURE NO.	4-10	REV / DATE	6/27/13

APPENDICES

APPENDIX A

FIELD FORMS, LOGSHEETS, AND DOCUMENTATION

SOIL BORING AND GAMMA LOGS

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F10

BORING No.: BPSI-TT-MW310S
DATE: 10-8-12 and 10-9-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		0												
				60/60		m. dense	DK Brn	Top Soil and roots		Post hole dig to moist	0	0	0	0
						m. dense	DK Brn	Silty F sand some small		5' bgs				
							Brn	pebbles and F. organics tr. to some sm-lg gravel (>1"Φ)		moist	0	0	0	0
10-8-12		5								less organics w/depth	0	0	0	0
10-9-12						m. dense/loose	brn	F-C Sand and pebbles some sm-med gravel tr. silt		moist	0	0	0	0
										moist	0	0	0	0
0750		10								moist	0	0	0	0
						m. dense/loose	brn/lt brn	F-C Sand and pebbles tr. to some gravel (<.5"Φ)		moist	0	0	0	0
										moist	0	0	0	0
0756		15								moist	0	0	0	0
						loose	lt brn	F-M sand some sm. pebbles tr. gravel		moist	0	0	0	0
										moist	0	0	0	0
0800		20								moist	0	0	0	0
						loose	lt brn	F-M sand some sm-med pebbles and gravel		moist	0	0	0	0
										Moist	0	0	0	0
0803		25								moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: 8" OD 4 1/4" ID augers, advanced w/o plate in cutting head
Logged soil cutting unless otherwise stated

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No _____ Well I.D. #: BPSI-TT-MW310S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F10

BORING No.: BPS1-TT-MW310S
DATE: 8-9-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		25												
						loose	Brn	F-M sand some pebbles and gravel to silt (sm-lg)		moist	0	0	0	0
										angular gravel (0.5-1" ϕ)				
											0	0	0	0
										moist				
0809		30									0	0	0	0
						loose	ltbrn	F-M sand and pebbles (med-lg)		moist	0	0	0	0
								some gravel (med)		gravel 0.5" ϕ				
										moist	0	0	0	0
0812		35								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
0815		40								moist	0	0	0	0
								Same as above		moist	0	0	0	0
										moist	0	0	0	0
0819		45								moist	0	0	0	0
								Same as above		moist	0	0	0	0
										moist	0	0	0	0
0822		50								moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See First page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW310S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F10

BORING No.: BPS1-TT-MW310S
DATE: 10-9-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		50												
						loose	lt brn	F-C sand and pebbles (med)		moist to wet	0	0	0	0
								some gravel		gravel <0.5' ϕ				
										moist to wet	0	0	0	0
0829		55								moist to wet	0	0	0	0
0845	S-1	56	65/50	5*/24		m dense	lt brn/org	F-M sand some pebbles (Sm-med) tr. sm. gravel		split spoon 55-57	0	0	0	0
		57	19/20			m. dense	brn/org	F-M sand tr. pebbles		*19" of gravel moist to wet Slough				
											0	0	0	0
					∇					moist to wet				
0855		60								wet	0	0	0	0
0910	S-2	61	15/6	24/24		m. dense	lt brn	F-M sand tr. silt and C. sand		wet	0	0	0	0
		62	13/20			m. dense	tan	F-M sand tr. C. sand and pebbles		wet				
											0	0	0	0
										wet				
0925		65									0	0	0	0
										wet	0	0	0	0
										Bail out 1' of heave				
0930										wet	0	0	0	0
		70												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW310S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW311S
DATE: 10-22-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		0		60/60		m. dense	DK Brn	Top Soil, organics, roots		Hand clear to	0	0	0	0
						m. dense	Brn	F-M sand some gravel tr. silt		5' bgs				
						m. dense	lt brn	F-M sand some pebbles		moist	0	0	0	0
						↓	↓	↓ ↓						
0915		5				m. dense	lt brn	VF-F sand some silt		moist	0	0	0	0
						m. dense	lt brn	F-C sand some med. gravel and pebbles sm-med		moist	0	0	0	0
										moist	0	0	0	0
0921		10								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
0924		15								moist	0	0	0	0
								less C. sand larger gravel		moist	0	0	0	0
										moist	0	0	0	0
0927		20								moist	0	0	0	0
								less C. sand smaller gravel		moist	0	0	0	0
										moist	0	0	0	0
0929		25				↓	↓	↓ ↓		moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: 8" OD w/ 4¼" ID HSA auger
Logged soil cuttings unless otherwise noted

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW311S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW311S
DATE: 10-22-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		25												
0						m.dense	lt brn	F-M Sand some SM-med gravel and pebbles SM-med		moist	0	0	0	0
										moist	0	0	0	0
0933		30								moist	0	0	0	0
								tr. silt		moist	0	0	0	0
										Moist	0	0	0	0
0937		35								Moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
0940		40								moist	0	0	0	0
						m.dense	lt brn/rd	VF-F Sand some M.sand tr. pebbles and silt		moist	0	0	0	0
										Moist	0	0	0	0
1022		45								Moist	0	0	0	0
								less M. sand		moist	0	0	0	0
										moist	0	0	0	0
1026		50								moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW311S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW311S
DATE: 10-22-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		50												
						m.dense	red	VF-M sand tr. C sand		moist	0	0	0	0
						↓	↓	↓						
										Moist	0	0	0	0
					▽					Knock out plate at 52' bgs				
1030		55				↓	↓	↓		Moist	0	0	0	0
1050	S-1	56	20/60	12/24		m.dense	lt brn	F-M sand tr. silt		~~moist~~ wet	0	0	0	0
		57	—	—						refusal at 56' bgs				
						m.dense	lt brn red	F-M sand tr. silt		moist to wet	0	0	0	0
						↓	↓	↓						
1053		60				↓	↓	↓		moist to wet	0	0	0	0
										Moist to wet	0	0	0	0
1102	S-2	63									0	0	0	0
	↓	64	23/10	12/24		m.dense	lt brn	F-M sand some C. sand very little silt		wet augers sink when pounding	0	0	0	0
1108		65	17/30		Clay	soft	lt gray	Clay		split spoon Clay on cutting head	0	0	0	0
					EOB 65' bgs									
		70												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No _____ Well I.D. #: BPSI-TT-MW311S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW311I
DATE: 10-16-12 + 10-17-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		0		60/60		m. dense	DK Brn	Top Soil, organics, roots		moist Hard clear to 5" bgs	0	0	0	0
						m. dense	Brn	F-M sand some gravel tr. silt		gravel > 1" ϕ				
						m. dense	lt brn	F-M sand some pebbles tr. gravel		moist	0	0	0	0
						↓	↓	↓						
10-16-12 1510		5				m. dense	lt brn	VF-F sand some silt tr. pebbles		moist	0	0	0	0
10-17-12						m. dense	lt brn	F-C sand some gravel and pebbles sm-med		moist	0	0	0	0
										gravel < 1" ϕ				
										moist	0	0	0	0
0828		10								moist	0	0	0	0
										moist	0	0	0	0
										Moist	0	0	0	0
0831		15								moist	0	0	0	0
						m. dense	lt brn	F-M sand some gravel and pebbles sm-med		moist	1.2	0	0	0
										gravel > 1" ϕ				
										moist	1.0	0	0	0
0834		20								moist	1.3	0	0	0
						m. dense	lt brn	F-M sand some gravel and pebbles sm-med		moist	0	0	0	0
										gravel ~1" ϕ				
										moist	0	0	0	0
0839		25								moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: 8" OD × 4¼" hollow stem augers
Soil cuttings logged unless otherwise noted
For split spoons used 175 lbs drop hammer

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW311I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW311I
DATE: 10-17-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		25				m.dense	lt brn	F-M sand some sm-med gravel and pebbles sm-med		moist	0	0	0	0
										gravel <1" ϕ				
										moist	0	0	0	0
0843		30								moist	0	0	0	0
						m.dense	lt brn	F-M sand some sm-med gravel and pebbles sm-med trace silt		moist	0	0	0	0
										moist	0	0	0	0
0848		35								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
0853		40								moist	0	0	0	0
						m.dense	light brn	VF-F sand some M. sand tr. pebbles and silt sm.		moist	0	0	0	0
										moist	0	0	0	0
0857		45								moist ~~trace~~	0	0	0	0
						m.dense	light brn	VF-F sand tr. M sand, sm pebbles and silt		moist	0	0	0	0
										moist	0	0	0	0
0901		50								moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See First page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW311I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW311I
DATE: 10-17-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		50				m. dense	lt brn slight pink	VF-M sand tr. C. sand		moist	0	0	0	0
										moist	0	0	0	0
0958		55					red			moist	0	0	0	0
						m. dense	red			moist	0	0	0	0
										little cuttings coming up				
											0	0	0	0
										moist				
1003		60									0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
										drillers notes harder drilling around 64'				
1005		65								moist (1' thick)	0	0	0	0
						m. dense	red/lt brown	F-M sand tr. C. sand and sm. pebbles		moist	0	0	0	0
										moist	0	0	0	0
1009		70								moist	0	0	0	0
						m. dense	lt brn	F-M sand some C. sand tr. sm. pebbles		moist to wet	0	0	0	0
										moist to wet	0	0	0	0
1016		75								moist to wet	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No _____ Well I.D. #: BPS1-TT-MW311I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW311I
DATE: 10-17-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		75				m. dense	lt brn	F-C sand tr. sm-med pebbles		wet	0	0	0	0
										wet	0	0	0	0
1020		80								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1023		85								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1028		90								wet	0	0	0	0
										wet	0	0	0	0
								More pebbles						
										wet	0	0	0	0
1031		95								wet	0	0	0	0
								Some pebbles		wet	0	0	0	0
										wet	0	0	0	0
1035		100								wet	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No _____ Well I.D. #: BPSI-TT-MW311I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW311I
DATE: 10-17-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		100				m. dense	ltbrn	F-C sand tr. silt and small pebbles		wet	0	0	0	0
										wet	0	0	0	0
1123		105								wet	0	0	0	0
						m. dense	ltbrn	F-M sand some sm pebbles tr. silt		Very saturated wet ~~Muddy~~ JB 10-17-12	0	0	0	0
										wet	0	0	0	0
1126		110								wet	0	0	0	0
						m. dense	ltbrn	F-M sand some C. sand tr. silt		wet ~~Muddy~~ JB 10-17-12	0	0	0	0
										wet	0	0	0	0
1130		115								wet	0	0	0	0
						m. dense to soft	brn	F-M sand some C. sand and silt		wet sandy mud slurry	0	0	0	0
											0	0	0	0
1133		120									0	0	0	0
						m. dense to soft	brn	F-M sand some C. sand and silt		wet slurry	0	0	0	0
										wet slurry	0	0	0	0
1137		125								wet slurry	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW311I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW311I
DATE: 10-17-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		125				m. dense ~~soft~~	Brn	F-M sand some C. sand and silt		wet slurry	0	0	0	0
										wet slurry	0	0	0	0
1141		130								wet slurry	0	0	0	0
										wet slurry	0	0	0	0
										wet slurry	0	0	0	0
1146		135								wet slurry	0	0	0	0
						soft	brn	F-M sand some silt tr. C sand		wet slurry	0	0	0	0
										wet slurry	0	0	0	0
1150		140								wet slurry	0	0	0	0
										wet slurry	0	0	0	0
										wet slurry	0	0	0	0
1156		145								wet slurry	0	0	0	0
						soft	brn	F-M sand some silt tr. C. sand		wet slurry	0	0	0	0
										wet slurry	0	0	0	0
1245		150								wet slurry	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW311I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW311 I
DATE: 10-17-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		150												
						soft	Brn	F-M sand tr to some silt		wet slurry	0	0	0	0
								tr. C. sand						
										wet slurry	0	0	0	0
1250		155								wet slurry	0	0	0	0
										wet slurry	0	0	0	0
										wet slurry	0	0	0	0
1254		160								wet slurry	0	0	0	0
	S-1	161	60/55	1/18		m. dense	light tan	F-M sand tr. sm. gravel		wet very clean sand	0	0	0	0
1413		162	65/—					some micaceous		gravel 1/8" ϕ	0	0	0	0
						m. dense	light tan	F-M sand tr. sm. gravel			0	0	0	0
										wet				
1418		165									0	0	0	0
										wet	0	0	0	0
1420		168					yellow tan			wet	0	0	0	0
	S-2	169	8/30	0/18		m. dense	yellow tan	F-M sand tr. ~~sm. gr~~ C. sand						
1440		170	60/—						10-17-12	wet	0	0	0	0
					EOB 170' bgs									
		175												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: See first page for details
Note that split spoons had little recover due to obstruction (tack welded plate

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW311 I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW312S
DATE: 10-26-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		0												
				60/60		hard dense	blk brn	asphalt F-C sand and gravel tr to some silt		gravel up to 4" ϕ	0	0	0	0
										moist	0	0	0	0
										hard clear to 5' bgs				
10-25-12 1430		5				m. dense	lt brn	F-M sand some gravel tr. silt		moist	0	0	0	0
10-26-12										moist	0	0	0	0
										moist	0	0	0	0
0805		10								moist	0	0	0	0
						m. dense	lt brn	F-M sand tr. sm-med pebbles and silt		moist	0	0	0	0
										moist	0	0	0	0
0810		15								moist	0	0	0	0
						m. dense	lt brn	F-M sand some sm-med pebbles tr. sm-med gravel and silt		moist	0	0	0	0
										gravel 0.75" ϕ				
										moist	0	0	0	0
0815		20								moist	0	0	0	0
						m. dense	lt brn	F-M sand and sm-med pebbles some sm-med gravel tr. silt		moist	0	0	0	0
										moist	0	0	0	0
0824		25								moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: 8" OD 4¼" ID augers
Logged soil cuttings except otherwise noted

Converted to Well: Yes X No _____ Well I.D. #: BPS1-TT-MW312S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW312S
DATE: 10-26-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	25					m.dense	brn	F-M sand some sm-lg gravel and pebbles tr. silt		gravel 1" ϕ	0	0	0	0
							lt brn							
										Moist	0	0	0	0
0827	30									Moist	0	0	0	0
										Moist	0	0	0	0
										Moist	0	0	0	0
0831	35									Moist	0	0	0	0
										Moist	0	0	0	0
										moist	0	0	0	0
0836	40									Moist	0	0	0	0
						m.dense	lt brn	F-M sand some sm pebbles tr. silt		Moist	0	0	0	0
										Moist	0	0	0	0
0838	45									Moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
										Knock out plate				
0842	50									Moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes x No _____ Well I.D. #: BPS1-TT-MW312S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW312S
DATE: 10-26-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		50												
						m.dense	lt brn	F-M sand some sm-med pebbles tr. silt		moist	0	0	0	0
						↓	↓	↓						
0850		53				↓	↓	↓		moist	0	0	0	0
0857	S-1	54	23/14	6/24		m.dense	Brn	F-M sand and sm. gravel		large rock lodged in split spoon	0	0	0	0
0900		55	10/25		▽	↓	↓	↓			0	0	0	0
						m.dense	lt brn	F-M sand tr. pebbles and silt		moist	0	0	0	0
						↓	↓	↓						
						↓	↓	↓		moist	0	0	0	0
						↓	↓	↓						
0908		60				↓	↓	↓		moist	0	0	0	0
0910		61				↓	↓	↓		moist	0	0	0	0
1000	S-2	62	—	20/24		m.dense	lt brn tan	F-M sand some C. sand		Rock lodged in	0	0	0	0
		63	—			↓	↓	↓ tr. silt ↓		auger cutting had used 3" SS to knock out	0	0	0	0
					EOB 63' bgs					Bailout multiple times				
		65												
		70												

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: See first page for details

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW312S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW312I
DATE: 10-23-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		0		60/60	asphalt	hard dense	blk brn	Asphalt Sand and Gravel		moist Few pieces of iron slag	0	0	0	0
										very compact gravel up to 2"Φ				
											0	0	0	0
					- - -	m. dense	lt brn	F-M sand tr. pebbles & silt		Moist				
1130		5						very few sm. gravel			0	0	0	0
						m. dense	lt brn	F-M sand some pebbles		moist	0	0	0	0
								tr. silt and sm-med gravel						
										moist	0	0	0	0
1150		10								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1155		15				↓	↓	↓		moist	0	0	0	0
						m. dense	lt brn	F-M sand tr. pebbles and silt		moist	0	0	0	0
										moist	0	0	0	0
1200		20				✓	✓	✓		moist	0	0	0	0
						m. dense	lt brn	F-M sand tr. pebbles and silt		moist	0	0	0	0
										moist	0	0	0	0
1250		25				↓	↓	↓		moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: 8" OD 4 1/4" ID HSA
Logged soil cutting unless otherwise noted

Converted to Well: Yes x No _____ Well I.D. #: BPSI-TT-MW312I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW312I
DATE: 10-23-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		25				m.dense	lt brn	F-M sand tr. C sand,		moist	0	0	0	0
								sm. pebbles, silt and sm. gravel		gravel 0.5"ϕ				
										moist	0	0	0	0
										moist				
1302		30									0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1306		35								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1310		40								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1314		45								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1317		50				✓	✓	✓	✓	moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See First page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes ✓ No _____ Well I.D. #: BPSI-TT-MW312I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW312I
DATE: 10-23-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		50				m.dense	ltbrn	F-M sand tr. to some sm. pebbles		moist	0	0	0	0
								tr. gravel small						
										moist	0	0	0	0
1319		55								moist	0	0	0	0
						m.dense	ltbrn	F-M sand tr. to some		moist	0	0	0	0
								pebbles and gravel sm-med		gravel <1" ϕ				
								tr. C. sand		moist	0	0	0	0
										drillers notes water table ~53' based on drilling				
1327		60			---					moist	0	0	0	0
						m.dense	ltbrn	F-M sand tr. C. sand		moist	0	0	0	0
								very few sm. pebbles						
										moist.	0	0	0	0
1331		65								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1336		70								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1340		75								moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW312I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW312I
DATE: 10-23-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		75												
						m. dense	lt brn	F-M Sand some C. sand tr. silt and sm. pebbles		moist to wet	0	0	0	0
										moist to wet	0	0	0	0
1430		80								moist to wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1433		85								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1436		90								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1439		95								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1442		100								wet	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See First page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW312I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW312I
DATE: 10-23-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		100				m. dense	lt brn	F-M sand some C. sand		wet	0	0	0	0
								tr. silt						
								very few sm. pebbles		wet	0	0	0	0
										Drillers notes possible clay from 105-107 hrs				
1445		105								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1449		110								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1500		115								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1505		120								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1510		125								wet	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW312I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW312I
DATE: 10-23-12 and 10-24-12
GEOLOGIST: J. Birkett
DRILLER: J. Gveci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		125				m. dense	lt brn	F-M sand some C. sand		wet	0	0	0	0
								tr. silt and small pebbles						
										wet	0	0	0	0
10-23-12 1515		130								wet	0	0	0	0
10-24-12						m. dense	lt brn	F-M sand tr. silt		wet	0	0	0	0
								and C. sand						
										wet	0	0	0	0
0815		135								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
0819		140								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
0823		145								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
0827		150								wet	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See First page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No _____ Well I.D. #: BPSI-TT-MW312I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW312I
DATE: 10-24-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		150				m.dense	ltbrn	F-M sand tr. silt		wet	0	0	0	0
						↓	↓	very few sm. pebbles						
						↓	↓	↓		wet	0	0	0	0
						↓	↓	↓						
0831		155				↓	↓	↓		wet	0	0	0	0
						m.dense	ltbrn	F-M sand tr silt and C. sand		wet	0	0	0	0
						↓	↓	↓		Tack welded plate				
						↓	↓	↓		fell out somewhere	0	0	0	0
						↓	↓	↓		wet				
0834		160				↓	↓	↓			0	0	0	0
0851	S-1	161	8/7	8/24		m.dense	ltbrn	F-M sand		Bail out 3' of heave	0	0	0	0
		162	27/40			↓	↓	↓ w/ mica flakes		only top 8" remains	0	0	0	0
						m.dense	ltbrn	F-M sand tr. silt		the bottom 16" washed out	0	0	0	0
						↓	↓	↓		wet				
0855		165				↓	↓	↓			0	0	0	0
						↓	↓	↓		wet	0	0	0	0
						↓	↓	↓		bail out 8' of heave				
0900						↓	↓	↓		wet	0	0	0	0
0945	S-2	169	2/2	24/24		m.dense	ltbrn	F-M sand w/ mica flakes		heave in while spooling first foot	0	0	0	0
		170	30/35			↓ soft	↓ ltgray	↓ clay (possible from cutting heave)		wet clay 1/10" at bottom of spoon	0	0	0	0
					EOB 170' bgs									

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW312I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW313S
DATE: 10-31-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		0												
				60/60		dense	Brn	Sand and gravel		moist	0	0	0	0
						dense	tan	Silty VF Sand		moist to dry				
						m.dense	tan	F-M sand tr. to some gravel		dry				
										gravel up to 1" ϕ	0	0	0	0
										dry				
0915		5									0	0	0	0
						m.dense	lt tan	F-M sand some gravel sm-med and pebbles		moist	0	0	0	0
										Moist	0	0	0	0
0945		10					lt brn			Moist	0	0	0	0
										Moist	0	0	0	0
										Moist	0	0	0	0
0952		15								Moist	0	0	0	0
										Moist	0	0	0	0
										Moist	0	0	0	0
0954		20								Moist	0	0	0	0
										moist	0	0	0	0
										Moist	0	0	0	0
0957		25								Moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: 4¼" ID 8" OD Augers
Logged soil cuttings unless otherwise noted

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW313S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW3135
DATE: 10-31-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		25				m.dense	ltbrn	F-M sand some gravel sm-med and pebbles		Moist	0	0	0	0
										gravel up to 1" ϕ				
										Moist	0	0	0	0
1001		30								Moist	0	0	0	0
										Moist	0	0	0	0
										moist	0	0	0	0
1051		35								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1055		40								moist	0	0	0	0
						m.dense	ltbrn	F-M sand some C. sand tr. pebbles very few gravel		Moist	0	0	0	0
										Moist	0	0	0	0
1058		45								moist	0	0	0	0
										Moist	0	0	0	0
										Moist	0	0	0	0
1101		50								Moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW3135

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW313S
DATE: 10-31-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		50												
						m.dense	lt brn	F-M sand some C. sand		moist	0	0	0	0
								tr. pebbles						
										moist	0	0	0	0
1105					clay ▽					clay might be in cutting hand from ab				
1113	S-1	55	3/3	12/24		m. stiff m.dense	gray tan	F-M clay sand tr. C. sand		wet	0	0	0	0
		56	9/12							wet	0	0	0	0
										wet	0	0	0	0
1125		60								wet	0	0	0	0
											0	0	0	0
1130										bail out heave				
1141	S-2	63	4/3	24/24		m.dense	lt brn	F-M sand some clay			0	0	0	0
		64	3/12					tr. C sand		one 1" gravel	0	0	0	0
1146		65									0	0	0	0
					EOB 65' bgs									

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See First page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW313S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW314S
DATE: 10-15-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		0												
1200				60/60		m. dense	Dk Brn	Sandy Top Soil		Hand clear to 5' bgs	0	0	0	0
						m. dense	Brn	F-M sand some gravel tr. F. organics		moist				
						dense	lt Brn	VF-F sand tr. pebbles			0	0	0	0
						m. dense	Brn	F-M sand some gravel tr. silt		moist				
		5									0	0	0	0
						m. dense	lt Brn	F-M sand some C. sand gravel and pebbles (small-med; sm-med)		moist	0	0	0	0
								few large gravel		gravel up to 1" ϕ	0	0	0	0
										moist				
1310		10								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1313		15								moist	0	0	0	0
										moist	0	0	0	0
										gravel up to 2" ϕ				
										moist	0	0	0	0
1317		20								moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1321		25								moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: 8" OD by 4¼" ID augers
Logged soil cuttings except where split spoon samples were collected

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW314S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW3145
DATE: 10-15-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	25					m.dense	lt brn	F-M sand some C. sand gravel and pebbles sm-lg sm-med		moist	0	0	0	0
										moist	0	0	0	0
1324	30									moist	0	0	0	0
										moist	0	0	0	0
										gravel >1" ϕ				
										moist	0	0	0	0
1327	35									moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1330	40									moist	0	0	0	0
						m.dense	lt brn	F-M sand some C. sand and pebbles sm-med		moist	0	0	0	0
										moist	0	0	0	0
1333	45									moist	0	0	0	0
										moist	0	0	0	0
										moist	0	0	0	0
1337	50									moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: See First page for details

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW3145

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPSI-TT-MW314S
DATE: 10-15-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
	50													
						m. dense	lt brn	F-M sand some pebbles		moist	0	0	0	0
						↓	↓	↓						
1359	S-1	53	4 10	16/24	▽	m. dense m. dense	DK Brn tan	F sand some M. sand tr. silt F-M sand tr. C. sand		possible slough in top 6" due to color chang	0	0	0	0
		54	16 20				to lt brn	Very Few pebbles		wet	0	0	0	0
1403	55					↓	↓	↓		wet	0	0	0	0
						m. dense	lt brn	F-M sand some pebbles		.	0	0	0	0
										wet				
											0	0	0	0
										wet				
1407	60										0	0	0	0
										wet	0	0	0	0
						↓	↓	↓						
1425	S-2	63	11 13	12/24		loose	tan	F-C sand tr. pebbles		wet	0	0	0	0
		64	-* -*			↓	↓	↓		*Augers slumped Heave 1' into augers				
1430	65					m. dense	lt brn	F-M sand some pebbles			0	0	0	0
					EOB 65' bgs									

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: See first page for details

Converted to Well: Yes X No _____ Well I.D. #: BPSI-TT-MW314S

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F10

BORING No.: BPSI-TT-MW314 I
DATE: 10-10-12 and 10-11-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
	Ø	0												
				60/60		m. dense	DK Brn	Sandy Topsoil		moist	0	0	0	0
						m. dense	Brn	F-M sand some gravel tr. Fine organics		gravel >1" ϕ				
						↓	↓	↓		Hand cleared to 5' bgs				
						m. dense	ltbrn	F-M sand some gravel and pebbles		moist	0	0	0	0
						↓	↓	↓						
10-10-12 1515	5	5				↓	↓	↓		moist	0	0	0	0
10-11-12						m. dense	ltbrn	F-M sand some gravel C sand and pebbles		moist	0	0	0	0
						↓	↓	↓		gravel up to 1" ϕ				
						↓	↓	↓		moist	0	0	0	0
0808		10				↓	↓	↓		moist	0	0	0	0
						↓	↓	↓		moist	0	0	0	0
						↓	↓	↓		moist	0	0	0	0
0813		15				↓	↓	↓		moist	0	0	0	0
						m. dense	ltbrn	F-M sand some C. sand tr. sm. pebbles and fine-med gravel		moist	0	0	0	0
						↓	↓	↓		gravel ~ 0.5" ϕ				
						↓	↓	↓		moist	0	0	0	0
0817		20				↓	↓	↓		moist	0	0	0	0
						m. dense	ltbrn	F-M sand some C. sand and pebbles tr. to some med gravel		moist	0	0	0	0
						↓	↓	↓		gravel up to 0.75" ϕ				
						↓	↓	↓		moist	0	0	0	0
0821		25				↓	↓	↓		moist	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: HSA 4 1/4" ID 8" OD
logged cuttings unless otherwise noted (hole gamma logged)

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW314 S and I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F10

BORING No.: BPSI-TT-MW314I
DATE: 10-11-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		25				m.dense/loose	ltbrn	F-M sand tr. to some pebbles tr. med gravel		gravel ~0.5"ϕ	0	0	0	0
										moist				
											0	0	0	0
										moist				
0825		30									0	0	0	0
						m.dense/loose	ltbrn	F-M sand some pebbles and gravel		moist	0	0	0	0
										gravel >1"ϕ				
										moist	0	0	0	0
0828		35								moist	0	0	0	0
						m.dense/loose	ltbrn	Pebbley F-M sand some gravel		slightly orange in color	0	0	0	0
										moist				
											0	0	0	0
										moist				
0832		40									0	0	0	0
						loose	tan	F-M sand tr. sm. pebbles very few sm. gravel		moist	0	0	0	0
										gravel ~0.25"ϕ				
										moist	0	0	0	0
0846		45								moist	0	0	0	0
						loose	tan	F-M sand some sm-lg gravel and pebbles		gravel >1"ϕ	0	0	0	0
										moist				
											0	0	0	0
										moist				
0850		50									0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW314S and I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F-10

BORING No.: BPS1-TT-MW314I
DATE: 10-11-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		50				loose	lt brn tan	F-M sand tr. C. sand very few sm gravel		moist gravel ~0.25" ϕ	0	0	0	0
										Moist	0	0	0	0
0852		55								moist	0	0	0	0
					▽					moist	0	0	0	0
										moist	0	0	0	0
0856		60								slightly more wet moist	0	0	0	0
										moist to wet	0	0	0	0
										likely into water table between 55-60'	0	0	0	0
										moist to wet				
0900		65									0	0	0	0
						loose	lt brn tan	F sand some M. sand tr. C. sand and sm-med pebbles		moist to wet	0	0	0	0
										moist to wet	0	0	0	0
		70								moist to wet	0	0	0	0
						m. dense	lt brn	F-M sand tr. C. sand and silt		wet	0	0	0	0
										maybe hit thin silt lens				
										wet	0	0	0	0
		75								wet	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No _____ Well I.D. #: BPS1-TT-MW314 S and I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F10

BORING No.: BPS1-TT-MW314I
DATE: 10-11-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		75				m dense	ltbrn	F-M sand tr C. sand and silt		wet	0	0	0	0
								very few sm. gravel						
										wet	0	0	0	0
0915		80								wet	0	0	0	0
						m dense	ltbrn	F-M sand some C. sand		wet	0	0	0	0
								tr. silt and sm. pebbles						
										wet	0	0	0	0
0945		85								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
0950		90								wet	0	0	0	0
						m dense	ltbrn	F-M sand some C. sand		wet	0	0	0	0
								tr. silt and sm. pebbles						
										wet	0	0	0	0
1025		95								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1027		100								wet	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: See first page for details

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW314S and I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F10

BORING No.: BPS1-TT-MW314I
DATE: 10-11-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		100				m.dense	lt brn	F-M sand tr. C. sand silt, and pebbles		wet	0	0	0	0
										wet	0	0	0	0
					Possible clay/silt lenses									
1031		105								wet	0	0	0	0
								slightly more silt	*	at 104' bgs notice hard drilling 104-105 and 105.5-106 possible clay lens	0	0	0	0
										wet	0	0	0	0
1037		110								wet	0	0	0	0
						m.dense	lt brn	F-M sand tr. to some silt tr. C. sand and pebbles		wet	0	0	0	0
										wet	0	0	0	0
1041		115								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1046		120								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1051		125								wet	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Drilling Area Background (ppm): 0.0

Remarks: See first page for details

Converted to Well: Yes X No ____ Well I.D. #: BPS1-TT-MW314S and I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F10

BORING No.: BPSI-TT-MW314I
DATE: 10-11-12
GEOLOGIST: J. Birkett
DRILLER: J. Gucci

	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
		125				m.dense	ltbrn	F-M sand tr. to some silt tr. C. sand		wet	0	0	0	0
										wet	0	0	0	0
1056		130								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1101		135								wet	0	0	0	0
						m.dense	ltbrn	F-M sand tr. silt and C. sand		wet	0	0	0	0
										wet	0	0	0	0
1106		140								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1123		145								wet	0	0	0	0
										wet	0	0	0	0
										wet	0	0	0	0
1133		150								wet	0	0	0	0

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks: See first page for details

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW314Sand I

Tetra Tech

BORING LOG

PROJECT NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230
DRILLING COMPANY: Delta
DRILLING RIG: Failing F10

BORING No.: BPSI-TT-MW314 I
DATE: 10-11-12
GEOLOGIST: J. Birkett
DRILLER: J. Gueci

Time	Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm) Sample	Sampler BZ	Borehole**	Driller BZ**
		150												
						m.dense	lt brn	F-M sand tr. silt and C. sand Very few sm. pebbles		wet	0	0	0	0
										wet	0	0	0	0
1136		155								wet	0	0	0	0
								slightly more silt		wet	0	0	0	0
										wet	0	0	0	0
1140		160								wet	0	0	0	0
1257	S-1	161	6/6	16/24		m.dense	lt brn	F-M sand tr. silt		wet	0	0	0	0
		162	7/9											
1336	S-2	163	150/—	6/24		m.dense	lt brn	F-M sand tr. silt		1.5' of heave bailed out at 162'	0	0	0	0
		164	—/—							Split spoon would not advance past 162.5'				
		165								(Filled w/ heave) tack welded plate may be in	0	0	0	0
1345	S-3	166	4/4	24/24		m.dense	lt brn	F-M sand tr. silt		wet	0	0	0	0
		167	6/8											
										wet	0	0	0	0
1355		170								wet	0	0	0	0
1412	S-4	171	9/12	24/24		m.dense	lt brn org/brn	F-M sand tr. silt and pebbles		Bail out 1.5' of heave at 170'	0	0	0	0
		172	15/45				brn			wet	0	0	0	0
					EOB 172' bgs									

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

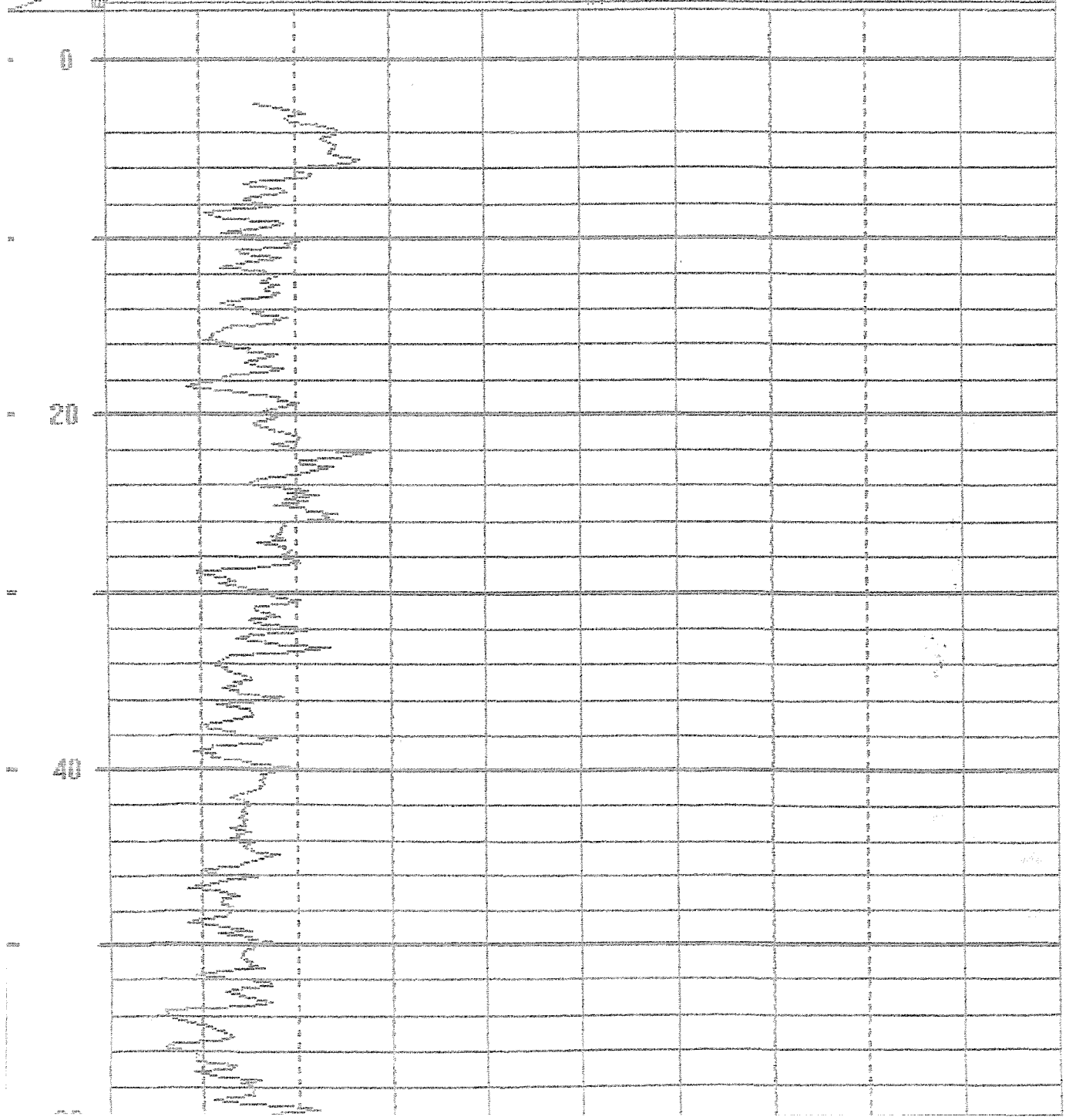
Drilling Area Background (ppm): 0.0

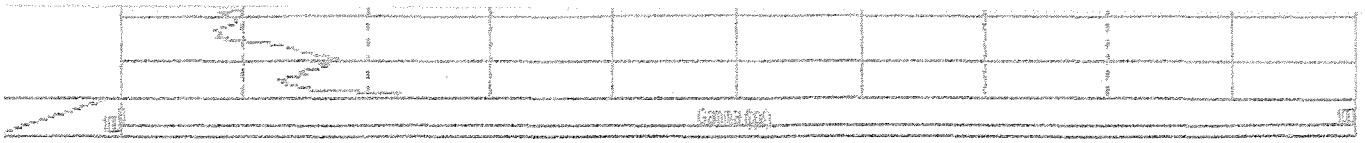
Remarks: See First page for details, Augers Stopped at 170' bgs

Converted to Well: Yes X No ____ Well I.D. #: BPSI-TT-MW314 S and I

COMPANY:	DELTA WELL & PUMP CO., INC.		
Location:	NWWRP BETHPAGE	BPSI-TT-MW310S Down	
Well	MW310S	Depth Driller	
		Depth Logger	
Date	10/08/2012	BH Fluid	Logged by: CMC
File Name	731		Witness: JAKE

Gamma (cps)

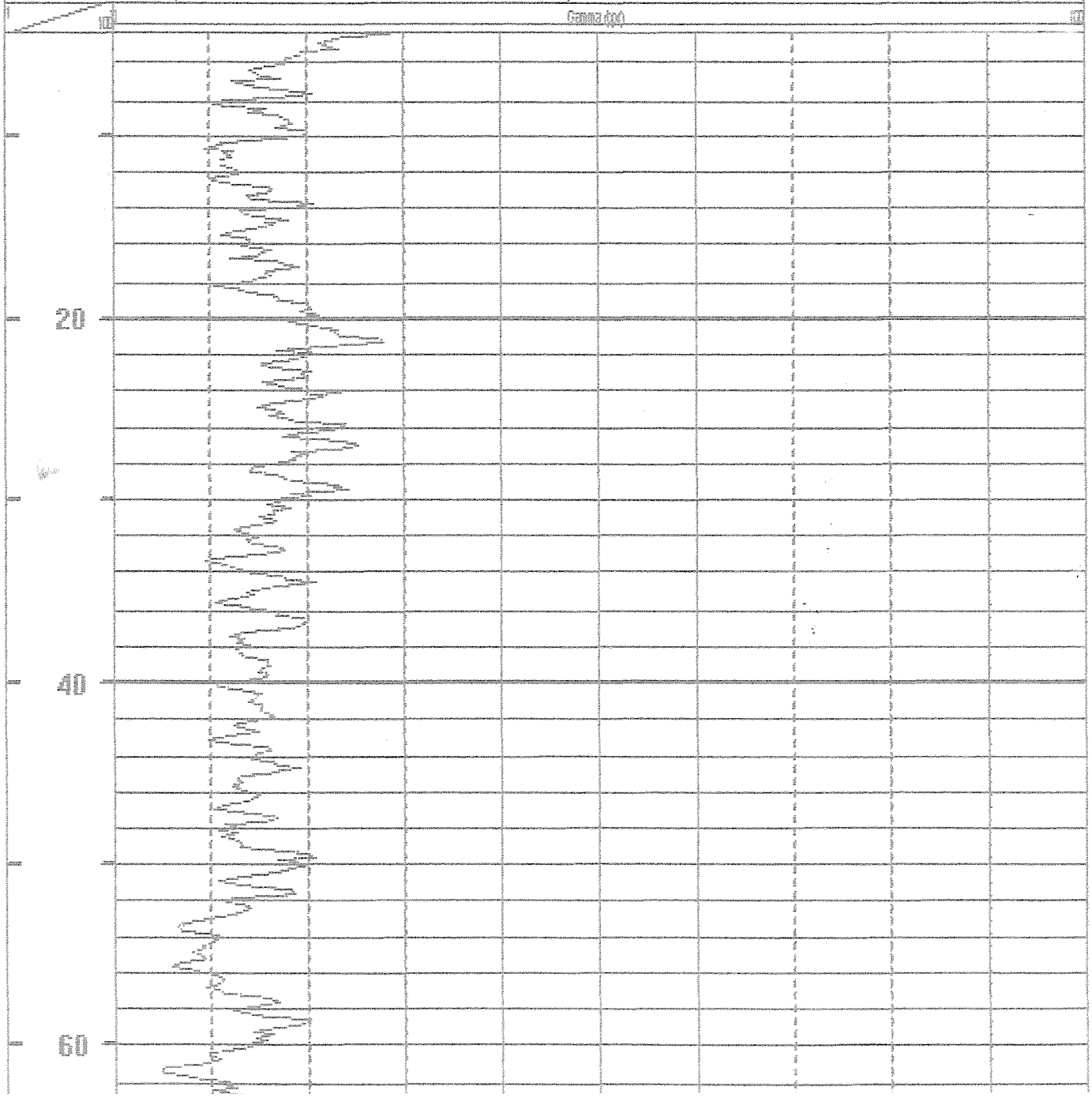


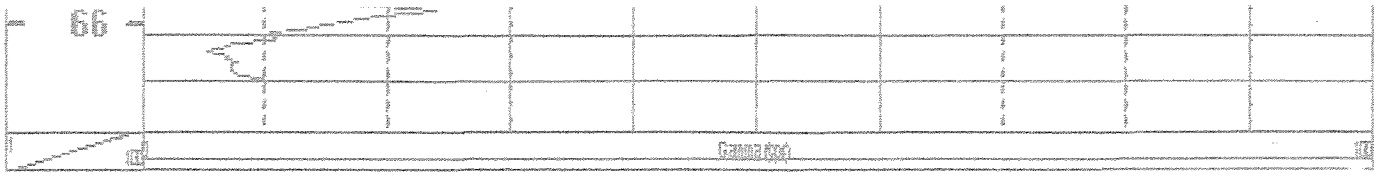


Tuesday, October 09, 2012 Time: 12:33 File: C:\Documents and Settings\Pdm\Mathcad\My Documents\VIT\V2013\MAD\MAD.xd

Date: Tuesday, October 09, 2012 Time: 12:40 File: C:\Documents and Settings\xcmo\Administrator\My Documents\731\MW310Sup.rd

	COMPANY	DELTA WELL & PUMP CO., INC.		Casing
	Location:	NWIRP BETHPAGE	BPSI-TT-MW310S UP	
Well	MW310S		Depth Driller :	
			Depth Logger :	
Date	10/09/2012	BH Fluid	Logged by: CMO	
File Name	731		Witness: JAKE	

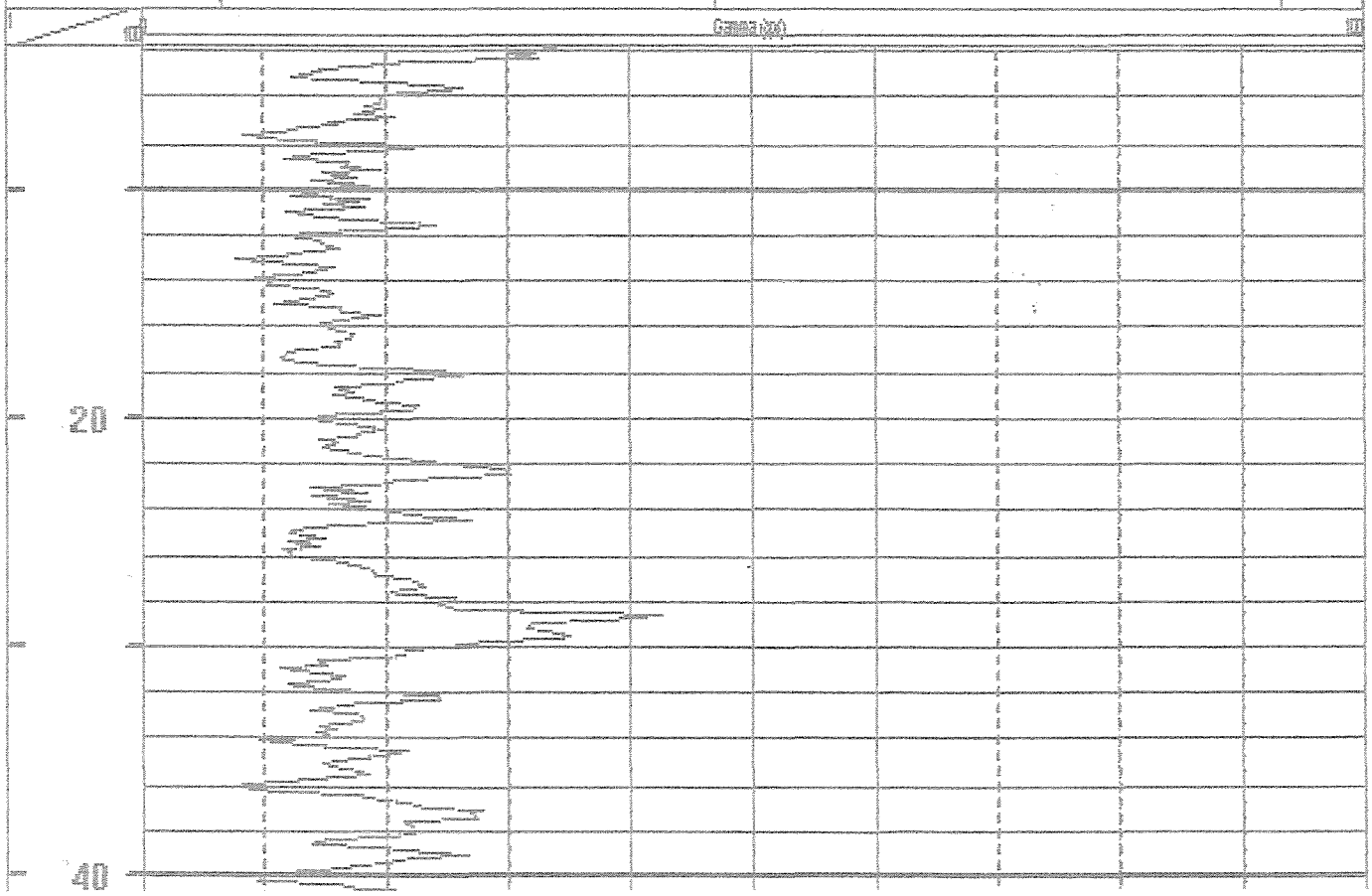


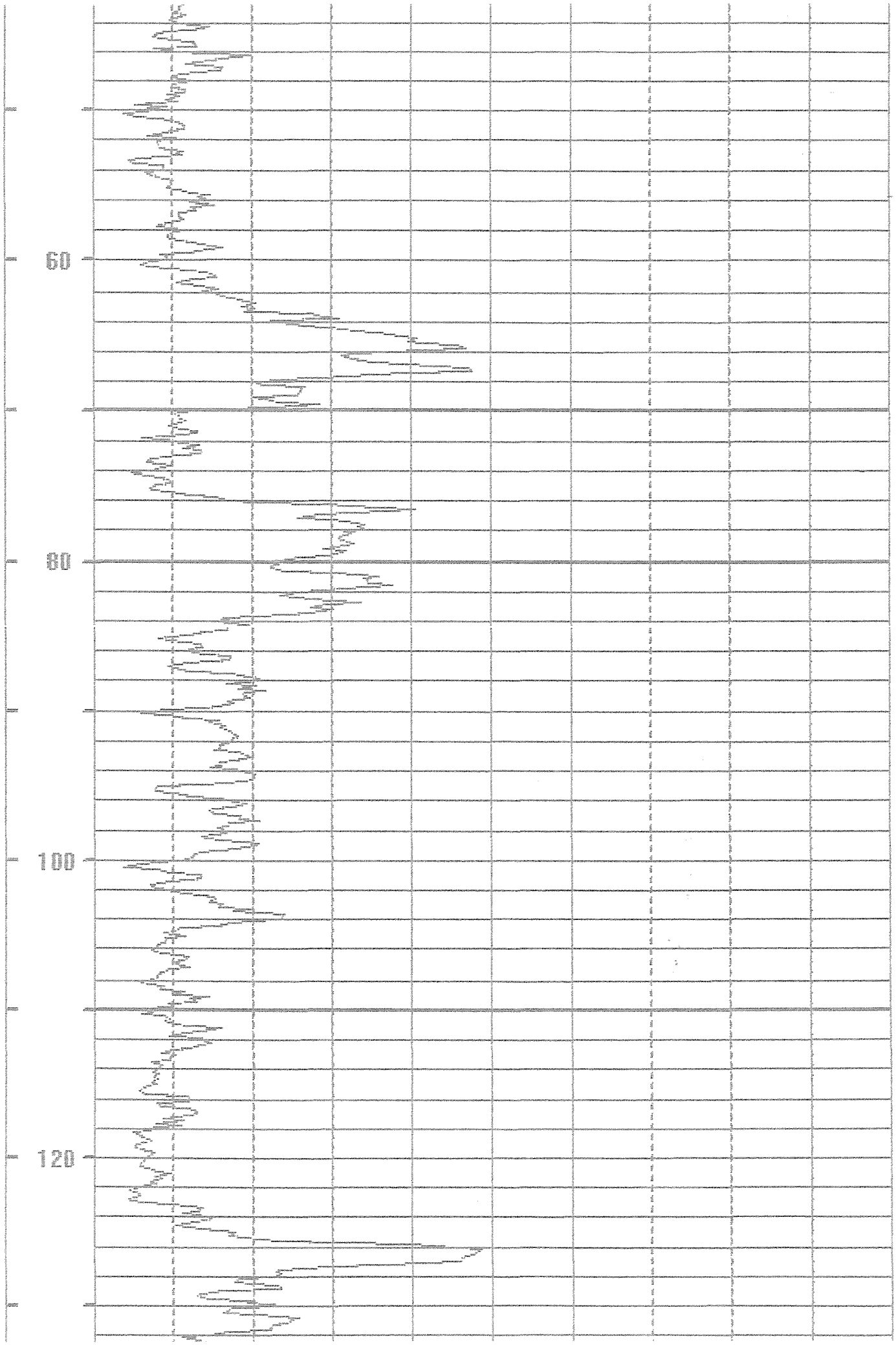


Date: Tuesday, October 09, 2012 Time: 12:00 File: C:\Documents and Settings\[illegible]\My Documents\[illegible]

Date: Thursday, October 18, 2012 Time: 10:31 File: C:\Documents and Settings\Administrator\My Documents\[illegible]\MW311up.rd

	COMPANY: DELTA WELL & PUMP CO., INC.			Casing
	Location: NWIRP BETHPAGE			
Well	MW311I		Depth Driller:	
			Depth Logger:	
Date	10/18/2012	BH Fluid	Logged by: CMO	
File Name	731		Witness: JAKE	

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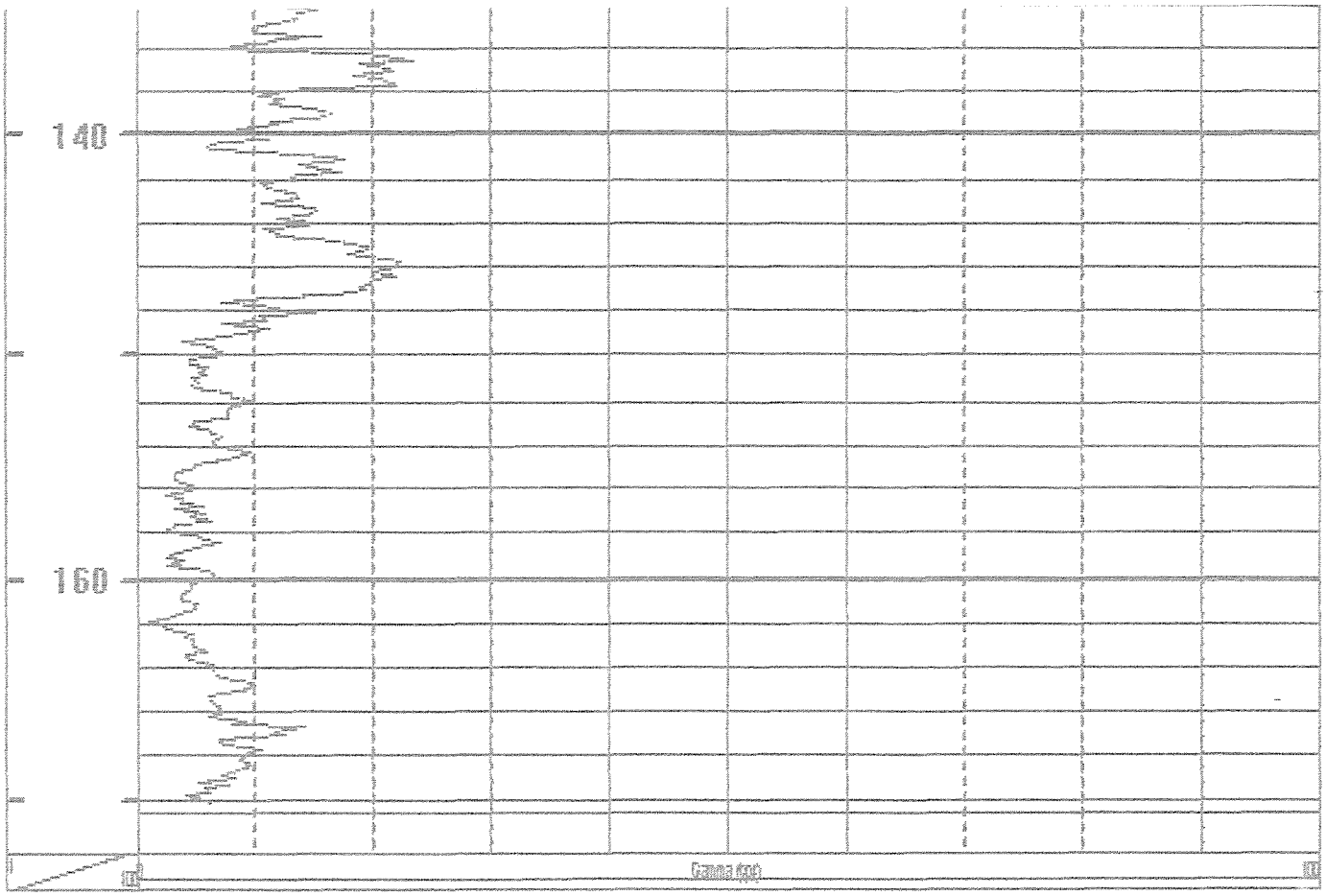

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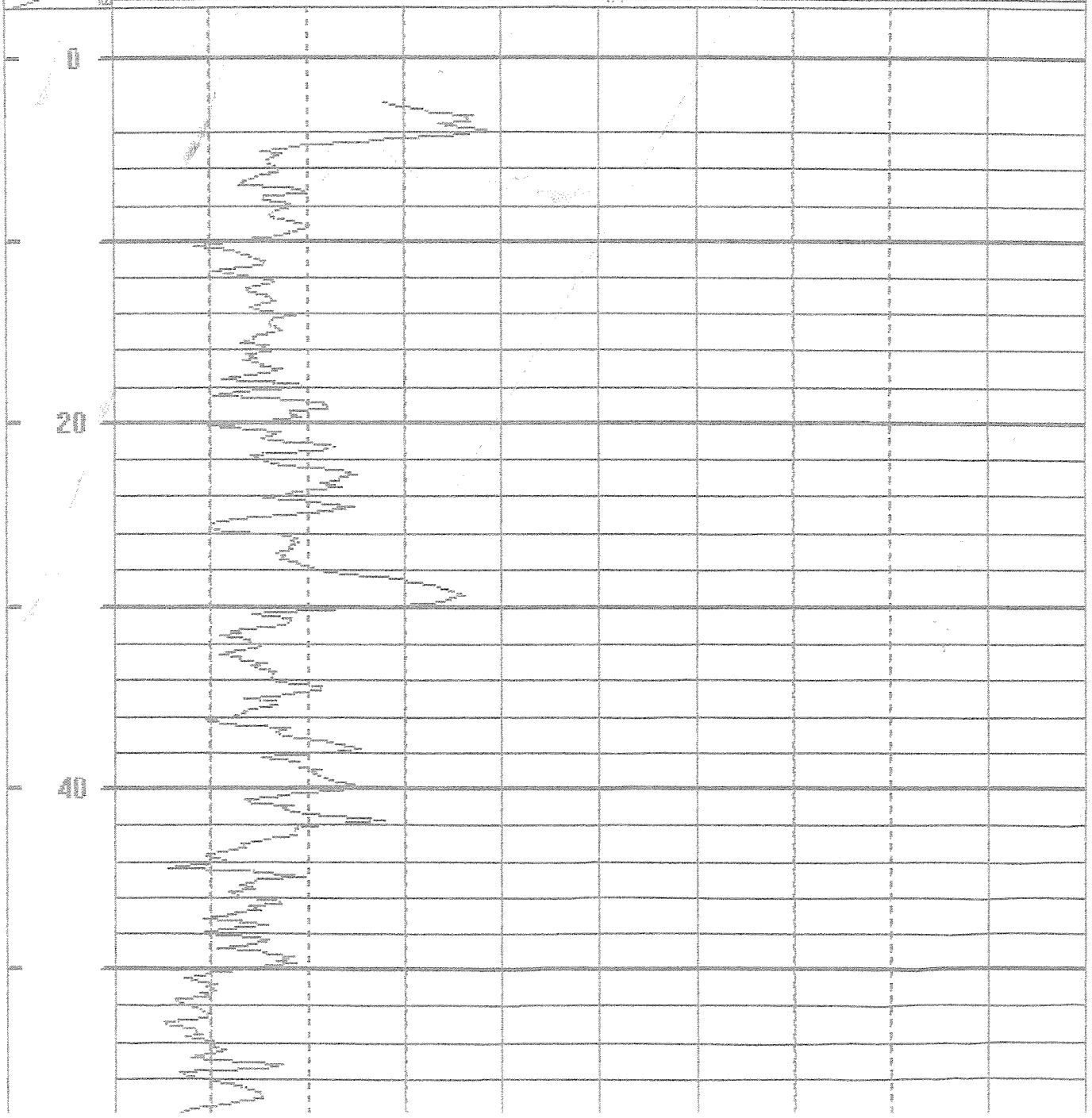
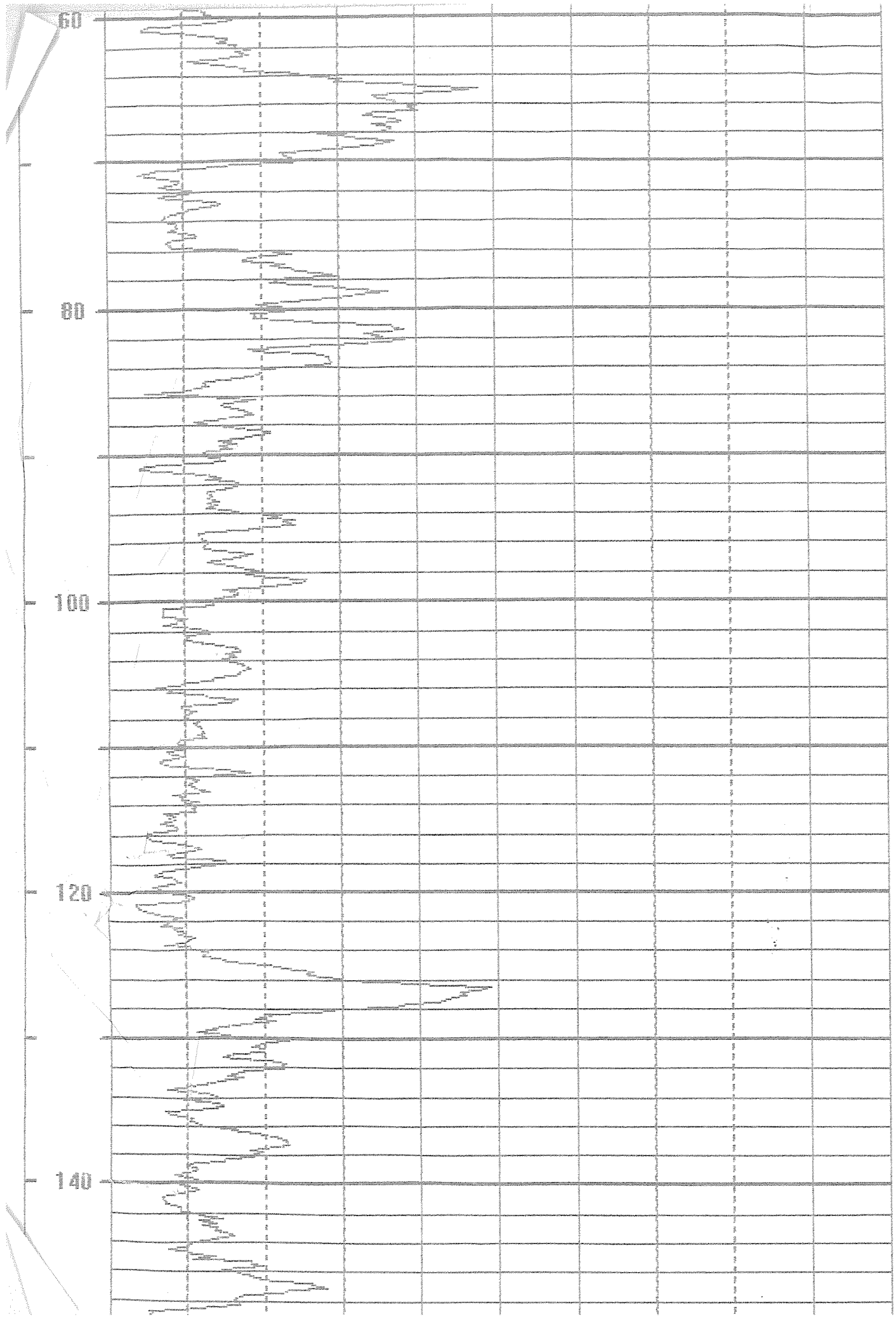
Date: Thursday, October 18, 2012 Time: [illegible]

	COMPANY: DELTA WELL & PUMP CO., INC.		Casing
	Location: NWRP BETHPAGE		
Well	MW311I	Depth Driller	
		Depth Logger	
Date	10/18/2012	BH Fluid	Logged by: CMO
File Name	731	Witness: JAKE	

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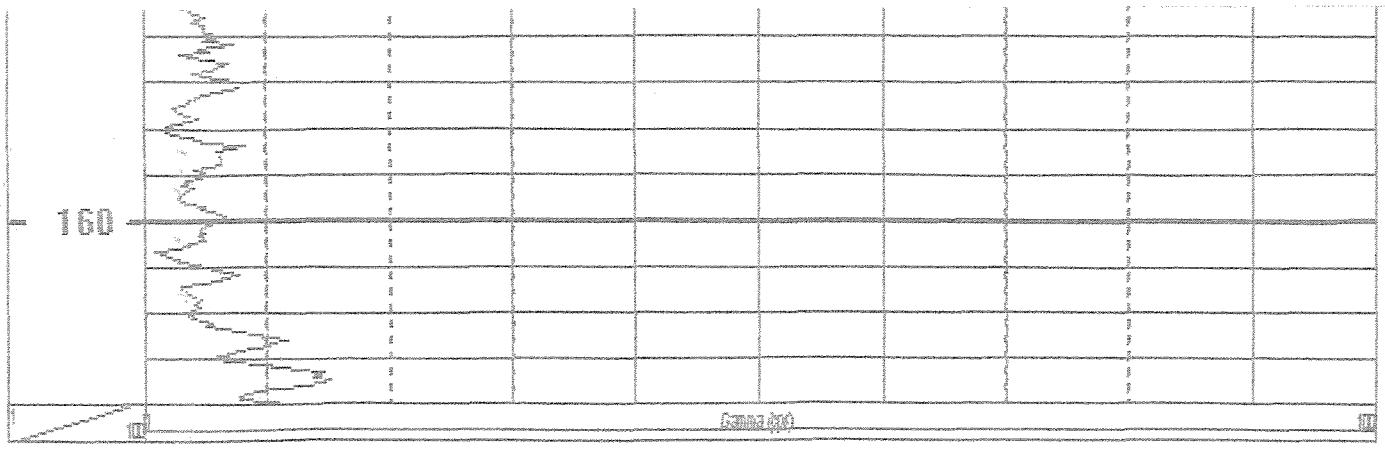

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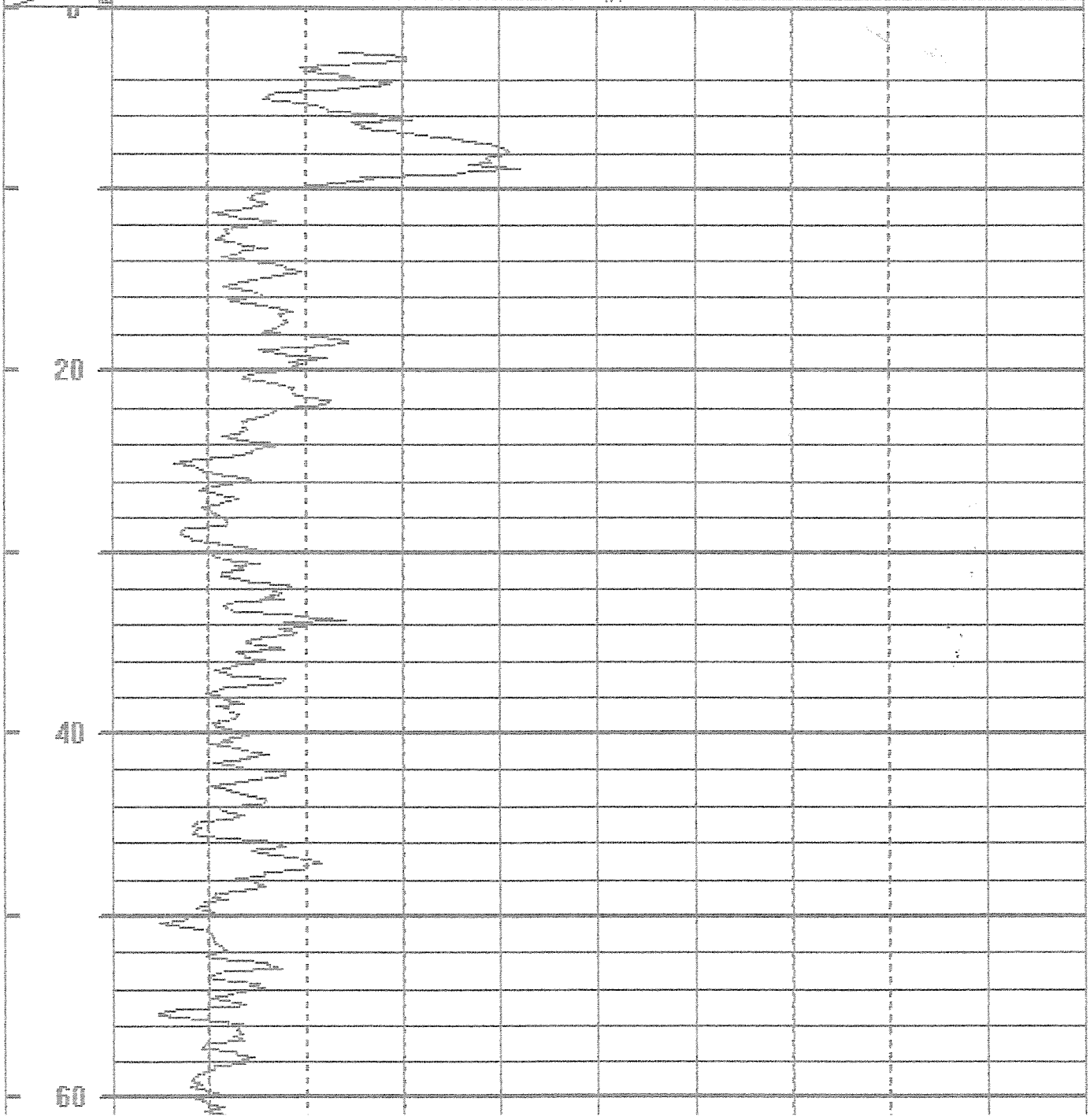
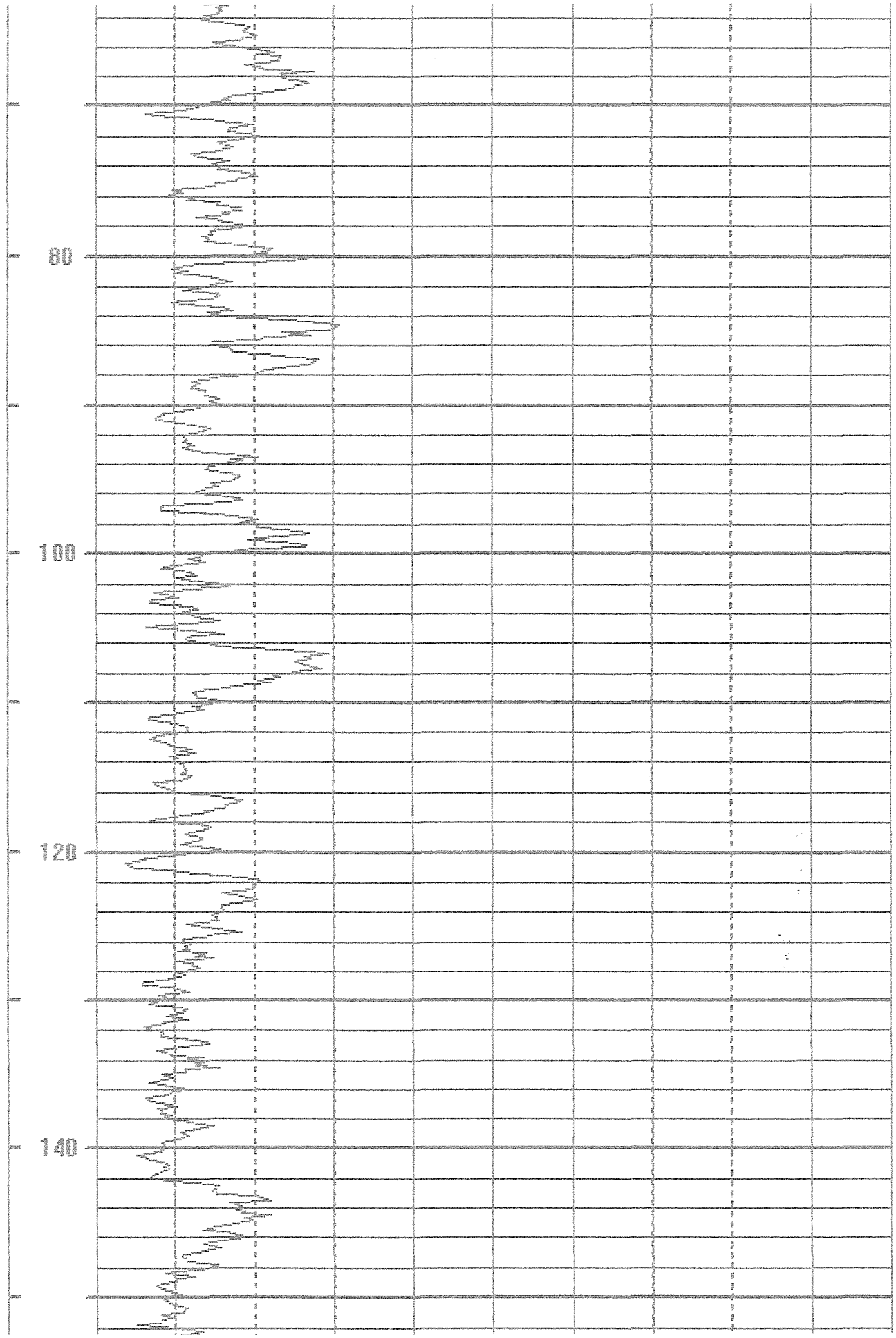
Date: Wednesday, October 24, 2012 Time: 12:27 File: C:\Documents and Settings\Admin\Data\Utility Documents\731\MW312I.rd

COMPANY:	DELTA WELL & PUMP CO., INC.		Casing
Location:	NWIRP BETHPAGE		
Well	MW312I	Depth Driller	
		Depth Logger	
Date	10/24/2012	BH Fluid	Logged by: CMO
File Name	731	Witness: JAKE	

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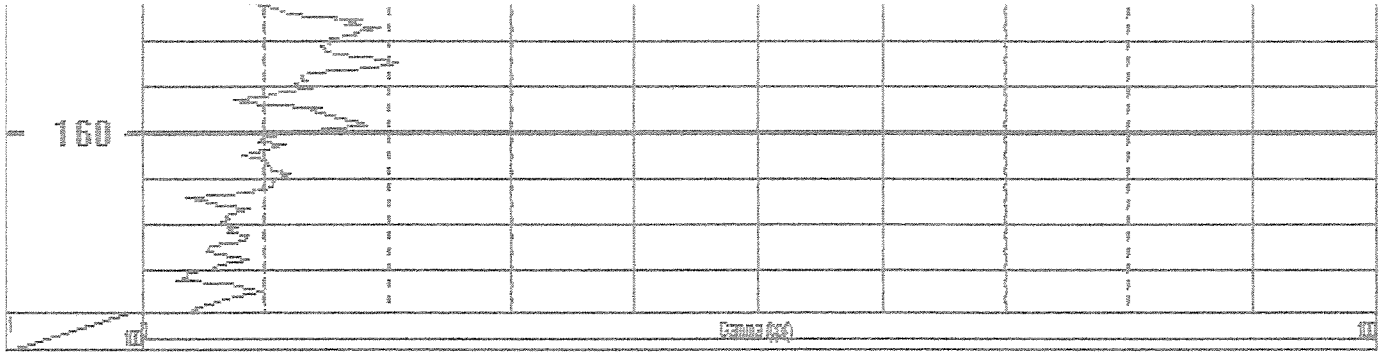
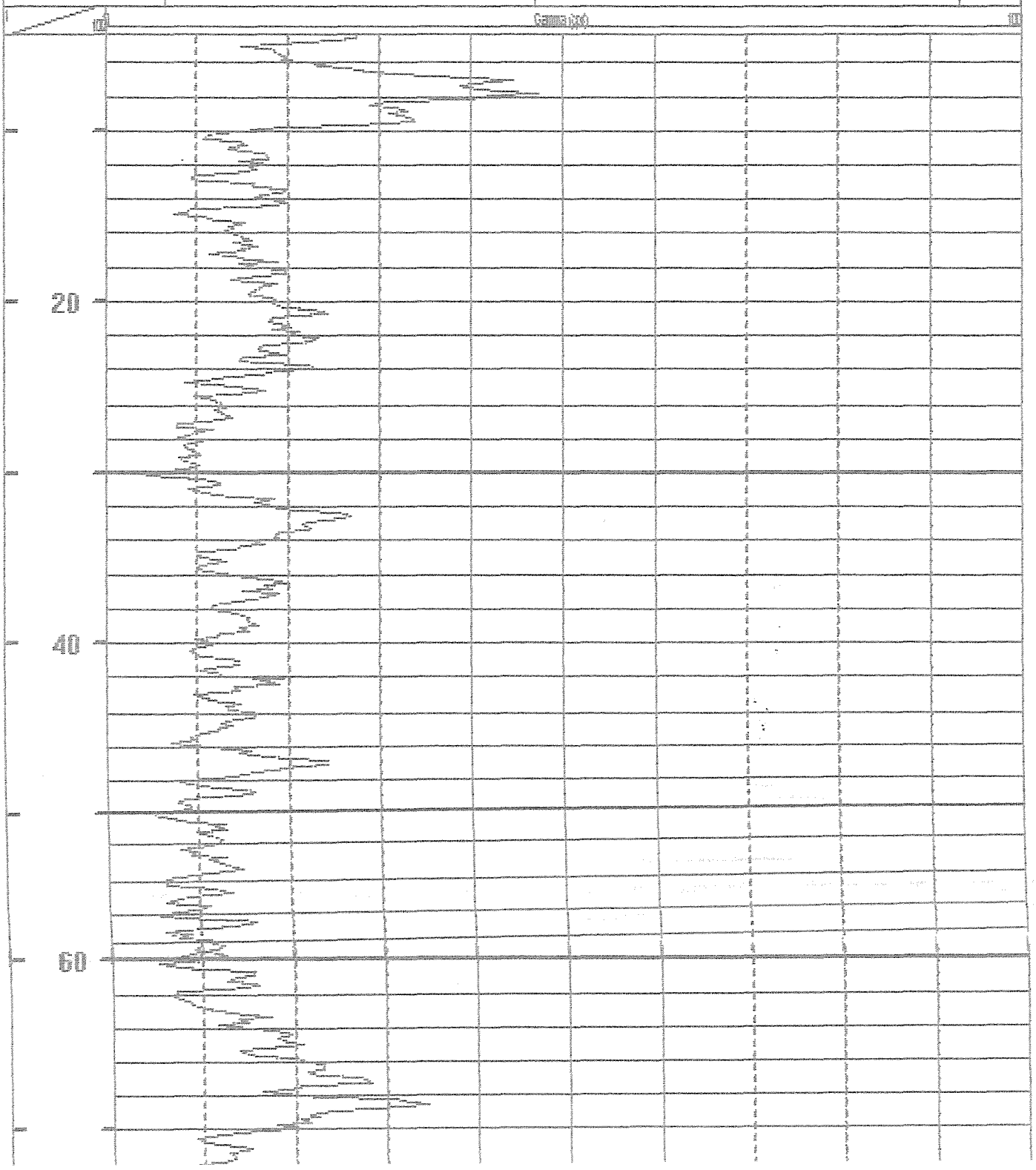
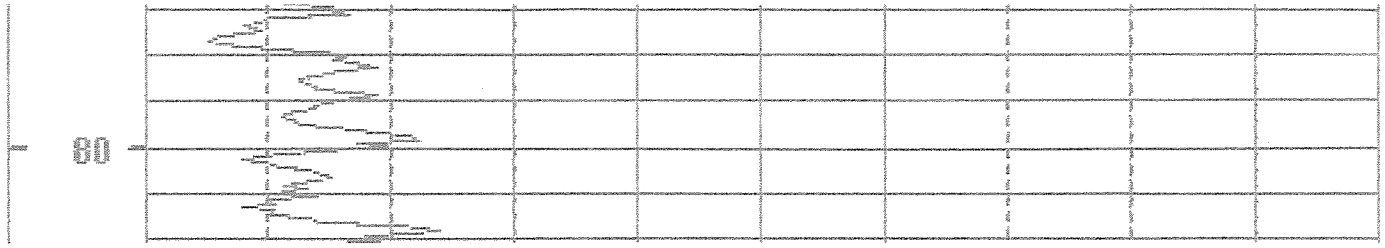


Date: Wednesday, October 24, 2012 Time: 12:21 File: C:\Documents and Settings\Administrator\My Documents\031\MW312.rd

Date: Wednesday, October 24, 2012 Time: 12:41 File: C:\Documents and Settings\Administrator\My Documents\731MW312hp.rd

	COMPANY: DELTA WELL & PUMP CO., INC.			Casing
	Location: NWIRP BETHPAGE			
Well	MW312I		Depth Driller	
			Depth Logger	
Date	10/24/2012	BH Fluid	Logged by: CMO	
File Name	731		Witness: JAKE	

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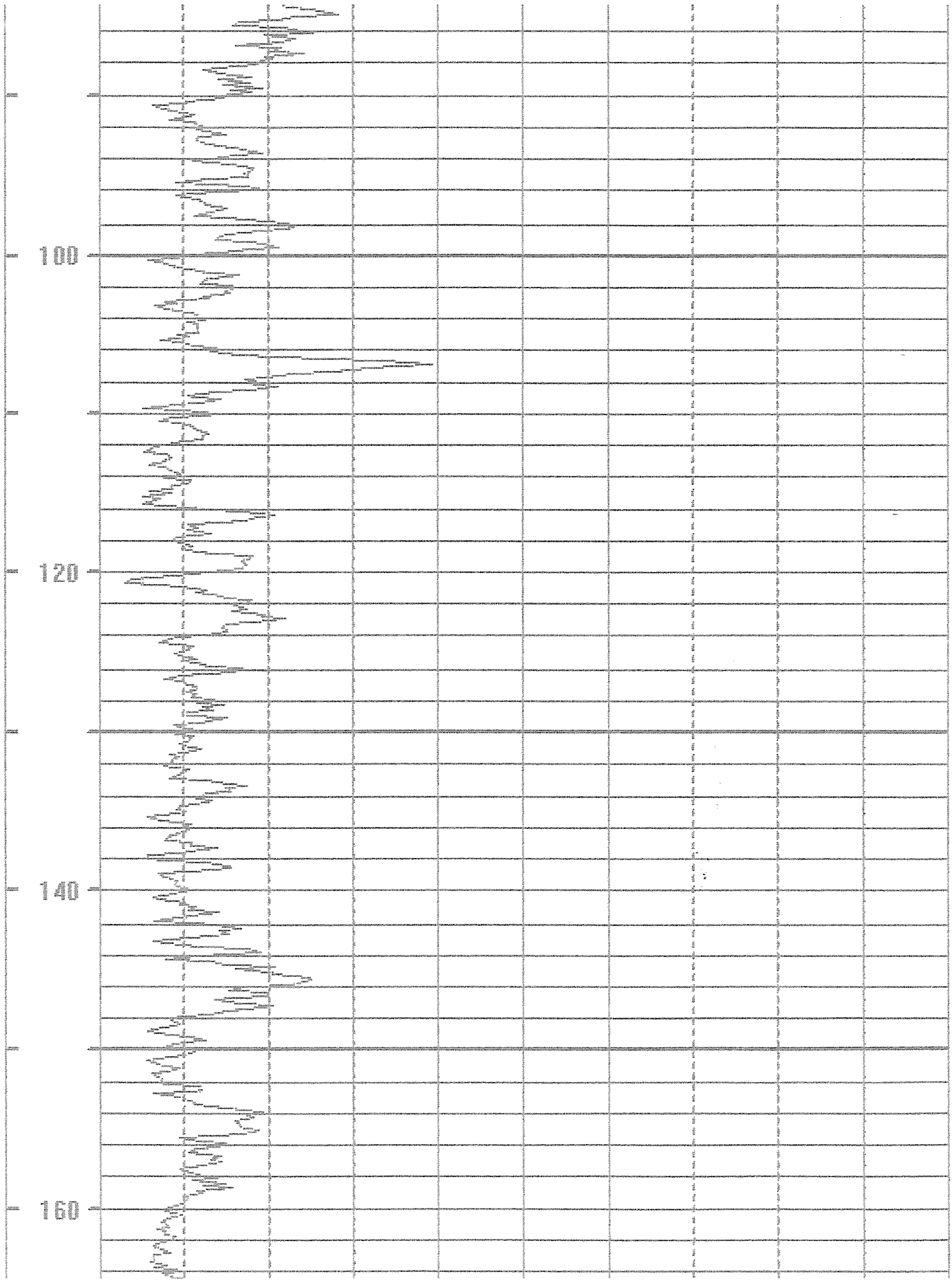
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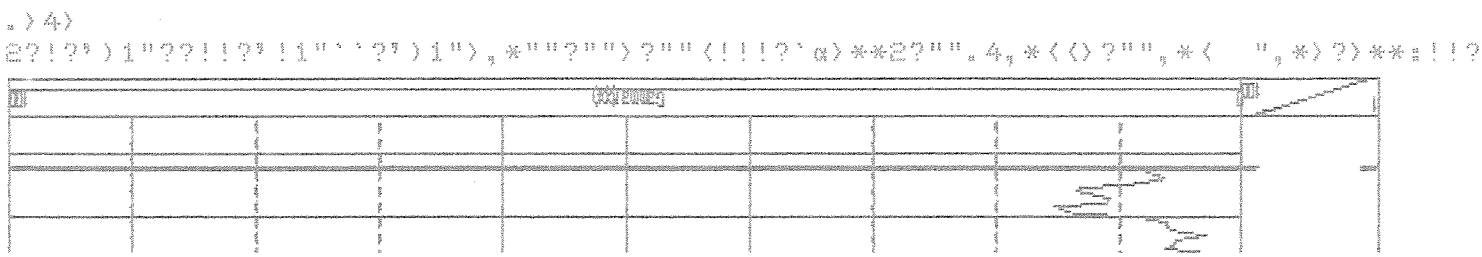
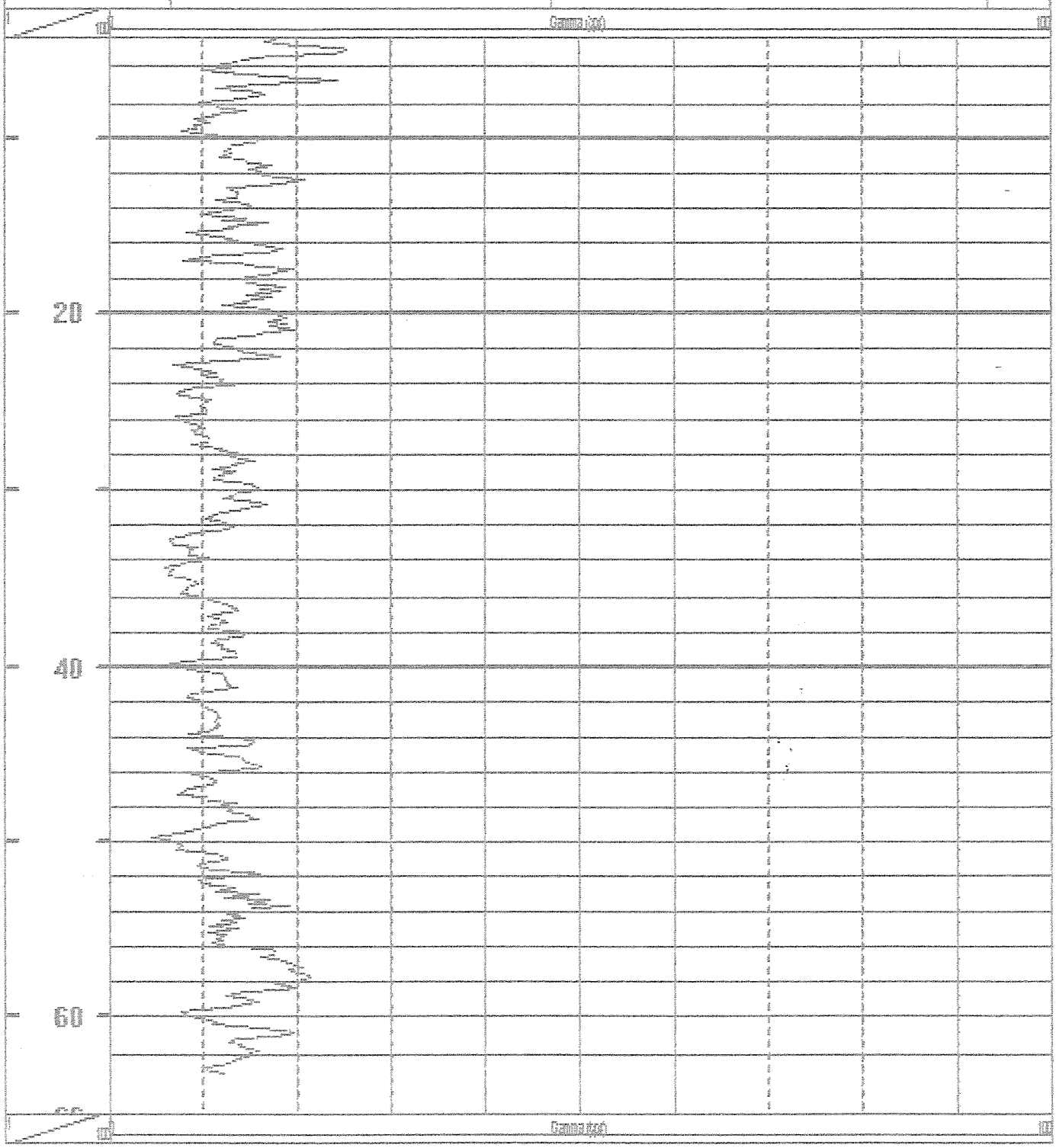


	COMPANY: DELTA WELL & PUMP CO., INC.			Casing
	Location: NWIRP BETHPAGE			
Well	MW313S		Depth Driller	
			Depth Logger	
Date	10/31/2012	BH Fluid	Logged by: CMO	
File Name	731		Witness: JAKE	



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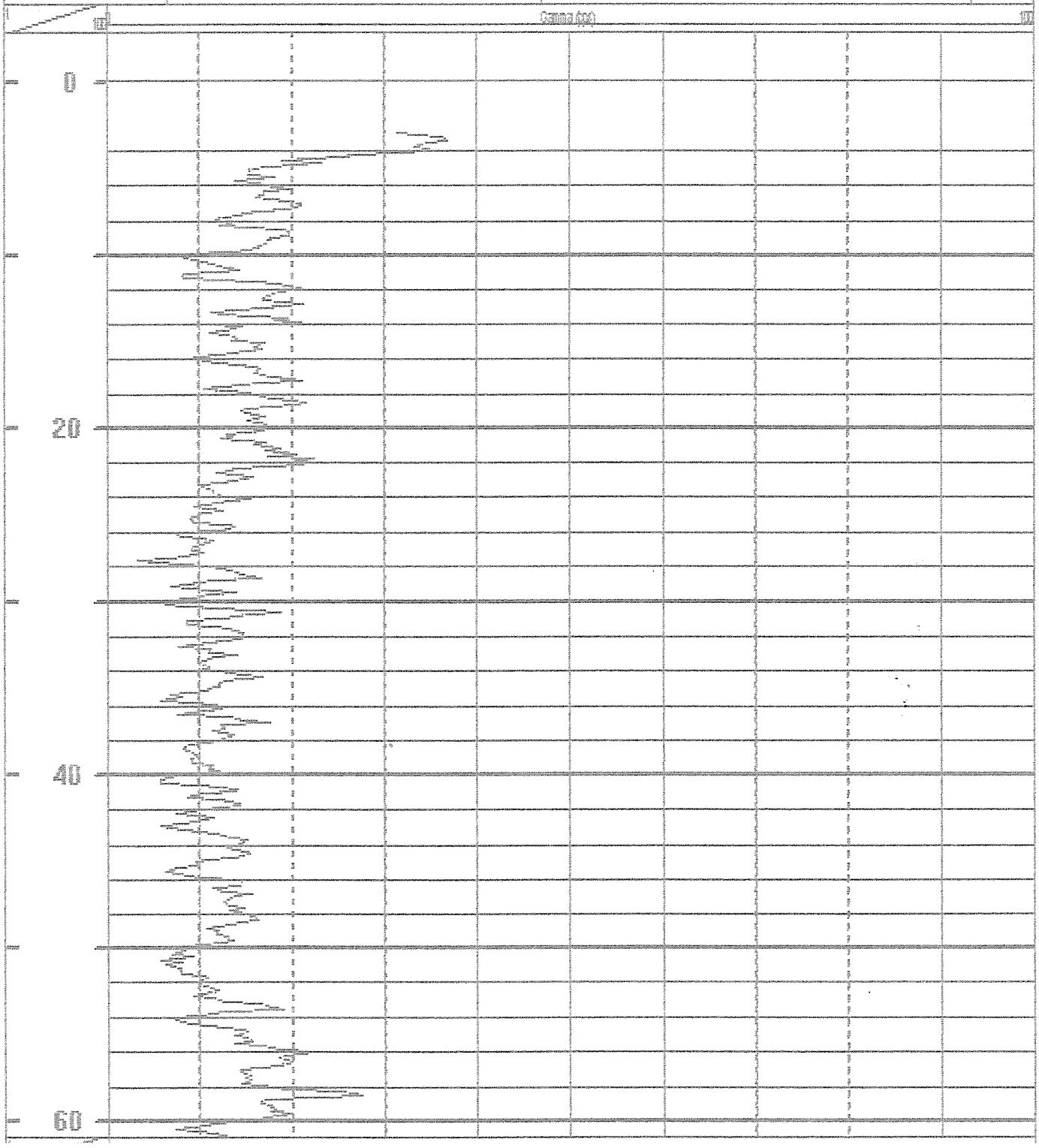
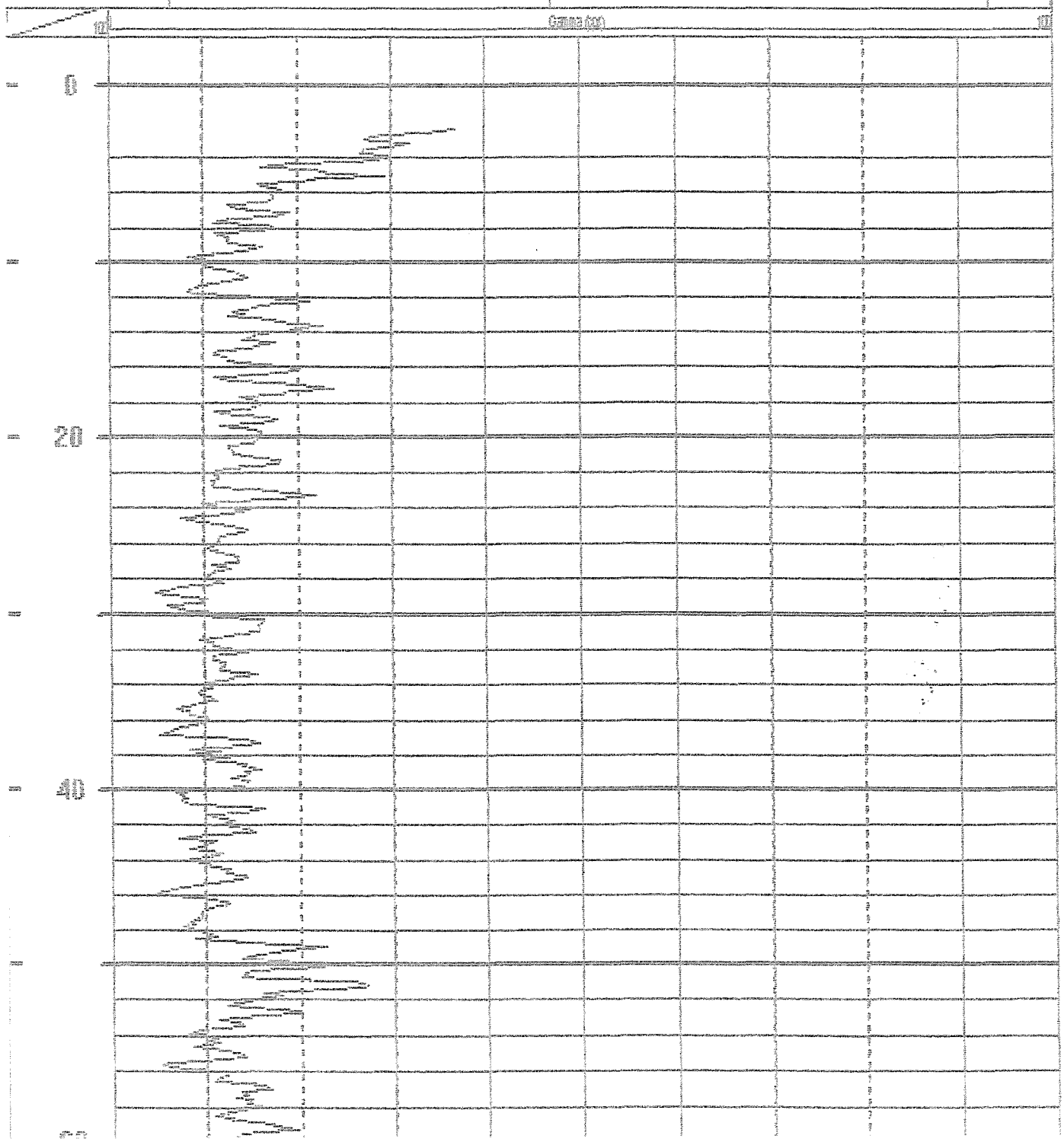
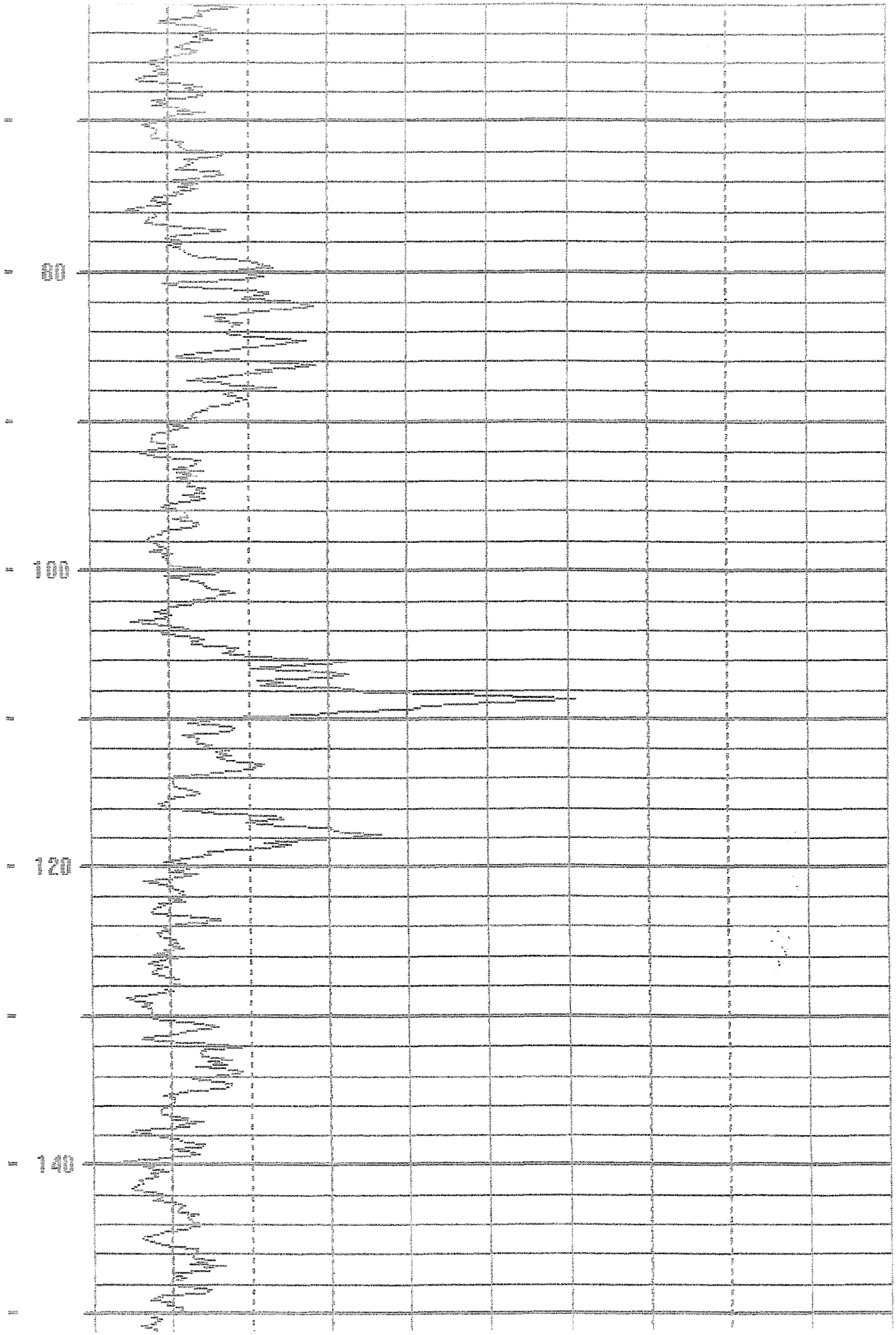
	COMPANY: DELTA WELL & PUMP CO., INC.		Casing
	Location: NWIRP BETHPAGE		
Well	MW313S	Depth Driller	
		Depth Logger	
Date	10/31/2012	BH Fluid	Logged by: CMO
File Name	731	Witness: JAKE	



Date: Thursday, October 11, 2012 Time: [illegible] File: [illegible]

COMPANY:	DELTA WELL & PUMP CO., INC.		Casing
Location:	NWIRP BETHPAGE	BPS1-TT-MW314I DOWN	
Well	MW3141	Depth Driller	
		Depth Logger	
Date	10/11/2012	BH Fluid	Logged by: CMO
File Name	731	Witness: JAKE	

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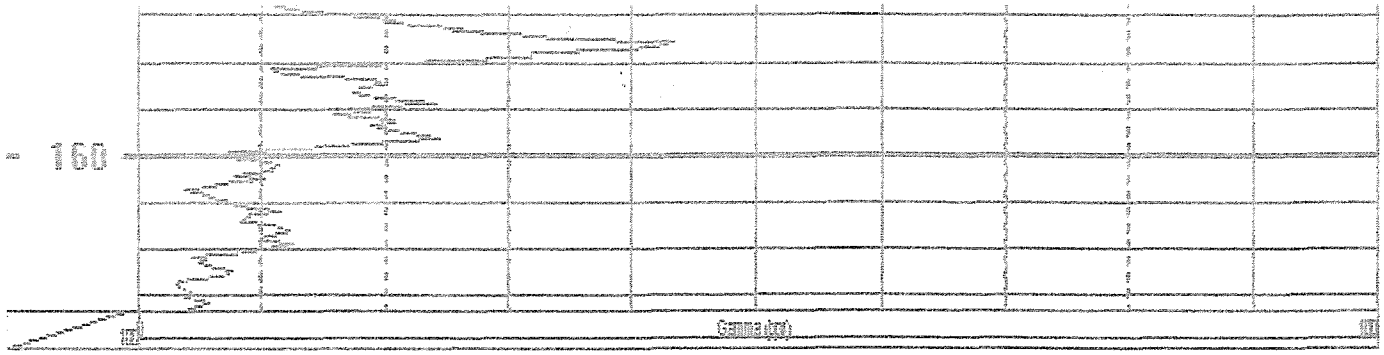

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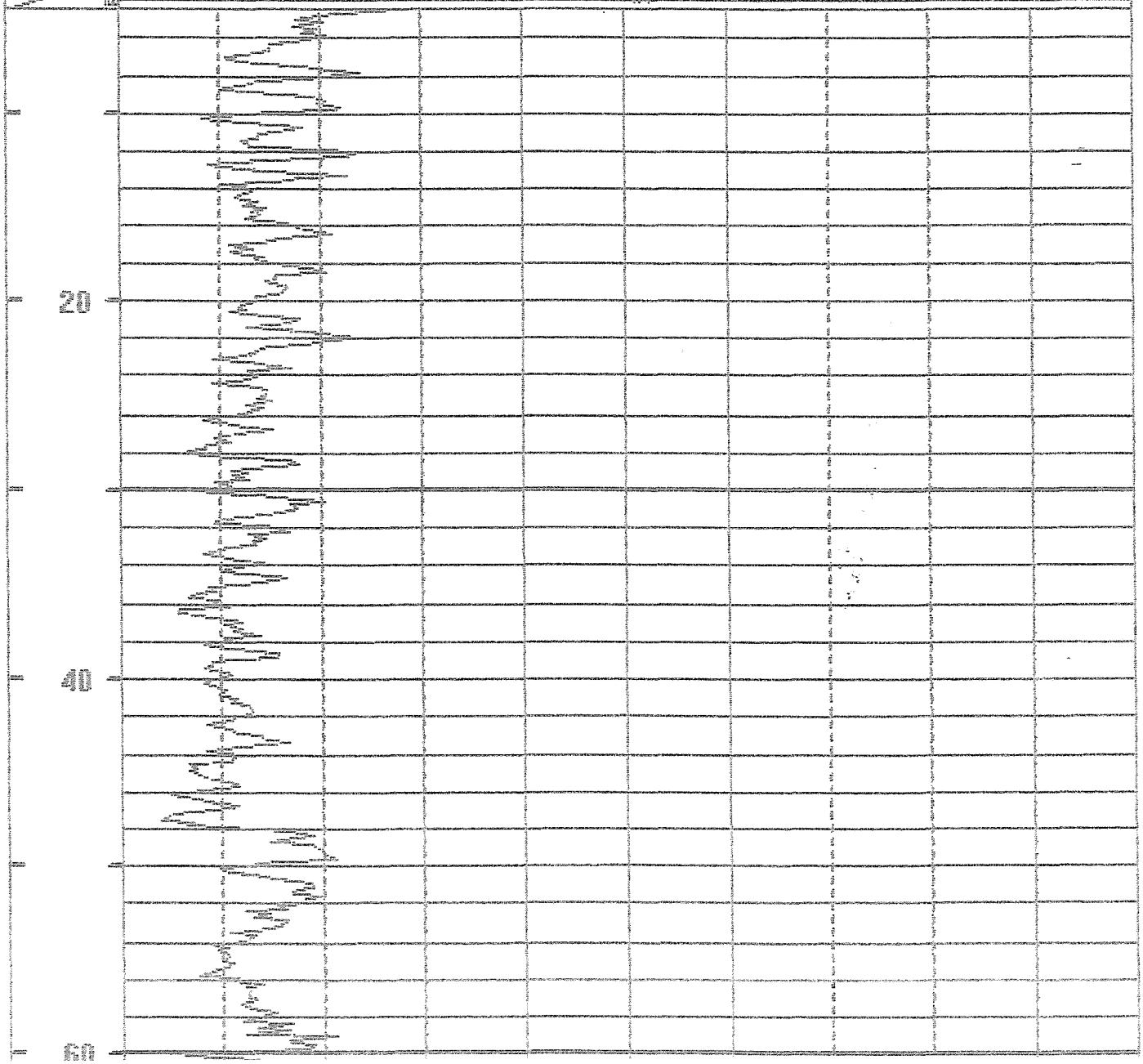
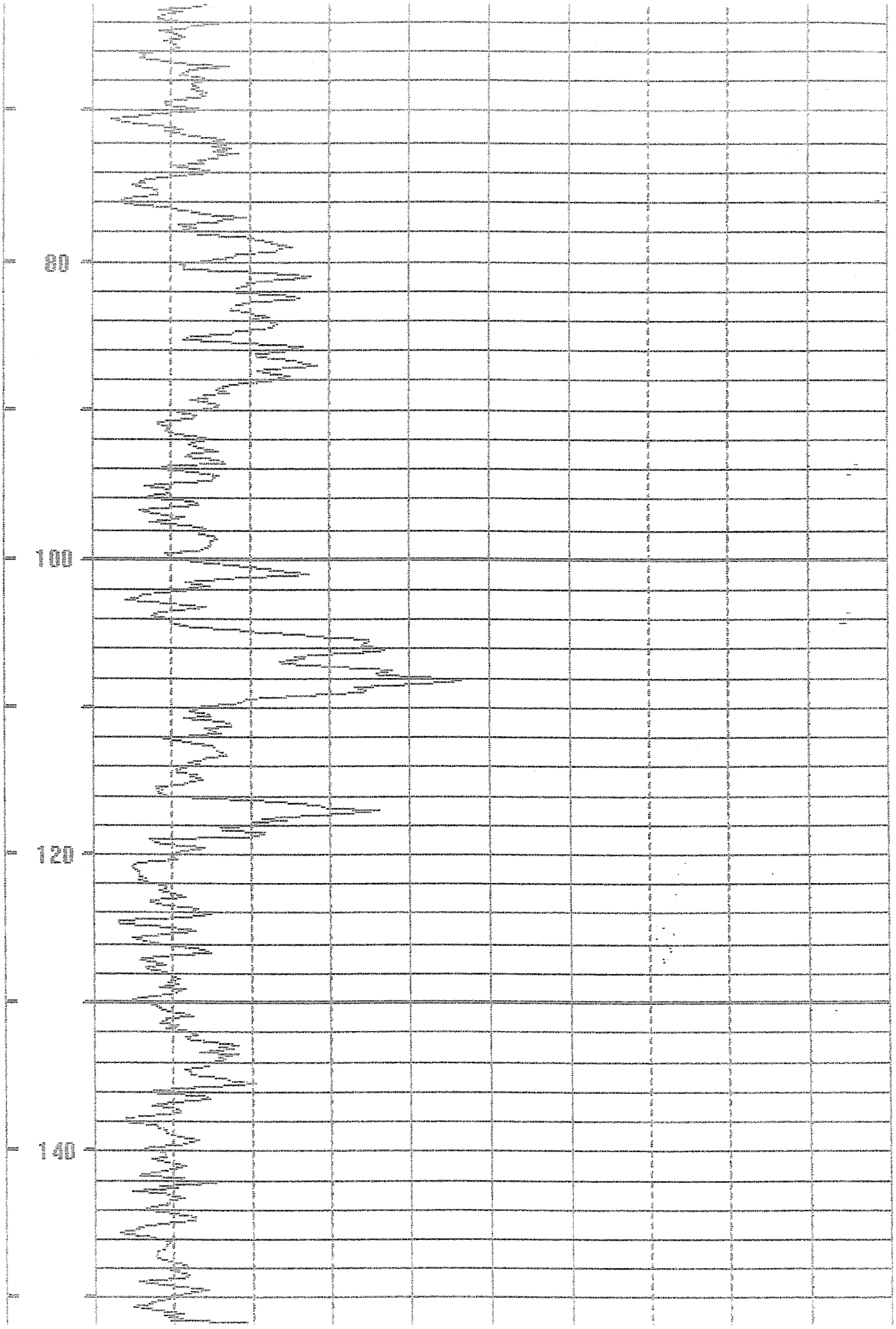
Date: Thursday, October 11, 2012 Time: 16:05 File: C:\Documents and Settings\Administrator\My Documents\[illegible]

	COMPANY: DELTA WELL & PUMP CO., INC.			Casing
	Location: NMRP BETHPAGE	BPSI-TT-MW314I	UP ~~DOWN~~ 10-11-12	
Well	MW314I	Depth Driller		
		Depth Logger		
Date	10/11/2012	BH Fluid	Logged by: CMO	
File Name	731		Witness: JAKE	

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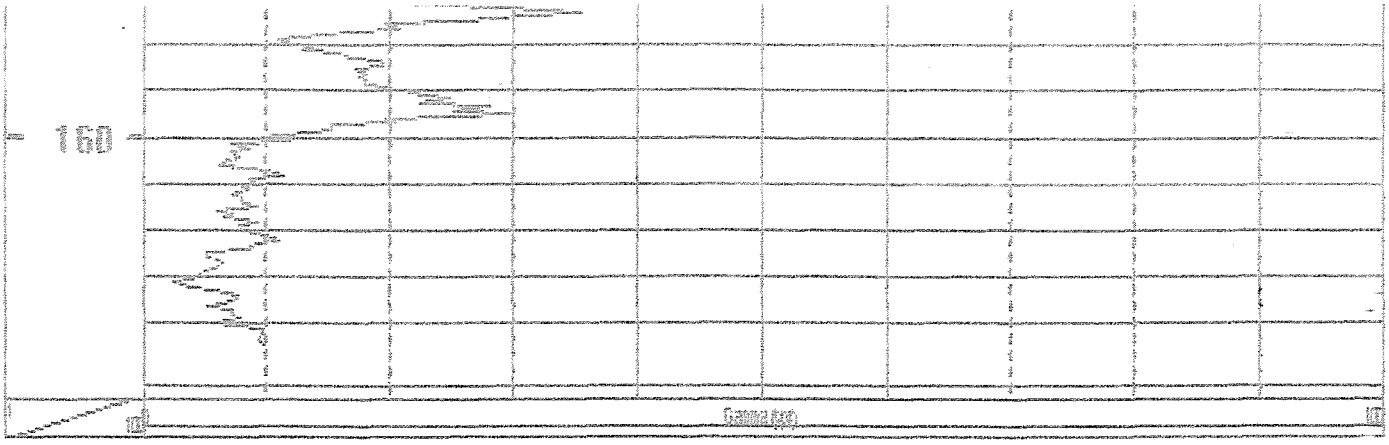


Date: Thursday, October 11, 2012 Time: 15:16 File: C:\Documents and Settings\Administrator\My Documents\[illegible]

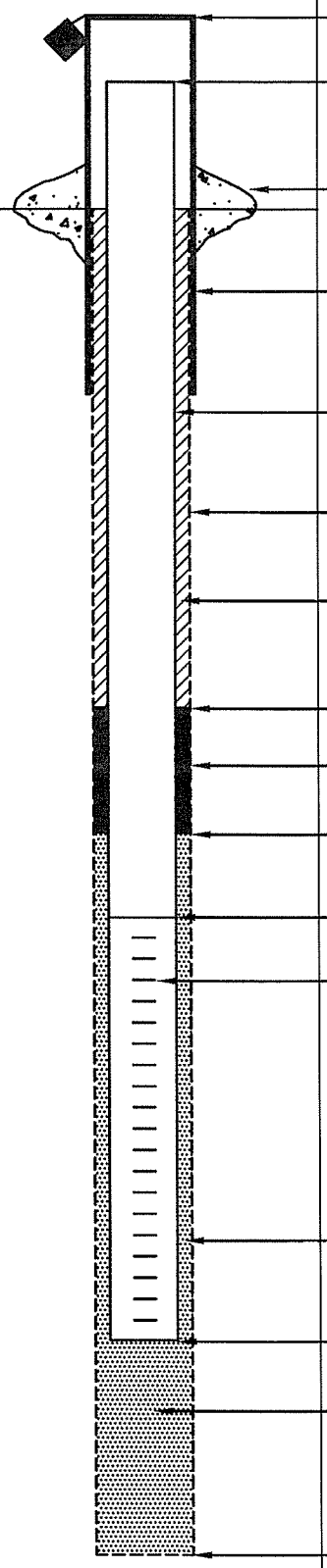
MONITORING WELL CONSTRUCTION AND DEVELOPMENT RECORDS

WELL NO.: BPS1-TT-MW310S

Tetra Tech

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Bethpage Site 1	LOCATION BPS1-TT-MW310S	DRILLER J. Gucci
PROJECT NO. 112G02230	BORING BPS1-TT-MW310S	DRILLING METHOD HSA
DATE BEGUN 10-8-12	DATE COMPLETED 10-9-12	
FIELD GEOLOGIST 10-9-12		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: 13'

ELEVATION/HEIGHT OF TOP OF RISER PIPE: 12.75'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel Round

RISER PIPE I.D.: 2"
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Bentonite Cement Grout

ELEVATION/DEPTH TOP OF SEAL: 49'

TYPE OF SEAL: Coated Bentonite Pellets

DEPTH TOP OF SAND PACK: 54'

ELEVATION/DEPTH TOP OF SCREEN: 57.5'

TYPE OF SCREEN: Schedule 40 PVC

SLOT SIZE x LENGTH: 0.010" x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: 67.5'

ELEVATION/DEPTH BOTTOM OF SAND PACK: 67.5'
BACKFILL MATERIAL BELOW SAND: Natural Collapse

ELEVATION/DEPTH OF HOLE: 68'

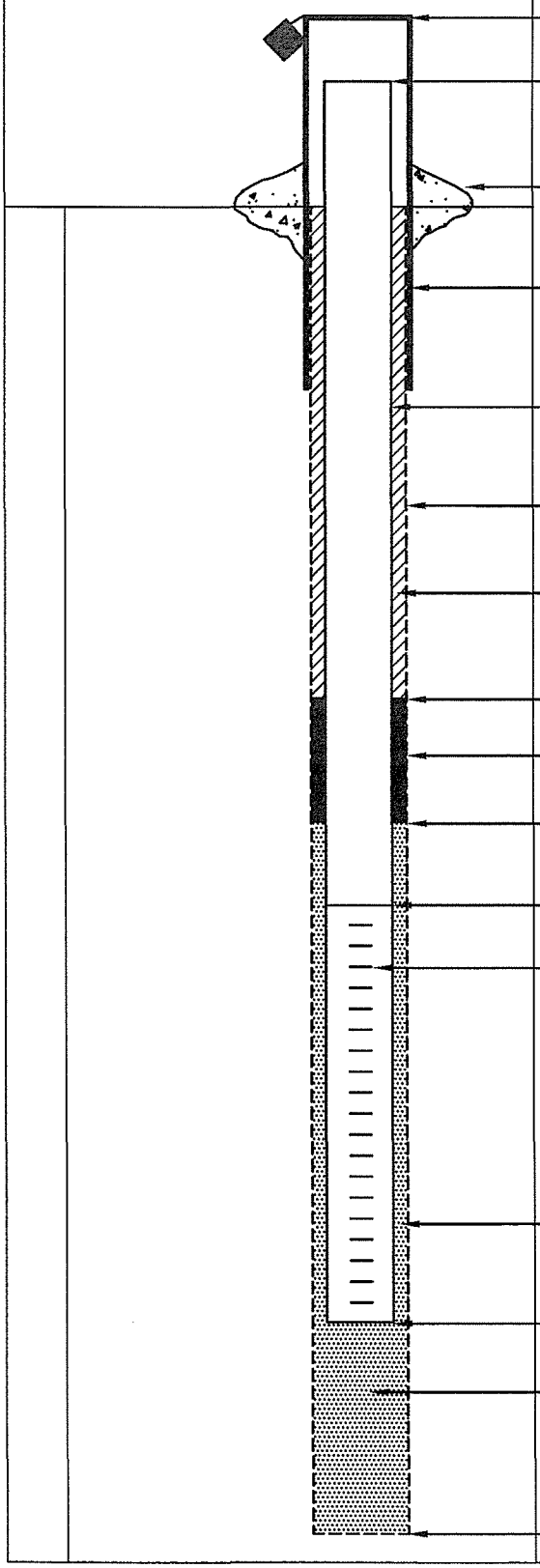
ACAD:FORM_MWSU.dwg 07/20/99 INL

WELL NO.: BPSI-TT-MW311S'

Tetra Tech

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Bethpage Site 1	LOCATION BPSI-TT-MW311	DRILLER J. Gucci
PROJECT NO. 112G02230	BORING BPSI-TT-MW311S'	DRILLING METHOD HSA
DATE BEGUN 10-22-12	DATE COMPLETED 10-22-12	
FIELD GEOLOGIST J. Birkett		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: 1 3'

ELEVATION/HEIGHT OF TOP OF RISER PIPE: 1 2.75'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel Round

RISER PIPE I.D.: 2"
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Bentonite Cement Grout

ELEVATION/DEPTH TOP OF SEAL: 1 49

TYPE OF SEAL: Coated Bentonite Pellets

DEPTH TOP OF SAND PACK: 51'

ELEVATION/DEPTH TOP OF SCREEN: 1 55'

TYPE OF SCREEN: Schedule 40 PVC

SLOT SIZE x LENGTH: 0.010" x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: 1 65'

ELEVATION/DEPTH BOTTOM OF SAND PACK: 1 65'
BACKFILL MATERIAL BELOW SAND:

ELEVATION/DEPTH OF HOLE: 1 65'

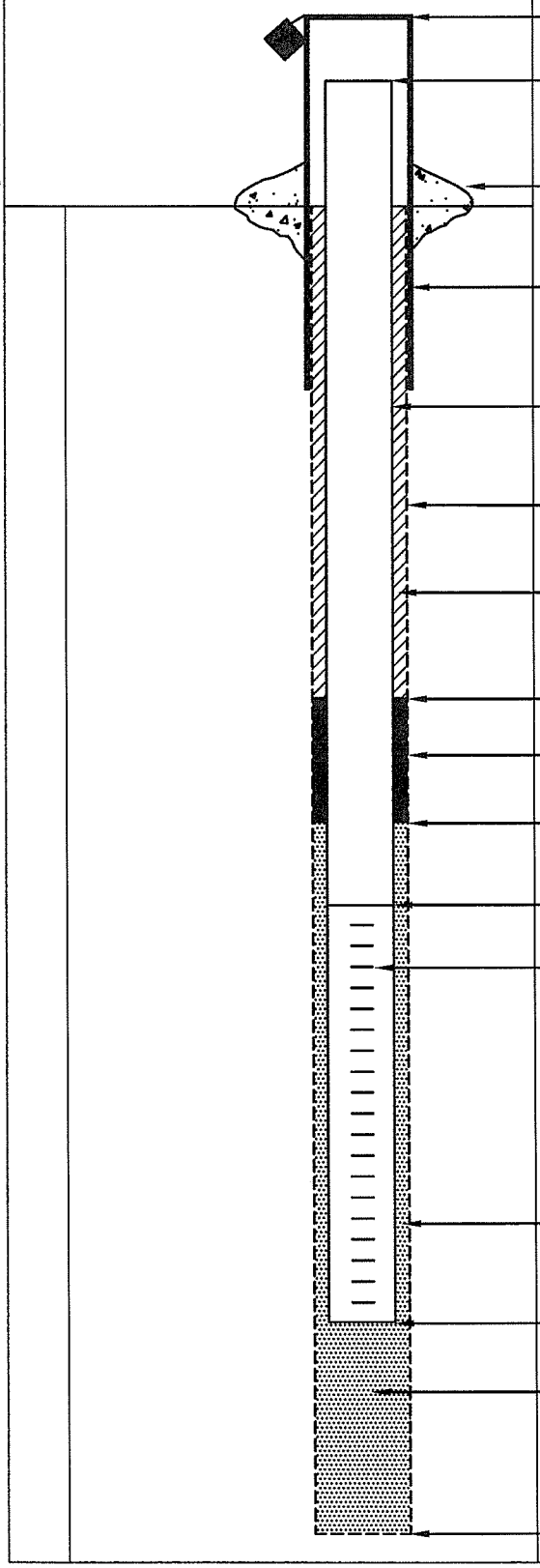
ACAD: FORM_MWSU.dwg 07/20/99 INL

WELL NO.: BPSI-TT-MW311I

Tetra Tech

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Bethpage Site1	LOCATION BPSI-TT-MW311	DRILLER J. Gueci
PROJECT NO. 112G02230	BORING BPSI-TT-MW311I	DRILLING METHOD HSA
DATE BEGUN 10-17-12	DATE COMPLETED 10-18-12	
FIELD GEOLOGIST J. Birkett		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: / 3'

ELEVATION/HEIGHT OF TOP OF RISER PIPE: /2.75'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel (Round)

RISER PIPE I.D.: 2"
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Bentonite Cement Grout

ELEVATION/DEPTH TOP OF SEAL: / 149'

TYPE OF SEAL: Bentonite pellets (hydrated)

DEPTH TOP OF SAND PACK: 153'

ELEVATION/DEPTH TOP OF SCREEN: / 160'

TYPE OF SCREEN: Schedule 40 PVC

SLOT SIZE x LENGTH: 0.010" x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: / 170'

ELEVATION/DEPTH BOTTOM OF SAND PACK: / 170'
BACKFILL MATERIAL BELOW SAND:

ELEVATION/DEPTH OF HOLE: / 170'

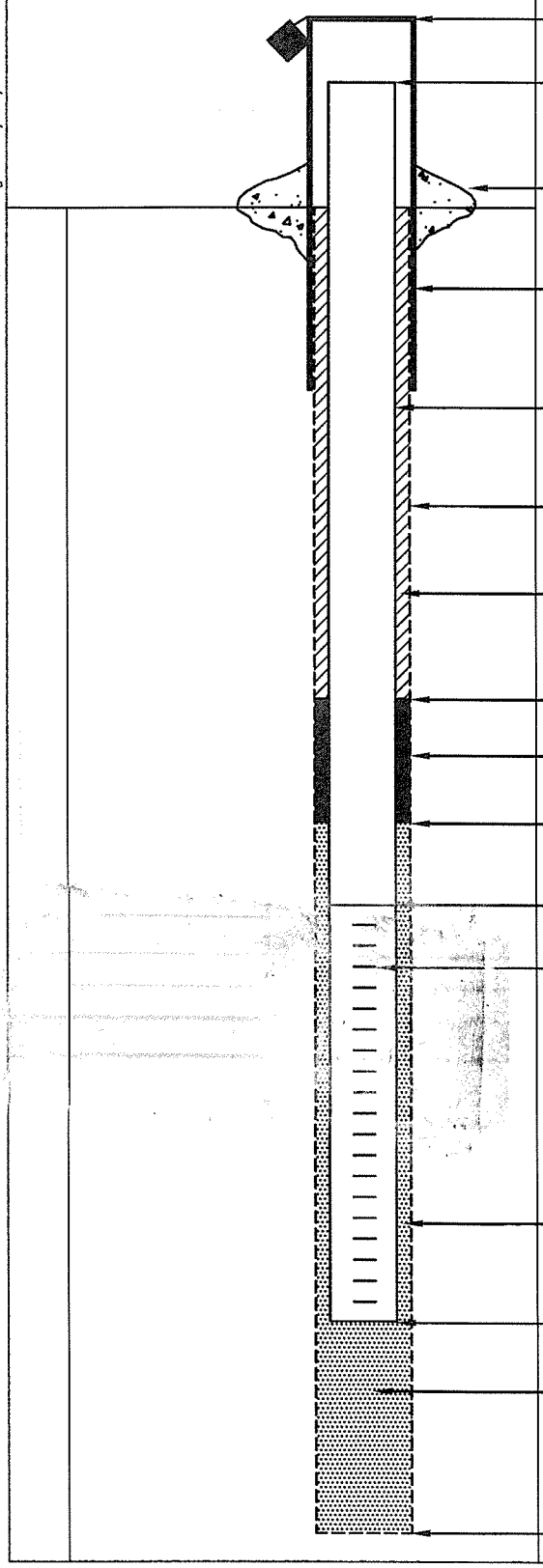
ACAD:FORM_MWSU.dwg 07/20/99 INL

WELL NO.: BPS1-TT-MW312S

Tetra Tech

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Bethpage Site1	LOCATION BPS1-TT-MW312	DRILLER J. Gueci
PROJECT NO. 112G02230	BORING BPS1-TT-MW312S	DRILLING METHOD HSA
DATE BEGUN 10-26-12	DATE COMPLETED 10-26-12	
FIELD GEOLOGIST Jacob Birkett		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: 1 3'

ELEVATION/HEIGHT OF TOP OF RISER PIPE: 1 2.75'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel (Round)

RISER PIPE I.D.: 2"
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Bentonite Cement Grout

ELEVATION/DEPTH TOP OF SEAL: 1 46.5'

TYPE OF SEAL: Bentonite Pellets (Hydrated)

DEPTH TOP OF SAND PACK: 49'

ELEVATION/DEPTH TOP OF SCREEN: 1 53'

TYPE OF SCREEN: Schedule 40 PVC

SLOT SIZE x LENGTH: 0.010" x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: 1 63'

ELEVATION/DEPTH BOTTOM OF SAND PACK: 1 63'
BACKFILL MATERIAL BELOW SAND:

ELEVATION/DEPTH OF HOLE: 1 63'

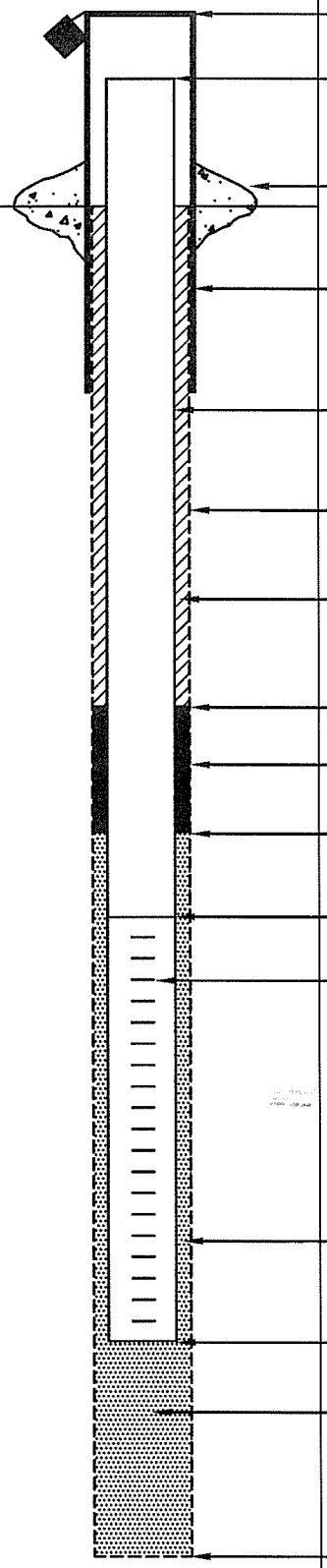
ACAD:FORM_MWSU.dwg 07/20/99 INL

WELL NO.: BPSI-TT-MW312I

Tetra Tech

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Bethpage Site1	LOCATION BPSI-TT-MW312	DRILLER Jason Gucci
PROJECT NO. 112G02230	BORING BPSI-TT-MW312I	DRILLING METHOD HSA
DATE BEGUN 10-23-12	DATE COMPLETED 10-25-12	
FIELD GEOLOGIST Jacob Birkett		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: /3'

ELEVATION/HEIGHT OF TOP OF RISER PIPE: /2.75'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel (Round)

RISER PIPE I.D.: 2"
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Bentonite Cement grout

ELEVATION/DEPTH TOP OF SEAL: /152'

TYPE OF SEAL: Bentonite pellets (coated)

DEPTH TOP OF SAND PACK: 155'

ELEVATION/DEPTH TOP OF SCREEN: /160'

TYPE OF SCREEN: Schedule 40 PVC

SLOT SIZE x LENGTH: 0.010" x 10'

I.D. OF SCREEN: ~~0.010" x 10'~~ 2" JBB 10-24-12

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: /170'

ELEVATION/DEPTH BOTTOM OF SAND PACK: /
BACKFILL MATERIAL BELOW SAND:

ELEVATION/DEPTH OF HOLE: /170'

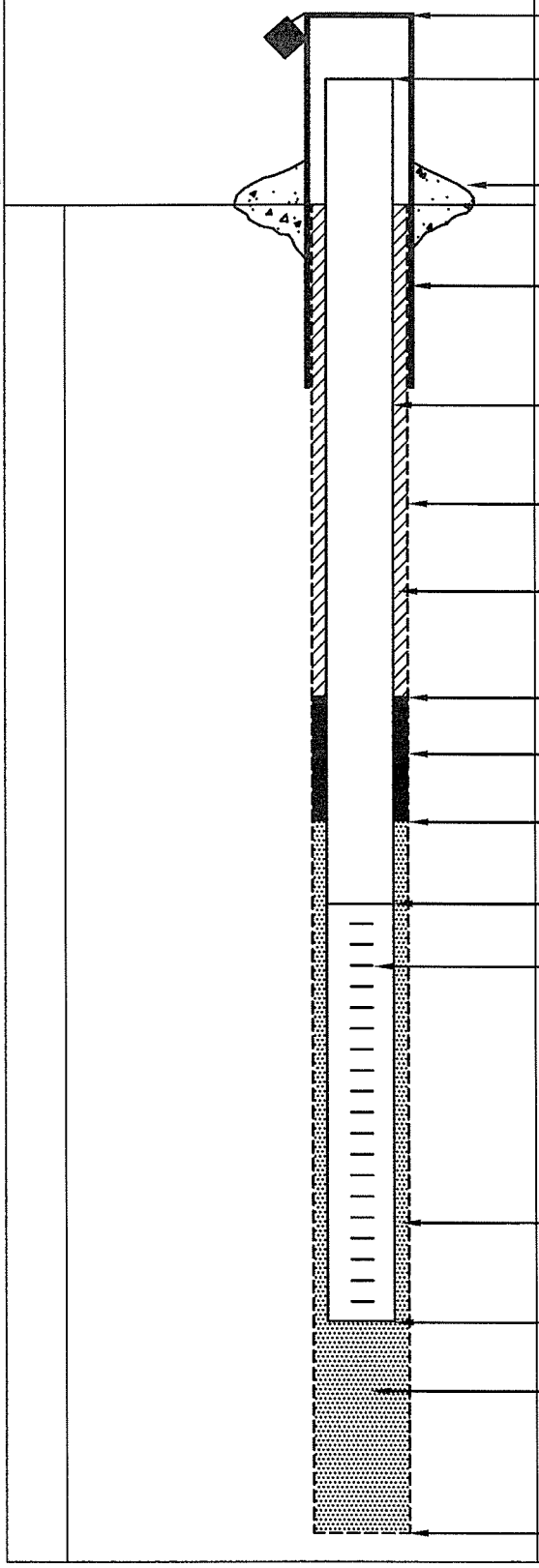
ACAD:FORM_MWSU.dwg 07/20/99 INL

WELL NO.: BPS1-TT-MW313S

Tetra Tech

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Bethpage Site 1	LOCATION BPS1-TT-MW313	DRILLER J. Gueci
PROJECT NO. 112G02230	BORING BPS1-TT-MW313S	DRILLING METHOD HSA
DATE BEGUN 10-31-12	DATE COMPLETED 11-1-12	
FIELD GEOLOGIST J. Birkett		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: /3'

ELEVATION/HEIGHT OF TOP OF RISER PIPE: /2.75'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel Round

RISER PIPE I.D.: 2"
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Bentonite cement grout

ELEVATION/DEPTH TOP OF SEAL: /35

TYPE OF SEAL: Powdered bentonite (hydrated) 40
Natural Collapse from 40-50' bgs*

DEPTH TOP OF SAND PACK: 50

ELEVATION/DEPTH TOP OF SCREEN: /53

TYPE OF SCREEN: Schedule 40 PVC

SLOT SIZE x LENGTH: 0.010" x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: /63'

ELEVATION/DEPTH BOTTOM OF SAND PACK: /63'
BACKFILL MATERIAL BELOW SAND:
Natural Collapse

ELEVATION/DEPTH OF HOLE: /65'

*Original Bentonite seal (pellets) did not fall through augers. Had to pull out all augers and put seal in w/o augers.

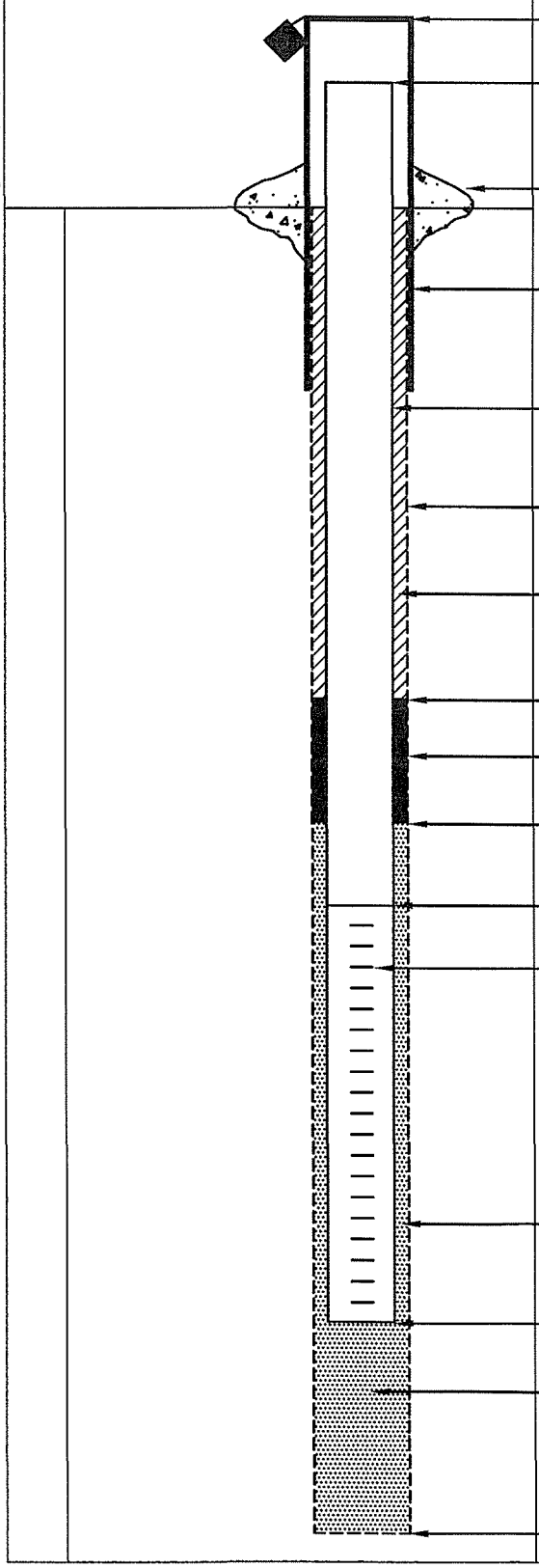
ACAD:FORM_MWSU.dwg 07/20/99 INL

WELL NO.: BPS1-TT-MW314S

Tetra Tech

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Bethpage Site 1	LOCATION BPS1-TT-MW314	DRILLER J. Gucci
PROJECT NO. 112G02230	BORING BPS1-TT-MW314S	DRILLING METHOD HSA
DATE BEGUN 10-15-12	DATE COMPLETED 10-16-12	
FIELD GEOLOGIST J. Birkett		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: /3'

ELEVATION/HEIGHT OF TOP OF RISER PIPE: /2.75'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel (Round)

RISER PIPE I.D.: 2"
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Bentonite Cement Grout

ELEVATION/DEPTH TOP OF SEAL: /49.5'

TYPE OF SEAL: Bentonite Pellets (Hydrated)

DEPTH TOP OF SAND PACK: 52'

ELEVATION/DEPTH TOP OF SCREEN: /55'

TYPE OF SCREEN: Schedule 40 PVC

SLOT SIZE x LENGTH: 0.010" x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: /65'

ELEVATION/DEPTH BOTTOM OF SAND PACK: /65'
BACKFILL MATERIAL BELOW SAND:

ELEVATION/DEPTH OF HOLE: /65'

ACAD:FORM_MWSU.dwg 07/20/99 INL

WELL NO.: BPS1-TT-MW314I

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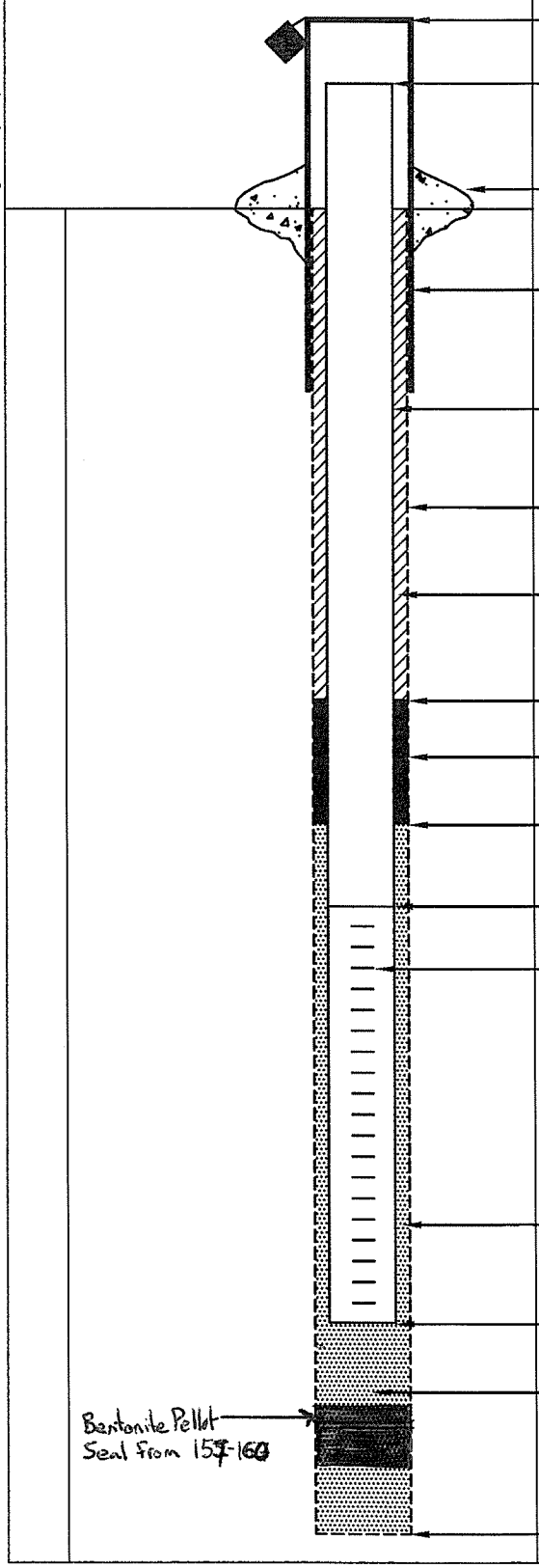
OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Bethpage Site 1	LOCATION BPS1-TT-MW314	DRILLER J. Gueci
PROJECT NO. 112G02230	BORING BPS1-TT-MW314I	DRILLING METHOD HSA
DATE BEGUN 10-11-12	DATE COMPLETED 10-12-12	
FIELD GEOLOGIST J. Birkett		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: / 3'

ELEVATION/HEIGHT OF TOP OF RISER PIPE: / 2.75'

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 6"
TYPE OF SURFACE CASING: Steel (Round

RISER PIPE I.D.: 2"
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 8"

TYPE OF BACKFILL: Bentonite Cement Grout

ELEVATION/DEPTH TOP OF SEAL: / 134'

TYPE OF SEAL: Bentonite Pellets

DEPTH TOP OF SAND PACK: 137'

ELEVATION/DEPTH TOP OF SCREEN: / 144'

TYPE OF SCREEN: Schedule 40 PVC

SLOT SIZE x LENGTH: 0.010" x 10'

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: / 154

ELEVATION/DEPTH BOTTOM OF SAND PACK: / 157
BACKFILL MATERIAL BELOW SAND:
Natural Collapse (160'-170')

ELEVATION/DEPTH OF HOLE: / 170'

ACAD: FORM_MWSU.dwg 07/20/99 INL

Tetra Tech

MONITORING WELL DEVELOPMENT RECORD

Well: BPSI-HN-MW27S
Site: NWIRP Bethpage Site 1
Date Installed:
Date Developed: 11-12-12 11-13-12
Dev. Method: Submersible Pumps
Pump Type: 3" Submersible and 2" Grundfos

Depth to Bottom (ft.): 55.6' BTOC
Static Water Level Before (ft.):
Static Water Level After (ft.):
Screen Length (ft.):
Specific Capacity:
Casing ID (in.): 4"

Responsible Personnel: J. Birkett
Drilling Co.: Delta
Project Name: NWIRP Bethpage Site 1 PCB Inv.
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units _____)	Turbidity (NTU)	Remarks (odor, color, etc.)
11-12-12	Lower	3"	pump down well and startup but doesn't pull					any water
11-13-12	Lower	2" Grundfos but well still does not produce						

Tetra Tech

MONITORING WELL DEVELOPMENT RECORD

Well: BPSI-HN-MW27I
Site: Bethpage Site 1
Date Installed:
Date Developed: 11-12-12
Dev. Method: Submersible Pump
Pump Type: 3" Submersible Pump

Depth to Bottom (ft.): 111.1
Static Water Level Before (ft.):
Static Water Level After (ft.):
Screen Length (ft.):
Specific Capacity:
Casing ID (in.): 4"

Responsible Personnel: J. Birkett
Drilling Co.: Delta
Project Name: NWIRP Bethpage Site 1 PCB Inv.
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1315	—	Start up pump		—	—	—		3" pump has too high of a flow rate
1335	—	75	105' *	—	—	—	Brown >1,000	which pumps well dry, had to put
1355	—	125	105' *	—	—	—	Clear ~75	Valve on outlet to slow down
1405	Shut off	pump 135' and	let well recharge	—	—	—	Clear ~75	Surged well every 10 min. Towards
1420	Surge screen	and restart pump		—	—	—		the end surging did not make
1440	—	175	105 *	—	—	—	Clear ~50	water cloud up
								* meter resting on pump

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MONITORING WELL DEVELOPMENT RECORD

Well: BPS1-TT-MW302S
Site: Bethpage Site 1
Date Installed: 10-30-10
Date Developed: 11-14-12
Dev. Method: Submersible + manual surge
Pump Type: Grundfos RediFlo

Depth to Bottom (ft.): 51' bgs
Static Water Level Before (ft.): 44.60' BTOC
Static Water Level After (ft.):
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"

Responsible Personnel: J. Birkeetl
Drilling Co.: Delta
Project Name: NWIRP Bethpage Site 1 PCB Investigation
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units _____)	Turbidity (NTU)	Remarks (odor, color, etc.)
0730	Lower surge block (2" rubber on aluminum pole) and surge for 5 min							
0745	Lower grundfos and start purge							
0815	~1.5 GPM	50	—	—	—	—	Brown	
0835	↓	75	—	—	—	—	light brown	
0850		100	—	—	—	—	clear	
0905	↓	125	—	—	—	—	clear	
	Complete development							

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MONITORING WELL DEVELOPMENT RECORD

Well: BPS1-TT-MW306S
Site: Bethpage Site 1
Date Installed: 12-8-11
Date Developed: 11-14-12
Dev. Method: Submersible + manual surge
Pump Type: Grundfos Redi Flo

Depth to Bottom (ft.): 60' bgs
Static Water Level Before (ft.): 47.15' BTOC
Static Water Level After (ft.):
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"

Responsible Personnel: J. Birkett
Drilling Co.: Delta
Project Name: NWIRP Bethpage Site 1 PCB Inv.
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units _____)	Turbidity (NTU)	Remarks (odor, color, etc.)
0930	Lower surge block (2" rubber on aluminum pole) and surge for 5 min							
0945	Lower grundfos and start purge							
1000	~1.5 GPM	30	—	—	—	—	Brown	
1020	↓	60	—	—	—	—	light brown	
1040		90	—	—	—	—	clear	
1100	↓	120	—	—	—	—	clear	
	Complete development							

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MONITORING WELL DEVELOPMENT RECORD

Well: BPSI-TT-MW307S
Site: Bethpage Site 1
Date Installed: 11-11-11
Date Developed: 11-14-12
Dev. Method: Submersible + manual surge
Pump Type: Grundfos Rediflo

Depth to Bottom (ft.): 50.5' bgs
Static Water Level Before (ft.): ~~46.82' btoc~~
Static Water Level After (ft.): 47.99' btc
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"

Responsible Personnel: J. Birkett
Drilling Co.: Delta
Project Name: NWIRP Bethpage Site 1 PCB Inv.
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units _____)	Turbidity (NTU)	Remarks (odor, color, etc.)
1230		47.99 →	Initial WL					
	Add 50	gal potable	water, but	formation takes water				
1235	Add surge	block and	surge for 5 min	while water	added	WL comes	up to ~46'	
1250	Insert grundfos and	start purging						
1255	—	10 gal	—	—	—	—	Red	
1315	—	40	—	—	—	—	Red	
1335	—	70	—	—	—	—	light Red	
1355	—	100	—	—	—	—	clear	
1415	—	125	—	—	—	—	Clear	

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MONITORING WELL DEVELOPMENT RECORD

Well: BPSI-TT-MW310S
Site: NWIRP Bethpage Site 1
Date Installed: 10-9-12
Date Developed: 11-5-12
Dev. Method: Grundfos pump/Surge
Pump Type: Grundfos RediFlo

Depth to Bottom (ft.): 65' bgs
Static Water Level Before (ft.): 53.9' bgs
Static Water Level After (ft.): 55.96' BTOC
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"

Responsible Personnel: Jacob Birkett
Drilling Co.: Delta
Project Name: NWIRP Bethpage Site 1 PCB Inv.
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
0830	—	2	54.7	12.89	5.27	0.838	1,000	Turbid Brown
0850	—	20	54.5	13.03	5.44	0.767	933	Surge well every
0910	—	40	54.9	12.92	5.41	0.772	460	5 min
0930	—	60	54.4	15.35	6.14	0.727	1,000	
0950	—	80	54.5	14.40	6.11	0.739	600	
1010	—	100	54.5	15.10	6.14	0.736	500	
1030	—	120	54.4	15.10	6.10	0.731	531	
1050	—	140	54.5	15.30	6.11	0.736	419	
1110	—	160	54.4	15.30	6.10	0.739	614	
1130	—	180	54.4	15.26	6.12	0.740	731	
1150	—	200	54.5	15.27	6.10	0.735	319	Light brow Stop Surge
1210	—	220	54.5	15.30	6.13	0.739	201	
1230	—	240	54.5	15.30	6.12	0.740	121	clearish
1250	—	260	54.5	15.29	6.10	0.736	108	
1310	—	280	54.4	15.31	6.11	0.737	43.2	
1330	—	300	54.5	15.30	6.12	0.740	21.9	clear

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MONITORING WELL DEVELOPMENT RECORD

Well: BPSI-TT-MW311S
Site: NWIRP Bethpage Site 1
Date Installed: 10-22-12
Date Developed: 11-9-12
Dev. Method: Submersible + manual surge
Pump Type: Grundfos RediFlo

Depth to Bottom (ft.): 65.1'
Static Water Level Before (ft.): 54.8
Static Water Level After (ft.):
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"

Responsible Personnel: Jacob Birkett
Drilling Co.: Delta Well
Project Name: NWIRP Bethpage Site 1 PCB Inv.
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1230	—	4	53.0	12.66	6.03	16.11	>1,000	Brown Surge every 10min
1250	—	40	53.4	12.70	6.19	16.28	>1,000	Brown
1310	—	80	53.2	12.63	6.10	15.87	>1,000	Brown
1330	—	120	53.6	12.11	6.13	15.93	>1,000	Brown
1350	—	160	53.4	12.62	6.05	15.17	>1000	Brown
1410	—	200	53.0	12.20	6.18	15.26	200	light Brown Stop Surging
1430	—	240	53.3	12.44	6.11	15.30	50	Clearish
1450	—	280	53.1	12.51	6.07	15.28	50	
1510	—	320	53.1	12.56	6.13	15.37	45	

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MONITORING WELL DEVELOPMENT RECORD

Well: BPS1-TT-MW311E
Site: Bethpage Site1
Date Installed: 10-18-12
Date Developed: 11-9-12
Dev. Method: Air Lift and submersible
Pump Type: Air Lift and Grundfos Rediflo
Depth to Bottom (ft.): 173.6' bgs
Static Water Level Before (ft.): 55.2' bgs
Static Water Level After (ft.): 57.23' BTOC
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"
Responsible Personnel: Jacob Birkett
Drilling Co.: Delta Well
Project Name: NWIRP Bethpage Site 1 PCB Inv.
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
0830	Air Lift	50	—	12.05	4.30	0.344	>1,000	Brown
0850		200	—	12.35	4.95	0.310	30	Clear
0910		500	—	12.60	5.11	0.319	45	Clear
0930	Grundfos	540	54.0	12.83	5.29	0.275	45	Surge Grundfos first 30 min
0950		580	54.2	12.54	5.37	0.311	50	Clear
1010		620	54.1	12.66	5.18	0.319	50	
1030		660	54.2	12.60	5.11	0.310	50	
1050		700	54.0	12.54	5.30	0.306	50	
1110		740	54.1	12.65	5.21	0.309	40	

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MONITORING WELL DEVELOPMENT RECORD

Well: BPSI-TT-MW312S
Site: Bethpage Site 1
Date Installed: 10-26-12
Date Developed: 11-6-12
Dev. Method: Submersible Pump / Manual surge
Pump Type: Grundfos RediFlo

Depth to Bottom (ft.): 65' bgs
Static Water Level Before (ft.): 54.6' bgs
Static Water Level After (ft.): 56.14' BTOC
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"

Responsible Personnel: Jacob Birkett
Drilling Co.: Delta
Project Name: NWIRP Bethpage Site 1 PCB Investigation
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
0900	—	2	55.7	16.23	5.73	0.056	>1000	Brown Surge screen every 10 min
0920	—	20	55.7	16.28	5.47	0.053	>1000	
0940	—	40	55.6	16.55	5.88	0.50	>1000	
1000	—	60	55.5	16.43	5.75	0.055	>1000	
1020	—	80	55.6	16.85	5.40	0.063	691	
1040	—	100	55.6	17.31	5.90	0.315	477	
1100	—	120	55.5	17.62	5.84	0.217	590	
1120	—	140	55.6	17.77	5.81	0.235	670	
1140	—	160	55.4	17.72	5.70	0.211	400	
1200	—	180	55.4	17.70	5.81	0.312	400	
1220	—	200	55.5	17.77	5.87	0.309	400	
1240	—	220	55.4	17.80	5.81	0.281	400	
1300	—	240	55.5	17.73	5.88	0.293	100	Clearish Stop Surging
1320	—	260	55.6	17.80	5.71	0.276	50	Clear
1340	—	280	55.5	17.70	5.66	0.282	37	Clear
1400	—	300	55.4	17.77	5.77	0.262	30	Clear

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MONITORING WELL DEVELOPMENT RECORD

Well: BPS1-TT-MW312I
Site: NWIRP Bethpage Site1
Date Installed: 10-25-12
Date Developed: 11-7-12
Dev. Method: Airlift / Submersible
Pump Type: Airlift + Grundfos RediFlo

Depth to Bottom (ft.): 170' bgs
Static Water Level Before (ft.): 54.8' bgs
Static Water Level After (ft.): 56.91
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"

Responsible Personnel: J. Birkett
Drilling Co.: Delta Well
Project Name: NWIRP Bethpage Site 1 PCB Investigation
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
0830	Air	100	—	16.21	5.40	0.466	>1000	Brown
0850		200	—	16.15	5.36	0.470	200	lt brown
0910		300	—	15.38	5.42	0.443	200	light brown
0930	Lift	400	—	16.11	5.80	0.440	161	↓
0950		500	—	16.09	5.46	0.451	149	↓
1010	Grundfos	520	53.6	15.88	5.79	0.442	>1,000	Brown Surge well every 5min
1030		540	53.3	15.91	5.77	0.466	>1,000	↓
1050		560	53.8	15.96	5.63	0.464	>1,000	↓
1110		580	53.3	15.79	5.61	0.451	50	Clear Stop Surge
1130		600	53.4	15.77	5.67	0.462	23	Clear

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MONITORING WELL DEVELOPMENT RECORD

Well: BPS1-TT-MW313S
Site: NWIRP Bethpage Site 1
Date Installed: 11-1-12
Date Developed: 11-2-12
Dev. Method: Grundfos manual surge
Pump Type: Grundfos Redi-Flo

Depth to Bottom (ft.): 63' bgs 65.21' BTOC
Static Water Level Before (ft.): 55.92' BTOC
Static Water Level After (ft.): 56.39' BTOC
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"

Responsible Personnel: J. Birkett
Drilling Co.: Delta (Conrad Strebel + Bob Devine)
Project Name: NWIRP Beth Site 1 PCB Investigation
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units _____)	Turbidity (NTU)	Remarks (odor, color, etc.)
1345	3 GPM	—	Well goes	dry after Shut off pump tech minutes		—	Brown	Pump set 2' off bottom
1355	0.75 GPM	5	56.99	—	—	—	Brown	silty Brown water
1400	0.75 GPM	7	60.95	20.88	6.50	0.348	Brown	" "
1410	Well goes dry	12	Shut off	pump, let	recharge	—	Brown	TURB overrange
1420	3 GPM	Restart pump	56'	—	—	—	Brown	" "
1423		15	60.93	21.13	8.18	0.339	Light Brown	" "
1426	Well goes dry	20	—	—	—	—	Light Brown	" "
		Will	restart	development	another	day		

Tetra Tech

MONITORING WELL DEVELOPMENT RECORD

Well: BPSI-TT-MW313S
Site: Bethpage Site 1
Date Installed: 11-1-12
Date Developed: 11-12-12
Dev. Method: Submersible Manual Surge
Pump Type: Grundfos Rediflow

Depth to Bottom (ft.):
Static Water Level Before (ft.):
Static Water Level After (ft.):
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2"

Responsible Personnel: J. Birkett
Drilling Co.: Delta
Project Name: NWIRP Bethpage Site 1 PCB Inv.
Project Number: 112G02230

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units _____)	Turbidity (NTU)	Remarks (odor, color, etc.)
0920	Install pump set 0.5' off bottom							
0930	Start up pump 0							
0950	—	20	50.95	—	—	—	OverRange	Brown Pump well w/o surging
1010	—	40	52.93	—	—	—	~2,000	Light Brow
1030	—	60	50.83	—	—	—	1,039	Tan
1050	—	80	50.94	—	—	—	1,680	Light Brow Surge well every 10 min
1110	—	100	50.93	—	—	—	436	Tan Stop Surging
1130	—	120	50.84	—	—	—	83	Clear
1150	—	140	50.90	—	—	—	40	Clear

Tetra Tech NUS, Inc.

MONITORING WELL DEVELOPMENT RECORD

Well: MW-3145
Site: NWIRP Bethpage
Date Installed: 10-16-12
Date Developed: 11/1/12
Dev. Method: Grundfos Pump
Pump Type: Grundfos Redi-Flo2

Depth to Bottom (ft.): [redacted] 65' +
Static Water Level Before (ft.): 56.45' *
Static Water Level After (ft.): 56.47' *
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2" PVC

Responsible Personnel: Chris Ferdik (CF)
Drilling Co.: Delta - Conrad, Bob
Project Name: Additional Groundwater Investigation for Site 1
Project Number: 112G02230

BPS1-TT-MW-3145 ∴ Screen @ 55-65' BGS ~58-68' From TOC

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks --- (odor, color, etc.)
09:50	Remove	pump	due to	pump	error	in	control box.	Reset 2nd pump. → [Start]
10:00	0.08	5.0	56.50	16.93	5.19	0.155	> 4,148	Brown/Sandy - turbid ∴ Flow rate @ ~1gpm
10:20	0.08	20.0	56.48	16.28	5.75	0.067	>1,000 (Error)	Tan/Sandy - turbid ∴ Flow rate @ ~1gpm
10:40	0.04	40.0	56.48	17.39	6.10	0.056	486	Water clears when kept @ ~2' From
11:00	0.06	60.0	56.54	17.02	5.97	0.053	> 2,649	bottom → becomes turbid when
11:20	0.04	80.0	56.48	17.09	6.00	0.052	933	surging screen ∴ Reset pump to ~5' off
11:40	0.02	100.0	56.48	16.59	6.07	0.053	347	light tan color - Flow rate @ ~ bottom
12:00	0.01	120.0	56.54	16.55	6.12	0.057	159	Reset pump to ~3.5' FB. Water 1gpm
12:20	0.02	140.0	56.55	16.62	6.06	0.053	221	turns more turbid but is clearing up
12:40	0.08	160.0	56.48	16.84	5.88	0.050	>1,000 (Error)	→ Pump set @ ~7.5' FB; more turbid
13:00	0.04	180.0	56.48	16.71	5.93	0.053	726	→ Pump set @ ~2' FB. Flow @ 1gpm
13:20	0.01	200.0	56.47	17.18	5.99	0.053	74.6	Flow ~ 1gpm ∴ pump set @ ~3.5' FB
13:40	0.01	220.0	56.48	17.28	6.01	0.052	38.7	pump set @ ~5' FB
14:00	0.005	240.0	56.47	17.19	5.98	0.050	17.5	pump set @ ~7.5' FB. Complete
								cycle. Stop purge.

* From Top of Casing (TOC) + From ground surface ±0.5 FT

'FB = From bottom (of well)

BGS = below ground surface

Tetra Tech NUS, Inc.

MONITORING WELL DEVELOPMENT RECORD

Well: MW-314I
Site: NWIRP Bethpage
Date Installed: 10-12-12
Date Developed: 11/2/12
Dev. Method: Air Lift / Grundfos
Pump Type: Compressor / Redi-Flo-2 OR Monsoon

Depth to Bottom (ft.): 154' +
Static Water Level Before (ft.): 56.75' *
Static Water Level After (ft.): 57.62 *
Screen Length (ft.): 10'
Specific Capacity:
Casing ID (in.): 2" PVC

Responsible Personnel: Chris Ferdik (CF)
Drilling Co.: Delta - Conrad, Bob
Project Name: Additional Groundwater Investigation for Site 1
Project Number: 112G02230

BPS1 - TT - MW-314I ∴ Screen @ 144 - 154' BGS ~ 147 - 157' from TOC

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units MS/cm)	Turbidity (NTU)	Remarks --- (odor, color, etc.)
09:30		200	—	14.11	4.56	0.445	174	Start purge @ 09:20 ∴ Flow rate ~ 20 gpm
09:40		400	—	13.94	5.32	0.359	53.7	Aerated water. Flow rate ~ 20 gpm
09:45		475	—	14.19	5.90	0.353	32.5	Flow rate ~ 15 gpm
10:00		~ 600	—	13.76	5.93	0.351	>10,000 (Err 4)	Water is turbid / sandy - brown → Switch to grundfos
10:35		690	57.41	13.47	5.83	0.364	>10,000 (Err)	Water turbid but clearing up ∴ Flow ~ 4 gpm
10:50		750	57.63	14.00	5.79	0.361	576	Water less turbid after agitating then waiting
11:05		810	57.63	14.60	5.75	0.355	149	→ Flow rate ~ 4 gpm
11:20		870	57.62	14.81	5.65	0.352	77.6	→ Flow @ ~ 4 gpm
11:35		930	57.62	15.50	5.83	0.354	0.0	→ Flow @ ~ 4 gpm
								→ Flow @ ~ 4 gpm. Stop purge

* From Top of Casing (TOC) + From ground surface +/- 0.5 Ft
BGS = below ground surface

GROUNDWATER LEVEL MEASUREMENT SHEETS

Tetra Tech

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Bethpage Site 1
Project No.: 112G02230
Location:
Personnel: Jake Costello + Chris Ferdick
Weather Conditions: 40's Cloudy
Measuring Device: Heron
Tidally Influenced: Yes ___ No X
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
TTAOC22 MW05	11/16/12		Abandoned			—		
TTAOC22 MW06		1417			46.67	—		
TTAOC22 MW10		1415			45.02	—		
TTAOC22 MW11		8:00			48.80	—		
FW-MW01		1321			54.59	—		
FW-MW02		1322			55.19	—		
FW-MW03		1323			53.66	—		
MW29I		1325			44.40	—		
27I MW27I		1320			54.45	—		
MW301S		1312			53.51	—		
MW301I		1311			53.45	—		
MW301D		1310			54.20	—		
MW302S		1400			44.61	—		
MW302I1		1401			44.63	—		
MW302I2		1402			44.91	—		
MW302D		1403			45.16	—		
MW303S		Could not open well				—		
MW303I1		1352			44.76	—		
MW303I2		1351			45.11	—		
MW303D		1350			45.26	—		
MW304S		1330			48.33	—		
MW304I1		1331			48.58	—		
MW304I2		1332			48.75	—		
MW304D		1333			48.93	—		
						—		

* All measurements to the nearest 0.01 foot

Tetra Tech

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Bethpage Site 1
Project No.: 112G02230
Location:
Personnel: Jake Costello + Chris Ferdik
Weather Conditions: 40's Cloudy
Measuring Device:
Tidally Influenced: Yes ___ No X
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
MW305S	11/16/12	1345			45.09			
MW305I		1344			45.65			
MW305D		1343			45.94			
MW306S		1015			47.16			
MW306I		1130			44.50			
MW306D		1135			~~[illegible]~~ → 44.95			
MW307S		08:20			46.82			
MW307I		1335			47.53			
MW307D		1336			48.26			
MW308S		1241			58.20			
MW308I		1242			58.16			
MW308D		1243			58.69			
MW309S		1232			58.15			
MW309I		1231			58.93			
MW309D		1230			58.88			
MW310S		1250			55.96			
MW311S		1257			56.93			
MW311D		1258			57.23			
MW312S		1303			56.14			
MW312I		1302			56.91			
MW313S		1235			56.39			
MW314S		1236			56.89			
MW314I		1237			57.80			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: NWIRP Bethpage Site 1
Project No.: 112G02230
Location: Bethpage
Personnel: J. Birkett
Weather Conditions: 60°F Sunny Calm
Measuring Device:
Tidally Influenced: Yes ___ No X
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
BPSI-TT-MW301S	4-8-13	1650			53.63			
MW301I		1653			53.39			
MW301D		1652			54.08			
MW302S		1848			44.70			
MW302I1		1847			44.75			
MW302I2		1846			45.00			
MW302D		1844			45.28			
MW303S		1901			44.39			
MW303I1		1900			44.78			
MW303I2		1859			45.16			
MW303D		1857			45.32			
MW304S		1801			48.27			
MW304I1		1802			48.49			
MW304I2		1803			48.70			
MW304D		1804			48.87			
MW305S		1834			45.23			
MW305I		1831			45.85			
MW305D		1830			46.16			
MW306S		1825			47.18			
MW306I		1824			47.64			
MW306D		1822			48.35			
MW307S		1810			44.00			
MW307I		1812			44.47			
MW307D		1813			44.96			
MW308S	↓	1714			57.91			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: NWIRP Bethpage Site 1
Project No.: 112G02230
Location: Bethpage
Personnel: J. Birkett
Weather Conditions: 60°F Sunny Calm
Measuring Device:
Tidally Influenced: Yes ___ No X
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
BPSI-TT-MW308I	4-8-13	1713			58.02			
MW308D		1712			58.53			
MW309S		1719			58.18			
MW309I		1721			58.78			
MW309D		1722			58.68			
MW310S		1640			55.86			
MW311S		1918			56.81			
MW311I		1920			57.09			
MW312S		1923			56.14			
MW312I		1925			56.84			
MW313S		1707			56.28			
MW314S		1702			56.73			
MW314I		1701			56.95			
BPSI-FW-MW01		1748			54.49			
MW02		1750			55.13			
MW03		1752			53.65			
BPSI-HN-MW27I		1742			54.41			
MW29I		1756			44.39			
MW29D		1758			44.62			
TTAOC22-MW10		1905			45.16			
MW11	↓	1912			48.95			

* All measurements to the nearest 0.01 foot

MONITORING WELL GROUNDWATER SAMPLE LOGS SHEETS AND LOW FLOW PURGE DATA SHEETS

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

MW06

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-T7A0C22-MW06-20121115
Sample Location: MW06
Sampled By: Jacob Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-15-12								
Time: 1400								
Method: Low Flow	C+C	6.19	0.434	17.91	4.7	0.35	0.2	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-15-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 62'								
Static Water Level (WL): 46.66								
One Casing Volume(gal/L):								
Start Purge (hrs): 1300								
End Purge (hrs): 1345								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~12								

See Low Flow Log

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOAs	HCL	3 - 40ml Vials	3
PCBs	ICE	2 - 1L Amber	2
Total Fe + Cr	HNO3	1 - 500mL Poly	1
Hex Cr.	ICE	1 - 250mL Poly	1

OBSERVATIONS / NOTES:

- Low on the Cr Reagent, so sampled for Hex Cr w/o analysis for the Lab to analyze. - Jake got 0.03 0.03
- Noticed while Filing Bottles that there is White Bubbling in the water.

Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

MW06

WELL ID.: BPS1-TAOC22-MW06-20121115
DATE: 11-15-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1300	46.69	400	6.04	0.404	18961	0.37	16.84	-73	0.2	Red Brown + Murky
1305	"	400	6.09	0.404	11944	0.54	17.69	-82	0.2	"
1310	"	"	6.15	0.425	986	0.49	18.31	-93	0.2	Lt Brown + Murky
1315	"	"	6.18	0.425	478	0.43	19.03	-97	0.2	C+C
1320		"	6.20	0.416	131	0.45	18.96	-98	"	
1325		"	6.21	0.419	63	0.41	19.26	-99	"	
1330			6.20	0.422	32.6	0.50	18.91	-97	"	
1335			6.19	0.427	21.3	0.42	18.49	-96	"	
1340			6.19	0.431	18.6	0.40	18.03	-94	"	
1345			6.19	0.434	4.7	0.35	17.91	-94	"	

SIGNATURE(S): Jacob A. Castillo

Sampled @ 14:00

PAGE 1 OF 1

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GROUNDWATER SAMPLE LOG SHEET

MW 10

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TTAOC22-MW10-20121115
Sample Location: MW10
Sampled By: Jacob Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-15-12								
Time: 16:00								
Method: Low Flow	C+C	6.18	0.301	21.05	7.4	9.62	0.1	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-15-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 60'								
Static Water Level (WL): 45.05								
One Casing Volume(gal/L):								
Start Purge (hrs): 1435								
End Purge (hrs): 1550								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): ~10								

See Low Flow Logs

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL	3 - 40mL Vials	3
PCBs	ICE	2 - 1L Ambers	2
Total Fe + Cr	HNO3	1 - 500mL Poly	1
Hex Cr	ICE	1 - 250mL Poly	1

OBSERVATIONS / NOTES:

15:03 - The Horiba Parameters started jumping around and giving odd readings - assuming the water sensors broke and could not finish. All parameters were stable, aside from Turbidity.
15:20 - Cleaned unit and sensors began to read properly.

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

MW10

WELL ID.: BPS1-TTAOC22-MW10-20121115
DATE: 11-15-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1435	45.02	400	6.53	0.325	6703	1.99	14.86	84	0.2	Reddish Brown + Murky
1440			6.19	0.318	5506	2.24	16.84	132	0.2	"
1445			6.20	0.315	4035	3.67	18.95	145	0.1	Lt Brown + cloudy
1450			6.19	0.309	1123	5.99	19.36	156	0.1	"
1455			6.19	0.306	763	9.34	19.77	161	"	"
1500			6.20	0.304	645	9.75	19.92	163	"	"
1505					553				"	
1510					241					
1515					164					
1520			6.18	0.303	76	9.71	20.78	153		C+C
1525			6.20	0.302	62	9.73	20.92	151		
1530			6.21	0.301	42	9.75	21.01	150		
1535			6.19	0.302	26	9.68	20.94	152		
1540			6.18	0.302	22	9.64	20.98	153		
1545			6.19	0.301	14.3	9.63	20.99	153		
1550			6.18	0.301	7.4	9.62	21.05	153		

Sampled @ 16:00

SIGNATURE(S): Jacob A. Costello

All Horiba Sensors broke @ 15:03 and could not take info until 15:20 (cleaned unit and then only DO was jumping).

PAGE 1 OF 1

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GROUNDWATER SAMPLE LOG SHEET

MW11

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TTA0C22-MW11-2012 1115
Sample Location: MW11
Sampled By: Jacob Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-16-12								
Time: 09:15								
Method: Low Flow	C+C	5.80	0.202	19.11	8.3	—	0.1	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-16-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 48.80								
One Casing Volume(gal/L):								
Start Purge (hrs): 08:20								
End Purge (hrs): 09:05								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~10								

See Low Flow Log

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOA	HCL	3 - 40mL Vials	3
PCBs	ICE	2 - 1L Ambers	2
Total Fe + Cr	HNO3	1 - 500mL Poly	1
Hex Cr	ICE	1 - 250mL Poly	1

OBSERVATIONS / NOTES:

DO sensor was broken on Horiba - could not get accurate DO

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	NA

Signature(s): Jacob A. Costello

MW11

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TTAOC22-MW11-20121116
DATE: 11-16-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
08:20	48.90	400	5.51	0.241	873		15.08	166	0.1	Light Brown + Murky
08:25	"	"	5.77	0.221	743		17.39	144	"	"
0830	"	"	5.73	0.220	368		18.54	159		C+C
0835	"	"	5.73	0.216	163		18.78	173		
0840			5.75	0.210	82.6		18.87	179		
0845			5.77	0.206	48.2		19.23	182		
0850			5.78	0.204	26.3		19.17	186		
0855			5.78	0.203	18.5		19.09	189		
0900			5.79	0.202	13.4		19.07	190		
0905			5.80	0.202	8.3		19.11	191		
~~0910~~										

DO sensor

SIGNATURE(S): Jacob A. Castillo

DO sensor is broken and jumping from 0.00 to 30.0

PAGE 1 OF 1

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GROUNDWATER SAMPLE LOG SHEET

FW01

Page___ of ___

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-FW-MW01-2012/11/4
Sample Location: FW01
Sampled By: J. Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-14-12								
Time: 10:20								
Method: Low Flow	C+C	7.30	0.592	16.25	8.2	3.25	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-14-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 63.5								
Static Water Level (WL): 54.60								
One Casing Volume(gal/L): 3								
Start Purge (hrs): 09:10								
End Purge (hrs): 10:15								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): ~15								

See Low Flow Log

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL	3 - 40mL VOAS	3
PCBs	ICE	2 - 1L Ambers	2
Total Fe + Cr	HNO3	1 - 500mL Poly	1
—	ICE	—	0
—	HNO3	—	0

OBSERVATIONS / NOTES:

Pump was stopping flow at slower rates, so had to maintain a fast flow rate - which caused some parameters to jump around and increased turbidity.

D.00 - Reading of Cr

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
NA	NA	

LOW FLOW PURGE DATA SHEET

FW01

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-FW-MW01-20121114
DATE: 11-14-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
09:10	54.60	400	7.16	0.681	446	3.27	13.17	225	—	Lt Gray + Cloudy
09:15	"	"	7.42	0.688	776	3.16	16.55	199	—	"
09:20	"	"	7.37	0.640	701	3.51	17.00	196	—	"
09:25	"	"	7.36	0.640	386	3.49	16.71	195	—	
09:30			7.33	0.644	395	4.01	16.64	197	—	
09:35			7.33	0.638	213	4.87	17.61	192		
09:40			7.32	0.632	231	5.88	17.51	210		
09:45			7.32	0.624	114	4.46	17.32	163		
09:50			7.31	0.605	56	3.36	16.56	183		Clr
09:55			7.29	0.598	30	3.73	16.29	185		"
10:00			7.31	0.598	26.4	3.67	16.27	185		"
10:05			7.31	0.594	15.2	3.34	16.25	184		"
10:10			7.29	0.594	11.4	3.28	16.23	184		"
10:15			7.30	0.592	8.2	3.25	16.26	184		"

SIGNATURE(S): Jacob A. Ustello

Sampled 10:20

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

FW02

Page 1 of 1

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] ~~Other Well Type:~~
[] ~~QA Sample Type:~~

Sample ID No.: BPS1-FW-MW02-20121114
Sample Location: FW02
Sampled By: Jacob Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-14-12								
Time: 11:40								
Method: —	C+C	6.90	0.265	17.33	0.0	2.65	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-14-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 65'								
Static Water Level (WL): 55.22								
One Casing Volume(gal/L): 3.25								
Start Purge (hrs): 1050								
End Purge (hrs): 1135								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~10								

See Low Flow Form

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOAs	HCL	3 - 40 mL Vials	3
PCBs	ICE	2 - 1L Ambers	2
Total Fe + Cr	HNO3	1 - 500 mL Poly	1
Hex Cr	ICE	1 - 250 mL Poly	0
Dissolved Cr	HNO3	1 - 500 mL Poly	0

OBSERVATIONS / NOTES:

0.01 Reading of Cr, so no sample taken

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

FW02

WELL ID.: BPST-FW-MW02-20121114
DATE: 11-14-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1050	55.20	400	7.66	0.202	216	1.90	14.58	25	—	C+C
1055	"	"	7.09	0.212	178	2.09	16.05	7	—	"
1100	"	"	6.94	0.232	163	2.28	15.67	8	—	"
1105	"	"	6.95	0.233	160	2.50	17.40	43	—	"
1110			6.89	0.257	67.4	2.82	17.11	54	—	
1115			6.90	0.260	16.4	2.81	17.08	61		
1120			6.91	0.263	4.2	2.85	17.12	63		
1125			6.89	0.258	0.0	2.46	17.20	66		
1130			6.89	0.265	0.0	2.66	17.24	64		
1135			6.90	0.265	0.0	2.65	17.33	63		
~~1140~~										
~~1145~~										
~~1150~~										

SIGNATURE(S): Jacob A. Castillo

PAGE___OF___

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

FW03

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-FW-MW03-20121114
Sample Location: FW03
Sampled By: Jacob Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-14-12								
Time: 13:20								
Method: Low Flow	C+C	6.23	0.273	18.12	7.3	1.42	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-14-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 67'								
Static Water Level (WL): 53.65								
One Casing Volume(gal/L): 4.5								
Start Purge (hrs): 1220								
End Purge (hrs): 1310								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): ~10								

See Low Flow Log

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40mL Vials	3
PCBs	ICE	2 - 1L Ambers	2
Total Fe+Cr	HNO3	1 - 500mL Poly	1
Hex Cr	ICE	1 - 250mL Poly	0
Dissolved Cr+Fe	HNO3	1 - 500mL Poly	0

OBSERVATIONS / NOTES:

0.01 Reading of Cr so did not sample

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s): For JC

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

FW03

WELL ID.: BPS1-FW-MW03-20121114
DATE: 11-14-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1220	53.65	500	6.23	0.286	410	1.70	16.43	157	—	Lt Brown + Murky
1225	"	"	6.24	0.286	356	1.64	17.51	156	—	"
1230	"	"	6.24	0.283	293	1.59	17.69	159	—	"
1235		"	6.23	0.280	261	1.56	17.84	160	—	
1240			6.24	0.277	242	1.54	17.89	160	—	C+C
1245			6.25	0.276	115	1.50	17.82	160	—	"
1250			6.23	0.276	74.2	1.45	17.80	159		"
1255			6.24	0.277	42	1.46	17.94	160		"
1300			6.24	0.276	24	1.47	18.01	160		
1305			6.23	0.274	9.0	1.41	18.05	161		
1310			6.23	0.273	7.3	1.42	18.12	160		

SIGNATURE(S): Jacob A. Costello

Sampled @ 13:20

PAGE___OF___

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

27 I

Project Site Name: Bethpage Site 1
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-HN-MW27I-20121114
Sample Location: MW27I
Sampled By: Jacob Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-14-12								
Time: 17:10								
Method: low flow	C+C	8.78	0.100	15.36	0.0	1.86	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-14-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 4" PVC								
Total Well Depth (TD): 110'								
Static Water Level (WL): 54.44								
One Casing Volume(gal/L): 36								
Start Purge (hrs): 1615								
End Purge (hrs): 1700								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~4								

See Low Flow Log

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL	3-40mL Vials	3
PCBs	ICE	2-1L Ambers	2
Total Fe+Cr	HNO3	1-500mL Poly	1
Hex Cr	ICE	1-250mL Poly	1
Dissolved Fe+Cr	HNO3	1-500mL Poly	0

OBSERVATIONS / NOTES:

0.08 = Reading for Cr

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER:

WELL ID.: BP57-HN-MW27I-20121114
DATE: 11-14-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1615	55.25	250	9.14	0.099	20	2.59	14.79	87	—	C+C
1620	55.00		9.09	0.103	7.3	2.33	14.59	86	—	
1625			9.13	0.109	13.1	2.00	14.67	85	—	
1630			9.10	0.110	14.3	2.01	14.71	87	—	
1635			9.03	0.108	6.7	2.00	14.99	90	—	
1640			8.97	0.106	3.5	1.97	15.10	92	—	
1645			8.92	0.105	0.0	1.98	15.16	95	—	
1650			8.87	0.103	0.0	1.83	15.26	98	—	
1655			8.82	0.101	0.0	1.83	15.41	100	—	
17:00			8.78	0.100	0.0	1.86	15.36	101	—	

SIGNATURE(S): Jacob A. Castillo

Sampled 17:10

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-HN-MW29I-20121114
Sample Location: 29I
Sampled By: Jacob Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-14-12								
Time: 1500								
Method: Low Flow	C+C	11.08	0.348	17.02	8.4	3.39	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-14-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 4" PVC								
Total Well Depth (TD): 130'								
Static Water Level (WL): 44.40								
One Casing Volume(gal/L): 55								
Start Purge (hrs): 1410								
End Purge (hrs): 1455								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 5.0								

See Low Flow Form

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOAs	HCL	3-40mL Vials	3
PCBs	ICE	2-1L Ambers	2
Total Fe + Cr	HNO3	1-500mL Poly	1
Hex Cr	ICE	1-250mL Poly	1
Dissolved Fe + Cr	HNO3	1-500mL Poly	0

OBSERVATIONS / NOTES:

0.10 - Reading For Cr

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230
158Hz

29I

WELL ID.: BPS7-HN-MW29I-20121114
DATE: 11-14-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1410	45.40	250	11.19	0.390	65.2	0.42	16.02	-6	—	C+C
1415	45.30	250	11.20	0.389	61.2	1.20	16.66	-38	—	
1420	45.20	"	11.21	0.385	48.4	2.24	16.83	-51	—	
1425	45.15	"	11.21	0.379	36.2	3.15	16.76	-55	—	
1430	"		11.20	0.375	28.6	3.04	16.85	-56	—	
1435	"		11.18	0.371	32.4	3.05	16.93	-56		
1440			11.18	0.365	26.7	3.41	16.99	-56		
1445			11.17	0.360	15.4	3.40	17.08	-56		
1450			11.16	0.353	13.6	3.48	17.05	-54		
1455			11.08	0.348	8.4	3.39	17.02			

SIGNATURE(S): Jacob A. Costello

Sampled @ 1500

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

301S

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[X] Other Well Type:
[] QA Sample Type:

Sample ID No.: BP-S1-TT-MW301S-20121113
Sample Location: MW301S
Sampled By: J. Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-13-12								
Time: 12:40								
Method: Low Flow	C+C	6.13	0.07	20.24	0.0	0.36	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-13-12								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Log					
Total Well Depth (TD): 60'								
Static Water Level (WL): 53.40								
One Casing Volume(gal/L): 2.1								
Start Purge (hrs): 1145								
End Purge (hrs): 1230								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~7								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOAs	HCL	3 - 40mL Vials	3
PCBs	ICE	2 - 1L Ambers	2
Total Fe+Cr	HNO3	1 - 500mL Poly	1
Hex Cr	ICE	1 - 250mL Poly	1
Dissolved Fe+Cr	HNO3	1 - 500mL Poly	0

OBSERVATIONS / NOTES:

0.05 - Reading for Hex Cr

Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

301S

WELL ID.: BP-S7-T7-MW301S-20121113
DATE: 11-13-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1145	53.40	350	5.86	0.071	25	0.69	15.55	191	—	C+C
1150	"	"	6.01	0.070	3.1	0.45	17.88	115	—	"
1155	"	"	6.06	0.071	8.0	0.46	19.50	114	—	"
1200	"	"	6.11	0.071	9.8	0.45	20.49	126	—	"
1205	"		6.12	0.071	2.0	0.45	20.54	132		"
1210			6.13	0.070	1.5	0.38	20.51	139		
1215			6.14	0.070	0.0	0.36	20.44	144		
1220			6.13	0.070	0.0	0.36	20.34	148		
1225			6.14	0.070	0.0	0.36	20.29	149		
1230			6.13	0.070	0.0	0.36	20.24	150		
			Sampled		@	12:40				

SIGNATURE(S): Jason A. Castillo

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

301 I

301 is up

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-T+-MW301I-20121113
Sample Location: MW301 I
Sampled By: J. Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-13-12								
Time: 1550								
Method: Low Flow	Clear	5.88	0.079	16.62	0.0	0.41	—	—

PURGE DATA:

Date: 11-13-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Log					
Total Well Depth (TD): 140'								
Static Water Level (WL): 58.39 (53.40)								
One Casing Volume(gal/L): 28								
Start Purge (hrs): 14:55								
End Purge (hrs): 15:40								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~8								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOC	HCL	3 - 40mL Vials	3
PCBs	ICE	2 - 1L Ambers	2
Total Fe + Cr	HNO3	1 - 500mL Poly	1
Hex Cr	ICE	1 - 250mL Poly	1
Dissolved Fe+Cr	HNO3	1 - 500mL Poly	0

OBSERVATIONS / NOTES:

0.06 = Reading For Hex Cr

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s): Jacob A Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

307 I

WELL ID.: BPS1-T+-MW301I-20121113
DATE: 11-13-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
14:55	53.40	400	6.28	0.085	27.6	0.54	13.54	186	—	C+C
15:00	53.40	"	6.01	0.075	48.90	0.43	15.75	149	—	"
1505	53.40	"	5.93	0.076	30.60	0.42	16.20	158	—	"
1510	"	"	5.91	0.077	15.70	0.42	16.43	167	—	"
1515	"		5.90	0.077	7.45	0.42	16.58	170		
1520			5.89	0.078	5.43	0.41	16.62	174		
1525			5.85	0.078	2.19	0.41	16.70	180		
1530			5.88	0.078	0.0	0.44	16.65	182		
1535			5.87	0.079	0.0	0.41	16.65	185		
1540			5.88	0.079	0.0	0.41	16.62	187		

SIGNATURE(S): Jacob A. Costello

Sampled @ 15:50

PAGE___OF___

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

301D

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BP-S1-TT-MW301D-20121113
Sample Location: MW301D
Sampled By: J. Costello
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-13-12								
Time: 1400								
Method: Low Flow	C+C	5.82	0.293	15.68	6.0	0.81	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-13-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 220'								
Static Water Level (WL): 54.15								
One Casing Volume(gal/L): ~54								
Start Purge (hrs): 13:05								
End Purge (hrs): 13:50								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~7								

See Low Flow Form

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL	3 - 40mL Vials	~~3~~ 6
PCBs	ICE	2 - 1L Ambers	4
Total Fe + Cr	HNO3	1 - 500mL Poly	2
Hex Cr	ICE	1 - 250mL Poly	2
Dissolved Fe+Cr	HNO3	1 - 500mL Poly	0

OBSERVATIONS / NOTES:

0.11 - Reading For Hex Cr

Circle if Applicable:

MS/MSD	Duplicate ID No.:
NA	BP-S1-TT-DUP03-20121113 @ 14:10

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

MW 301 D

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BP-51-Tt-MW301D-20121113
DATE: 11-13-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1305	54.15	400	6.29	0.325	1.5	0.96	14.96	169	—	C+C
1310	"	"	5.96	0.299	2.1	0.94	15.44	181	—	"
1315	"	"	5.90	0.296	1.7	0.89	15.51	185	—	"
1320	"	"	5.90	0.292	1.5	0.88	15.54	186	—	"
1325			5.88	0.295	1.3	0.88	15.49	187		
1330			5.87	0.296	1.1	0.88	15.35	186		
1335			5.87	0.295	0.0	0.87	15.57	187		
1340			5.85	0.294	0.0	0.84	15.60	188		
1345			5.81	0.293	0.0	0.81	15.76	191		
1350			5.82	0.293	0.0	0.81	15.68	190		

Sampled @ 14:00

SIGNATURE(S): Jacob A. Castillo

DUP 03
14:10

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW302$-20121115
Sample Location: BPS1-TT-MW302$
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11/15/12	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 16:00	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP (mV)
Method: Low Flow (Redi-Flo2)	Clear	7.30	0.130	17.01	0.0	8.20	—	165

PURGE DATA:

Date: 11/15/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow (Redi-Flo2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): ~51'								
Static Water Level (WL): 44.65'								
One Casing Volume(gal/L): N/A								
Start Purge (hrs): 14:25								
End Purge (hrs): 16:00								
Total Purge Time (min): 95								
Total Vol. Purged (gal/L): 17.5								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x - 40 mL glass vials	3
PCBs	4°C	2x - 1 L ambers	2
Total Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	1
Hexavalent Chromium	4°C	1x - 250 mL poly	1
Dissolved Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	0

OBSERVATIONS / NOTES:

No Hex. Chromium Field test Performed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW302$
DATE: 11/15/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
14:25	44.75	375	7.29	0.136	110	12.70	16.51	171	—	Start purge; slight tint
14:30	44.66	375	7.25	0.135	96.0	9.14	16.50	170	—	
14:35	44.66	375↓	7.28	0.135	89.1	8.58	16.48	168	—	Flow is slowing down
14:40	44.72	350↓	7.33	0.136	61.2	8.40	17.58	155	—	↑ pump to ~200 Hz. Flow still stopping
14:45	Pump @ 251	Hz and	Flow	is ~	0 mL/min.					
15:05	Pull pump +	tubing.	Dismantle	pump,	clean out.	Replace	tubing.	Restart	purge.	
15:10	44.71	475	7.43	0.137	>800	8.66	18.39	130	—	Slight brown tint
15:15	44.71	~0	7.38	0.138	648	6.61	17.84	121	—	Flow slows as pump speed ↑ (@ 200 Hz)
15:20	44.71	↑ pump	to 271	Hz. Flow	shy rockets,	dislodges	gasket	in	Horiba	U-52. Turn off pump.
Re-Seat	Horiba in	Flow	through	cell	Turn	back on.	Pump @	153 Hz	—	Flow @ > 500 mL/min.
15:25	44.71	500+	7.32	0.136	248	8.84	17.56	133	—	Flow > 500 mL/min. Has not
15:30	44.71	>500	7.31	0.130	21.9	8.59	17.38	143	—	Slowed yet.
15:35	44.71	>500	7.29	0.130	1.4	8.41	17.17	150	—	Flow Consistent @ higher rate
15:40	44.71	>500	7.29	0.130	0.0	8.31	17.16	156	—	" "
15:45	44.71	>500	7.29	0.130	0.0	8.25	17.18	160	—	
15:50	44.71	>500	7.29	0.129	0.0	8.26	17.11	162	—	
15:55	44.71	>500	7.30	0.129	0.0	8.20	17.09	163	—	
16:00	44.71	>500	7.30	0.130	0.0	8.20	17.01	165	—	Sample Collected

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW302T1-20121101
Sample Location: BPS1-TT-MW302T1
Sampled By: E. Wyatt
C.O.C. No.: 1248
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-1-12								
Time: 1030								
Method: Low Flow	clear	5.47	0.195	15.11	0.09	7.39	272	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-1-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 44.59								
One Casing Volume(gal/L):								
Start Purge (hrs): 0855								
End Purge (hrs): 1030								
Total Purge Time (min): 95								
Total Vol. Purged (gal/L): 6.3								

EW

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40 mL vials	Y
PCBs	ice	2 - 1,000 mL amber	Y
Total Fe & Cr	HNO_3	1 - 500 mL poly	Y

OBSERVATIONS / NOTES:

Hex chrome Field kit 0.01 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW302I1
DATE: 11-1-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity %/or ppt	Comments
0855	44.59									Prior to Purging
0904	44.75	250	6.09	0.205	4.74	9.20	13.67	187		Clear
0909	44.75	250	6.03	0.206	2.67	9.19	13.62	191		clear
0914	44.75	250	5.97	0.208	1.99	9.17	13.46	197		
0919	44.75	250	5.89	0.207	1.38	9.25	13.64	204		
0924	44.75	250	5.83	0.206	1.70	8.84	13.83	211		
0929	44.75	250	5.75	0.204	1.89	8.68	13.98	215		
0939	44.75	250	5.70	0.203	1.81	8.28	14.52	220		
0944	44.75	250	5.63	0.199	0.73	8.27	14.48	226		
0949	44.75	250	5.57	0.200	0.42	8.28	14.56	231		
0954	44.75	250	5.54	0.198	0.33	8.09	13.92	227		
1004	44.75	250	5.39	0.198	0.26	7.56	13.10	234		
1009	44.75	250	5.44	0.196	0.21	7.49	13.81	252		
1014	44.74	250	5.56	0.196	0.23	7.69	14.22	261		
1019	44.74	250	5.52	0.196	0.16	7.33	14.57	265		
1024	44.74	250	5.49	0.196	0.08	7.25	14.82	268		
1029	44.74	250	5.47	0.195	0.09	7.39	15.11	272		
										Sample time 1030

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW302I2-2012
Sample Location: BPS1-TT-MW302I2
Sampled By: E. Watt
C.O.C. No.: 1249
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity~~ ORP mV	Other
Date: 11-5-12								
Time: 1635								
Method: Low Flow	Clear	5.01	0.166	15.14	0.41	7.86	246	—

PURGE DATA:

Date: 11-5-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):				BW				
Static Water Level (WL): 44.93								
One Casing Volume(gal/L):								
Start Purge (hrs): 1531								
End Purge (hrs): 1633								
Total Purge Time (min): 62								
Total Vol. Purged (gal/L): 7.4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3-40 mL vials	✓
PCBs	ice	2-1 L ambers	✓
Total Fe and Cr	HNO_3	1-500 mL poly	✓
Hexavalent Cr	Ice	1-250 mL poly	✓

OBSERVATIONS / NOTES:

Field hex chrome result: 0.02 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW302I2
DATE: 11-5-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	~~Salinity~~ % or ppt	Comments
1531	44.93					7.98				Prior to pursing
1538	44.98	450	5.95	0.159	5.22	7.93	15.12	133		clear
1543	44.98	450	5.36	0.155	6.76	7.[illegible]	15.21	166		
1548	44.98	450	5.24	0.155	4.57	7.94	15.41	189		
1553	44.98	450	5.16	0.156	3.62	7.90	15.27	203		
1558	44.98	450	5.14	0.158	2.91	7.91	15.38	216		
1603	44.98	450	5.13	0.159	1.95	7.92	15.25	217		
1608	44.98	450	5.15	0.163	1.36	8.23	15.33	222		
1613	44.98	450	5.07	0.163	1.10	8.00	15.45	232		
1618	44.98	450	5.04	0.165	0.77	7.92	15.44	241		
1623	44.98	450	5.03	0.165	1.13	7.89	15.46	243		
1628	44.98	450	5.02	0.166	0.57	7.89	15.22	245		
1633	44.98	450	5.01	0.166	0.41	7.86	15.14	246		
										Sample time 1635

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW3020-112012 01
Sample Location: BPS1-TT-MW302D
Sampled By: E. Watt
C.O.C. No.: 1248
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-1-12								
Time: 1450								
Method: Low Flow	clear	6.32	0.225	15.60	0.00	5.26	149	—

PURGE DATA:

Date: 11-1-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 45.12								
One Casing Volume(gal/L):								
Start Purge (hrs): 1340								
End Purge (hrs): 1450								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 10-2								

EW

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40 mL vials	✓
PCBs	ice	2 - 1L ambers	✓
Total Fe and Cr	HNO_3	1 - 500 mL poly	✓

OBSERVATIONS / NOTES:

Hex chrome field kit 0.01 ns/L
pH reading would not stabilize, similar to Jan. 2012 sampling.
ORP reading started to increase at a higher rate toward the end of purging.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW 302D
DATE: 11-1-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1340	45.12									
1344	45.22	750	9.56	0.283	1.21	6.02	15.57	88		Clear, trace sheen
1349	45.20	550	9.60	0.253	0.48	5.91	15.04	74		Clear
1354	45.20	550	9.70	0.247	0.36	5.78	14.80	77		Clear
1359	45.20	550	9.72	0.251	0.21	5.82	14.77	77		
1409	45.20	550	9.86	0.269	0.20	5.62	15.26	85		
1414	45.20	550	9.81	0.262	0.16	5.52	15.35	87		
1419	45.20	550	9.67	0.251	0.18	5.53	15.45	92		
1424	45.20	550	9.49	0.240	0.06	5.46	15.59	97		
1429	45.19	550	9.40	0.232	0.04	5.45	15.32	99		
1434	45.19	550	9.01	0.228	0.00	5.40	15.28	108		
1439	45.19	550	8.44	0.226	0.02	5.36	15.32	118		
1444	45.19	550	7.40	0.225	0.00	5.35	15.52	133		
1449	45.19	550	6.32	0.225	0.00	5.26	15.60	149		
										Sample time 1450

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW3035-1101 2012
Sample Location: BPS1-TT-MW3035
Sampled By: G. Wait
C.O.C. No.: 1248
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-1-12								
Time: 1655								
Method: Low Flow	Clear	5.35	0.203	17.86	0.76	8.48	148	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-1-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 44.28								
One Casing Volume(gal/L):								
Start Purge (hrs): 1542 / 1618								
End Purge (hrs): 1605 / 1653								
Total Purge Time (min): 58								
Total Vol. Purged (gal/L): 7.7								

DW

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40mL vials	✓
PCBs	ice	2 - 1L ambers	✓
Total Fe and Cr	HNO_3	1 - 500mL poly	✓

OBSERVATIONS / NOTES:

Flow rate stopped/slowed down to <100 mL/min after 23 minutes of pumping. Pump was lowered, then pursing resumed without stopping.

Hex chrome field kit 0.02 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW 3035
DATE: 11-1-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1542	44.28									
1550	44.30	500	5.67	0.190	15.8	10.92	12.49	108		Clear
1555	44.30	500	5.52	0.197	3.98	10.79	14.14	118		Clear
1600	44.30	500	5.61	0.197	2.75	10.41	14.40	124		Clear
1605	44.30	<100	4.66	0.194	NR*	7.80	14.37	179		Stop pump, re-try
1618	44.30	500	5.43	0.204	12.9	8.18	18.44	104		restart
1623	44.30	500	5.40	0.201	6.27	8.51	18.26	117		Clear
1628	44.30	500	5.41	0.198	3.65	8.47	18.31	125		Clear
1633	44.30	500	5.39	0.198	2.30	8.48	18.16	131		Clear
1638	44.30	500	5.37	0.200	1.73	8.50	18.01	136		Clear
1643	44.30	500	5.37	0.201	1.33	8.44	18.04	141		Clear
1648	44.30	500	5.36	0.203	1.16	8.52	18.01	145		↓
1653	44.30	500	5.35	0.203	0.76	8.48	17.86	148		↓
1655										Sample time
										*Pump was stopped because flow rate was reduced. No turbidity reading recorded.

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW303I1-20121102
Sample Location: BPS1-TT-MW303I1
Sampled By: E. Lynch
C.O.C. No.: 1248
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-2-12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity~~ ORP mV	Other
Time: 1015								
Method: Low Flow	lt. brown	10.21	0.216	16.43	310	1.42	71	—

PURGE DATA:

Date: 11-2-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):				BW				
Static Water Level (WL): 44.67								
One Casing Volume(gal/L):								
Start Purge (hrs): 0841								
End Purge (hrs): 0945								
Total Purge Time (min): 64								
Total Vol. Purged (gal/L): 6.8								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40 mL vials	✓
PCBs	Ice	2 - 1 L ambers	✓
Total Fe and Cr	HNO_3	1 - 500 mL poly	✓
Dissolved Fe and Cr	HNO_3	1 - 500 mL poly	✓
Hexavalent Cr	Ice	1 - 250 mL poly	✓

OBSERVATIONS / NOTES:

Field hex chrome result 0.63 mg/L. There was no purple color present in sample.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
✓	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW303D1
DATE: 11-2-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0841	44.67									prior to purging
0845	44.82	400	10.73	0.219	206	8.17	14.91	132		slightly cloudy/light brown
0850	44.82	400	10.70	0.218	158	7.38	15.47	123		
0855	44.82	400	10.67	0.218	167	6.40	15.99	111		
0900	44.82	400	10.65	0.219	176	5.39	16.03	104		
0905	44.82	400	10.61	0.218	186	4.61	16.10	98		
0910	44.82	400	10.58	0.218	171	3.93	16.09	92		
0915	44.82	400	10.52	0.218	225	3.30	16.22	87		
0920	44.82	400	10.44	0.218	255	2.68	16.23	81		
0925	44.82	400	10.39	0.218	217	2.47	16.19	72		
0930	44.82	400	10.34	0.218	237	2.03	15.99	75		
0935	44.82	400	10.30	0.216	258	1.79	16.30	72		
0940	44.82	400	10.27	0.216	280	1.63	16.35	71		
0945	44.82	400	10.21	0.216	310	1.42	16.43	71		
										Sample time listed as 1015 because of hex chrome result & delaying collection until confirming with lab they could receive & analyze tomorrow (Saturday).

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Page 1 of ___

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW303I2-1105 2012
Sample Location: BPS1-TT-MW303I2
Sampled By: E. Wall
C.O.C. No.: 1249
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-5-12								
Time: 1435								
Method: Low Flow	Clear	5.43	0.099	15.62	0.68	4.60	206	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-5-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 45.18								
One Casing Volume(gal/L):								
Start Purge (hrs): 1335								
End Purge (hrs): 1434								
Total Purge Time (min): 59								
Total Vol. Purged (gal/L): 3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40 mL vials	✓
PCBs	ice	2 - 1 L ambers	✓
Total Pb and Cr	HNO_3	1 - 500 mL poly	✓
Hexavalent Cr	ice	1 - 250 mL poly	✓

OBSERVATIONS / NOTES:

Field hex chrome result: 0.01 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPSI-TT-MW303I2
DATE: 11-5-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	~~Salinity~~ % or ppt	Comments
1335	45.18									Prior to pursing
1344	45.20	225	5.98	0.100	0.86	4.20	15.87	182		Clear
1349	45.20	225	5.88	0.098	2.50	4.43	15.91	189		clear
1354	45.20	225	5.69	0.098	3.71	4.51	15.81	168		
1359	45.20	225	5.72	0.099	2.50	4.62	15.76	177		
1404	45.20	225	5.64	0.099	2.34	4.66	15.72	182		
1409	45.20	225	5.59	0.099	1.61	4.68	15.65	192		
1414	45.20	225	5.56	0.099	1.47	4.59	15.72	194		
1419	45.20	225	5.49	0.099	1.30	4.42	15.68	197		
1424	45.20	225	5.47	0.099	0.83	4.64	15.66	201		
1429	45.20	225	5.44	0.099	0.72	4.60	15.62	202		
1434	45.20	225	5.43	0.099	0.65	4.60	15.62	206		
										sample time 1435

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW303D-2012-1105
Sample Location: BPS1-TT-MW303D
Sampled By: EWatt
C.O.C. No.: 1249
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity~~ ORP mV	Other
Date: 11-5-12								
Time: 1220								
Method: Low Flow	clear	4.42	0.164	16.12	5.05	5.70	222	—

PURGE DATA:

Date: 11-5-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):				BW				
Static Water Level (WL): 45.35								
One Casing Volume(gal/L):								
Start Purge (hrs): 1053								
End Purge (hrs): 1220								
Total Purge Time (min): 97								
Total Vol. Purged (gal/L): 5.3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40 mL vials	✓
PCBs	ice	2 - 1 L ambers	✓
Total Fe and Cr	HNO_3	1 - 500 mL poly	✓

OBSERVATIONS / NOTES:

Hex chrome field kit result 0.10 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): EWatt

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW303D
DATE: 11-5-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1053	45.35									Prior to pursing
1100	45.39	350	7.49	0.187	4.96	7.20	15.61	119		clear
1105	45.39	350	6.39	0.169	5.24	6.36	15.54	149		"
1110	45.39	350	5.78	0.166	7.10	6.37	15.53	155		clear
1115	45.40	350	5.55	0.165	6.72	6.33	15.19	158		
1120	45.40	350	5.32	0.165	6.08	6.24	15.22	169		
1125	45.40	350	5.16	0.164	4.92	6.21	15.35	181		
1130	45.40	350	5.03	0.164	4.19	6.16	15.41	193		
1135	45.40	350	5.10	0.164	3.56	6.20	15.43	195		
1140	45.40	350	5.06	0.163	3.08	6.24	15.44	201		
1145	45.41	350	4.91	0.163	2.87	6.16	15.55	210		
1150	45.42	300	4.78	0.163	3.74	6.04	15.63	218		
1155	45.42	250	4.75	0.164	4.46	6.01	15.49	220		
1200	45.42	250	4.61	0.163	4.29	5.44	16.08	227		
1205	45.42	250	4.58	0.164	4.41	5.78	16.06	229		
1210	45.42	250	4.50	0.164	4.28	5.83	16.36	231		
1215	45.42	250	4.44	0.164	4.64	5.81	16.12	230		
1220	45.42	250	4.42	0.164	5.05	5.70	16.12	222		collect sample

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW304S-20121106
Sample Location: BPS1-TT-MW304S
Sampled By: E. Watt
C.O.C. No.: 1250
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-6-12								
Time: 1555								
Method: Low Flow	Clear	5.42	0.045	19.20	0.29	9.51	242	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-6-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):				EW				
Static Water Level (WL): 48.33								
One Casing Volume(gal/L):								
Start Purge (hrs): 1458								
End Purge (hrs): 1552								
Total Purge Time (min): 54								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3- 40 mL VOAs	✓
PCBs	ice	2- 1L ambers	✓
Total Fe and Cr	HNO_3	1- 500 mL poly	✓

OBSERVATIONS / NOTES:

Field hex Chrome result: 0.01 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW304S
DATE: 11-6-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity ~~% or ppt~~	Comments
~~1458~~	48.33		~~5.91~~	~~0.083~~		~~9.07~~	~~16.02~~	~~159~~		
1502	48.36	350	5.91	0.083	18.11	9.07	16.02	159		
1507	48.36	350	5.63	0.078	7.36	11.84	15.46	157		
1512	48.36	350	5.46	0.061	2.54	11.03	16.29	191		
1517	48.36	350	5.45	0.057	1.33	10.75	16.70	205		
1522	48.36	350	5.44	0.054	0.91	11.86	17.21	215		
1527	48.36	350	5.41	0.050	0.67	11.25	18.59	228		
1532	48.36	350	5.45	0.047	0.48	9.75	19.39	233		
1537	48.36	350	5.48	0.046	0.31	9.67	19.83	234		
1542	48.36	350	5.45	0.046	0.51	9.69	19.76	234		
1547	48.36	350	5.42	0.046	0.36	9.49	19.19	240		
1552	48-36	350	5.42	0.045	0.29	9.51	19.20	242		
										Sample time 1555

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW304I1-20121106
Sample Location: BPS1-TT-MW304I1
Sampled By: E. Wagh
C.O.C. No.: 1250
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-6-12								
Time: 1715								
Method: Low Flow	cloudy	6.55	0.147	14.40	55.7	6.00	158	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-6-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 48.55								
One Casing Volume(gal/L):								
Start Purge (hrs): 1622								
End Purge (hrs): 1713								
Total Purge Time (min): 51								
Total Vol. Purged (gal/L): 4.7								

EW

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3-40 mL VOAs	✓
PCBs	ice	2-1L ambers	✓
Total Fe and Cr	HNO_3	1-500 mL poly	✓
Dissolved Fe and Cr	HNO_3	1-500 mL poly	✓
Hexavalent Cr	ice	1-250 mL poly	✓

OBSERVATIONS / NOTES:

Field hexchrome result: 0.03 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW304I1
DATE: 11-6-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	~~Salinity~~ ~~% or ppt~~	Comments
1622	48.55									Prior to pursing
1628	48.57	350	7.41	0.185	58.7	7.15	12.30	211		slightly cloudy
1633	48.57	350	6.75	0.165	51.6	6.49	13.40	190		
1638	48.57	350	6.71	0.161	67.6	6.31	13.85	175		
1643	48.57	350	6.67	0.159	76.3	6.09	14.32	167		
1648	48.57	350	6.65	0.156	79.3	6.13	14.32	162		
1653	48.57	350	6.62	0.153	75.1	6.20	14.34	160		
1658	48.57	350	6.60	0.151	67.6	6.07	14.50	159		
1703	48.57	350	6.59	0.150	64.3	6.13	14.47	157		
1708	48.57	350	6.58	0.148	53.3	5.93	14.40	157		
1713	48.57	350	6.55	0.147	55.7	6.00	14.40	158		
										Sample time 1715

SIGNATURE(S): [signature]

PAGE 1 OF 1

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW 304I2 2012 1108
Sample Location: BPS1-TT-MW 304I2
Sampled By: E. Watt
C.O.C. No.: 1251
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	~~Salinity~~ ORP (mV)	Other
Date: 11-8-12								
Time: 1450								
Method: Low Flow	clear	5.87	0.097	10.00	2.13	9.75	233	—

PURGE DATA:

Date: 11-8-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 48.76								
One Casing Volume(gal/L):								
Start Purge (hrs): 1351								
End Purge (hrs): 1450								
Total Purge Time (min): 59								
Total Vol. Purged (gal/L): 7.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3-40 mL vials	✓
PCBs	ice	2-1 L ambers	✓
Total Fe and Cr	HNO_3	1-500 mL poly	✓
Hexavalent Cr	ice	1-250 mL poly	✓

OBSERVATIONS / NOTES:

Field hex chrome result 0.17 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW304I2
DATE: 11.8.12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity ~~% pr~~ppt	Comments
1351	48.76									Prior to pursing
1355	48.79	500	9.15	0.136	32.5	11.63	10.76	137		clear
1400	48.79	500	6.36	0.103	24.6	9.88	13.81	181		clear
1405	48.79	500	6.24	0.102	14.5	10.29	11.86	204		clear
1410	48.79	500	6.20	0.101	6.64	10.15	11.85	207		clear
1415	48.79	500	6.11	0.099	3.31	10.07	11.48	217		clear
1420	48.79	500	6.05	0.098	3.91	10.06	11.23	222		Clear
1425	48.79	500	6.01	0.097	1.88	9.89	11.17	226		Clear
1430	48.79	500	5.99	0.097	1.73	9.90	10.92	228		clear
1435	48.79	500	5.96	0.097	2.28	9.97	10.30	230		clear
1440	48.79	500	5.89	0.097	2.64	9.52	10.69	234		clear
1445	48.79	500	5.88	0.096	3.12	9.85	10.06	233		clear
1450	48.79	500	5.87	0.097	2.13	9.75	10.00	233		clear
										Sample time 1450

SIGNATURE(S): [illegible]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW304D-20121107
Sample Location: BPS1-TT-MW304D
Sampled By: E. Wait
C.O.C. No.: 12
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity~~ ORP (~~%~~) mV	Other
Date: 11-7-12								
Time: 0935								
Method: LowFlow	Clear	6.09	0.084	12.91	0.48	7.08	248	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-7-12								
Method: LowFlow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):				EW				
Static Water Level (WL): 48.97								
One Casing Volume(gal/L):								
Start Purge (hrs): 0834								
End Purge (hrs): 0931								
Total Purge Time (min): 57								
Total Vol. Purged (gal/L): 7.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3-40 mL vials	✓
PCBs	Ice	2-1L ambers	✓
Total Fe and Cr	HNO_3	1-500 mL poly	✓

OBSERVATIONS / NOTES:

Field hex chrome result 0.00 mg/L

Circle if Applicable:

MS/MSD —
Duplicate ID No.: —

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW304D
DATE: 11-7-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity ~~%~~ or ppt	Comments
0834	48.97									Prior to pursing
0846	49.04	500	6.68	0.081	5.45	7.69	13.44	192		Clear
0851	49.04	500	6.41	0.084	3.33	7.02	13.36	198		Clear
0856	49.04	500	6.32	0.084	1.71	6.95	13.47	207		Clear
0901	49.04	500	6.23	0.084	0.96	6.90	13.17	217		Clear
0906	49.04	500	6.13	0.084	0.63	7.60	12.65	227		Clear
0911	49.04	500	6.16	0.086	0.47	7.02	12.92	233		Clear
0916	49.04	500	6.14	0.086	0.46	7.61	12.01	237		Clear
0921	49.04	500	6.12	0.086	0.41	7.34	11.99	240		Clear
0926	49.04	500	6.08	0.085	0.51	7.37	12.34	246		Clear
0931	49.04	500	6.09	0.084	0.48	7.08	12.91	248		Clear
										0935 Sample time

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

3055

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW3055-20121115
Sample Location: MW 3055
Sampled By: Jacob Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-15-12								
Time: 1000								
Method: Low Flow	C+C	5.48	0.110	19.27	0.0	1.51	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-15-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 50'								
Static Water Level (WL): 45.10								
One Casing Volume (gal/L): 1.5								
Start Purge (hrs): 0900								
End Purge (hrs): 0955								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): ~8								

See Low Flow Forms

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL	3 - 40ml Vials	6
PCBs	ICE	2 - 1L Ambers	4
Total Fe + Cr	HNO3	1 - 500ml Poly	2

OBSERVATIONS / NOTES:

ND on the Cr Reading

Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: BPS1-DUP05-20121115

Sampled @ 10:10

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1 MW305S
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW305S-20121115
DATE: 11-15-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0900	45.12	400	5.38	0.123	746	8.43	15.54	212	—	Lt Brown + Murky
0905	45.10	"	5.47	0.116	415	3.67	16.34	183	—	"
0910	"	"	5.54	0.115	282	2.27	19.05	180	—	C+C
0915	"	"	5.55	0.110	122	1.89	19.33	177	—	
0920	"		5.50	0.111	114	1.50	22.60	180	—	
0925			5.56	0.109	86.3	1.62	19.69	191	—	
0930			5.52	0.111	47.2	1.47	20.13	192		
0935			5.50	0.110	36.1	1.58	19.62	205		
0940			5.50	0.111	7.4	1.55	19.21	214		
0945			5.48	0.111	5.2	1.52	19.33	222		
0950			5.49	0.110	0.0	1.52	19.22	224		
0955			5.48	0.110	0.0	1.51	19.27	227		
~~1000~~										

SIGNATURE(S): Jacob A. Astello

Sampled @ 10:00

Dup05 @1010

PAGE___OF___

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Page 1 of ___

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW305I-20121108
Sample Location: BPS1-TT-MW305I
Sampled By: E. Wall
C.O.C. No.: 1251
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-8-12 Time: 1645	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity~~ ORP (~~%~~) mV	Other
Method: Low Flow	Clear	5.60	0.220	15.46	9.96	6.64	254	—

PURGE DATA:

Date: 11-8-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 45.73								
One Casing Volume(gal/L):								
Start Purge (hrs): 1538								
End Purge (hrs): 1642								
Total Purge Time (min): 64								
Total Vol. Purged (gal/L): 6.8								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	
TCL VOCs	HCl	3 - 40 mL vials	✓ +DUP	6
PCBs	ice	2 - 1 L ambers	✓ +DUP	4
Total Fe and Cr	HNO_3	1 - 500 mL poly	✓ +DUP	2
Hexavalent Cr	ice	1 - 250 mL poly	✓	

OBSERVATIONS / NOTES:

Field hex chrome result 0.02 mg/L

Duplicate collected (sample time 1000)

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	BPS1-DUP02-20121108 sample time 1000

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW305I
DATE: 11-8-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity ~~% or ppt~~	Comments
1538	45.73									Prior to purging
1542	45.78	400	6.10	0.209	13.8	6.87	12.29	223		clear
1547	45.78	400	5.85	0.211	855	3.96	14.12	188		brown, cloudy
1552	45.78	400	5.74	0.215	757	5.80	14.54	186		brown, cloudy
1557	45.78	400	5.70	0.214	359	5.91	14.70	202		H. brown, cloudy
1602	45.78	400	5.67	0.214	205	5.85	14.81	214		cloudy
1607	45.78	400	5.65	0.215	87.4	6.16	14.95	223		cloudy
1612	45.78	400	5.64	0.216	64.0	6.24	15.17	232		cloudy
1617	45.78	400	5.63	0.217	34.3	6.31	15.18	239		clear
1622	45.78	400	5.63	0.217	25.3	6.17	15.19	245		clear
1627	45.78	400	5.62	0.218	24.1	6.37	15.28	250		clear
1632	45.78	400	5.61	0.218	15.9	6.23	15.36	255		clear
1637	45.78	400	5.62	0.219	13.6	6.42	15.32	257		clear
1642	45.78	400	5.60	0.220	9.96	6.64	15.46	254		clear

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW305D-20121115
Sample Location: MW 305D
Sampled By: Jacob Costello
C.O.C. No.: –
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-15-12								
Time: 1150								
Method: Low Flow	C+C	5.59	0.162	16.73	0.0	1.94	0.00	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-15-12								
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 296'								
Static Water Level (WL): 46.10								
One Casing Volume(gal/L):								
Start Purge (hrs): 1055								
End Purge (hrs): 1140								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~13								

See Low Flow Forms

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOAs	HCL	3-40mL Vials	3
PCBs	ICE	2-1L Ambers	2
Total Fe+Cr	HNO3	1-500mL Poly	1
Hex. Cr	ICE	1-250mL Poly	1

OBSERVATIONS / NOTES:

Cr not tested - Collected for Lab Analysis

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

305D

WELL ID.: BPS1-Tt-MW305D-20121115
DATE: 11-15-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1055	46.12	400	5.78	0.175	23	1.15	15.83	207	—	C+C
1100		"	5.62	0.168	346	1.73	15.81	211	—	Murky
1105		"	5.63	0.165	104	1.84	16.06	186	—	Cloudy
1110			5.61	0.164	32.6	1.89	16.09	191	—	C+C
1115			5.61	0.163	10.4	1.82	16.25	196	—	
1120			5.60	0.163	0.0	1.89	16.27	200	—	
1125			5.60	0.164	0.0	1.83	16.48	204	—	
1130			5.60	0.164	0.0	1.86	16.39	205	—	
1135			5.59	0.163	0.0	1.95	16.69	206	—	
11:40			5.59	0.162	0.0	1.94	16.73	208	—	

SIGNATURE(S): Jacob A. Costello

Sampled @ 11:50

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW306$-20121116
Sample Location: BPS1 - TT-MW306$
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11/16/12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Time: 09:40.								
Method: Low Flow (Redi-Flo2)	Slight tint	6.70	0.116	17.14	30.1	9.53	—	164

PURGE DATA:

Date: 11/16/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow (Redi-Flo2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~60'								
Static Water Level (WL): 47.16'								
One Casing Volume(gal/L): N/A								
Start Purge (hrs): 08:40								
End Purge (hrs): 09:40								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 8.0								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x- 40 mL glass vials	3
PCBs	4°C	2x- 1 L ambers	2
Total Fe + Cr (Metals)	HNO_3; 4°C	1x- 500 mL poly	1
Hexavalent Chromium	4°C	1x- 250 mL poly	1
Dissolved Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	1

OBSERVATIONS / NOTES:

No Hex. Chromium test kit Field reading performed.
~ high turb. @ point of Sampling. Collect dissolved Fe+ Cr and Cr^{6+} Samples.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Charles L. Frace

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1 - TT - MW306 $
DATE: 11/16/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
08:40	57.22	275	6.16	0.138	>800	10.14	13.60	228	—	Start purge; light brown tint
08:45	57.22	275	6.27	0.136	722	10.04	13.87	214	—	
08:50	57.22	275	6.45	0.124	568	9.60	14.25	177	—	
08:55	57.22	275	6.60	0.118	449	9.23	16.41	142	—	↑ Flow as it trickles
09:00	57.22	400	6.64	0.117	436	9.32	16.96	142	—	turbidity is ↓
09:05	57.22	400	6.66	0.117	311	9.72	16.17	144	—	
09:10	57.22	475	6.68	0.116	256	9.26	17.08	141	—	Air bubbles seen tube constricting Flow
09:15	57.22	450	6.67	0.116	197	9.62	16.63	143	—	↑ pump speed; Flow sputters
09:20	57.22	450	6.70	0.115	121	9.46	17.55	147	—	Flow consistent
09:25	57.22	450	6.69	0.116	67.2	9.56	17.16	157	—	
09:30	57.22	450	6.69	0.115	42.9	9.58	17.04	161	—	
09:35	57.22	450	6.70	0.116	35.9	9.58	17.10	163	—	↓
09:40	57.22	450	6.70	0.116	30.1	9.53	17.14	164	—	Sample taken

SIGNATURE(S): Geoff J. Ferri

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW306I-2012 no8
Sample Location: BPS1-TT-MW306I
Sampled By: C. Wall
C.O.C. No.: 1251
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-8-12 Time: 1316 Method: Low Flow	Clear	5.94	0.141	13.50	1.91	8.96	239	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-8-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 47.58								
One Casing Volume(gal/L):								
Start Purge (hrs): 1145								
End Purge (hrs): 1306								
Total Purge Time (min):								
Total Vol. Purged (Gal/L): 8.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	7 - 40 mL vials	✓
PCBs	ice	6 - 1 L ambers	✓
Total Fe and Cr	HNO_3	1 - 500 mL poly	✓
Hexavalent Cr	ice	1 - 250 mL poly	✓

OBSERVATIONS / NOTES:

Field hex chrome result 0.00 mg/L

Circle if Applicable:

MS/MSD Yes

Duplicate ID No.: —

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW306I
DATE: 11-8-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1145	47.58									Prior to pursing
1151	47.61	400	7.60	0.145	5.32	11.36	11.37	156		Clear
1156	47.61	400	7.24	0.143	30.3	10.85	12.14	159		clear
1201	47.61	400	6.86	0.142	22.5	10.33	12.87	162		clear
1206	47.61	400	6.83	0.142	17.8	10.31	12.89	165		clear
1211	47.61	400	6.70	0.142	15.4	10.11	13.04	174		Clear
1216	47.61	400	6.49	0.142	14.1	9.69	13.55	185		Clear
1221	47.61	400	6.45	0.141	12.2	9.66	13.53	189		Clear
1226	47.61	400	6.38	0.141	7.51	9.53	13.69	194		Clear
1231	47.61	400	6.27	0.141	6.77	9.35	13.84	205		Clear
1236	47.61	400	6.20	0.141	4.54	9.24	13.92	211		Clear
1241	47.61	400	6.14	0.141	4.11	9.12	14.06	217		clear
1246	47.61	400	6.07	0.141	3.23	8.96	14.32	224		Clear
1251	47.61	400	6.01	0.141	2.87	8.91	14.34	231		clear
1256	47.61	400	6.00	0.141	2.58	8.96	14.02	233		clear
1301	47.61	400	5.98	0.140	2.36	9.01	13.88	235		clear
1306	47.61	400	5.94	0.141	1.91	8.96	13.80	239		
										Sample time 1310

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW306D-20121108
Sample Location: BPS1-TT-MW306D
Sampled By: S Walsh
C.O.C. No.: 1251
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-8-12								
Time: 1115								
Method: Low Flow	Clear	5.74	0.149	13.67	1.97	6.48	243	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-8-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 48.29								
One Casing Volume(gal/L):								
Start Purge (hrs): 1017								
End Purge (hrs): 1102								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 6.5								

EW

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40 mL vials	✓
PCBs	ice	2 - 1L ambers	✓
Total Fe and Cr	HNO_3	1 - 500 mL poly	✓

OBSERVATIONS / NOTES:

Field hex chrome result 0.01 mg/L.
Fault message Heat Sink Temp appeared on control box when pursing started at 0822. Unable to troubleshoot with FEI tech support. Used backup control box in blower bldg. and generator from A1T. to complete sampling.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW306D
DATE: 11-8-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0822	48.29									Prior to purging
0952	48.3429									restart/prior to purging
0954	48.34	450	6.74	0.193	21.9	8.24	12.07	235		Clear
0959	48.34	450	6.78	0.160	18.0	5.67	13.49	215		
1004										Lost flow - DC Bus
										Low message on
										control box
1017	48.34	450	6.43	0.154	34.5	7.63	13.90	207		restart
1022	48.34	450	6.31	0.153	25.0	6.63	13.44	199		clear
1027	48.34	450	6.22	0.151	18.7	6.33	13.74	200		clear
1032	48.34	450	6.16	0.150	13.5	6.45	13.73	207		clear
1037	48.34	450	6.07	0.150	6.15	6.36	13.57	215		clear
1042	48.34	450	6.02	0.150	5.20	6.27	13.48	219		clear
1047	48.34	450	5.99	0.149	4.75	6.41	13.55	224		
1052	48.34	450	5.91	0.150	4.06	5.78	13.41	230		
1057	48.34	450	5.85	0.149	3.71	6.37	13.43	235		
1102	48.34	450	5.83	0.149	3.24	6.15	13.50	237		
1107	48.34	450	5.78	0.149	2.46	6.51	13.76	240		
1112	48.34	450	5.74	0.149	1.97	6.48	13.67	243		Sample time 1115

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW307S-20121116
Sample Location: BPS1-TT-MW307S
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Date: 11/16/12								
Time: 11:40								
Method: Low Flow (Redi-Flo2)	Clear	6.72	0.121	19.36	3.8	8.33	—	174

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11/16/12								
Method: Low Flow (Redi-Flo2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~50.5								
Static Water Level (WL): 46.82'								
One Casing Volume(gal/L): N/A								
Start Purge (hrs): 10:35								
End Purge (hrs): 11:40								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 8								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x - 40 mL glass vials	3
PCBs	4°C	2x - 1 L ambers	2
Total Fe + Cr (Metals)	HNO3; 4°C	1x - 500 mL poly	1
Hexavalent Chromium	4°C	1x - 250 mL poly	1
Dissolved Fe + Cr (Metals)	HNO3; 4°C	1x - 500 mL poly	0

OBSERVATIONS / NOTES:

No hex. Chromium field test performed.

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Cardell L. Francis

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW307 $
DATE: 11/16/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
10:35	46.84	400	6.72	0.119	>800	9.45	15.53	179	—	Start – turbid
10:40	46.84	400	6.70	0.118	470	9.36	17.01	174	—	Red-brown; clearing up
10:45	46.84	400	6.74	0.121	202	9.37	17.83	189	—	Repair leaking tubing by cutting
10:50	46.84	400	6.73	0.119	125	9.36	18.10	162	—	out kink and barbing in new tubing
10:55	46.84	400	6.74	0.120	96.5	9.23	18.15	160	—	piece – replace when
11:00	46.84	400	6.73	0.119	63.2	9.13	18.22	150	—	Sampling time comes
11:05	46.84	400	6.73	0.122	51.8	8.93	18.98	145	—	
11:10	Replace tubing at kinked portion. Flow was stopping and getting backed up. Used barbed fitting.									
11:15	46.84	400	6.75	0.122	583	9.32	20.63	150	—	Stop well – surge pump to retain
11:20	46.84	400	6.75	0.125	71.4	9.02	20.09	161	—	proper flow rate. Turb. ↑
11:25	46.84	400	6.73	0.122	24.1	8.91	19.45	164	—	slightly. 11:20 – turb. ↓
11:30	46.84	400	6.74	0.120	10.8	8.67	19.13	170	—	
11:35	46.84	400	6.72	0.120	5.3	8.55	19.14	173	—	
11:40	46.84	400	6.72	0.121	3.8	8.33	19.36	174	—	Sample taken

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW307I - 20121106
Sample Location: BPS1-TT-MW307I
Sampled By: E. Watt
C.O.C. No.: 1250
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP (mV)	Other
Date: 11-6-12								
Time: 1010								
Method: Low Flow	Clear	5.05	0.120	13.37	6.82	8.55	170	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-6-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 44.60								
One Casing Volume(gal/L):								
Start Purge (hrs): 0907								
End Purge (hrs): 1009								
Total Purge Time (min): 62								
Total Vol. Purged (gal/L): 6 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected	
TCL VOCs	HCl	3 - 40 mL vials	✓ + DUP	6
PCBs	ice	2 - 1 L ambers	✓ + DUP	4
Total Fe and Cr	HNO_3	1 - 500 mL poly	✓ + DUP	2
Hexavalent Cr	ice	1 - 250 mL poly	✓	1

OBSERVATIONS / NOTES:

Field hex chrome results: 0.12 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	BPS1-DUP01-20121106 @ 0930

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW 307I
DATE: 11-6-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	~~Salinity % or ppt~~	Comments
0907	44.66									prior to purging
0914	44.74	275	4.85	0.129	3.67	10.69	9.53	241		Clear
0919	44.74	275	4.78	0.124	40.6	10.10	10.78	235		cloudy
0924	44.74	275	5.07	0.122	156	9.53	11.55	193		cloudy
0929	44.74	275	5.15	0.122	183	9.42	11.75	177		cloudy
0934	44.74	275	5.26	0.121	121	9.44	12.10	144		cloudy
0939	44.74	275	5.20	0.120	53.6	9.20	12.25	161		cloudy
0944	44.74	275	5.18	0.120	38.1	9.11	12.35	163		slightly cloudy
0949	44.74	275	5.17	0.120	26.8	9.15	12.52	164		slightly cloudy
0954	44.74	275	5.15	0.121	16.6	9.07	12.73	167		Clear
0959	44.74	275	5.13	0.122	12.9	9.00	12.90	168		clear
1004	44.74	275	5.11	0.120	10.36	8.56	13.26	168		Clear
1009	44.74	275	5.05	0.120	6.82	8.55	13.37	170		clear
										Sample time 1010
										DUP 01 0930

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW307D - 20121106
Sample Location: BPS1-TT-MW307D
Sampled By: E. Watt
C.O.C. No.: 1250
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-6-12								
Time: 1310								
Method: Low Flow	Cloudy	4.48	0.139	14.41	71.1	5.10	181	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-6-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):				EW				
Static Water Level (WL): 45.14								
One Casing Volume(gal/L):								
Start Purge (hrs): 1133								
End Purge (hrs): 1309								
Total Purge Time (min): 96								
Total Vol. Purged (~~gal~~ L): 6.3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40 mL vial	✓
PCBs	ice	2 - 1L ambers	✓
Total Fe and Cr	HNO_3	1 - 500 mL poly	✓
Dissolved Fe and Cr	HNO_3	1 - 500 mL poly	✓

OBSERVATIONS / NOTES:

Field hex chrome test result: 0.04 ug/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW307D
DATE: 11-6-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1133	45.14									Prior to purging
1144	45.22	250	5.65	0.149	6.47	5.64	14.60	164		clear
1149	45.22	250	5.44	0.144	7.59	4.90	14.89	175		clear
1154	45.22	250	5.34	0.141	24.5	4.87	15.15	183		clear
1159	45.22	250	5.27	0.140	59.8	4.80	15.05	168		slightly cloudy
1204	45.22	250	5.22	0.140	63.1	4.86	14.95	156		slightly cloudy
1209	45.22	250	5.16	0.139	56.6	4.88	14.91	152		slightly cloudy
1214	45.22	250	5.10	0.139	61.2	4.85	15.18	153		
1219	45.22	250	5.02	0.139	76.3	4.86	15.01	156		
1224	45.22	250	4.94	0.139	87.6	4.84	15.17	160		
1229	45.22	250	4.87	0.139	84.2	4.81	15.26	163		
1234	45.22	250	4.80	0.139	86.8	4.89	15.12	166		
1239	45.22	250	4.74	0.139	103.2	4.90	15.24	168		
1244	45.22	250	4.68	0.139	106.4	4.90	15.09	170		
1249	45.22	250	4.62	0.139	109.2	4.94	15.00	173		
1254	45.22	250	4.57	0.139	81.0	4.96	14.68	176		
1259	45.22	250	4.53	0.139	87.3	5.00	14.71	178		
1304	45.22	250	4.49	0.139	66.8	5.07	14.70	181		
1309	45.22	250	4.48	0.139	71.1	5.10	14.41	181		
										sample time 1310

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

3085

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BP-SI-77-MW3085-20121
Sample Location:
Sampled By: Jacob Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-12-12								
Time: 13:40								
Method: Low Flow	C+C	6.32	0.385	23.12	218	4.05	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-12-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Log					
Total Well Depth (TD): 64.00								
Static Water Level (WL): 56.58	~~56.58~~							
One Casing Volume(gal/L):	C/V							
Start Purge (hrs): 12:45								
End Purge (hrs): 13:35								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): ~5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL	3 - 40 mL vials	3
PCBs	Ice	2 - 1L Ambers	2
Total Fe + Cr	HNO3	1 - 500 mL Poly	1
Hexavalent Cr	Ice	1 - 250 mL Poly	0
Dissolved Fe + Cr	HNO3	1 - 500 mL Poly	1

OBSERVATIONS / NOTES:

Pump would occasionally jam and stop flow - had to increase rate to clean out and then decrease soon after, which caused a delay in stabilization

0.00 Cr Reading

Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s): Jacob A. Costello

T - 156' D = 260'

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BP-S1-Tt-MW308s
DATE: 11-12-12

Time ~~(Hrs.)~~ Min	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0	57.12	350	6.14	0.466	~~2.791~~ 350	7.15	19.46	137	—	Lt Brown + Cloudy
5	"	"	6.25	0.433	346	7.52	19.69	111	—	"
10	"	"	6.28	0.434	264	8.28	20.01	76	—	
15			6.31	0.417	276	7.63	21.16	57	—	
20			6.25	0.417	305	5.98	21.41	59	—	
25			6.29	0.393	286	6.08	21.67	64	—	
30			6.30	0.386	248	5.87	22.36	77	—	
35			6.30	0.386	284	6.01	23.14	78		C+C
40			6.31	0.387	222	5.48	23.16	79		"
45			6.29	0.388	210	3.85	23.14	80		"
50			6.32	0.385	218	4.05	23.12	83		"
~~55~~										
~~60~~										

SIGNATURE(S): Jacob A. Costillo

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

308 I

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BP-S1-TT-MW308I-20121112
Sample Location: MW308I
Sampled By: J. Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-12-12								
Time: 15:45								
Method: Low Flow	clear	5.62	0.274	18.82	6.55	0.74	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-12-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		See Low Flow Form						
Total Well Depth (TD): 166'								
Static Water Level (WL): 58.00								
One Casing Volume(gal/L): 30								
Start Purge (hrs): 14:45								
End Purge (hrs): 15:35								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 90								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCL	3-40mL Vials	3
PCBs	ICE	2-1L Ambers	2
Total Fe + Cr	HNO3	1-500mL Poly	1
Hexavalent Cr	ICE	1-250mL Poly	0
Dissolved Fe + Cr	HNO3	1-500mL Poly	0

OBSERVATIONS / NOTES:

0.00 on Cr Reading

Circle if Applicable:

MS/MSD: NA
Duplicate ID No.: NA

Signature(s): Jacob A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BP-S1-TT-MW308I-~~0~~1121112
DATE: 11-12-12

Time ~~(Hrs.)~~ Min	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0	58.20	400	5.96	0.253	1236	0.82	20.11	177	—	Lt Brown + cloudy
5	"	"	5.84	0.262	1100	0.77	19.53	177	—	"
10	"	"	5.75	0.269	1827	0.78	18.92	146	—	"
15	"	"	5.68	0.269	623	0.77	18.81	142	—	C+C
20		"	5.65	0.273	280	0.76	18.80	154	—	"
25			5.64	0.272	180	0.81	19.04	163		"
30			5.64	0.272	15	0.79	19.02	165		"
35			5.64	0.273	9.46	0.76	18.99	166		"
40			5.64	0.273	7.12	0.75	18.91	167		"
45			5.62	0.274	6.53	0.74	18.82	169		
~~50~~										

SIGNATURE(S): Jacob A. Costello

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

308D

Page___ of ___

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BP-S1-TT-MW308D-20121113
Sample Location: MW 308D
Sampled By: J. Costello
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11-13-12								
Time: 10:20								
Method: Low Flow	clear	5.44	0.162	16.93	7.14	0.61	—	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-13-12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 260'								
Static Water Level (WL): 58.7								
One Casing Volume(gal/L): 65								
Start Purge (hrs): 09:30								
End Purge (hrs): 10:15								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~7								

See Low Flow Form

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOC	HCL	3 - 40mL Vials	3
PCBs	ICE	2 - 1L Ambers	2
Total Fe+Cr	HNO3	1 - 500mL Poly	1
Hex Cr	ICE	1 - 250mL Poly	0
Dissolved Fe+Cr	HNO3	1 - 500mL Poly	0

OBSERVATIONS / NOTES:

0.01 Reading of Cn

Circle if Applicable:

MS/MSD: NA

Duplicate ID No.: NA

Signature(s): Joseph A. Costello

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

308D

WELL ID.: BP-S1-T+-MW308D-20121113
DATE: 11-13-12

Time Min (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
Start 09:30 0	59.00	400	5.54	0.159	374	0.74	16.70	233	—	C+C
5	"	"	5.55	0.158	252	0.73	16.67	201	—	"
10	"	"	5.52	0.158	242	0.71	16.72	188	—	"
15	"	"	5.52	0.159	178	0.71	16.79	189	—	"
20	"	"	5.51	0.160	86	0.71	16.83	187	—	
25			5.52	0.161	43	0.71	16.85	188		
30			5.49	0.161	30.2	0.60	16.82	189		
35			5.47	0.161	17.7	0.59	16.87	194		
End 10:15 40			5.43	0.162	11.4	0.61	16.92	198		
45			5.44	0.162	7.14	0.61	16.93	201		
~~50~~										

Sampled 10:20

SIGNATURE(S): Jacob A. Castillo

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW309$-20121112
Sample Location: BPS1-TT-MW309$
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Date: 11/12/12								
Time: 14:10								
Method: Low Flow (Redi-Flo2)	Clear	6.25	0.228	18.67	0.0	7.61	—	183

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11/12/12								
Method: Low Flow (Redi-Flo2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~63'								
Static Water Level (WL): 57.95'								
One Casing Volume (gal/L): 0.82								
Start Purge (hrs): 13:10								
End Purge (hrs): 14:10								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 12.5								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3- 40mL clear glass vial	3
PCBs	4°C	2- 1L amber vial	2
Total Fe + Cr (Metals)	HNO_3; 4°C	1- 500mL poly	1
Hexavalent Cr	4°C	1- 250 mL poly	0
Dissolved Fe + Cr (Metals)	HNO_3; 4°C	1- 500 mL poly	0

OBSERVATIONS / NOTES:

Hex. Chromium Field test reading: 0.00 mg/L

* Test performed twice to verify concentration

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
—	—	Cindell L. Fulli

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW309 $
DATE: 11/12/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
13:10	57.96	200	6.21	0.233	416	8.45	17.28	136	—	Start Purge; light brown
13:15	57.98	200	6.22	0.232	361	8.97	17.24	133	—	light brown / turbid tint
13:20	57.98	200	6.23	0.232	313	8.93	17.36	131	—	" "
13:25	57.98	200	6.23	0.231	286	8.87	17.48	130	—	" "
13:30	58.02	400	6.15	0.226	12.2	8.26	18.13	168	—	" "
13:35	57.98	400	6.15	0.226	13.6	8.15	18.38	168	—	Clearing up
13:40	57.98	400	6.16	0.227	6.2	8.07	18.65	171	—	turb. ↓
13:45	57.98	400	6.16	0.228	3.5	8.03	18.67	175	—	
13:50	57.98	400	5.99	0.228	1.3	7.98	18.60	186	—	
13:55	57.98	400	6.02	0.228	0.0	7.85	18.66	186	—	
14:00	57.98	400	6.23	0.228	0.0	7.75	18.70	180	—	
14:05	57.98	400	6.24	0.228	0.0	7.68	18.69	182	—	
14:10	57.98	400	6.25	0.228	0.0	7.61	18.67	183	—	Sample collected

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW309I-20121113
Sample Location: BPS1-TT-MW309I
Sampled By: LF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Date: 11/12/12								
Time: 16:30								
Method: Low Flow (Redi-Flo2)	Clear	5.81	0.280	15.32	0.5	6.26	—	228

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11/12/12								
Method: Low Flow (Redi-Flo2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~170'								
Static Water Level (WL): 58.83'								
One Casing Volume (gal/L): 18.13								
Start Purge (hrs): 15:20								
End Purge (hrs): 16:30								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 12.5								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3- 40mL vials	3
PCBs	4°C	2- 1L ambers	2
Total Fe + Cr (Metals)	HNO_3; 4°C	1- 500 mL poly	1
Hexavalent Cr	4°C	1- 250 mL poly	1
Dissolved Fe + Cr (Metals)	HNO_3; 4°C	1- 500 mL poly	0

OBSERVATIONS / NOTES:

Hex. Chromium field-test reading: ~~0.03~~ (LF) mg/L
$\boxed{0.06}$
→ taken after 5 minutes of sitting. Reading was initially 0.03 mg/L.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW309I
DATE: 11/12/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
15:20	58.84'	450	5.97	0.258	0.0	5.65	14.42	162	—	Start purge; slight tint--brown
15:25	58.85	450	5.89	0.271	0.0	5.73	14.72	163	—	tan/turbid — clean out
15:30	58.85	400	5.87	0.281	340	6.35	15.24	185	—	Horiba to reset turb. readings
15:35	58.85	400	5.86	0.281	326	6.34	15.21	188	—	turb. starts to ↓
15:40	58.85	400	5.85	0.281	192	6.77	14.86	188	—	
15:45	58.85	425	5.83	0.281	126	6.54	15.21	211	—	
15:50	58.85	425	5.82	0.281	49.3	6.58	15.20	220	—	
15:55	58.84	400	5.83	0.281	31.1	6.06	15.29	224	—	
16:00	58.84	400	5.82	0.281	16.3	5.89	15.06	223	—	
16:05	58.84	400	5.82	0.280	5.4	5.18	15.03	222	—	
16:10	58.84	400	5.82	0.280	7.6	6.10	15.05	219	—	
16:15	58.84	400	5.84	0.280	3.6	6.13	14.86	220	—	
16:20	58.84	400	5.83	0.279	8.2	6.29	15.07	221	—	
16:25	58.84	400	5.82	0.280	0.3	6.19	15.30	227	—	
16:30	58.84	400	5.81	0.280	0.5	6.26	15.32	228	—	Sample collected

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW309D-20121113
Sample Location: BPS1-TT-MW309D
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 11/13/12								
Time: 11:55								ORP (mV)
Method: Low Flow (Redi-Flo 2)	Clear	6.32	0.222	12.93	0.0	4.37	—	188

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11/13/12								
Method: Low Flow (Redi Flo 2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): ~262'								
Static Water Level (WL): 58.84'								
One Casing Volume(gal/L):								
Start Purge (hrs): 10:45								
End Purge (hrs): 11:55								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 10.0								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x - 40 mL vials	7 (4 MS/MSD)
PCBs	4°C	2x - 1 L ambers	6 (4 MS/MSD)
Total Fe + Cr (metals)	HNO_3; 4°C	1x - 500 mL poly	1
Hexavalent Cr	4°C	1x - 250 mL poly	1
Dissolved Fe + Cr (metals)	HNO_3; 4°C	1x - 500 mL poly	0

OBSERVATIONS / NOTES:

Hex. Chromium Field-test reading: 0.02 mg/L

Cut new ½" ID (5/8" OD) tubing to 272' total length and placed in well.

Circle if Applicable:

MS/MSD
VOCs / PCBs
All

Duplicate ID No.: —

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BP31-TT-MW309D
DATE: 11/13/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
10:45	58.98	400	6.32	0.228	16.6	11.87	13.49	240	—	Start purge – slightly turbid
10:50	58.98	400	6.32	0.228	10.9	11.37	13.50	238	—	clearing up
10:55	58.98	400	6.32	0.227	1.2	10.17	13.56	224	—	
11:00	58.98	400	6.34	0.226	3.8	8.76	13.44	204	—	
1105	58.98	400	6.32	0.225	4.4	8.31	13.37	202	—	
11:10	58.98	400	6.33	0.225	2.2	8.04	13.34	200	—	
11:15	58.98	400	6.32	0.224	0.0	7.40	13.22	199	—	
11:20	58.98	400	6.31	0.224	0.0	6.85	13.09	197	—	
11:25	58.98	400	6.31	0.224	0.0	6.32	13.14	195	—	
11:30	58.98	400	6.31	0.224	0.0	5.83	13.22	194	—	
11:35	58.98	400	6.31	0.223	0.0	5.41	13.05	192	—	
11:40	58.98	400	6.31	0.223	0.0	4.90	12.99	191	—	
11:45	58.98	400	6.32	0.223	0.0	4.60	12.94	189	—	
11:50	58.98	400	6.32	0.223	0.0	4.41	12.94	189	—	
11:55	58.98	400	6.32	0.222	0.0	4.37	12.93	188	—	Sample collected

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW310S-20121114
Sample Location: BPS1-TT-MW310S
Sampled By: LF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Date: 11/14/12 Time: 15:35 Method: Low Flow (Bdi-Flo2)	Clear	6.92	0.913	16.43	7.1	9.93	—	148

PURGE DATA:

Date: 11/14/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow (Bdi-Flo2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~67.5'								
Static Water Level (WL): 56.01'								
One Casing Volume(gal/L): N/A								
Start Purge (hrs): 14:25								
End Purge (hrs): 15:35								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 10.0								

SEE Low Flow Purge DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x - 40 mL glass vials	6 (3 Dup)
PCBs	4°C	2x - 1 L ambers	4 (2 Dup)
Total Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	2 (1 Dup)
Hexavalent Cr	4°C	1x - 250 mL poly	2 (1 Dup)
Dissolved Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	0

OBSERVATIONS / NOTES:

Hex. Chromium field test-kit reading: 0.02 mg/L

Circle if Applicable:

MS/MSD —

Duplicate ID No.: Dup 04 BPS1-Dup-04-20121114 Assigned time: 12:00

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW310$
DATE: 11/14/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
14:25	56.02	400	7.13	0.931	>800	9.91	13.99	183	—	Start purge; very turbid
14:30	56.02	400	7.11	0.926	>800	9.82	14.21	177	—	" "
14:35	56.02	400	7.02	0.918	>800	10.47	15.76	151	—	turb. slightly ↓
14:40	56.02	400	6.95	0.906	>800	10.63	15.74	156	—	
14:45	56.02	400	6.93	0.910	519	10.44	15.79	156	—	
14:50	56.02	400	6.94	0.913	281	10.49	15.32	155	—	
14:55	56.02	400	6.93	0.920	192	10.40	15.45	153	—	
15:00	56.02	400	6.92	0.922	143	10.29	15.71	151	—	
15:05	56.02	400	6.93	0.920	~~144~~ 81.7	10.21	15.88	149	—	
15:10	56.02	400	6.92	0.921	73.0	10.15	15.99	148	—	
15:15	56.02	400	6.91	0.915	17.9	10.32	16.31	148	—	
15:20	56.02	400	6.90	0.916	18.2	10.29	16.33	148	—	
15:25	56.02	400	6.91	0.915	15.2	10.12	16.42	148	—	
15:30	56.02	400	6.92	0.916	11.7	9.99	16.46	148	—	↓
15:35	56.02	400	6.92	0.913	7.1	9.93	16.43	148	—	Sample collected

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW311$-20121115
Sample Location: MW-311$
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Date: 11/15/12								
Time: 10:45								
Method: Low Flow (Redi-Flo2)	Brown tint	6.71	1.75	15.75	± 800	8.06	—	151

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11/15/12								
Method: Low Flow (Redi-Flo2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~65'								
Static Water Level (WL): 56.96'								
One Casing Volume(gal/L): N/A								
Start Purge (hrs): 09:20								
End Purge (hrs): 10:45								
Total Purge Time (min): 85								
Total Vol. Purged (gal/L): 10								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x - 40 mL glass vials	3
PCBs	4°C	2x - 1 L ambers	2
Total Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	1
Hex. Chromium	4°C	1x - 250 mL poly	1
Dissolved Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	1

OBSERVATIONS / NOTES:

Hex. Chromium Field test-kit reading: 0.02 mg/L * Acid pouch added to blank

Flow stopped twice during purging. Turbidity reached as low as 119 NTU, but was ~800 NTU at point of sampling when other parameters stabilized. Cr^{6+} and diss. metals samples collected.

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s): Camille L. Fedi

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1 - TT - MW311 $
DATE: 11/15/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
09:20	56.97	275	6.74	1.94	>800	11.20	12.02	203	—	Start purge; very turbid
09:25	56.97	275	6.75	1.91	>800	11.20	12.00	193	—	pump @ 16 hz. @ 17 hz,
09:30	56.97	275	6.75	1.89	>800	11.17	12.05	181	—	Flow is ~ 70 mL/min.
09:35	56.97	275	6.75	1.74	>800	10.24	14.37	145	—	
09:40	56.97	275	6.74	1.73	800	9.91	15.42	146	—	turb. starts to drop
09:45	56.97	275	6.73	1.73	550	9.82	15.67	146	—	
09:50	56.97	275	6.74	1.72	335	9.90	15.34	149	—	
09:55	56.97	275	6.75	1.73	165	9.97	14.86	150	—	
10:00	56.97	275	6.75	1.73	126	10.39	13.81	151	—	
10:05	56.97	325	6.75	1.74	151	10.57	13.33	151	—	
10:10	56.97	325	5.54	0.002	119	12.05	12.37	208	—	FLOW STOPPED — ANOMALY
10:15										Stop pump/restart. Had to surge
10:20	56.97	450	6.81	1.79	>800	8.08	18.71	125	—	well to get Flow, ↑ turb.
10:25	56.97	450	6.82	1.78	>800	8.38	18.23	130	—	
10:30	56.97	450	6.71	1.71	>800	8.07	17.70	142	—	
10:35	56.97	450	6.72	1.70	800	8.00	15.98	150	—	
10:40	56.97	400	6.71	1.73	609	6.49	14.93	155	—	Flow steps; DO is wrong
10:45	56.97	400	6.71	1.75	800	8.06	15.75	151	—	Sample Collected

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW311I-20121115
Sample Location: BPS1-TT-MW311I
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Date: 11/15/12								
Time: 12:45								
Method: Low Flow (Redi-Flo 2)	Clear	6.11	0.265	14.65	0.0	8.02	—	225

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11/15/12								
Method: Low Flow (Redi-Flo 2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): ~170'								
Static Water Level (WL): 57.24'								
One Casing Volume(gal/L): N/A								
Start Purge (hrs): 11:45								
End Purge (hrs): 12:45								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 12.5								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x - 40 mL glass vials	3
PCBs	4°C	2x - 1L ambers	2
Total Fe + Cr (metals)	HNO_3; 4°C	1x - 500 mL poly	1
Hexavalent Chromium	4°C	1x - 250 mL poly	1
Dissolved Fe + Cr (metals)	HNO_3; 4°C	1x - 500 mL poly	0

OBSERVATIONS / NOTES:

Hex. Chromium field test-kit reading: 0.02 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BP1-TT-MW311I
DATE: 11/15/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
11:45	57.25	400	6.54	0.283	3.1	10.12	13.03	163	—	Start purge; slight tint
11:50	57.25	400	6.45	0.280	1.0	9.76	13.22	167	—	
11:55	57.25	400	6.48	0.284	7800	8.68	13.42	179	—	turbidity ↑
12:00	57.25	300	6.43	0.282	7800	8.20	13.21	183	—	↓ Flow to ↓ turb.
12:05	57.25	300	6.38	0.280	365	8.15	13.17	192	—	
12:10	57.25	300	6.37	0.279	335	8.11	13.20	193	—	
12:15	57.25	300+	6.19	0.272	31.3	8.77	14.39	197	—	
12:20	57.25	300+	6.19	0.271	23.3	8.39	14.44	199	—	
12:25	57.25	300+	6.19	0.271	20.7	8.32	14.46	200	—	
12:30	57.25	500	6.16	0.269	12.1	8.17	14.89	208	—	
12:35	57.25	500	6.14	0.267	6.3	8.06	14.77	216	—	
12:40	57.25	500	6.14	0.266	2.3	8.03	14.55	221	—	
12:45	57.25	500	6.11	0.265	0.0	8.02	14.65	225	—	Sample Collected

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW3125-1109 2012
Sample Location: BPS1-TT-MW3125
Sampled By: E. Wait
C.O.C. No.: 1254
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity (%)~~ ORP mV	Other
Date: 11-9-12								
Time: 1000								
Method: Low Flow	clear	6.53	0.299	21.70	5.96	4.69	208	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-9-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):				EW				
Static Water Level (WL): 56.11								
One Casing Volume(gal/L):								
Start Purge (hrs): 0858								
End Purge (hrs): 0959								
Total Purge Time (min): 61								
Total Vol. Purged (gal/L): 8.9								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3 - 40 mL vials	✓
PCBs	ice	2 - 1 L amber	✓
Total Fe and Cr	HNO_3	1 - 500 mL poly	✓
Hexavalent Cr	ice	1 - 250 mL poly	✓

OBSERVATIONS / NOTES:

Field hex chrome result: 0.01 mg/L.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW3125
DATE: 11-9-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0858	56.11									Prior to pursing
0904	56.14	550	7.49	0.297	1390	5.87	16.11	159		Brown, cloudy
0909	56.14	550	7.38	0.296	1,279	6.59	15.06	124		Brown, cloudy
0914	56.16	550	7.14	0.298	138	6.29	21.88	147		Cloudy
0919	56.16	550	7.07	0.296	68.7	5.73	21.68	164		cloudy
0924	56.16	550	6.99	0.296	32.8	5.36	21.67	173		clear
0929	56.16	550	6.91	0.296	22.1	5.22	21.46	179		clear
0934	56.16	550	6.84	0.298	14.9	5.05	21.60	185		clear
0939	56.16	550	6.73	0.297	8.30	4.87	21.70	191		clear
0944	56.16	550	6.68	0.297	7.66	4.84	21.65	196		clear
0949	56.16	550	6.63	0.299	7.01	4.78	21.67	200		clear
0954	56.16	550	6.58	0.299	6.43	4.72	21.58	204		clear
0959	56.16	550	6.53	0.299	5.96	4.69	21.70	208		clear
										sample time 1000

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW312I-20121109
Sample Location: BPS1-TT-MW312I
Sampled By:
C.O.C. No.: 1254
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	~~Salinity~~ ORP (mV)	Other
Date: 11-9-12								
Time: 1150								
Method: Low Flow	Clear	6.58	0.217	16.72	2.18	5.18	189	—

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11-9-12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):				EW				
Static Water Level (WL): 56.92								
One Casing Volume(gal/L):								
Start Purge (hrs): 1057								
End Purge (hrs): 1148								
Total Purge Time (min): 51								
Total Vol. Purged (gal/L): 4.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl	3-40 mL vials	✓
PCBs	ice	2-1 L ambers	✓
Total Fe and Cr	HNO_3	1-500 mL poly	✓
Hexavalent Cr	ice	1-250 mL poly	✓

OBSERVATIONS / NOTES:

Field hex Chrome result: 0.00 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPSI-TT-MW312I
DATE: 11-9-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1057	56.92									Prior to pursing
1103	56.91	300	7.79	0.209	22.7	9.69	12.82	179		clear
1108	56.91	300	6.97	0.207	12.4	7.84	14.54	201		clear
1113	56.91	300	6.81	0.212	11.6	7.23	14.86	198		clear
1118	56.91	300	6.65	0.218	11.1	6.50	15.53	202		clear
1123	56.91	300	6.61	0.220	7.91	6.12	16.00	192		clear
1128	56.91	300	6.57	0.219	6.25	5.91	16.23	187		clear
1133	56.91	300	6.58	0.219	5.17	5.61	16.56	186		clear
1138	56.91	300	6.57	0.218	3.23	5.40	16.83	187		clear
1143	56.91	300	6.58	0.217	2.67	5.27	16.75	188		clear
1148	56.91	300	6.58	0.217	2.18	5.18	16.72	189		clear
										sample time 1150

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW313$-20121114
Sample Location: BPS1-TT-MW313$
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Date: 11/14/12								
Time: 12:35								
Method: Low Flow (Redi-Flo2)	Clear	7.03	0.338	19.87	5.9	9.30	—	144

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11/14/12								
Method: Low Flow (Redi-Flo2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~63'								
Static Water Level (WL): 56.29'								
One Casing Volume(gal/L): N/A								
Start Purge (hrs): 11:40								
End Purge (hrs): 12:35								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 7.5								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x - 40 mL glass vials	3
PCBs	4°C	2x - 1 L ambers	2
Total Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	1
Hexavalent Cr	4°C	1x - 250 mL poly	0
Dissolved Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	0

OBSERVATIONS / NOTES:

Hex. Chromium Field test-kit reading = 0.01 mg/L

Circle if Applicable:

MS/MSD ____ Duplicate ID No.: ____

Signature(s): Chuck L. Fenn

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT- MW313$
DATE: 11/14/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
11:40	56.30	500	7.27	0.316	>800	9.83	16.71	164	—	Start purge; tan-turbid
11:45	56.30	400	7.06	0.318	>800	9.67	17.98	147	—	brown - turbid
11:50	56.30	400	7.04	0.319	>800	9.64	18.15	145	—	
11:55	56.30	400	6.85	0.322	518	9.13	20.65	142	—	
12:00	56.30	400	6.86	0.323	395	9.07	20.86	142	—	turb. ↓
12:05	56.30	400	6.91	0.326	192	9.13	20.50	143	—	
12:10	56.30	400	6.95	0.329	103	8.97	20.83	142	—	
12:15	56.30	400	6.96	0.330	94.9	8.98	20.78	143	—	
12:20	56.30	400	6.99	0.333	90.3	8.97	21.64	144	—	
12:25	56.30	400	7.01	0.335	36.2	9.42	20.36	146	—	
12:30	56.30	400	7.02	0.336	9.1	9.50	19.69	145	—	
12:35	56.30	400	7.03	0.338	5.9	9.30	19.87	144	—	Sample Collected

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW314S-20121113
Sample Location: BPS1-TT-MW314S
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Date: 11/13/12								
Time: 15:00								
Method: Low Flow (Redi-Flo2)	Clear	6.42	0.059	16.14	6.1	10.34	—	220

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11/13/12								
Method: Low Flow (Redi-Flo2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~65'								
Static Water Level (WL): 56.88'								
One Casing Volume(gal/L):								
Start Purge (hrs): 13:30								
End Purge (hrs): 15:00								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 12.5								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x - 40 mL vials	3
PCBs	4°C	2x - 1 L ambers	2
Total Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	1
Hexavalent Cr	4°C	1x - 250 mL poly	0
Dissolved Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	0

OBSERVATIONS / NOTES:

Hex. Chromium Field test kit reading: 0.01 mg/L

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW314S
DATE: 11/13/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
13:30	56.90	375	6.42	0.061	800	13.87	11.89	182	—	Start purge; slightly turbid
13:35	56.91	375	6.45	0.062	800	13.90	11.86	177	—	light tan/turbid
13:40	56.90	375	6.48	0.061	290	13.96	11.36	164	—	turb. ↓s
13:45	56.90	300	6.49	0.062	274	13.59	11.67	163	—	light tan/turbid
13:50	56.90	300	6.48	0.062	283	14.25	11.35	165	—	
13:55	56.90	Adjust	pump	speed	to ~	300 mL	and	Flow is	5 too mL	/min
14:00	56.90	Remove	pump/	tubing	,	spray	off	pump intake.	Reset	pump in well
14:05	56.90	casing	to	~	1'	from	bottom.	Brown,	turbid	water.
14:10	56.90	400	6.49	0.064	>10,000	11.41	15.70	199	—	Reset Horiba Flow cell.
14:15	56.90	400	6.44	0.065	800	11.61	15.91	201	—	Clean out as turb. was reading 0.0
14:20	56.90	400	6.47	0.060	114	10.62	16.17	203	—	
14:25	56.90	400	6.47	0.060	90.9	10.16	16.16	204	—	
14:30	56.90	400	6.44	0.060	83.8	10.53	16.23	204	—	
14:35	56.90	400	6.46	0.060	79.6	10.55	16.23	205	—	
14:40	56.90	400	6.46	0.060	36.2	10.45	16.17	208	—	
14:45	56.90	400	6.42	0.060	10.5	10.81	16.23	215	—	
14:50	56.90	400	6.44	0.059	9.3	10.68	16.18	216	—	
14:55	56.90	400	6.41	0.059	6.7	10.44	16.22	217	—	
15:00	56.90	400	6.42	0.059	6.1	10.34	16.14	220	—	Sample collected

SIGNATURE(S): [illegible] L. Fucci

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW314I-20121114
Sample Location: BPS1-TT-MW314I
Sampled By: CF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Date: 11/14/12								
Time: 10:15								
Method: Low Flow (Redi-Flo 2)	Clear	6.25	0.424	13.97	0.0	4.30	—	222

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 11/14/12								
Method: Low Flow (Redi-Flo 2)								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~154'								
Static Water Level (WL): 57.12'								
One Casing Volume(gal/L): N/A								
Start Purge (hrs): 09:25								
End Purge (hrs): 10:15								
Total Purge Time (min): ~~09:25~~ CF 50								
Total Vol. Purged (gal/L): 10.0								

SEE LOW FLOW PURGE DATA SHEET

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TCL VOCs	HCl; 4°C	3x - 40 mL glass vials	3
PCBs	4°C	2x - 1 L ambers	2
Total Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	1
Hexavalent Cr	4°C	1x - 250 mL poly	1
Dissolved Fe + Cr (Metals)	HNO_3; 4°C	1x - 500 mL poly	0

OBSERVATIONS / NOTES:

Hex. Chromium Field test-kit reading: 0.03 mg/L

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Cecille R. Fuli

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1- TT- MW314 I
DATE: 11/14/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
09:25	57.13	450	6.12	0.400	371	5.26	13.05	280	—	Start purge
09:30	57.13	450	6.14	0.406	720	4.95	13.25	274	—	
09:35	57.13	450	6.15	0.409	0.0	4.92	13.34	268	—	turbidity sensor needs reset
09:40	57.13	450	6.19	0.416	800	4.66	13.75	218	—	Spray turb. sensor/reset
09:45	57.13	450	6.21	0.421	800	4.53	13.86	213	—	turbid water
09:50	57.13	450	6.22	0.425	172	4.43	14.31	215	—	turb.↓
09:55	57.13	450	6.21	0.424	67.4	4.38	14.39	217	—	
10:00	57.13	450	6.22	0.425	37.3	4.37	14.43	218	—	
10:05	57.13	450	6.23	0.425	1.2	4.32	14.33	220	—	
10:10	57.13	450	6.23	0.425	0.0	4.32	14.25	221	—	
10:15	57.13	450	6.25	0.424	0.0	4.30	13.97	222	—	Sample collected

SIGNATURE(S): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW314I
DATE: 11/13/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
15.35	57.10	250	6.88	0.424	0.0	4.38	12.70	233	—	Start purge; slight turbidity
15:40	57.10	250	6.90	0.427	0.0	4.43	13.08	229	—	
15:45	57.10	250	6.92	0.424	0.0	4.82	13.09	227	—	
15:50	57.10	400	6.74	0.413	0.0	4.41	12.81	212	—	
15:55	57.10	400	6.52	0.423	0.0	4.55	11.23	197	—	Clean Horiba Flow tru
16:00	57.10	400	6.44	0.423	554	4.43	13.36	202	—	Cal for turbidimeter -
16:05	57.10	400	6.43	0.422	321	4.44	13.59	207	—	turbidity is reading again
16:10	57.10	400	6.42	0.422	168	4.44	13.78	212	—	
16:15	Converter box shows "Bus - Under voltage" Fault. Pump can't be sustained. Stop purge									

SIGNATURE(S): [signature] for CF

PAGE___OF___

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

TT- AOC22-MW06-20130218

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~BPS1~~ VAS
Sample Location: ~~BPS1~~ VAS AOC22-MW06
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-18-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1140	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	6.19	0.405	17.24	7.9	0.42	0.2	-28

PURGE DATA:

Date: 2-18-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 47.15								
One Casing Volume(gal/L):								
Start Purge (hrs): 1040								
End Purge (hrs): 1140								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 6.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	3
PCBs,	--	2 1-L amber galss bottle	2
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	1
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	—
Hexavalent Chromium	--	1 125-mL poly bottle	1

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: Not performed

- No stains or odors observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage Site1
PROJECT NUMBER: 112G02230

WELL ID.: TT-AOC22-MW06
DATE: 2-18-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1020	47.15									
1040	47.20	450	5.98	0.375	245	1.85	16.39	8	0.2	cloudy (Brown)
1045	47.20	450	6.02	0.389	266	1.30	16.70	-7	0.2	" "
1050	47.20	450	6.15	0.414	169	0.99	16.80	-28	0.2	Tinted (Brown)
1055	47.20	450	6.15	0.396	97.3	0.95	16.58	-29	0.2	" "
1100	47.20	450	6.17	0.400	39.4	0.90	16.72	-31	0.2	slight Tint (Tan)
1105	47.20	450	6.17	0.401	31.2	0.88	16.83	-31	0.2	" "
1110	47.19	450	6.17	0.402	29.9	0.94	16.90	-30	0.2	clear
1115	47.19	450	6.17	0.403	24.6	0.90	16.95	-30	0.2	clear
1120	47.19	450	6.18	0.404	20.5	0.86	17.01	-30	0.2	clear
1125	47.19	450	6.18	0.404	16.4	0.77	17.09	-30	0.2	clear
1130	47.19	450	6.18	0.405	10.4	0.62	17.17	-29	0.2	clear
1135	47.19	450	6.18	0.405	9.0	0.51	17.26	-29	0.2	clear
1140	47.19	450	6.19	0.405	7.9	0.42	17.24	-28	0.2	clear - collect sample

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~BPS1~~ TT-AOC22-MW10-20130218 (VAS)
Sample Location: ~~BPS1~~ AOC22-MW10
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-18-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1340	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	6.27	0.321	16.66	8.3	8.62	0.2	215

PURGE DATA:

Date: 2-18-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 45.43								
One Casing Volume(gal/L):								
Start Purge (hrs): 1230								
End Purge (hrs): 1340								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 7.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	3
PCBs,	--	2 1-L amber galss bottle	2
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	1
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	–
Hexavalent Chromium	--	1 125-mL poly bottle	1

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: Not performed

No stains or odors observed

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: TT-AOC22-MW10
DATE: 2-18-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1220	45.43	—	—	—	—	—	—	—	—	Initial
1230	45.45	450	6.28	0.313	520	9.31	15.33	126	0.1	cloudy (Red-Brown)
1235	45.45	450	6.28	0.316	490	9.09	16.70	164	0.1	" " "
1240	45.44	450	6.29	0.318	417	9.02	17.06	183	0.2	" " "
1245	45.44	450	6.28	0.318	430	8.93	17.07	192	0.2	" " "
1250	45.44	450	6.26	0.318	389	9.00	16.88	202	0.2	" " "
1255	45.44	450	6.25	0.319	273	8.78	16.69	206	0.2	Tinted (Brown)
1300	45.44	450	6.25	0.320	164	8.49	16.56	208	0.2	" "
1305	45.44	450	6.25	0.322	128	8.52	16.53	210	0.2	slight Tint (Tea)
1310	45.44	450	6.23	0.322	83.7	8.64	16.46	211	0.2	" " "
1315	45.44	450	6.25	0.324	49.9	8.72	16.41	211	0.2	" " "
1320	45.44	450	6.27	0.323	52.3	8.60	16.30	212	0.2	" " "
1325	45.44	450	6.27	0.322	40.0	8.72	16.49	213	0.2	" " "
1330	45.44	450	6.28	0.320	13.6	8.88	16.55	215	0.2	clear
1335	45.44	450	6.27	0.321	10.0	8.69	16.60	214	0.2	clear
1340	45.44	450	6.27	0.321	8.3	8.62	16.66	215	0.2	clear - collect sample

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~BPS1~~ TTA0C22-MW11-20130218
Sample Location: ~~BPS1~~ TTA0C22-MW11
Sampled By: J. Birkeit
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-18-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1127	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	5.81	0.201	18.28	10.87	7.47	—	177

PURGE DATA:

Date: 2-18-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 49.23								
One Casing Volume(gal/L):								
Start Purge (hrs): 1035								
End Purge (hrs): 1127								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 6 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	no
Hexavalent Chromium	--	1 125-mL poly bottle	yes

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: No test kit run

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: TTAOC22-MW11
DATE: 2-18-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1035	49.23									
1040	49.24	500	5.07	0.178	—	8.99	16.57	194	—	tan color
1045	49.25	350	5.91	0.180	429	8.33	16.49	160	—	clearish
1050	49.25	350	5.86	0.188	223	8.14	17.48	165	—	clear
1056	49.25	350	5.85	0.193	94.1	7.96	17.71	169	—	clear 2 gal
1100	49.25	350	5.84	0.196	18.1	7.83	17.94	171	—	clear
1105	49.25	350	5.86	0.198	14.4	7.71	17.38	172	—	clear 3.5 gal
1110	49.25	350	5.81	0.199	14.8	7.61	17.80	171	—	clear
1115	49.25	350	5.82	0.200	13.26	7.49	17.97	173	—	clear 4.5 gal
1120	49.25	350	5.82	0.201	10.32	7.45	18.15	175	—	clear 5 gal
1125	49.25	350	5.81	0.201	10.89	7.47	18.28	177	—	clear
1127	Collect sample									

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-HN-MW27I-20130218
Sample Location: BPS1-HN-MW27I
Sampled By: J Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-18-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1317	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	8.84	0.094	14.12	5.68	6.14	—	64

PURGE DATA:

Date: 2-18-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 54.45								
One Casing Volume(gal/L):								
Start Purge (hrs): 1225								
End Purge (hrs): 1317								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 6 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	7 ~~8~~ 40-mL glass vials	yes
PCBs,	--	6 ~~2~~ 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	no
Hexavalent Chromium	--	1 125-mL poly bottle	yes

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: No test kit run

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Yes	—

Signature(s): J Birkett

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-HN-MW27I
DATE: 2-18-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1225	54.45									
1230	54.98	350	7.18	0.099	50.6	5.73	12.21	169	—	clear
1235	55.15	350	8.09	0.098	11.01	5.78	12.68	127	—	clear
1240	55.33	350	8.68	0.098	8.43	5.81	13.00	97	—	clear
1245	55.39	350	8.86	0.098	9.03	5.90	13.64	86	—	clear
1250	55.40	350	8.91	0.097	7.09	5.93	13.79	80	—	clear
1255	55.40	350	8.87	0.097	5.52	5.97	13.95	82	—	clear 3 gal
1300	55.40	350	8.80	0.096	5.13	6.01	13.54	87	—	clear
1305	55.40	350	8.83	0.095	6.68	6.08	14.01	67	—	clear
1310	55.40	350	8.85	0.095	6.83	6.13	14.02	68	—	clear
1315	55.40	350	8.84	0.094	5.68	6.14	14.12	64	—	clear
1317	Collect sample									

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~BPS1-~~ BPS1-TT-MW301D-20130221
Sample Location: BPS1- MW301D
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-21-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1320	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	Clear	5.98	0.297	14.37	0.2	4.73	0.1	224

PURGE DATA:

Date: 2-21-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 54.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 1220								
End Purge (hrs): 1320								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 60								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	6
PCBs,	--	2 1-L amber galss bottle	4
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	2
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	-
Hexavalent Chromium	--	1 125-mL poly bottle	2

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.08

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	BPS1-DUP02-20130221 (Time → 1200 hrs)

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPSI-TT-MW301D
DATE: 2-21-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1210	54.30	–	–	–	–	–	–	–	–	Initial
1220	54.32	450	6.13	0.313	28.2	7.28	13.30	233	0.1	slight Tint (Tea)
1225	54.32	450	6.08	0.310	14.3	5.73	13.45	230	0.1	clear
1230	54.32	450	6.07	0.311	7.7	5.10	13.80	221	0.1	clear
1235	54.31	450	6.08	0.309	2.4	4.68	13.88	214	0.1	clear
1240	54.31	450	6.05	0.310	2.0	4.51	14.14	212	0.1	clear
1245	54.31	450	6.06	0.307	1.7	4.38	13.99	210	0.1	clear
1250	54.31	450	6.05	0.307	1.1	4.40	13.92	211	0.1	clear
1255	54.31	450	6.03	0.304	0.8	4.51	14.04	214	0.1	clear
1300	54.31	450	6.01	0.302	0.7	4.60	14.18	216	0.1	clear
1305	54.31	450	5.99	0.299	0.5	4.61	14.23	218	0.1	clear
1310	54.31	450	5.98	0.298	0.3	4.68	14.30	220	0.1	clear
1315	54.31	450	5.98	0.297	0.2	4.70	14.33	222	0.1	clear
1320	54.31	450	5.98	0.297	0.2	4.73	14.37	224	0.1	clear-collect sample

SIGNATURE(S): [illegible]

PAGE 1 OF 1

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW308S-2013 0220
Sample Location: BPS1-TT-MW308S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-20-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1232	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	6.09	0.271	18.44	12.2	4.95	—	148

PURGE DATA:

Date: 2-20-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 57.93								
One Casing Volume(gal/L):								
Start Purge (hrs): 1125								
End Purge (hrs): 1232								
Total Purge Time (min): 67								
Total Vol. Purged (gal/L): 9.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	no
Hexavalent Chromium	--	1 125-mL poly bottle	no

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.00

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage Site1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW308S
DATE: 2-20-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1125	57.93									
1130	57.94	500	5.58	0.272	—	6.20	17.23	155	—	tan color
1135	57.94	500	6.11	0.271	39.3	6.31	17.33	149	—	clear 3.5 gal
1140	57.94	300	6.11	0.274	24.8	5.41	15.96	157	—	clear
1145	57.94	300	6.09	0.296	19.2	5.97	17.61	152	—	clear
1150	57.94	300	6.10	0.272	17.7	5.44	17.02	153	—	clear 4.5 gal
1155	57.94	300	6.07	0.271	15.6	5.23	17.17	152	—	clear
1200	57.94	300	6.09	0.270	17.4	5.01	17.09	147	—	clear
1205	57.94	300	6.05	0.267	20.1	4.85	17.07	146	—	clear 6 gal
1210	57.94	300	6.03	0.267	20.4	4.80	17.30	149	—	Clear
1215	57.94	300	5.62	0.267	20.7	4.83	17.39	170	—	clear
1220	57.94	350	6.09	0.273	31.0	4.61	20.85	130	—	clear Pump stall
1225	57.94	350	6.10	0.271	13.9	4.68	18.57	143	—	clear 8.5 gal
1230	57.94	350	6.09	0.271	17.7	4.95	18.44	148	—	clear 9 gal
1232	Collect	sample								

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW308I-20130221
Sample Location: BPS1-TT-MW308I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-21-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1107	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	5.89	0.262	15.14	38.5	0.00	—	136

PURGE DATA:

Date: 2-21-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 58.20								
One Casing Volume(gal/L):								
Start Purge (hrs): 0955								
End Purge (hrs): 1107								
Total Purge Time (min): 72								
Total Vol. Purged (gal/L): 9.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Hexavalent Chromium	--	1 125-mL poly bottle	no

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.00

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW308I
DATE: 2-21-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0955	58.20									
1000	58.25	1000	5.41	0.251	OverRange	8.83	15.21	159	—	light brown (Sandy)
1005	58.23	500	5.79	0.259	1714	0.53	15.37	145	—	light brown
1010	58.21	500	5.92	0.259	1539	0.27	14.97	140	—	light tan
1015	58.21	500	5.92	0.258	1124	0.27	14.81	140	—	light tan 4 gal
1020	58.21	500	5.92	0.259	931	0.00	15.35	140	—	ligh tan
1025	58.21	500	5.92	0.259	777	0.00	15.48	142	—	light tan 5 gal
1030	58.21	400	5.91	0.260	480	0.00	15.24	142		" "
1035	58.21	400	5.70	0.284	100	0.00	15.13	141	—	tan tint 6 gal
1040	58.21	400	5.97	0.271	58	0.00	15.73	116	—	clear
1045	58.21	400	5.95	0.268	65.8	0.00	16.01	119	—	clear 7 gal
1050	58.21	400	5.91	0.261	70.0	0.00	15.50	125	—	clear
1055	58.21	400	5.90	0.263	61.8	0.00	15.24	132	—	clear 8 gal
1100	58.21	400	5.89	0.262	39.1	0.00	15.11	137	—	clear
1105	58.21	400	5.89	0.262	38.5	0.00	15.14	136	—	clear 9 gal
1107	Collect sample									

SIGNATURE(S):

PAGE___OF___

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW308D-20130220
Sample Location: BPS1-TT-MW308D
Sampled By: J. Birkell
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-20-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1402	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	4.88	0.149	14.26	7.19	3.73	—	254

PURGE DATA:

Date: 2-20-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 58.82								
One Casing Volume(gal/L):								
Start Purge (hrs): 1300								
End Purge (hrs): 1402								
Total Purge Time (min): 62								
Total Vol. Purged (gal/L): 7.5gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	no
Hexavalent Chromium	--	1 125-mL poly bottle	yes

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.09

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112602230

WELL ID.: BPSI-TT-MW308D-20130220
DATE: 2-20-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1300	58.82									
1305	58.85	600	4.98	0.136	—	7.32	14.31	262	—	clear
1311	58.84	500	4.74	0.138	—	5.05	14.93	235	—	tan tint
1316	58.83	450	4.69	0.142	25.4	4.84	14.98	253	—	clear
1320	58.83	400	4.65	0.143	30.9	4.66	14.12	263	—	clear 3 gal
1325	58.83	400	4.67	0.146	27.3	4.46	13.86	265	—	clear
1330	58.83	400	4.70	0.147	21.4	3.94	13.60	262	—	clear 4 gal
1335	58.83	400	4.76	0.146	17.7	4.55	14.22	257	—	clear
1340	58.83	400	4.81	0.147	15.5	4.17	14.19	254	—	clear 5 gal
1345	58.83	400	4.87	0.146	11.9	4.36	14.28	252	—	clear
1350	58.83	400	4.87	0.148	10.3	3.74	13.93	253	—	clear 6 gal
1355	58.83	400	4.86	0.147	8.68	4.57	14.35	254	—	clear
1400	58.83	400	4.88	0.149	7.19	3.73	14.26	254	—	clear 7 gal
1402	Collect sample									

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

BPS1-TT-MW309S-20130220

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~BPS1-~~
Sample Location: BPS1- MW309S
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-20-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1420	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	5.77	0.303	16.48	1.1	3.74	0.1	250

PURGE DATA:

Date: 2-20-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 58.38								
One Casing Volume(gal/L):								
Start Purge (hrs): 1315								
End Purge (hrs): 1420								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 7.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	6
PCBs,	--	2 1-L amber galss bottle	4
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	2
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	–
Hexavalent Chromium	--	1 125-mL poly bottle	–

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.01

No stains or odors observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	BPS1-DUP01-20130220 (Time → 1600 hrs)

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW309S
DATE: 2-20-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1305	58.38	—	—	—	—	—	—	—	—	Initial
1315	58.40	450	5.80	0.297	53.3	4.97	14.36	258	0.1	cloudy (Brown)
1320	58.40	450	5.80	0.303	90.5	4.06	15.71	242	0.1	Tinted (Tan)
1325	58.40	450	5.79	0.304	46.8	3.87	16.22	240	0.1	" "
1330	58.40	450	5.78	0.304	31.3	3.82	16.30	241	0.1	clear
1335	58.40	450	5.78	0.303	26.6	3.75	16.40	242	0.1	clear
1340	58.40	450	5.78	0.303	22.1	3.79	16.44	244	0.1	clear
1345	58.40	450	5.78	0.302	19.5	3.76	16.42	245	0.1	clear
1350	58.40	450	5.78	0.302	15.0	3.78	16.47	247	0.1	clear
1355	58.40	400	5.77	0.303	12.5	3.77	16.50	248	0.1	clear
1400	58.40	400	5.77	0.303	10.4	3.75	16.48	249	0.1	clear
1405	58.40	400	5.77	0.303	8.9	3.74	16.46	249	0.1	clear
1410	58.40	400	5.78	0.303	6.2	3.75	16.47	249	0.1	clear
1415	58.40	400	5.77	0.303	3.0	3.77	16.49	250	0.1	clear
1420	58.40	400	5.77	0.303	1.1	3.74	16.48	250	0.1	clear - collect sample

SIGNATURE(S): [illegible]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~BPS1-~~ BPS1-TT-MW309I-20130220
Sample Location: BPS1- MW309I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-20-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1240	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	5.52	0.317	14.25	5.4	6.58	0.1	283

PURGE DATA:

Date: 2-20-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 59.08'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1130								
End Purge (hrs): 1240								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 7.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	3
PCBs,	--	2 1-L amber galss bottle	2
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	1
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	-
Hexavalent Chromium	--	1 125-mL poly bottle	-

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.01

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW309I
DATE: 2-20-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1120	59.08	—	—	—	—	—	—	—	—	Initial
1130	59.10	450	5.92	0.306	38.4	6.54	12.23	253	0.1	slight Tint (Tan)
1135	59.10	450	5.84	0.302	17.2	6.47	11.88	262	0.1	clear
1140	59.09	450	5.55	0.309	20.3	7.00	12.04	270	0.1	clear
1145	59.09	450	5.51	0.309	98.5	6.56	13.09	260	0.1	Tinted (Tan)
1150	59.10	450	5.51	0.313	88.0	6.54	13.40	265	0.1	" "
1155	59.10	450	5.52	0.318	54.6	6.59	13.69	271	0.1	slight Tint (Tan)
1200	59.09	450	5.52	0.319	30.3	6.61	13.80	272	0.1	clear
1205	59.10	450	5.52	0.317	23.5	6.64	13.96	275	0.1	clear
1210	59.09	450	5.52	0.318	19.4	6.60	14.03	277	0.1	clear
1215	59.09	450	5.52	0.317	13.7	6.56	14.10	278	0.1	clear
1220	59.09	400	5.52	0.317	11.9	6.60	14.15	279	0.1	clear
1225	59.09	400	5.52	0.317	10.2	6.61	14.18	280	0.1	clear
1230	59.09	400	5.52	0.317	9.0	6.59	14.20	281	0.1	clear
1235	59.09	400	5.52	0.317	7.7	6.61	14.23	282	0.1	clear
1240	59.09	400	5.52	0.317	5.4	6.58	14.25	283	0.1	clear - collect samples

SIGNATURE(S): [illegible]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW3090-20130221 ~~BPS1-~~
Sample Location: BPS1- MW3090
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-21-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1110	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	5.58	0.217	10.88	2.2	0.05	0.1	233

PURGE DATA:

Date: 2-21-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 58.92								
One Casing Volume(gal/L):								
Start Purge (hrs): 1005								
End Purge (hrs): 1110								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 6.75								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	3
PCBs,	--	2 1-L amber galss bottle	2
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	1
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	—
Hexavalent Chromium	--	1 125-mL poly bottle	1

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.00

No stains or odors observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW309D
DATE: 2-21-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0953	58.92	—	—	—	—	—	—	—	—	Initial
1005	58.92	400	5.70	0.227	44.3	6.35	10.82	281	0.1	Tinted (Tan)
1010	58.93	400	5.67	0.227	40.1	3.59	11.28	266	0.1	slight Tint (Tan)
1015	58.93	400	5.63	0.222	38.3	1.99	11.44	260	0.1	" " "
1020	58.92	400	5.62	0.221	23.0	1.57	11.50	253	0.1	clear
1025	58.92	400	5.62	0.219	12.6	0.81	11.48	249	0.1	clear
1030	58.92	400	5.61	0.217	12.0	0.84	11.39	247	0.1	clear
1035	58.92	400	5.61	0.218	10.2	0.49	11.33	247	0.1	clear
1040	58.92	400	5.61	0.218	9.3	0.30	11.24	244	0.1	clear
1045	58.92	400	5.60	0.218	8.0	0.28	11.20	240	0.1	clear
1050	58.92	400	5.59	0.219	6.3	0.18	11.12	236	0.1	clear
1055	58.92	400	5.60	0.217	2.7	0.10	10.99	233	0.1	clear
1100	58.92	400	5.58	0.218	2.5	0.08	10.95	234	0.1	clear
1105	58.92	400	5.59	0.218	2.3	0.06	10.92	233	0.1	clear
1110	58.92	400	5.58	0.217	2.2	0.05	10.88	233	0.1	clear-collect sample

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW310S-20130221
Sample Location: BPS1-TT-MW310S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-21-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0852	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	6.24	0.675	15.09	6.41	4.76	—	131

PURGE DATA:

Date: 2-21-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 56.18								
One Casing Volume(gal/L):								
Start Purge (hrs): 0750								
End Purge (hrs): 0852								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	no
Hexavalent Chromium	--	1 125-mL poly bottle	no

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.01

Note: Men working on fence up wind of MW310S have a fire burning over a 55 gal drum (waterproofing material? tar?)

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPSI-TT-MW310S
DATE: 2-21-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0750	56.18									
0755	56.25	800	5.82	0.663	—	5.90	15.20	169	—	tan color (sandy)
0800	56.23	600	6.24	0.675	2188	5.69	15.43	134	—	tan color
0805	56.23	600	6.27	0.687	140	5.27	14.82	134	—	tan color/lit 4 gal
0810	56.21	400	6.26	0.675	91.7	6.03	15.07	135	—	clear
0815	56.21	400	6.27	0.687	47.8	4.67	14.54	135	—	clear 6 gal
0820	56.21	400	6.21	0.673	36.8	4.88	14.45	136	—	clear
0825	56.21	400	6.22	0.675	24.6	5.05	14.80	132	—	clear 7 gal
0830	56.21	400	6.23	0.676	19.4	5.00	14.49	131	—	clear
0835	56.21	400	6.22	0.676	16.3	4.83	14.63	132	—	clear
0840	56.21	400	6.22	0.676	11.1	4.52	14.75	132	—	clear 8.5 gal
0845	56.21	400	6.24	0.671	8.65	4.89	15.25	132	—	clear
0850	56.21	400	6.24	0.675	6.41	4.76	15.09	131	—	clear
0852	Collect	sample								

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW311S-20130219
Sample Location: BPS1-TT-MW311S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-19-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1201	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	6.07	1.52	16.66	7.60	7.43	—	146

PURGE DATA:

Date: 2-19-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 57.05								
One Casing Volume(gal/L):								
Start Purge (hrs): 1108								
End Purge (hrs): 1201								
Total Purge Time (min): 53								
Total Vol. Purged (gal/L): 10 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	no
Hexavalent Chromium	--	1 125-mL poly bottle	no

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.00

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW311S'
DATE: 2-19-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1108	57.05									
1113	57.21	>500	5.86	1.58	Overrange	8.91	13.41	170	—	light brown
1118	57.35	>500	5.96	1.53	150	8.60	16.06	160	—	light tan tint
1123	57.18	350	6.05	1.53	112	7.81	15.41	160	—	clearish 5 gal
1128	57.18	350	6.05	1.54	54.5	7.68	16.37	150	—	clear
1134	57.18	350	6.05	1.54	43.2	7.78	16.58	154	—	clear
1138	57.18	350	6.06	1.53	29.2	7.72	16.82	145	—	clear
1143	57.18	350	6.07	1.52	21.3	7.69	16.84	145	—	clear 8 gal
1148	57.18	350	6.06	1.52	12.96	7.67	17.00	146	—	clear
1153	57.18	350	6.07	1.52	9.18	7.53	16.68	147	—	clear
1158	57.18	350	6.07	1.52	7.60	7.43	16.66	146	—	clear 10 gal
1201	Collect sample									

SIGNATURE(S): [signature]

PAGE 1 OF 1

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GROUNDWATER SAMPLE LOG SHEET

BPS1-TT-MW311I-20130219

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-
Sample Location: BPS1- MW-311I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-19-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1215	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	Clear	5.50	0.263	14.58	4.0	9.24	0.1	281

PURGE DATA:

Date: 2-19-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 57.34'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1115								
End Purge (hrs): 1215								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 6.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	3
PCBs,	--	2 1-L amber galss bottle	2
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	1
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	-
Hexavalent Chromium	--	1 125-mL poly bottle	-

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.01

- No odors or stains observed

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW311-I
DATE: 2-19-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1105	57.34	–	–	–	–	–	–	–	–	Initial
1115	57.35	400	5.55	0.272	17.3	10.29	11.94	247	0.1	clear
1120	57.36	400	5.52	0.263	349	9.86	13.27	258	0.1	cloudy (Tan)
1125	57.36	400	5.53	0.263	699	9.75	13.74	262	0.1	" "
1130	57.36	400	5.53	0.263	269	9.57	13.88	270	0.1	" "
1135	57.36	400	5.52	0.263	105	9.46	14.03	273	0.1	Tinted (Tan)
1140	57.36	400	5.52	0.262	49.8	9.45	14.22	275	0.1	Slight Tint (Tan)
1145	57.36	400	5.51	0.262	30.5	9.40	14.35	277	0.1	" " "
1150	57.36	400	5.51	0.262	20.3	9.51	14.41	280	0.1	clear
1155	57.36	400	5.51	0.262	10.2	9.42	14.50	279	0.1	clear
1200	57.36	400	5.51	0.263	6.0	9.34	14.53	280	0.1	clear
1205	57.36	400	5.50	0.263	5.1	9.29	14.58	281	0.1	clear
1210	57.36	400	5.50	0.263	4.6	9.26	14.57	281	0.1	clear
1215	57.36	400	5.50	0.263	4.0	9.24	14.58	281	0.1	clear-collect sample

SIGNATURE(S): [illegible]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW312S-20130220
Sample Location: BPS1-TT-MW312S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-20-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1015	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	6.05	0.344	15.48	10.53	4.67	—	157

PURGE DATA:

Date: 2-20-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 56.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 0913								
End Purge (hrs): 1015								
Total Purge Time (min): 62								
Total Vol. Purged (gal/L): 10.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	no
Hexavalent Chromium	--	1 125-mL poly bottle	yes

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.02

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage Site1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW312S-2
DATE: 2-20-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0913	56.30									High purge rate due to high silt content
0918	56.51	1,000	6.05	0.352	OveRange	4.36	13.12	165	0.0	Silty light brown
0923	56.33	500	6.07	0.350	484	5.15	13.16	168	—	light brown 4 gal
0928	56.33	500	6.04	0.346	80.8	4.53	14.43	163	—	clearish
0933	56.33	350	6.06	0.350	37.4	4.73	13.85	160	—	clear
0938	56.33	350	6.03	0.347	31.9	4.54	14.04	157	—	clear 6 gal
0943	56.33	350	6.04	0.347	29.6	4.48	14.43	154	—	clear
0948	56.33	350	6.05	0.349	24.2	4.44	14.56	153	—	clear
0953	56.33	350	6.06	0.346	21.7	4.85	15.16	153	—	clear
0958	56.33	350	6.06	0.347	14.1	4.39	14.71	155	—	clear 8 gal
1003	56.33	350	6.04	0.346	13.2	4.93	14.82	157	—	clear
1008	56.33	350	6.03	0.345	11.94	4.58	14.94	158	—	clear
1013	56.33	350	6.05	0.344	10.53	4.67	15.48	157	—	clear 10 gal
1015	Collect sample									

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW312I-20130220
Sample Location: BPS1-TT-MW312I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-20-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0855	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	Clear	5.69	0.206	15.17	45.7	2.67	–	186

PURGE DATA:

Date: 2-20-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): –								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): –								
Static Water Level (WL): 57.08								
One Casing Volume(gal/L):								
Start Purge (hrs): 0748								
End Purge (hrs): 0855								
Total Purge Time (min): 67								
Total Vol. Purged (gal/L): 11.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Hexavalent Chromium	--	1 125-mL poly bottle	no

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.01

Circle if Applicable:

MS/MSD	Duplicate ID No.:
–	–

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW312I
DATE: 2-20-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0748	57.08									
0752	57.08	400	5.92	0.206	–	2.10	14.59	201	–	~~clear~~ tan color
0757	57.08	450	5.41	0.208	1108	4.05	16.25	193	–	tan color
0802	57.08	400	5.89	0.212	649	3.57	16.49	171	–	tan color
0807	57.08	400	5.87	0.216	317	3.46	16.01	183	–	tan tint
0812	57.08	350	5.85	0.207	162	3.49	15.61	187	–	clear w/ tan tint 4 gal
0817	57.08	350	5.84	0.207	134	2.94	15.64	187	–	clearish
0822	57.08	350	5.83	0.207	103	2.89	15.31	189	–	clearish
0827	57.08	350	5.78	0.207	91.2	3.09	15.01	190	–	clearish 6 gal
0832	57.08	350	5.65	0.206	81.3	3.01	14.52	197	–	clearish
0837	57.08	350	5.58	0.205	74.4	2.92	14.83	200	–	clearish
0842	57.08	350	5.59	0.206	65.3	2.92	14.95	196	–	clear
0847	57.08	350	5.71	0.206	51.0	2.60	15.09	189	–	clear
0852	57.08	350	5.69	0.206	45.7	2.67	15.17	186	–	clear 11 gal
0855	Collect sample									

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

BPS1-TT-MW313S-20130221

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: ~~BPS1-~~
Sample Location: BPS1- MW313S
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-21-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0905	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	6.22	0.357	10.67	2.6	10.52	0.2	244

PURGE DATA:

Date: 2-21-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 56.53								
One Casing Volume(gal/L):								
Start Purge (hrs): 0755								
End Purge (hrs): 0905								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 7.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	3
PCBs,	--	2 1-L amber galss bottle	2
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	1
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	-
Hexavalent Chromium	--	1 125-mL poly bottle	-

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.01

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage
PROJECT NUMBER: 112G02230

WELL ID.: BPSI-TT-MW313S
DATE: 2-21-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
	56.53									
0755	56.55	460	6.16	0.370	65.5	12.20	9.79	250	0.2	cloudy (Brown)
0800	56.55	425	6.27	0.374	620	11.14	10.29	242	0.2	" "
0805	56.57	400	6.33	0.371	600	10.51	10.70	240	0.2	" "
0810	56.57	400	6.33	0.367	572	10.33	11.05	243	0.2	" "
0815	56.57	400	6.30	0.359	217	10.27	11.00	242	0.2	" "
0820	56.56	400	6.29	0.357	89.4	10.35	10.91	240	0.2	Tinted (Brown)
0825	56.56	400	6.29	0.356	38.6	10.40	10.80	239	0.2	slight Tint (Tan)
0830	56.55	400	6.28	0.357	19.3	10.39	10.75	239	0.2	clear
0835	56.55	400	6.26	0.357	16.0	10.41	10.69	239	0.2	clear
0840	56.55	400	6.24	0.358	13.9	10.48	10.77	241	0.2	clear
0845	56.55	400	6.24	0.357	10.1	10.46	10.70	242	0.2	clear
0850	56.55	400	6.22	0.358	8.5	10.51	10.75	242	0.2	clear
0855	56.55	400	6.23	0.358	4.2	10.47	10.69	243	0.2	clear
0900	56.55	400	6.22	0.357	3.5	10.50	10.64	244	0.2	clear
0905	56.55	400	6.22	0.357	2.6	10.52	10.67	244	0.2	clear - collect sample

SIGNATURE(S): [illegible]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW3145-20130219
Sample Location: BPS1-TT-MW3145
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-19-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1407	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	5.89	0.058	16.84	10.51	6.00	—	180

PURGE DATA:

Date: 2-19-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 56.95								
One Casing Volume(gal/L):								
Start Purge (hrs): 1300								
End Purge (hrs): 1407								
Total Purge Time (min): 67								
Total Vol. Purged (gal/L): 10 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	Yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	No
Hexavalent Chromium	--	1 125-mL poly bottle	No

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.01

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage Site 1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW314S-2c
DATE: 2-19-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1300	56.95									
1305	56.97	456	5.09	0.055	—	7.68	16.05	213	—	tan color
1310	56.97	450	5.09	0.057	1340 AV	7.39	17.11	209	—	tan tint/color
1315	56.96	350	5.95	0.059	745	6.85	17.22	161	—	tan tint/color
1320	56.96	350	5.94	0.060	362	6.53	17.41	164	—	tan tint 2.5 gal
1325	56.96	350	5.94	0.060	121	6.48	17.52	166	—	" "
1330	56.96	350	5.93	0.060	68.2	6.33	17.59	168	—	clearish
1335	56.96	350	5.88	0.059	59.2	6.33	17.44	174	—	clearish 5 gal
1340	56.96	350	5.69	0.060	50.6	6.42	16.79	188	—	" "
1345	56.96	350	5.27	0.058	68	6.31	17.21	207	—	clear slight surge, slow pump
1350	56.96	350	5.89	0.059	26.8	6.25	17.45	148	—	clear
1355	56.96	350	5.84	0.058	25.0	6.07	17.13	184	—	clear
1400	56.96	350	5.89	0.058	21.2	5.82	16.83	189	—	
1405	56.96	350	5.89	0.058	10.51	6.00	16.84	180	—	clear 10 gal
1407	Collect sample									

SIGNATURE(S):

PAGE 1 OF 1

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project No.: 112G02230

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: BPS1-TT-MW314T-20130219
Sample Location: BPS1-TT-MW314E
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 2-19 -13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1427	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	5.87	0.346	14.06	7.43	4.61	0.2	233

PURGE DATA:

Date: 2-19 -13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos			See Low Flow Purge Sheet For Details					
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 57.15								
One Casing Volume(gal/L):								
Start Purge (hrs): 1325								
End Purge (hrs): 1427								
Total Purge Time (min): 62								
Total Vol. Purged (gal/L): 9 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 40-mL glass vials	yes
PCBs,	--	2 1-L amber galss bottle	yes
Total Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	yes
Dissolved Metals (Fe and Cr)	HNO3	1 250-mL poly bottle	no
Hexavalent Chromium	--	1 125-mL poly bottle	yes

OBSERVATIONS / NOTES:

Pump set within screened interval ~2 feet off bottom

Hexavalent Chromium Test Kit result: 0.04

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Bethpage Site1
PROJECT NUMBER: 112G02230

WELL ID.: BPS1-TT-MW314I
DATE: 2-19-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1325	57.15									
1330	57.17	400	5.98	0.340	11.8	3.18	11.97	265	0.2	clear
1335	57.17	350	5.95	0.345	10.36	4.32	12.11	246	0.2	clear
1341	57.17	350	5.90	0.350	15.77	4.72	11.98	216	0.2	gray silty
1345	57.17	350	5.88	0.355	—	4.84	11.92	215	0.2	" "
1350	57.17	350	5.85	0.361	16.9	4.77	11.96	217	0.2	" "
1355	57.17	350	5.85	0.363	7.6	4.80	12.25	219	0.2	gray tint 3.5 gal
1400	57.17	350	5.87	0.346	63.1	4.76	13.24	223	0.2	
1405	57.17	350	5.86	0.346	42.7	4.69	13.84	225	0.2	clear
1410	57.17	350	5.85	0.347	21.8	4.62	13.92	227	0.2	clear
1415	57.17	350	5.85	0.346	19.4	4.81	14.00	229	0.2	clear
1420	57.17	350	5.85	0.346	11.29	4.93	14.08	231	0.2	clear
1425	57.17	350	5.87	0.346	7.43	4.61	14.06	233	0.2	clear
1427	Collect sample									

SIGNATURE(S): [signature]

PAGE___OF___

QA SAMPLE LOG SHEETS

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QA SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project Number: 112G02230
Sample Location:
QA Sample Type:

Sample ID Number: BPS1-TB20121101
Sampled By: E. Watt
C.O.C. Number: 1248

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-01-12
Time: 1000
Method: Grab

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2-40 mL vials	(YES) / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s): E. Watt

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project Number: 112G02230
Sample Location:
QA Sample Type:

Sample ID Number: BPS1-TB2012 1105
Sampled By: E. Watt
C.O.C. Number: 1249

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-05-12
Time: 1100
Method: Grab

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2-40 mL vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project Number: 112G02230
Sample Location: N/A
QA Sample Type:

Sample ID Number: BPS1-TB20121106
Sampled By: E. Watt
C.O.C. Number: 1250

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-6-12
Time: 0900
Method: Grab

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	3 - 40mL vials	(YES) / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: Bethpage Site 1
Project Number: 112G02230
Sample Location: N/A
QA Sample Type:

Sample ID Number: BPS1-TB2021107
Sampled By: E. Watt
C.O.C. Number: 1251

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-7-12
Time: 0900
Method: Grab

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2-40 mL vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project Number: 112G02230
Sample Location: Lab
QA Sample Type:

Sample ID Number: BPS1-TB-20121112
Sampled By: Lab / JB
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-12-12
Time: 1200
Method: Lab prep

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40 mL vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site1
Project Number: 112G02230
Sample Location: Site 4 Blower Bldg
QA Sample Type:

Sample ID Number: BPS1-TB-20121113
Sampled By: J. Birkett
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-13-12
Time:
Method:

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Deionized Water
Supplier: Hach
Manufacturer: Hach Company
Order Number:
Lot Number: A2282
Expiration Date: Oct-2017

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40mL glass vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Bethpage Site 1
Project Number: 112G02230
Sample Location:
QA Sample Type:

Sample ID Number: BPS1 - TB 20121114
Sampled By: C. Ferlik
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11/14/12
Time: 08:45
Method: Grab

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Deionized Water
Supplier: Hach
Manufacturer: Hach Company
Order Number:
Lot Number: A2282
Expiration Date: Oct-2017

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	3x - 40 mL glass vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site1
Project Number: 112G02230
Sample Location: Lab
QA Sample Type:

Sample ID Number: BPS1-TB-20121115
Sampled By: Lab
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-15-12
Time: 0800
Method: Lab prepped

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40mL glass vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Chemtech VOCs
↳ Lab prep

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Sample ID Number: BPS1-TB-20121116
Project Number: 112G02230
Sampled By: JB
Sample Location: Lab
C.O.C. Number:
QA Sample Type:

[X] Trip Blank
[] Rinsate Blank
[] Source Water Blank
[] Other Blank

SAMPLING DATA:

Date: 11-16-12
Time: 0800
Method: Lab prep

WATER SOURCE:

[X] Laboratory Prepared
[] Tap
[] Purchased
[] Fire Hydrant
[] Other

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40 mL glass vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project Number: 112G02230
Sample Location: Blower Bldg
QA Sample Type:

Sample ID Number: BPS1-TB01-20130218
Sampled By: JB
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 2-18-13
Time: 0840
Method: Lab prepared

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40 mL glass vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site1
Project Number: 112G02230
Sample Location: Blower Bldg
QA Sample Type:

Sample ID Number: BPS1-TB02-20130219
Sampled By: JB
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 2-19-13
Time: 0800
Method: Lab prepared

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40 mL glass vials	(YES) / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site1
Project Number: 112G02230
Sample Location: Blower Bldg
QA Sample Type:

Sample ID Number: BPS1-TB03-20130220
Sampled By: J. Birkett
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 2-20-13
Time: 0700
Method: Lab prepared

WATER SOURCE:

[X] Laboratory Prepared
[] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40mL glass vials	YES / NO
Semivolatiles	Cool 4°C	—	YES / NO
Pesticide / PCB	Cool 4°C	—	YES / NO
Metals	Cool 4°C & HNO_3	—	YES / NO
Cyanide	Cool 4°C & NaOH	—	YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site
Sample ID Number: BPSI-TB04-20130221
Project Number: 112G02230
Sampled By: J. Birkett
Sample Location: Blower Bldg
C.O.C. Number:
QA Sample Type:

[X] Trip Blank
[] Rinsate Blank
[] Source Water Blank
[] Other Blank

SAMPLING DATA:

Date: 2-21-13
Time: 0710
Method: Lab prepared

WATER SOURCE:

[X] Laboratory Prepared
[] Tap
[] Purchased
[] Fire Hydrant
[] Other

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name:
Supplier:
Manufacturer:
Order Number:
Lot Number:
Expiration Date:

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40mL glass vials	(YES) / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site 1
Project Number: 112G02230
Sample Location: Site 4 Blower Bldg
QA Sample Type:

Sample ID Number: BPS1-RB-20121116
Sampled By: J. Birkett, J. Costello
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-16-12
Time: 1100
Method: Pour over clean pump into bottle

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: NERL Reagent Water
Supplier: Scientific Sales, Inc.
Manufacturer: Fisher Diagnostics Thermo Scientific
Order Number:
Lot Number: 059169
Expiration Date: 2012-07

RINSATE INFORMATION (If Applicable):

Media Type: Aqueous
Equipment Used: Grundfos Redi-Flo
Equipment Type:
[] Dedicated
[X] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	3 40mL glass vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
~~Pesticide~~ / PCB	Cool 4°C	2 1 L amber glass bottles	YES / NO
Metals (Total Fe and Cr)	Cool 4°C & HNO_3	1 500 mL poly bottle	YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO
Hexavalent Cr.	Cool 4°C	1 250mL poly bottle	yes

OBSERVATIONS / NOTES:

Decontaminated grundfos w/ alconox and DI rinse

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project Number: 112G02230
Sample Location: Site 1
QA Sample Type:

Sample ID Number: BPS1-RB01-20130219
Sampled By: VAS and JB
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 2-19-13
Time: 1540
Method: See below (Grab)

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: NERL Reagent Grade H_2O
Supplier: VWR International
Manufacturer: VWR International
Order Number: —
Lot Number: 253719
Expiration Date: 12-2013

RINSATE INFORMATION (If Applicable):

Media Type: Groundwater
Equipment Used: Redi-flow pump
Equipment Type:
[] Dedicated
[X] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	3 x 40 ml vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C	2 X 1 Liter Amber	YES / NO
Metals	Cool 4°C & HNO_3	1 X 500 ml poly	YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO
Hex Chrome	Cool 4°C	1 x 250 ml poly	YES

OBSERVATIONS / NOTES:

- Water poured over clean Redi-Flow pump directly into sample bottles

Signature(s):

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage Site
Sample ID Number: BPS1-FB-20121116
Project Number: 112G02230
Sampled By: J. Costello
Sample Location: Site 4 Blower Bldg
C.O.C. Number:
QA Sample Type:

[] Trip Blank
[] Rinsate Blank
[X] Source Water Blank
[] Other Blank

SAMPLING DATA:

Date: 11-16-12
Time: 1000
Method: Direct Pour

WATER SOURCE:

[] Laboratory Prepared
[] Tap
[X] Purchased
[] Fire Hydrant
[] Other

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: NERL Reagent Water
Supplier: Scientific Sales, Inc.
Manufacturer: Fisher Diagnostics Thermo Scientific
Order Number:
Lot Number: 059169
Expiration Date: 2012-07

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	3 40ml glass vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
~~Pesticide~~ / PCB	Cool 4°C	2 1L amber bottles	YES / NO
Metals (Total Fe and Cr)	Cool 4°C & HNO_3	1 500mL poly bottle	YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO
Hexavalent Cr	Cool 4°C	1 250 mL poly bottle	yes

OBSERVATIONS / NOTES:

Signature(s): [signature] For JC

Tetra Tech

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Bethpage
Project Number: 112G02230
Sample Location: Site 1
QA Sample Type:

Sample ID Number: BPS1-FB01-20130219
Sampled By: VAS
C.O.C. Number:

[] Trip Blank
[X] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 2-19-13
Time: 1550
Method: See below (Grab)

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: DERL Reagent grade H_2O
Supplier: Scientific Sales, Inc
Manufacturer: VWR International
Order Number: –
Lot Number: 253719
Expiration Date: 12-2013

RINSATE INFORMATION (If Applicable):

Media Type:
Equipment Used:
Equipment Type:
[] Dedicated
[] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	3 x 40 ml vials	YES / NO
Semivolatiles	Cool 4°C		YES / NO
Pesticide / PCB	Cool 4°C	2 x 1 liter Amber	YES / NO
Metals	Cool 4°C & HNO_3	1 x 500 ml poly	YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO
Hex Chrome	Cool 4°C	1 x 250 ml poly	yes

OBSERVATIONS / NOTES:

- Direct pour into sample bottles

Signature(s):

APPENDIX B

SURVEY DATA

PT #	GRID NORTHING (US FT)	GRID EASTING (US FT)	TOC	Ground
MW312S	215322.312	1125165.285	129.81	127.74
MW312I	215327.647	1125165.865	129.95	127.72
MW311S	215423.402	1124594.444	130.23	128.01
MW311I	215422.011	1124599.099	130.34	128.23
MW310S	215489.753	1124093.163	129.50	127.42
MW313S	215154.779	1125592.428	129.76	127.48
MW314S	214555.481	1125571.008	128.60	126.15
MW314I	214550.460	1125572.683	128.69	126.28
MW27S	214408.971	1124932.604	127.04	124.40
MW27I	214408.498	1124951.944	126.51	124.43

BANC3, Inc.
Consulting Engineers
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- Surveyors
- Construction Managers
- Information Technology

300 Alexander Park, Suite 350
Princeton, NJ 08540
609.759.1900 phone
609.919.9022 fax

February 14, 2012

Robert Sok, P.G.
Project Manager / Geologist
Tetra Tech NUS, Inc.
Twin Oaks I, Suite 309
5700 Lake Wright Drive
Norfolk, VA 23502

Re.: Survey Report
US Navy – NWIRP
Bethpage, New York
Subcontract # 1080854
Job # 112G02230 – CTO WE44
BANC3 Project # 2000215-04

Dear Mr. Sok,

Per your request, I have enclosed three signed and sealed copies of our Survey Report dated February 14, 2012 for the above captioned project. Two copies have been bound and one copy is provided unbound, for your use.

We appreciate the opportunity to work with Tetra Tech NUS, Inc. and the US Navy. Please contact me if you have any questions and/or require additional information.

Respectfully submitted,

Thomas F. Miller

Thomas F. Miller, PLS, PP

BANC3, Inc.
Consulting Engineers
www.banc3.com

- Engineers
- Surveyors
- Construction Managers
- Information Technology

300 Alexander Park, Suite 350
Princeton, NJ 08540
609.759.1900 phone
609.919.9022 fax

Survey Report
U.S. Navy – NWIRP
Bethpage, New York
Subcontract # 1080854
Job # 112G02230 – CTO WE44

BANC3 Project # 2000215-04

February 14, 2012

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February 14, 2012

Robert Sok, P.G.
Project Manager / Geologist
Tetra Tech NUS, Inc.
Twin Oaks I, Suite 309
5700 Lake Wright Drive
Norfolk, VA 23502

Re.: Survey Report
US Navy – NWIRP
Bethpage, New York
Subcontract # 1080854
Job # 112G02230 – CTO WE44
BANC3 Project # 2000215-04

Dear Mr. Sok,

BANC3 Inc. is pleased to provide you with our completed Survey Report for the above referenced project.

BANC3 performed field surveys relative to the subject project to include Global Positioning Systems (GPS), conventional Total Station Surveys and differential leveling surveys. From the data, a table of Monitoring Well and Soil Boring Locations was prepared and included herein. The table includes control points utilized, locations and elevations of Monitoring Well cover, inner casing and adjacent ground where appropriate and Soil Boring locations and elevations. BANC3 performed field reconnaissance and locations of survey control markers tied National Geodetic Survey (NGS) monument designated as "15E 14N" (PID # KU5039) included herein. BANC3 verified the positioning and accuracy of the Monitoring Wells and Soil Borings through our ground field locations and redundant measurements of survey control points. All locations are referenced to New York State Plane Coordinates (Long Island Zone), North American Datum of 1983 and elevations referenced to North American Vertical Datum of 1988. (NAD83, NAVD 88).

We appreciate the opportunity to work with your organization and the US Navy. Please contact me if you have any questions and/or require additional information.

Respectfully submitted,

Thomas F. Miller, PLS, PP
State of New York Professional Land Surveyor #050484

STATE OF NEW YORK
THOMAS F. MILLER
050484
LICENSED LAND SURVEYOR

BETHPAGE, NEW YORK / JANUARY 26, 2012

MONITORING WELL & SOIL VAPOR EXTRACTION WELL LOCATIONS

DESCRIPTION	GRID NORTH (US FT)	GRID EAST (US FT)	ELEV (US FT)	PT #
GPS MON	214296.002	1125124.594	122.84	15E14N
CIP / CONTROL POINT	214063.933	1123668.505	123.38	1
MW301S	214560.160	1124865.210	126.40	1574
INNER CASING	214560.546	1124865.178	126.00	1575
GROUND	214559.968	1124864.936	126.38	1576
MW301D	214562.161	1124880.995	126.33	1578
INNER CASING	214562.630	1124881.106	125.93	1579
GROUND	214561.885	1124881.124	126.32	1577
MW301I	214565.915	1124905.714	126.09	1580
INNER CASING	214566.352	1124906.082	125.56	1581
GROUND	214565.459	1124905.933	126.04	1582
MW305S	213411.314	1123930.003	116.49	1538
INNER CASING	213411.021	1123930.127	116.04	1539
GROUND	213409.185	1123930.184	116.52	1529
MW305D	213406.292	1123949.047	116.28	1534
INNER CASING	213405.975	1123949.183	115.94	1535
GROUND	213404.255	1123948.903	116.25	1531
MW305I	213408.673	1123939.648	116.43	1537
INNER CASING	213408.557	1123939.487	116.16	1536
GROUND	213406.936	1123939.665	116.38	1530
MW306S	213383.396	1124387.860	118.48	1552
INNER CASING	213383.550	1124387.814	117.82	1551
GROUND	213383.190	1124388.302	115.33	1550
MW306D	213381.032	1124409.879	118.62	1546
INNER CASING	213380.799	1124409.899	118.06	1545
GROUND	213380.768	1124410.251	115.59	1544

DESCRIPTION	GRID NORTH (US FT)	GRID EAST (US FT)	ELEV (US FT)	PT #
MW306I	213381.956	1124399.469	118.56	1548
INNER CASING	213382.124	1124399.458	117.76	1547
GROUND	213381.577	1124399.699	115.45	1549
MW307S	213350.889	1124902.305	114.58	1562
INNER CASING	213350.824	1124901.871	114.39	1563
GROUND	213351.290	1124900.960	114.59	1561
MW307D	213357.390	1124926.585	114.85	1568
INNER CASING	213357.307	1124926.918	114.42	1569
GROUND	213357.831	1124925.942	114.85	1567
MW307I	213353.948	1124915.179	114.65	1565
INNER CASING	213353.775	1124914.838	114.16	1564
GROUND	213354.844	1124915.305	114.67	1566
MW308S	214978.217	1124909.927	131.58	1589
INNER CASING	214978.065	1124909.900	131.05	1588
GROUND	214977.778	1124910.412	128.586	1587
MW308D	214965.058	1124935.523	131.61	1595
INNER CASING	214965.082	1124935.463	130.98	1594
GROUND	214964.782	1124934.963	128.78	1593
MW308I	214972.536	1124923.282	131.51	1592
INNER CASING	214972.484	1124923.261	130.73	1591
GROUND	214972.278	1124923.640	128.58	1590
MW309S	215211.896	1124997.760	132.45	1602
INNER CASING	215212.060	1124997.916	131.77	1601
GROUND	215212.026	1124997.416	129.41	1600
MW309D	215208.337	1125028.364	132.14	1608
INNER CASING	215208.441	1125028.421	131.52	1607
GROUND	215208.448	1125028.046	129.42	1606
MW309I	215209.976	1125016.064	132.36	1605
INNER CASING	215209.932	1125016.144	131.83	1604
GROUND	215210.375	1125015.580	129.44	1603

DESCRIPTION	GRID NORTH (US FT)	GRID EAST (US FT)	ELEV (US FT)	PT #
SVE-107D	213936.763	1124748.817	115.77	1501
INNER CASING	213936.904	1124749.376	115.49	1502
GROUND	213935.960	1124748.782	115.70	1500
SVE-108D	213957.882	1124515.465	117.43	1504
INNER CASING	213957.528	1124515.629	117.01	1503
GROUND	213958.809	1124514.989	117.27	1505
SVE-109D	213976.646	1124241.948	117.94	1507
INNER CASING	213976.388	1124242.354	117.49	1508
GROUND	213978.450	1124242.971	117.78	1506
SVE-110D	213991.041	1123998.401	117.04	1510
INNER CASING	213990.593	1123998.498	116.36	1509
GROUND	213991.920	1123998.760	116.88	1511
SVE-111D	214044.084	1123802.414	122.59	1513
INNER CASING	214043.723	1123802.430	122.01	1514
GROUND	214045.635	1123802.456	122.39	1512

BANC3

Tetra Tech - Bethpage, NY

16 June 2011

INPUT	OUTPUT
Geographic, NAD83	State Plane, NAD83 3104 - New York Long Island, U.S. Feet

15E14N (KU5039)

1/1

Latitude: 40 45 13.49016
Longitude: 073 29 29.50713

Northing/Y: 214296.001
Easting/X: 1125124.593

Convergence: 0 19 57.29260
Scale Factor: 0.999996308

Remark: Prepared by: Thomas F. Miller, PLS, PP

Corpscon v6.0.1, U.S. Army Corps of Engineers

DERIVATION OF ORTHOMETRIC HEIGHT OF NATIONAL GEODETIC SURVEY MONUMENT 15E 14N (PID # KU5039)

"It is a straightforward procedure to algebraically subtract an interpolated geoid height, N, from a GPS ellipsoidal height, h, to obtain and orthometric height, H:

$$H = h - N"$$ [1]

<u>For NGS Monument 15E 14N:</u>

H = Orthometric Height (to be determined)

h = Ellipsoidal Height (6.331 meters) Adjusted 02/10/07

N = Geoid Height (-31.11 meters)

<u>or</u>

H = 6.331m – (-31.11m)

H = 37.441m (or 122.84 feet)

[1] Converting GPS Height into NAVD88 Elevation with the GEOID96 Geoid Height Model, Dennis G. Milbert, Ph.D. and Dru A. Smith, Ph.D., National Geodetic Survey, NOAA

The NGS Data Sheet

See file dsdata.txt for more information about the datasheet.

```
DATABASE = NGSIDB , PROGRAM = datasheet95, VERSION = 7.87.5
1        National Geodetic Survey,   Retrieval Date = FEBRUARY 14, 2012
 KU5039 ***********************************************************************
 KU5039  DESIGNATION -  15E 14N
 KU5039  PID         -  KU5039
 KU5039  STATE/COUNTY-  NY/NASSAU
 KU5039  USGS QUAD   -  HUNTINGTON (1979)
 KU5039
 KU5039                        *CURRENT SURVEY CONTROL
 KU5039
 KU5039* NAD 83(2007)-  40 45 13.49016(N)    073 29 29.50713(W)     ADJUSTED
 KU5039* NAVD 88     -        37.4    (meters)     123.     (feet)  VERTCON
 KU5039
 KU5039  EPOCH DATE  -        2002.00
 KU5039  X           -   1,374,891.931 (meters)                     COMP
 KU5039  Y           -  -4,639,038.874 (meters)                     COMP
 KU5039  Z           -   4,141,749.994 (meters)                     COMP
 KU5039  LAPLACE CORR-           4.02  (seconds)                   DEFLEC09
 KU5039  ELLIP HEIGHT-           6.331 (meters)          (02/10/07) ADJUSTED
 KU5039  GEOID HEIGHT-         -31.11  (meters)                     GEOID09
 KU5039
 KU5039  ------- Accuracy Estimates (at 95% Confidence Level in cm) --------
 KU5039  Type    PID    Designation                        North   East  Ellip
 KU5039  ----------------------------------------------------------------------
 KU5039  NETWORK KU5039 15E 14N                              1.29   1.12   2.78
 KU5039  ----------------------------------------------------------------------
 KU5039
 KU5039.The horizontal coordinates were established by GPS observations
 KU5039.and adjusted by the National Geodetic Survey in February 2007.
 KU5039
 KU5039.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
 KU5039.See National Readjustment for more information.
 KU5039
 KU5039.The horizontal coordinates are valid at the epoch date displayed above
 KU5039.which is a decimal equivalence of Year/Month/Day.
 KU5039
 KU5039.The NAVD 88 height was computed by applying the VERTCON shift value to
 KU5039.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
 KU5039
 KU5039.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 KU5039
 KU5039.The Laplace correction was computed from DEFLEC09 derived deflections.
 KU5039
 KU5039.The ellipsoidal height was determined by GPS observations
 KU5039.and is referenced to NAD 83.
 KU5039
 KU5039.The geoid height was determined by GEOID09.
 KU5039
 KU5039;                    North         East     Units Scale Factor Converg.
 KU5039;SPC NY L     -    65,317.552   342,938.662   MT  0.99999631   +0 19 57.3
 KU5039;SPC NY L     -   214,296.00  1,125,124.59   sFT  0.99999631   +0 19 57.3
 KU5039;UTM  18      - 4,512,515.673   627,337.852   MT  0.99979958   +0 59 05.6
```

```
KU5039
KU5039!              -  Elev Factor  x  Scale Factor =   Combined Factor
KU5039!SPC NY L      -   0.99999901  x   0.99999631  =   0.99999532
KU5039!UTM  18       -   0.99999901  x   0.99979958  =   0.99979859
KU5039
KU5039:                  Primary Azimuth Mark                      Grid Az
KU5039:SPC NY L      -  15E 14N AZ                                 093 49 50.7
KU5039:UTM  18       -  15E 14N AZ                                 093 10 42.4
KU5039
KU5039|-----------------------------------------------------------------------|
KU5039| PID    Reference Object                      Distance       Geod. Az  |
KU5039|                                                             dddmmss.s |
KU5039| KU5058 15E 14N AZ                          APPROX. 0.6 KM 0940948.0 |
KU5039|-----------------------------------------------------------------------|
KU5039
KU5039                          SUPERSEDED SURVEY CONTROL
KU5039
KU5039  ELLIP H (12/03/02)     6.339  (m)                        GP(       ) 4 2
KU5039  NAD 83(1996)-  40 45 13.48989(N)    073 29 29.50681(W) AD(       ) 1
KU5039  ELLIP H (01/11/99)     6.342  (m)                        GP(       ) 4 1
KU5039  NAD 83(1996)-  40 45 13.49288(N)    073 29 29.50569(W) AD(       ) 1
KU5039  NAD 83(1992)-  40 45 13.49274(N)    073 29 29.50540(W) AD(       ) 1
KU5039  NAD 83(1986)-  40 45 13.49343(N)    073 29 29.50648(W) AD(       ) 1
KU5039  NGVD 29 (03/24/92)   37.8    (m)          124.     (f) GPS OBS
KU5039
KU5039.Superseded values are not recommended for survey control.
KU5039.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
KU5039.See file dsdata.txt to determine how the superseded data were derived.
KU5039
KU5039_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL2733712515(NAD 83)
KU5039
KU5039_MARKER: DO = NOT SPECIFIED OR SEE DESCRIPTION
KU5039_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
KU5039_SP_SET: STAINLESS STEEL ROD IN SLEEVE
KU5039_STAMPING: 15E14N
KU5039_MARK LOGO: NYDPW
KU5039_PROJECTION: RECESSED 8 CENTIMETERS
KU5039_MAGNETIC: N = NO MAGNETIC MATERIAL
KU5039_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
KU5039+STABILITY: POSITION/ELEVATION WELL
KU5039_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
KU5039+SATELLITE: SATELLITE OBSERVATIONS - 1990
KU5039_ROD/PIPE-DEPTH: 20.6 meters
KU5039_SLEEVE-DEPTH  : 1.52 meters
KU5039
KU5039  HISTORY     - Date     Condition        Report By
KU5039  HISTORY     - 1990     MONUMENTED       SBAS
KU5039
KU5039                          STATION DESCRIPTION
KU5039
KU5039'DESCRIBED BY SIDNEY B BOWNE AND SON 1990
KU5039'THE POINT IS LOCATED IN BETHPAGE, TOWN OF OYSTER BAY, 21 FEET (6.4 M)
KU5039'SOUTH OF THE CENTERLINE OF SYCAMORE AVENUE AND 40 FEET (12.2 M) EAST
KU5039'OF THE CENTERLINE OF NORTH 11TH STREET,IN THE CONCRETE SIDEWALK.
KU5039'THE LOCATION TIES ARE 42.5 FEET (13.0 M) FROM THE CENTER OF THE
KU5039'HYDRANT, 48.6 FEET (14.8 M) FROM THE CENTER OF THE SEWER MANHOLE AND
KU5039'33.8 FEET (10.3 M) FROM THE NORTH WEST CORNER OF HOUSE NUMBER 207.

*** retrieval complete.
Elapsed Time = 00:00:03
```

APPENDIX C

CHAIN OF CUSTODY FORMS AND ANALYTICAL RESULTS

Chain of Custody Forms

E-1211071 Cart 9 Rack#194B TM2856 45-1

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 1248 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	Bethpage Site 1	D. Brayack	757 461 3768	Trimatrix
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: E. Watt	PHONE NUMBER: 302 542-2982	ADDRESS: 5560 Corporate Exchange Court
[signature]		CARRIER/WAYBILL NUMBER: 8000 4356 0828		CITY, STATE: Grand Rapids, MI 49512

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, P, P, P

PRESERVATIVE USED: HCl, Ice, HNO3, HNO3, Ice

TYPE OF ANALYSIS: TCL VOCs, PCBs, Total Fe and Cr, Dissolved Fe and Cr, Hexavalent Cr, TEST GROUP

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TCL VOCs	PCBs	Total Fe and Cr	Dissolved Fe and Cr	Hexavalent Cr		TEST GROUP	Containers	COMMENTS
01	11-1	1030	BPS1-TT-MW302I1-2012 1101		—	—	GW	G	6	X	X	X				06		~~3~~ 6 LR 11/3/12
02	11-1	1450	BPS1-TT-MW302D-2012 1101		—	—	GW	G	6	X	X	X				06		~~3~~ 6
03	11-1	1655	BPS1-TT-MW303S-2012 1101		—	—	GW	G	6	X	X	X				06		5
04	11-2	1015	BPS1-TT-MW303I1-2012 1102		—	—	GW	G	8	X	X	X	X	X		07		8
05	11-1	1000	BPS1-TB20121101		—	—	GW	G	2	X						08		2

1. RELINQUISHED BY: Eric Watt [signature]	DATE: 11-2-12	TIME: 1300	1. RECEIVED BY: [signature] Romeyn TriMatrix	DATE: 11/3/12	TIME: 0920
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

000030

1211079 Cart 7 Rack #415 white

TETRA TECH NUS, INC.

CHAIN OF CUSTODY | NUMBER № 1249 | PAGE 1 OF 1 49-1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	Bethpage Site 1	D. Brayack	(757) 461-3768	Tri Matrix / Walt
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		E. Wall	(302) 542-2982	5560 Corporate Exchange Court
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FedEx 8741 9938 0902		Grand Rapids, MI 49512

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P P

PRESERVATIVE USED: HCl Ice HNO3 Ice

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TCL VOCs	PCBs	Total Fe and Cr	Hexavalent Cr		TEST GROUP			COMMENTS
01	11-5	1100	BPS1-TB20121105		—	—	QC	G		X					08			
02	11-5	1220	BPS1-TT-MW303D-20121105		—	—	GW	G	6	X	X	X			06			
03	11-5	1435	BPS1-TT-MW303D2-20121105		—	—	GW	G	7	X	X	X	X		09			
04	11-5	1635	BPS1-TT-MW302D2-20121105		—	—	GW	G	7	X	X	X	X		09			

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY E. Wall	11-5-12	1730	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	11/6/12	0830

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cart 13, Rack #432R E 1211104

1-7

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 1250 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
1R6G02230	Bethpage Site 1	D. Brayack	757 461-3768	Tri Matrix / Walt
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		E. Watt	302 542-2982	5560 Corporate Exchange Court
		CARRIER/WAYBILL NUMBER		CITY, STATE
		Fed Ex 8000 4356 0839		Grand Rapids, MI 49512

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P P P

PRESERVATIVE USED: HCl Ice HNO3 Ice HNO3

TYPE OF ANALYSIS

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TCL VOCs	PCBs	Total Ferrous Cr	Hexavalent Cr	Dissolved Ferrous Cr		TEST GROUP		COMMENTS
1.	11-6	0900	BPSI-TB2012 1106		—	—	QC	G	2	X						08		
2.	11-6	1010	BPSI-TT-MW307I-2012 1106		—	—	GW	G	7	X	X	X	X			09		
3.	11-6	1310	BSI-TT-MW307D-2012 1106		—	—	GW	G	7	X	X	X		X		10		BPSI (WR)
4.	11-6	0930	BPSI-DUP01-2012 1106		—	—	GW	G	6	X	X	X				11		
5.	11-6	1535	BPSI-TT-MW304S-2012 1106		—	—	GW	G	6	X	X	X				06		
6.	11-6	1715	BPSI-TT-MW304I-2012 1106		—	—	GW	G	8	X	X	X	X	X		07		

1. RELINQUISHED BY Eric Watt	DATE 11-6-12	TIME 1500	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE 11/7/12	TIME 0830

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cart 8, 577G E-1211153 5-5

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 1251 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	Bethpage Site 1	D. Brayack		Tri Matrix / Walt
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]		E. Watt	302 542-2982	5560 Corporate Exchange Court
		CARRIER/WAYBILL NUMBER		CITY, STATE
		Fed Ex ~~8001~~ ~~3652~~ ~~7782~~ 7940 2786 8442		Grand Rapids, MI 49512

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, P, P

PRESERVATIVE USED: HCl, ice, HNO3, ice

TYPE OF ANALYSIS: TCL VOCs, PCBs, Total Fe and Cr, Hexavalent Cr, TEST GROUP

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TCL VOCs	PCBs	Total Fe and Cr	Hexavalent Cr		TEST GROUP			COMMENTS
1.	11-7	0900	BPS1-TB20121107		–	–	QC	G	2	X					08			
~~2.~~	11-7	0935	BPS1-TT-MW304D-2012-1107		–	–	GW	G	6	X	X	X			—			See N/C Form (WM)
~~3.~~ 023	11-8	1115	BPS1-TT-MW306D-2012-1108		–	–	GW	G	6	X	X	X			06			
~~4.~~ 024	11-8	1310	BPS1-TT-MW306I-2012-1108		–	–	GW	G	15	X	X	X	X		~~09~~	12		MS/MSD
~~5.~~ 045	11-8	1450	BPS1-TT-MW304I2-2012-1108		–	–	GW	G	7	X	X	X	X		09			
~~6.~~ 056	11-8	1000	BPS1-DUP02-20121108		–	–	GW	G	6	X	X	X			11			
~~7.~~ 067	11-8	1645	BPS1-TT-MW305I-2012-1108		–	–	GW	G	7	X	X	X	X		09			

1. RELINQUISHED BY [signature] Eric Watt	DATE 11-8-12	TIME 1730	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY [signature] Cole	DATE 11/9/12	TIME 0830

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

:00055

E-1211220

Cart 8 VOC Rack # 711-W 7-1

TETRA TECH NUS, INC.

CHAIN OF CUSTODY | NUMBER № 1254 | PAGE 1 OF ____

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	Bethpage Site 1	Rob Sojk	757	Tri Matrix / Wait
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Eric Wait	PHONE NUMBER: 302 542-2982	ADDRESS: 5560 Corporate Exchange Court
		CARRIER/WAYBILL NUMBER: Fed Ex 7940 3836 0743		CITY, STATE: Grand Rapids, MI 49512

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P P

PRESERVATIVE USED: HCl ice HNO3 ice

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TCL VOCs	PCBs	Total Fe & Cr	Hexavalent Cr		TEST GROUP			COMMENTS
01	11-9	0930	BPS1-TB2012 1109		—	—	QC	G	2	X					08			
02	11-9	1015	BPS1-TT-MW3125-2012 1109		—	—	GW	G	7	X	X	X	X		09			
03	11-9	1150	BPS1-TT-MW312I-2012 1109		—	—	GW	G	7	X	X	X	X		09			
04	11-7	0935	BPS1-TT-MW304D-2012 1109		—	—	GW	G	6	X	X	X			06			

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
Eric Wait	11-9-12	1700		11-10-12	09:00
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cart 4, 701R E-1211254 H-3

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 1257 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	NWIRP Bethpage Site 1	Rob Sok	757-466-4904	Tri Matrix Walt Roudebush

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Jacob A. Costello / Cmdll J. Fenlin	Jacob Birkett	757-814-9916	5560 Corporate Exchange Ct

CARRIER/WAYBILL NUMBER	CITY, STATE
FedEx 8634-8642-7592	Grand Rapids, MI 49512

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, P, P, P

PRESERVATIVE USED: HCl, —, HNO3, —, HNO3

TYPE OF ANALYSIS

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs	PCBs	Total Fe and Cr	Hexavalent Cr	Dissolved Fe and Cr		TEST GROUP		COMMENTS
01	11-12	1340	BPSI-TT-MW308S-20121112	MW308S	—	—	GW	G	7	3	2	1		1		10		See N/C Form (WC)
02	11-12	1410	BPSI-TT-MW309S-20121112	MW309S	—	—	GW	G	6	3	2	1				06		
03	11-12	1545	BPSI-TT-MW308I-20121112	MW308I	—	—	GW	G	6	3	2	1				06		
04	11-12	1630	BPSI-TT-MW309I-2012112	MW309I	—	—	GW	G	7	3	2	1	1			09		
05	11-12	1200	BPSI-TB-20121112	—	—	—	QC	—	2	2						08		Trip Blank

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY Cmdll J. Fenlin	11/12/12	18:30	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY [signature]	11/13/12	0830

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

00029

E-1211282

Bottom/Cart 12 150 Blue

13-3

TETRA TECH NUS, INC.

CHAIN OF CUSTODY | NUMBER № 1258 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	NWIRP Bethpage Site 1	Rob Sok	757-466-4904	TriMatrix Walt Roudebush

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Jacob A. Costello Cornell J. Ferri	Jacob Birkett	757-814-9916	55600 Corporate Exchange Ct

CARRIER/WAYBILL NUMBER	CITY, STATE
FedEx 8634-8642-7559	Grand Rapids, MI 49512

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, P, P

PRESERVATIVE USED: HCl, –, HNO_3, –

TYPE OF ANALYSIS

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOC	PCBs	Total Fe and Cr	Hexavalent Cr		TEST GROUP			COMMENTS
01	11-13	0830	BPSI-TB-20121113	—	—	—	QC	—	2	2					08			Field Prepared Trip Blank
02	11-13	1020	BPSI-TT-MW308D-20121113	MW308D	—	—	GW	G	6	3	2	1			06			
03	11-13	1155	BPSI-TT-MW309D-20121113	MW309D	—	—	GW	G	15	7	6	1	1		12			Run MSMSD
04	11-13	1240	BPSI-TT-MW301S-20121113	MW301S	—	—	GW	G	7	3	2	1	1		09			
05	11-13	1400	BPSI-TT-MW301D-20121113	MW301D	—	—	GW	G	7	3	2	1	1		09			
06	11-13	1500	BPSI-TT-MW314S-20121113	MW314S	—	—	GW	G	6	3	2	1			06			
07	11-13	1550	BPSI-TT-MW301I-20121113	MW301I	—	—	GW	G	7	3	2	1	1		09			
08	11-13	1410	BPSI-Dup03-20121113	—	—	—	GW	G	7	3	2	1	1		13			Duplicate

11-13-12

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY Cornell J. Ferri	11/13/12	18:30	1. RECEIVED BY [signature]	11/14/12	0830
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

E 1211346

Cart 5 VOC Rack # 1029-W 17-1

TETRA TECH NUS, INC.

CHAIN OF CUSTODY | NUMBER № 1261 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	NWIRP Bethpage Site 1	Rob Sok	757-466-4904	TriMatrix Walt Roudebush

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Jacob A. Costello Amelia J. Ferri	Jacob Birkett		5560 Corporate Exchange Ct

CARRIER/WAYBILL NUMBER	CITY, STATE
FedEx 8634 8642 7607	Grand Rapids, MI 49512

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P P

PRESERVATIVE USED: HCl / HNO3

TYPE OF ANALYSIS: VOC, PCBs, Total Cr and Fe, Hexavalent Cr, TEST GROUP

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOC	PCBs	Total Cr and Fe	Hexavalent Cr		TEST GROUP			COMMENTS
01	11-14	0845	BPSI-TB-20121114	—	—	—	QC	—	3	3					08			Trip Blank (Field Prep)
02	11-14	1020	BPSI-FW-MW01-20121114	FW MW01	—	—	GW	G	6	3	2	1			06			
03	11-14	1015	BPSI-TT-MW314I-20121114	TT MW314I	—	—	GW	G	7	3	2	1	1		09			
04	11-14	1140	BPSI-FW-MW02-20121114	FW MW02	—	—	GW	G	6	3	2	1			06			
05	11-14	1235	BPSI-TT-MW313S-20121114	TT MW313S	—	—	GW	G	6	3	2	1			06			
06	11-14	1320	BPSI-FW-MW03-20121114	FW MW03	—	—	GW	G	6	3	2	1			06			
07	11-14	1500	BPSI-HN-MW29I-20121114	HN MW29I	—	—	GW	G	7	3	2	1	1		09			
08	11-14	1535	BPSI-TT-MW310S-20121114	TT MW310S	—	—	GW	G	7	3	2	1	1		09			
09	11-14	1710	BPSI-HN-MW27I-20121114	HN MW27I	—	—	GW	G	7	3	2	1	1		09			
10	11-14	1200	BPSI-Dup04-20121114	—	—	—	GW	G	7	3	2	1	1		13			

JBB 11-14-12

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY Amelia J. Ferri	11/14/12	14:00	1. RECEIVED BY Joshua Jones	11-16-12	08:35
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

00042

E-1211347

VOC Rack 539-R

17-6

TETRA TECH NUS, INC.

CHAIN OF CUSTODY | NUMBER № 1260 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	NWIRP Bethpage Site 1	Rob Sok	757-466-4904	TriMatrix Walt Roudebush
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Cecil J. Fedi		Jacob Birkett	757-814-9916	5560 Corporate Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FedEx 8634-8642-7570		Grand Rapids, MI 49512

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, P, P, P

PRESERVATIVE USED: HCl, –, HNO_3, HNO_3, –

TYPE OF ANALYSIS: VOCs, PCBs, Total Cr and Fe, Dissolved Cr and Fe, Hexavalent Chromium, TEST GROUP

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs	PCBs	Total Cr and Fe	Dissolved Cr and Fe	Hexavalent Chromium	TEST GROUP	COMMENTS
01	11-15	0800	BPS1-TB-20121115	—	—	—	QC	—	2	2					08	Trip Blank
02	11-15	1000	BPS1-TT-MW305S-20121115	TT MW305S	—	—	GW	G	6	3	2	1			06	
03	11-15	1045	BPS1-TT-MW311S-20121115	TT MW311S	—	—	GW	G	7	3	2	1		1	09	
04	11-15	1150	BPS1-TT-MW305D-20121115	TT MW305D	—	—	GW	G	7	3	2	1		1	09	
05	11-15	1245	BPS1-TT-MW311I-20121115	TT MW311I	—	—	GW	G	8	3	2	1	1	1	07	
06	11-15	1400	TTAOC22-MW06-20121115	AOC22 MW06	—	—	GW	G	7	3	2	1		1	09	
07	11-15	1600	BPS1-TT-MW302S-20121115	TT MW302S	—	—	GW	G	7	3	2	1		1	09	
08	11-15	1600	TTAOC22-MW10-20121115	AOC MW10	—	—	GW	G	7	3	2	1		1	09	
	~~11-15~~		~~BPS1-TT-MW306S-20121115~~	~~TT MW306S~~	~~—~~	~~—~~	~~GW~~	~~G~~		~~3~~	~~2~~	~~1~~		Did not sample		
09	11-15	1010	BPS1-Dup05-20121115	—	—	—	GW	G	6	3	2	1			11	Duplicate sample

JBB 11-14-12

JBB 11-15-12

1. RELINQUISHED BY Cecil J. Fedi	DATE 11/15/12	TIME 18:00	1. RECEIVED BY [signature]	DATE 11-16-12	TIME 08:35
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

00024

E 1211367 Rack # 579 Green Metals Cart

TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER № 1262 | PAGE 1 OF 1 19-1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	NWIRP Bethpage Site1	Rob Sok	757-466-4904	TriMatrix Walt Roudebush
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]		Jacob Birkett	757-814-9916	5560 Corporate Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FedEx 8634-8642-7581		Grand Rapids, MI 49512

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs	PCBs	Total Fe and Cr	Hexavalent Chromium	Dissolved Fe and Cr	TEST GROUP	COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)										G	G	P	P	P		
PRESERVATIVE USED										HCl	/	HNO3	/	HNO3		
01	11-16	0800	BPSI-TB-20121116	—	—	—	QC	—	2	2					08	Trip Blank
02	11-16	0915	TTAOC22-MW11-20121116	AOC22 MW11	—	—	GW	G	7	3	2	1	1		09	
03	11-16	0940	BPSI-TT-MW306S-20121116	TT MW306S	—	—	GW	G	8	3	2	1	1	1	07	
04	11-16	1100	BPSI-RB-20121116	—	—	—	QC	—	7	3	2	1	1		14	Rinsate Blank
05	11-16	1000	BPSI-FB-20121116	—	—	—	QC	—	7	3	2	1	1		15	Field Blank
06	11-16	1140	BPSI-TT-MW307S-20121116	TT MW307S	—	—	GW	G	7	3	2	1	1		09	

11-16-12

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	11-16-12	1600	1. RECEIVED BY		
2. RELINQUISHED BY [signature]	11/16/12	16:00	2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY [signature] TriMatrix	11/17/12	0950

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

00037

Cart 3 Rack 343 B. E-1302260 15-3

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 1264 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	NWIRP Bethpage	Rob Sok	757-466-4907	TriMatrix Walt Roudebush
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Vince Shickora	610-909-1893	5560 Corporate Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FedEx Airbill # 8634-8642-7798		Grand Rapids, MI 49512

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P P
PRESERVATIVE USED: HCl / HNO3 -

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs	PCBs	Total Metals	Hexavalent Chromium		TEST GROUP			COMMENTS
-01 2-18	0840	BPSI-TB01-20130218	—	—	—	QC	G	2	2					08			Trip Blank
-02 2-18	1127	TTAOC22-MW11-20130218	TTAOC22-MW11	—	—	GW	G	7	3	2	1	1		09			
-03 2-18	1140	TTAOC22-MW06-20130218	TTAOC22-MW06	—	—	GW	G	7	3	2	1	1		09			
-04 2-18	1317	BPSI-HN-MW27I-20130218	BPSI-HN-MW27I	—	—	GW	G	15	7	6	1	1		12			Run MS MSD
-05 2-18	1340	TTAOC22-MW10-20130218	TTAOC22-MW10	—	—	GW	G	7	3	2	1	1		09			

2-18-12

1. RELINQUISHED BY Jacob Birkett	DATE 2-18-12	TIME 1800	1. RECEIVED BY	DATE 2/19/13	TIME 0940
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

23899

Cart 13 326 Blue 17-3

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER № 1266 PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	NWIRP Bethpage S.I.	Rob Sok	757-466-4904	TriMatrix Walt Roudebush
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS Corporate Exchange Ct
		Vince Shickora	610-909-1893	5560 ~~Grand Rapids, MI~~ 2BB 2-19-13
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FedEx 8634-8642-7813		Grand Rapids, MI 49512

1302268

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G P G P
PRESERVATIVE USED: HCl HNO3 - -

	DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs	Total Metals (Fe and Cr)	PCBs	Hexavalent Chromium		TEST GROUP			COMMENTS
01	2-13	0800	BPSI-TB02-20130219	—	—	—	QC	G	2	2					08			Trip Blank
02	2-13	1201	BPSI-TT-MW311S-20130219	BPSI-TT-MW311S	—	—	GW	G	6	3	1	2			06			
03	2-13	1215	BPSI-TT-MW311I-20130219	BPSI-TT MW311I	—	—	GW	G	6	3	1	2			06			
04	2-13	1407	BPSI-TT-MW314S-20130219	BPSI-TT MW314S	—	—	GW	G	6	3	1	2			06			
05	2-13	1427	BPSI-TT-MW314I-20130219	BPSI-TT MW314I	—	—	GW	G	7	3	1	2	1		09			
06	2-13	1540	BPSI-RB01-20130219	—	—	—	QC	G	7	3	1	2	1		14			
07	2-13	1550	BPSI-FB01-20130219	—	—	—	QC	G	7	3	1	2	1		15			

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2-19-13	1745	1. RECEIVED BY	2/20/13	0830
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS See TriMatrix NC form. Date changed to 2-19 (WR)

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cart 7 & Rack #372G E-1302295

19-2

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 1233 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	NWIRP Bethpage Site 1	Rob Sok	757-466-4904	TriMatrix Walt Roudebush
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Jacob Birkett		Vince Shickora	610-909-1893	5560 Corporate Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FedEx 8741-9938-0784		Grand Rapids, MI 49512

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P P A
PRESERVATIVE USED: HCl – HNO3 HNO3 –

	DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: BS (JB 2-20-13)	VOC	PCBs	Total Metals (Fe and Cr)	Dissolved Metals (Fe and Cr)	Hexavalent Chromium	TEST GROUP		COMMENTS
1.	2-20 (JB 2-20-13)	0700	BPSI-TB03-20130220	—	—	—	QC	—	2	2						08		Trip Blank
2.	2-20	0855	BPSI-TT-MW312I-20130220	BPSI-TT-MW312I	—	—	GW	G	7	3	2	1	1			10		
3.	2-20	1015	BPSI-TT-MW312S-20130220	BPSI-TT-MW312S	—	—	GW	G	7	3	2	1		1		09		
4.	2-20	1232	BPSI-TT-MW308S-20130220	BPSI-TT-MW308S	—	—	GW	G	6	3	2	1				06		
5.	2-20	1240	BPSI-TT-MW309I-20130220	BPSI-TT-MW309I	—	—	GW	G	6	3	2	1				06		
6.	2-20	1402	BPSI-TT-MW308D-20130220	BPSI-TT-MW308D	—	—	GW	G	7	3	2	1		1		10		
7.	2-20	1420	BPSI-TT-MW309S-20130220	BPSI-TT-MW309S	—	—	GW	G	6 (JB 2-20-13)	3	2	1				06		
8.	2-20	1600	BPSI-Dup01-20130220	—	—	—	GW	G	6	3	2	1				17		

JB 2-20-13

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
Jacob Birkett	2-20-13	1800			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME
				2-21-13	0830

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Rock #310G, Cart 6 E-1302315

21.4

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 1270 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02230	NWIRP Bethpage Site 1	Rob Sok	757-466-4904	TriMatrix Walt Roudebush
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Jacob Birkett		Vince Shickora	610-909-1893	5560 Corporate Exchange Ct SE
		CARRIER/WAYBILL NUMBER		CITY, STATE
		FedEx 8634-8642-7802		Grand Rapids, MI 49512

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P P P

PRESERVATIVE USED: HCl — HNO3 HNO3 —

	DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs	PCBs	Total Metals (Fe and Cr)	Dissolved Metals (Fe and Cr)	Hexavalent Chromium		TEST GROUP		COMMENTS
1.	2-21	0710	BPSI-TB04-20130221	—	—	-	QC	—	2	2						08		Trip Blank
2.	2-21	0852	BPSI-TT-MW310S-20130221	BPSI-TT-MW310S	-	-	GW	G	6	3	2	1				06		
3.	2-21	0905	BPSI-TT-MW313S-20130221	BPSI-TT-MW313S	-	-	GW	G	6	3	2	1				06		
4.	2-21	1107	BPSI-TT-MW308I-20130221	BPSI-TT-MW308I	-	-	GW	G	7	3	2	1	1			10		
5.	2-21	1110	BPSI-TT-MW309D-20130221	BPSI-TT-MW309D	-	-	GW	G	7	3	2	1		1		09		
6.	2-21	1320	BPSI-TT-MW301D-20130221	BPSI-TT-MW301D	-	-	GW	G	7	3	2	1		1		09		
7.	2-21	1200	BPSI-DUP02-20130221	—	—	-	GW	G	7	3	2	1		1		13		

2-21-13

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
Jacob Birkett	2-21-13	1800			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME
				2·22·13	0930

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

08852

Analytical Results

LOCATION	BPS1FWMW01	BPS1FWMW02	BPS1FWMW03	BPS1HNMW27I	BPS1HNMW29I	BPS1MW305D	BPS1MW305I	
SAMPLE ID	BPS1-FW-MW01-20121114	BPS1-FW-MW02-20121114	BPS1-FW-MW03-20121114	BPS1-HN-MW27I-20121114	BPS1-HN-MW29I-20121114	BPS1-TT-MW305D-20121115	BPS1-TT-MW305I-20121108	BPS1-TT-MW305I-20121108-D
SAMPLE DATE	20121114	20121114	20121114	20121114	20121114	20121115	20121108	20121108
VOLATILES (µg/L)								
1,1,1-TRICHLOROETHANE	3.2	0.57 J	0.2 J	0.5 U	0.5 U	0.5 U	0.65 J	0.59 J
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.9 J	0.5 U	0.5 U	0.5 U	0.5 U	0.44 J	1.6	1.4
1,1-DICHLOROETHANE	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.56 J	4.5	4.6
1,1-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.96 J	1.9	2
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	70 J	81 J
2-BUTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-HEXANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-METHYL-2-PENTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ACETONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
BENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.42 J	0.42 J
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.18 J	0.29 J	0.3 J
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	22	0.34 J	0.22 J	0.5 U	0.5 U	0.32 J	9.4	8.4
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.22 J	0.5 UJ	0.5 UJ
ETHYLBENZENE	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL CYCLOHEXANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
O-XYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	100	43	77	0.5 U	0.67 J	1.8	5.2	5
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	9.4	3.7	2.8	0.5 U	0.26 J	200	3400	3300
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.2	0.88 J	0.85 J
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)								
AROCLOR-1016	0.08 U	0.091 U	0.17 U	0.08 U	0.086 U	0.08 U	0.08 U	0.16 U
AROCLOR-1221	0.08 U	0.091 U	0.17 U	0.08 U	0.086 U	0.08 U	0.08 U	0.16 U
AROCLOR-1232	0.08 U	0.091 U	0.17 U	0.08 U	0.086 U	0.08 U	0.08 U	0.16 U
AROCLOR-1242	0.08 U	0.091 U	0.17 U	0.08 U	0.086 U	0.08 U	0.08 U	0.16 U
AROCLOR-1248	0.45 J	0.091 U	2.3	1.2	1.5	0.08 U	1.1 J	1.1 J
AROCLOR-1254	0.08 U	0.091 U	0.17 U	0.08 U	0.086 U	0.08 U	0.08 U	0.16 U
AROCLOR-1260	0.08 U	0.091 U	0.17 U	0.08 U	0.086 U	0.08 U	0.08 U	0.16 U
AROCLOR-1262	0.08 U	0.091 U	0.17 U	0.08 U	0.086 U	0.08 U	0.08 U	0.16 U
AROCLOR-1268	0.08 U	0.091 U	0.17 U	0.08 U	0.086 U	0.08 U	0.08 U	0.16 U
METALS (µg/L)								
CHROMIUM	4.2	7.8	5.7	8.8	11	1.7	4.5	3.8
IRON	900	280	840	120	1900	91	770	630
MISCELLANEOUS PARAMETERS (µg/L)								
HEXAVALENT CHROMIUM	NA	NA	NA	6.4 J	0.7 J	1 U	1 U	NA
DISSOLVED METALS (µg/L)								
CHROMIUM	NA	NA	NA	NA	NA	NA	NA	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA

LOCATION	BPS1MW305S		BPS1MW306D	BPS1MW306I	BPS1MW306S	BPS1MW307D	BPS1MW307I	
SAMPLE ID	BPS1-TT-MW305S-20121115	BPS1-TT-MW305S-20121115-D	BPS1-TT-MW306D-20121108	BPS1-TT-MW306I-20121108	BPS1-TT-MW306S-20121116	BPS1-TT-MW307D-20121106	BPS1-TT-MW307I-20121106	BPS1-TT-MW307I-20121106-D
SAMPLE DATE	20121115	20121115	20121108	20121108	20121116	20121106	20121106	20121106
VOLATILES (µg/L)								
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
2-BUTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-HEXANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-METHYL-2-PENTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ACETONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
BENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
ETHYLBENZENE	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL CYCLOHEXANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
O-XYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 U	0.5 U	0.31 J	0.5 U	0.32 J	0.5 U	1	1.1
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	1.5	0.46 J	0.5 U	0.5 U	0.71 J	0.86 J
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)								
AROCLOR-1016	0.08 U	0.08 U	0.16 U	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1221	0.08 U	0.08 U	0.16 U	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1232	0.08 U	0.08 U	0.16 U	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1242	0.08 U	0.08 U	0.16 U	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1248	0.08 U	0.08 U	1.1 J	2.7 J	0.55 U	0.31	0.33	0.36
AROCLOR-1254	0.08 U	0.08 U	0.16 U	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1260	0.08 U	0.08 U	0.16 U	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1262	0.08 U	0.08 U	0.16 U	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1268	0.08 U	0.08 U	0.16 U	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
METALS (µg/L)								
CHROMIUM	1.7	1.7	3.1	2.5	4.6	13	5.5	6.7
IRON	58	68	39	25	960	1100	99	110
MISCELLANEOUS PARAMETERS (µg/L)								
HEXAVALENT CHROMIUM	NA	NA	NA	1 U	0.6 J	NA	1 U	NA
DISSOLVED METALS (µg/L)								
CHROMIUM	NA	NA	NA	NA	0.48 J	0.23 J	NA	NA
IRON	NA	NA	NA	NA	9.5 J	10	NA	NA

LOCATION	BPS1MW307S	BPS1MW308D	BPS1MW308I	BPS1MW308S	BPS1MW309D	BPS1MW309I	BPS1MW309S	BPS1M
SAMPLE ID	BPS1-TT-MW307S-20121116	BPS1-TT-MW308D-20121113	BPS1-TT-MW308I-20121112	BPS1-TT-MW308S-20121112	BPS1-TT-MW309D-20121113	BPS1-TT-MW309I-20121112	BPS1-TT-MW309S-20121112	BPS1-TT-MW310S-20121114
SAMPLE DATE	20121116	20121113	20121112	20121112	20121113	20121112	20121112	20121114
VOLATILES (µg/L)								
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.45 J	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.23 J	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
2-BUTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-HEXANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-METHYL-2-PENTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ACETONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
BENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.12 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	1 U	1 U	1 U	1.2 U	1 U	1 U	1 U	1 U
METHYL CYCLOHEXANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
O-XYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.69 J	0.69 J	0.5 U	0.5 U	1.1	0.5 U	0.5 U	0.5 U
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.41 J	0.95 J	0.5 U	0.81 J	1.6	0.23 J	0.83 J	0.5 U
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)								
AROCLOR-1016	0.08 U	0.08 U	0.085 U	0.08 U	0.086 U	0.08 U	0.08 U	0.08 U
AROCLOR-1221	0.08 U	0.08 U	0.085 U	0.08 U	0.086 U	0.08 U	0.08 U	0.08 U
AROCLOR-1232	0.08 U	0.08 U	0.085 U	0.08 U	0.086 U	0.08 U	0.08 U	0.08 U
AROCLOR-1242	0.08 U	0.08 U	0.085 U	0.08 U	0.086 U	0.08 U	0.08 U	0.08 U
AROCLOR-1248	0.042 U	0.056 J	0.32	0.17 J	0.086 U	0.41	0.9	0.08 U
AROCLOR-1254	0.08 U	0.08 U	0.085 U	0.08 U	0.086 U	0.08 U	0.08 U	0.08 U
AROCLOR-1260	0.08 U	0.08 U	0.085 U	0.08 U	0.086 U	0.08 U	0.08 U	0.08 U
AROCLOR-1262	0.08 U	0.08 U	0.085 U	0.08 U	0.086 U	0.08 U	0.08 U	0.08 U
AROCLOR-1268	0.08 U	0.08 U	0.085 U	0.08 U	0.086 U	0.08 U	0.08 U	0.08 U
METALS (µg/L)								
CHROMIUM	1.6	81	30	36	4	61	6.4	11
IRON	100	35	3200	1600	220	91	43	2900
MISCELLANEOUS PARAMETERS (µg/L)								
HEXAVALENT CHROMIUM	1 U	NA	NA	NA	1 U	55.1	NA	1 UJ
DISSOLVED METALS (µg/L)								
CHROMIUM	NA	NA	NA	8.2	NA	NA	NA	NA
IRON	NA	NA	NA	23	NA	NA	NA	NA

LOCATION	W310S	BPS1MW311I	BPS1MW311S	BPS1MW312I	BPS1MW312S	BPS1MW313S	BPS1MW314I	BPS1MW314S
SAMPLE ID	BPS1-TT-MW310S-20121114-D	BPS1-TT-MW311I-20121115	BPS1-TT-MW311S-20121115	BPS1-TT-MW312I-20121109	BPS1-TT-MW312S-20121109	BPS1-TT-MW313S-20121114	BPS1-TT-MW314I-20121114	BPS1-TT-MW314S-20121113
SAMPLE DATE	20121114	20121115	20121115	20121109	20121109	20121114	20121114	20121113
VOLATILES (µg/L)								
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
2-BUTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-HEXANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-METHYL-2-PENTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ACETONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
BENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.2 U	0.43 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	1 U	1 U	1 U	0.99 U	0.96 U	1 U	1 U	1 U
METHYL CYCLOHEXANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	0.5 U	5.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
O-XYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.46 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)								
AROCLOR-1016	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1221	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1232	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1242	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1248	0.08 U	0.28	0.17 J	0.14 J	0.08 U	0.08 U	0.29	0.37
AROCLOR-1254	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1260	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1262	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1268	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
METALS (µg/L)								
CHROMIUM	9.4	5.8	14	14	21	9.7	33	4.2
IRON	3600	130	1800	120	3000	310	85	350
MISCELLANEOUS PARAMETERS (µg/L)								
HEXAVALENT CHROMIUM	0.8 J	1 U	2.6	5.7	1 U	NA	22.9 J	NA
DISSOLVED METALS (µg/L)								
CHROMIUM	NA	NA	4.9	NA	NA	NA	NA	NA
IRON	NA	NA	26	NA	NA	NA	NA	NA

LOCATION	BPS1-TT-MW301D		BPS1-TT-MW301I	BPS1-TT-MW301S	BPS1-TT-MW302D	BPS1-TT-MW302I1	BPS1-TT-MW302I2	BPS1-TT-MW302S
SAMPLE ID	BPS1-TT-MW301D-20121113	BPS1-TT-MW301D-20121113-D	BPS1-TT-MW301I-20121113	BPS1-TT-MW301S-20121113	BPS1-TT-MW302D-20121101	BPS1-TT-MW302I1-20121101	BPS1-TT-MW302I2-20121105	BPS1-TT-MW302S-20121115
SAMPLE DATE	20121113	20121113	20121113	20121113	20121101	20121101	20121105	20121115
VOLATILES (µg/L)								
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.35 J	0.6 J	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.31 J	0.5 U	0.5 U
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.25 J	1.2	0.5 U	0.5 U
1,1-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	1.3	0.5 U	0.5 U	0.5 U
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	25 UR	25 UR	25 UR	25 UR	25 UR	21 J	25 UR	25 UR
2-BUTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-HEXANONE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U
4-METHYL-2-PENTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ACETONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
BENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.2 U	0.2 U	0.2 U	0.2 U	0.13 J	0.15 J	0.2 U	0.2 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
ETHYLBENZENE	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U
METHYL CYCLOHEXANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
O-XYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.38 J	0.25 J	0.5 U	0.37 J
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.68 J	0.62 J	0.5 U	0.5 U	5.5	3.1	1.8	1.3
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)								
AROCLOR-1016	0.08 U	0.08 U	0.08 U	0.8 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1221	0.08 U	0.08 U	0.08 U	0.8 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1232	0.08 U	0.08 U	0.08 U	0.8 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1242	0.08 U	0.08 U	0.08 U	0.8 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1248	0.67	0.69	0.73	9.9	0.93	1.1	1.5	0.18 J
AROCLOR-1254	0.08 U	0.08 U	0.08 U	0.8 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1260	0.08 U	0.08 U	0.08 U	0.8 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1262	0.08 U	0.08 U	0.08 U	0.8 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1268	0.08 U	0.08 U	0.08 U	0.8 U	0.08 U	0.08 U	0.08 U	0.08 U
METALS (µg/L)								
CHROMIUM	82	76	7.8	2.8	1.4	4	8	1.1
IRON	14	19	56	44	19	22	100	92
MISCELLANEOUS PARAMETERS (µg/L)								
HEXAVALENT CHROMIUM	81.1	82.4	6.1	1.2	NA	NA	2.9	0.4 J
DISSOLVED METALS (µg/L)								
CHROMIUM	NA	NA	NA	NA	NA	NA	NA	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA

LOCATION	BPS1-TT-MW303D	BPS1-TT-MW303I1	BPS1-TT-MW303I2	BPS1-TT-MW303S	BPS1-TT-MW304D	BPS1-TT-MW304I1	BPS1-TT-MW304I2	BPS1-TT-MW304S
SAMPLE ID	BPS1-TT-MW303D-20121105	BPS1-TT-MW303I1-20121102	BPS1-TT-MW303I2-20121105	BPS1-TT-MW303S-20121101	BPS1-TT-MW304D-20121109	BPS1-TT-MW304I1-20121106	BPS1-TT-MW304I2-20121108	BPS1-TT-MW304S-20121106
SAMPLE DATE	20121105	20121102	20121105	20121101	20121107	20121106	20121108	20121106
VOLATILES (µg/L)								
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	0.5 U	1	0.5 U	0.5 U	0.5 U	1.5	0.5 U	0.5 U
1,1-DICHLOROETHENE	0.5 U	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
2-BUTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-HEXANONE	1 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U
4-METHYL-2-PENTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ACETONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
BENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	0.5 U	0.66 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	0.5 U	0.43 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	1.6	0.5 U	0.5 U	0.5 U	21	1.9	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	1 U	0.88 J	1 U	1 UJ	0.93 U	1 U	1 U	1 U
METHYL CYCLOHEXANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
O-XYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 U	46	0.72 J	1.9	0.5 U	23	3.1	0.5 U
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.45 J	10	1.1	1.6	0.5 U	5.6	0.87 J	0.5 U
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)								
AROCLOR-1016	0.16 U	0.16 U	0.16 U	0.08 U	0.32 U	0.08 U	0.16 U	0.08 U
AROCLOR-1221	0.16 U	0.16 U	0.16 U	0.08 U	0.32 U	0.08 U	0.16 U	0.08 U
AROCLOR-1232	0.16 U	0.16 U	0.16 U	0.08 U	0.32 U	0.08 U	0.16 U	0.08 U
AROCLOR-1242	0.16 U	3	0.16 U	0.08 U	0.32 U	0.08 U	0.16 U	0.08 U
AROCLOR-1248	2.2	0.16 U	2 J	0.18 J	3.9	1.5	2.5	0.08 U
AROCLOR-1254	0.16 U	0.16 U	0.16 U	0.08 U	0.32 U	0.08 U	0.16 U	0.08 U
AROCLOR-1260	0.16 U	0.16 U	0.16 U	0.08 U	0.32 U	0.08 U	0.16 U	0.08 U
AROCLOR-1262	0.16 U	0.16 U	0.16 U	0.08 U	0.32 U	0.08 U	0.16 U	0.08 U
AROCLOR-1268	0.16 U	0.16 U	0.16 U	0.08 U	0.32 U	0.08 U	0.16 U	0.08 U
METALS (µg/L)								
CHROMIUM	62	4.9	11	3.8	2.2	30	21	2.4
IRON	2000	4800	90	60	16	500	120	14
MISCELLANEOUS PARAMETERS (µg/L)								
HEXAVALENT CHROMIUM	NA	1 U	1 U	NA	NA	21.5	152	NA
DISSOLVED METALS (µg/L)								
CHROMIUM	NA	0.7 J	NA	NA	NA	22	NA	NA
IRON	NA	260	NA	NA	NA	8.2 J	NA	NA

LOCATION	BPTTAOC22MW06	BPTTAOC22MW10	BPTTAOC22MW11	BPS1HNMW27I	BPS1-TT-MW301D		BPS1-TT-MW308D	BPS1-TT-MW308I	BPS1-TT-MW308S	BPS1-TT-MW309D	BPS1-TT-MW309I
SAMPLE ID	TTAOC22-MW06-20121115	TTAOC22-MW10-20121115	TTAOC22-MW11-20121116	BPS1-HN-MW27I-	BPS1-TT-MW301D-	BPS1-TT-MW301D-	BPS1-TT-MW308D-	BPS1-TT-MW308I-	BPS1-TT-MW308S-	BPS1-TT-MW309D-	BPS1-TT-MW309I-
SAMPLE DATE	20121115	20121115	20121116	20130218	20130221	20130221	20130220	20130221	20130220	20130221	20130220
VOLATILES (µg/L)											
1,1,1-TRICHLOROETHANE	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.21 J	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.26 J	0.5 U
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.18 J	0.5 U
1,1-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
2-BUTANONE	1 U	1 U	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 UJ
2-HEXANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-METHYL-2-PENTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ACETONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
BENZENE	0.39 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	1 U	1 U	1 U	1 UJ	1 U	1 U	1 UJ	1 U	1 UJ	1 U	1 UJ
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.2 U	0.38 J	0.2 U	0.2 U	0.2 U	0.2 U	0.14 J	0.2 U	0.2 U	0.2 U	0.2 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.7 J	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ISOPROPYLBENZENE	1.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL CYCLOHEXANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
O-XYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 U	0.83 J	0.5 U	0.5 U	0.5 U	0.5 U	0.75 J	0.5 U	0.5 U	1.1	0.5 U
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.33 J	86	0.94 J	0.5 U	0.43 J	0.43 J	0.82 J	0.5 U	0.84 J	1.4	0.21 J
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)											
AROCLOR-1016	0.08 U	0.094 U	0.08 U	0.085 U	0.08 U	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1221	0.08 U	0.094 U	0.08 U	0.085 U	0.08 U	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1232	0.08 U	0.094 U	0.08 U	0.085 U	0.08 U	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1242	0.08 U	0.094 U	0.08 U	0.085 U	0.08 U	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1248	0.041 J	0.48	0.24 U	0.61 J	0.56	0.6	0.089 U	0.35	0.15 J	0.08 U	0.27
AROCLOR-1254	0.08 U	0.094 U	0.08 U	0.085 U	0.08 U	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1260	0.08 U	0.094 U	0.064 U	0.085 U	0.08 U	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1262	0.08 U	0.094 U	0.08 U	0.085 U	0.08 U	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U
AROCLOR-1268	0.08 U	0.094 U	0.08 U	0.085 U	0.08 U	0.08 U	0.089 U	0.08 U	0.08 U	0.08 U	0.08 U
METALS (µg/L)											
CHROMIUM	2.4	160	48	12	65 J	65 J	82 J	29	14	1.6	55
IRON	28000	1600	7000	68	12	13	180	880	440	150	47
MISCELLANEOUS PARAMETERS (µg/L)											
HEXAVALENT CHROMIUM	1 U	158	18.3 J	5.4	73.4 J	75.4 J	82.2 J			1 U	
DISSOLVED METALS (µg/L)											
CHROMIUM	NA	NA	NA					7.5			
IRON	NA	NA	NA					37 U			

LOCATION	BPS1-TT-MW309S		BPS1-TT-MW310S	BPS1-TT-MW311I	BPS1-TT-MW311S	BPS1-TT-MW312I	BPS1-TT-MW312S	BPS1-TT-MW313S	BPS1-TT-MW314I	BPS1-TT-MW314S	BPTTAOC22MW06	BPTTAOC22MW10	BPTTAOC22MW11
SAMPLE ID	BPS1-TT-MW309S-20130220	BPS1-TT-MW309S-	BPS1-TT-MW310S-	BPS1-TT-MW311I-	BPS1-TT-MW311S-	BPS1-TT-MW312I-	BPS1-TT-MW312S-	BPS1-TT-MW313S-	BPS1-TT-MW314I-	BPS1-TT-MW314S-	TTAOC22-MW06-	TTAOC22-MW10-	TTAOC22-MW11-
SAMPLE DATE	20130220	20130220	20130221	20130219	20130219	20130220	20130220	20130221	20130219	20130219	20130218	20130218	20130218
VOLATILES (µg/L)													
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J	0.21 J	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR	25 UR
2-BUTANONE	1 UJ	1 U	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
2-HEXANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-METHYL-2-PENTANONE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ACETONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	3.8 U	2 U	2 U
BENZENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.24 J	0.2 U	0.2 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	1 UJ	1 U	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.2 U	0.2 U	0.2 U	0.52 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.29 J	0.2 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.26 J	0.5 U	0.5 U
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9	0.5 U	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U
METHYL CYCLOHEXANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	4.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
O-XYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.23 J
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.52 J	0.57 J	0.5 U	0.73 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.36 J	66	0.64 J
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
PCBS (µg/L)													
AROCLOR-1016	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U	0.094 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U
AROCLOR-1221	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U	0.094 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U
AROCLOR-1232	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U	0.094 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U
AROCLOR-1242	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U	0.094 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U
AROCLOR-1248	0.82	0.8	0.08 U	0.32 J	0.19 J	0.16 J	0.094 U	0.08 U	0.27	0.37	0.08 U	0.24 J	0.089 U
AROCLOR-1254	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U	0.094 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U
AROCLOR-1260	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U	0.094 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U
AROCLOR-1262	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U	0.094 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U
AROCLOR-1268	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U	0.094 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.089 U
METALS (µg/L)													
CHROMIUM	5.3	5.8	16	0.73 J	18	12	11	1.8	37	4.7	1.9	110 J	39
IRON	30 U	30 U	220	78	180	1200	420	180	650	450	38000	2600	680
MISCELLANEOUS PARAMETERS (µg/L)													
HEXAVALENT CHROMIUM							1 U		21.9		1 U	111 J	12
DISSOLVED METALS (µg/L)													
CHROMIUM						6.5							
IRON						17 U							

APPENDIX D

VALIDATION SUMMARIES

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO:	**R. SOK**	**DATE:**	**FEBRUARY 19, 2013**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / PCB**
INORGANIC DATA VALIDATION – METALS / HEXAVALENT CHROMIUM,
NWIRP BETHPAGE, CTO WE44
SDG 50063-18

SAMPLES: 4 / Aqueous / VOC

BPS1-TB20121109 BPS1-TT-MW304D-20121109 BPS1-TT-MW312I-20121109
BPS1-TT-MW312S-20121109

3 / Aqueous / PCB / Total Metals – Iron & Chromium

BPS1-TT-MW304D-20121109 BPS1-TT-MW312I-20121109 BPS1-TT-MW312S-20121109

2 / Aqueous / Hexavalent Chromium

BPS1-TT-MW312I-20121109 BPS1-TT-MW312S-20121109

16 / Soil / PCB

BPS1-Dup-20121109	BPS1-SB3022-0205	BPS1-SB3022-0510
BPS1-SB3022-1015	BPS1-SB3022-1520	BPS1-SB3022-2025
BPS1-SB3022-2535	BPS1-SB3022-3545	BPS1-SB3022-4555
BPS1-SB3022-5565	BPS1-SB3022-6575	BPS1-SB3028-2535
BPS1-SB3028-3545	BPS1-SB3028-4555	BPS1-SB3028-5565
BPS1-SB3028-6575		

Overview

The sample set for NWIRP Bethpage, CTO WE44, SDG 50063-18 consisted of four (4) aqueous samples and sixteen (16) soil samples, including one (1) trip blank sample. One (1) field duplicate sample was included in the Sample Delivery Group (SDG); BPS1-Dup-20121109 / BPS1-SB3022-2535. Four (4) aqueous samples were analyzed for volatile organic compounds (VOC) as listed above. Three (3) aqueous samples were analyzed for polychlorinated biphenyls (PCB) and the metals (total) iron and chromium as listed above. Two (2) aqueous samples were analyzed for hexavalent chromium as listed above. Two (2) aqueous samples were analyzed for hexavalent chromium as listed above. Sixteen (16) soil samples were analyzed for PCBs as listed above.

The samples were collected by Tetra Tech on November 7, and 9, 2012 and analyzed by TriMatrix Laboratories, Inc. All analyses were conducted in accordance with EPA Methods SW-846 8260C for VOCs, 8082A for PCB, 6010C for iron, 6020A for chromium, and EPA Method 7196A for hexavalent chromium, method analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

*	•	Data completeness
	•	Hold times
*	•	GC/MS System Tuning and Performance
	•	Initial/continuing Calibrations
	•	Blank Results
	•	Laboratory Control Sample Recovery
*	•	Matrix Spike/Matrix Spike Duplicate Recoveries
*	•	Surrogate Spike Recoveries
*	•	Internal Standard Recoveries
*	•	ICP Interference Results
*	•	ICP Serial Dilution Results
*	•	Field Duplicate Precision
*	•	Compound Identification
	•	Compound Quantitation
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

VOC

The following VOC contaminants were detected in the blanks at the following maximum concentrations.

Analyte	Maximum Conc. µg/L	Action Level µg/L
Methyl acetate (1)	0.87	4.35
Methyl acetate (2)	1.1	5.5
Acetone (2)	2.0	20.0

(1) Method blank for batch 1214456 affecting samples BPS1-TT-MW304D-20121109, BPS1-TT-MW312I-20121109, and BPS1-TT-MW312S-20121109.
(2) Trip blank sample BPS1-TB20121109 affecting samples BPS1-TT-MW304D-20121109, BPS1-TT-MW312I-20121109, and BPS1-TT-MW312S-20121109.

An action level of ten time the maximum level for acetone and five times the maximum level for methyl acetate has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The trip blank sample was not qualified for blank contamination. All sample methyl acetate positive results were qualified for blank contamination.

The initial calibration average relative response factor (RRF) was less than the 0.05 quality control limit for 1,4-dioxane for instrument 328 on 11/19/13 and on all continuing calibration verifications (CCV).

Affected samples:
BPS1-TB20121109 BPS1-TT-MW304D-20121109 BPS1-TT-MW312I-20121109
BPS1-TT-MW312S-20121109
Action: The non-detected 1,4-dioxane results for all samples were qualified rejected, (UR).

The initial calibration RRF relative standard deviation (RSD) was greater than the 15% quality control limit for ethyl benzene for instrument 328 on 11/19/12.

Affected samples:
BPS1-TB20121109 BPS1-TT-MW304D-20121109 BPS1-TT-MW312I-20121109
BPS1-TT-MW312S-20121109
Action: The non-detected ethyl benzene results for the samples were qualified estimated, (UJ).

PCB

The Aroclor-1248 positive result column relative percent differences (RPDs) were greater than the 25% quality control limit.

Affected samples:
BPS1-SB3022-0205 BPS1-SB3022-0510
BPS1-SB3028-5565 BPS1-SB3028-6575
Action: The Aroclor-1248 sample results for the affected samples were qualified estimated, (J). The lower of the two column results was reported for all RPDs greater than 25%. The laboratory reported the lower of the two column results for all RPDs greater than 40% but for Region II criteria this was lowered to the 25% criteria.

Metals

No issues were identified.

Miscellaneous – Hexavalent Chromium

No issues were identified.

Additional Comments

Positive results below the Limit of Quantitation (LOQ) and above the Method Detection Limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The CCV percent difference (%D) was greater than the 20% quality control limit 1,4-dioxane for instrument 328 on 11/20/12 @ 08:51.

Affected samples:
BPS1-TB20121109 BPS1-TT-MW304D-20121109 BPS1-TT-MW312I-20121109
BPS1-TT-MW312S-20121109
Action: No validation action was necessary as the sample non-detected results were rejected for RRF criteria non-compliances.

The VOC laboratory control sample (LCS) %R was less than the quality control limit for 1,4-dioxane for batch 1214456.

Affected samples:
BPS1-TB20121109 BPS1-TT-MW304D-20121109 BPS1-TT-MW312I-20121109
BPS1-TT-MW312S-20121109
Action: The samples had non-detected 1,4-dioxane results which were qualified rejected for RRF criteria non-compliances and no further validation action was necessary.

The aqueous samples analyzed for PCBs were extracted greater than the 7 day sample to extraction hold time. No validation action was taken as the newest PCB analysis procedure, EPA Method 8082A, lists no sample to extraction time hold time.

The samples listed below were analyzed diluted for Aroclors. Samples which were only analyzed at a dilution resulted in elevated levels reported for non-detected Aroclor analytes.

Sample	Dilution
BPS1-TT-MW304D-20121109	4X
BPS1-TT-MW304D-20121109 Aroclor-1248	4X

The laboratory reported all positive results for Aroclors from column 1 with the exception of column result RPDs >40%, in which case the lowest of the two column results was reported.

EXECUTIVE SUMMARY

Laboratory Performance Issues: The sample 1,4-dioxane non-detected results were for RRF criteria non-compliances. VOC ethyl benzene non-detected sample results were qualified for an initial calibration RSD non-compliance. Sample VOC methyl acetate results were qualified for blank contamination.

Other Factors Affecting Data Quality: Positive results below the Limit of Quantitation (LOQ) and above the Method Detection Limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit. Aroclor-1248 positive sample results were qualified for column RPD criteria non-compliances.

The data for these analyses were reviewed with reference to the SOP HW-24 Revision #2 - August 2008 Validating Volatile Organic Compounds by SW-846 Method 8260B, SOP HW-45 Revision 1 - Oct '06 Data Validation SOP of Organic Analysis of PCBs by Gas Chromatography SW-846 Method 8082A, SOP HW-02 Rev.13 – September 2006 Evaluation of Metals Data for the CLP Program; and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (October 2010).

Tetra Tech
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A - Qualified Analytical Results
Appendix B - Results as Reported by the Laboratory
Appendix C – Region II Data Validation Forms
Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 02230	NSAMPLE	BPS1-TB20121109			BPS1-TT-MW304D-20121109			BPS1-TT-MW312I-20121109			BPS1-TT-MW312S-20121109		
SDG: 50063-18	LAB_ID	1211220-01			1211220-04			1211220-03			1211220-02		
FRACTION: OV	SAMP_DATE	11/9/2012			11/7/2012			11/9/2012			11/9/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	J	P	2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TB20121109			BPS1-TT-MW304D-20121109			BPS1-TT-MW312I-20121109			BPS1-TT-MW312S-20121109		
SDG: 50063-18	LAB_ID	1211220-01			1211220-04			1211220-03			1211220-02		
FRACTION: OV	SAMP_DATE	11/9/2012			11/7/2012			11/9/2012			11/9/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1.1	J	P	0.93	U	A	0.99	U	A	0.96	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW304D-20121109			BPS1-TT-MW304D-20121109RE1			BPS1-TT-MW312I-20121109			BPS1-TT-MW312I-20121109RE1		
SDG: 50063-18	LAB_ID	1211220-04			1211220-04RE1			1211220-03			1211220-03RE1		
FRACTION: PCB	SAMP_DATE	11/7/2012			11/7/2012			11/9/2012			11/9/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.32	U					0.08	U				
AROCLOR-1221		0.32	U					0.08	U				
AROCLOR-1232		0.32	U					0.08	U				
AROCLOR-1242		0.32	U					0.08	U				
AROCLOR-1248					3.9						0.14	J	P
AROCLOR-1254		0.32	U					0.08	U				
AROCLOR-1260		0.32	U					0.08	U				
AROCLOR-1262		0.32	U					0.08	U				
AROCLOR-1268		0.32	U					0.08	U				

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW312S-20121109		
SDG: 50063-18	LAB_ID	1211220-02		
FRACTION: PCB	SAMP_DATE	11/9/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.08	U	
AROCLOR-1221		0.08	U	
AROCLOR-1232		0.08	U	
AROCLOR-1242		0.08	U	
AROCLOR-1248		0.08	U	
AROCLOR-1254		0.08	U	
AROCLOR-1260		0.08	U	
AROCLOR-1262		0.08	U	
AROCLOR-1268		0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW304D-20121109			BPS1-TT-MW312I-20121109			BPS1-TT-MW312S-20121109		
SDG: 50063-18	LAB_ID	1211220-04			1211220-03			1211220-02		
FRACTION: M	SAMP_DATE	11/7/2012			11/9/2012			11/9/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		2.2			14			21		
IRON		16			120			3000		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW312I-20121109			BPS1-TT-MW312S-20121109		
SDG: 50063-18	LAB_ID	1211220-03			1211220-02		
FRACTION: MISC	SAMP_DATE	11/9/2012			11/9/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		5.7			1	U	

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO: **R. SOK** **DATE:** **FEBRUARY 22, 2013**

FROM: **JOSEPH KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / PCB**
INORGANIC DATA VALIDATION – METALS / HEXAVALENT CHROMIUM,
NWIRP BETHPAGE, CTO WE44
SDG 50063-17

SAMPLES: 21 / Aqueous / VOC

BPS1-DUP01-20121106	BPS1-DUP02-20121108	BPS1-TB20121101
BPS1-TB20121106	BPS1-TB20121107	BPS1-TT-MW302D-20121101
BPS1-TT-MW302I1-20121101	BPS1-TT-MW303I1-20121102	BPS1-TT-MW303S-20121101
BPS1-TT-MW304I1-20121106	BPS1-TT-MW304I2-20121108	BPS1-TT-MW304S-20121106
BPS1-TT-MW305I-20121108	BPS1-TT-MW306D-20121108	BPS1-TT-MW306I-20121108
BPS1-TT-MW307D-20121106	BPS1-TT-MW307I-20121106	BPSI-TB20121105
BPSI-TT-MW302I2-20121105	BPSI-TT-MW303D-20121105	BPSI-TT-MW303I2-20121105

19 / Aqueous / PCB

BPS1-DUP01-20121106	BPS1-DUP02-20121108	BPS1-FB-20121106
BPS1-RB-20121106	BPS1-TT-MW302D-20121101	BPS1-TT-MW302I1-20121101
BPS1-TT-MW303I1-20121102	BPS1-TT-MW303S-20121101	BPS1-TT-MW304I1-20121106
BPS1-TT-MW304I2-20121108	BPS1-TT-MW304S-20121106	BPS1-TT-MW305I-20121108
BPS1-TT-MW306D-20121108	BPS1-TT-MW306I-20121108	BPS1-TT-MW307D-20121106
BPS1-TT-MW307I-20121106	BPSI-TT-MW302I2-20121105	BPSI-TT-MW303D-20121105
BPSI-TT-MW303I2-20121105		

17 / Aqueous / Total Metals – Iron & Chromium

BPS1-DUP01-20121106	BPS1-DUP02-20121108	BPS1-TT-MW302D-20121101
BPS1-TT-MW302I1-20121101	BPS1-TT-MW303I1-20121102	BPS1-TT-MW303S-20121101
BPS1-TT-MW304I1-20121106	BPS1-TT-MW304I2-20121108	BPS1-TT-MW304S-20121106
BPS1-TT-MW305I-20121108	BPS1-TT-MW306D-20121108	BPS1-TT-MW306I-20121108
BPS1-TT-MW307D-20121106	BPS1-TT-MW307I-20121106	BPSI-TT-MW302I2-20121105
BPSI-TT-MW303D-20121105	BPSI-TT-MW303I2-20121105	

3 / Aqueous / Dissolved Metals - Iron & Chromium

BPS1-TT-MW303I1-20121102	BPS1-TT-MW304I1-20121106	BPS1-TT-MW307D-20121106

8 / Aqueous / Hexavalent Chromium

BPS1-TT-MW303I1-20121102	BPS1-TT-MW304I1-20121106	BPS1-TT-MW304I2-20121108
BPS1-TT-MW305I-20121108	BPS1-TT-MW306I-20121108	BPS1-TT-MW307I-20121106
BPSI-TT-MW302I2-20121105	BPSI-TT-MW303I2-20121105	

6 / Soil / PCB / Hexavalent Chromium

BPS1-Dup-20121105	BPS1-SB3025-2535	BPS1-SB3025-3545
BPS1-SB3025-4555	BPS1-SB3025-5565	BPS1-SB3025-6575

Overview

The sample set for NWIRP Bethpage, CTO WE44, SDG 50063-17 consisted of twenty-one (1) aqueous samples and six (6) soil samples, including four (4) trip blank samples, one (1) rinse blank sample, and one (1) field blank sample. Three (3) field duplicate samples were included in the Sample Delivery Group (SDG); BPS1-DUP01-20121106 / BPS1-TT-MW307I-20121106, BPS1-DUP02-20121108 / BPS1-TT-MW305I-20121108, and BPS1-Dup-20121105 / BPS1-SB3025-2535. Twenty-one (21) aqueous samples were analyzed for volatile organic compounds (VOC) as listed above. Nineteen (19) aqueous samples and six (6) soil samples were analyzed for polychlorinated biphenyls (PCB) and seventeen (17) aqueous samples were analyzed for the total metals chromium and iron as listed above. Three (3) aqueous samples were also analyzed for the dissolved metals iron and chromium as listed above. Eight (8) aqueous samples and six (6) soil samples were analyzed for hexavalent chromium as listed above.

The samples were collected by Tetra Tech on November 1, 2, 5, 6, 7, and 8, 2012 and analyzed by TriMatrix Laboratories, Inc. All analyses were conducted in accordance with EPA Methods SW-846 8260C for VOCs, 8082A for PCB, 6010C for iron, 6020A for chromium, and EPA Method 7196A for hexavalent chromium, method analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

*	• Data completeness
*	• Hold times
*	• GC/MS System Tuning and Performance
	• Initial/continuing Calibrations
	• Blank Results
*	• Laboratory Control Sample Recovery
	• Matrix Spike/Matrix Spike Duplicate Recoveries
*	• Surrogate Spike Recoveries
*	• Internal Standard Recoveries
*	• ICP Interference Results
*	• ICP Serial Dilution Results
*	• Field Duplicate Precision
*	• Compound Identification
	• Compound Quantitation
*	• Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

VOC

The initial calibration average relative response factor (RRF) was less than the 0.05 quality control limit for 1,4-dioxane for instrument 224 on 11/13/12 and for instrument 328 on 11/19/13 and on all continuing calibration verifications (CCV).

Affected samples: All samples

Action: The non-detected 1,4-dioxane results for all samples were qualified rejected, (UR). The sample positive 1,4-dioxane results were qualified estimated, (J).

The CCV percent differences (%D) were greater than the 20% quality control limit 1,2-dibromo-3-chloropropane, 2-hexanone, methyl acetate, and 1,2,3-trichlorobenzene for instrument 224 on 11/14/12 @ 09:15.

Affected samples:

BPS1-TB20121101	BPS1-TT-MW302I1-20121101
BPS1-TT-MW302D-20121101	BPS1-TT-MW303S-20121101
BPS1-TT-MW303I1-20121102	

Action: The sample positive and non-detected results 1,2-dibromo-3-chloropropane, 2-hexanone, methyl acetate, and 1,2,3-trichlorobenzene were qualified estimated, (J) and (UJ), respectively.

The CCV %D was greater than the 20% quality control limit for dichlorodifluoromethane for instrument 224 on 11/15/12 @ 11:53.

Affected samples:

BPSI-TB20121105	BPSI-TT-MW303D-20121105
BPSI-TT-MW303I2-20121105	BPSI-TT-MW303I2-20121105
BPS1-TB20121106	BPS1-TT-MW307I-20121106
BPS1-TT-MW307D-20121106	BPS1-DUP01-20121106
BPS1-TT-MW304S-20121106	BPS1-TT-MW304I1-20121106
BPS1-TB20121107	BPS1-TT-MW306D-20121108
BPS1-TT-MW306I-20121108	BPS1-TT-MW304I2-20121108
BPS1-DUP02-20121108	BPS1-TT-MW305I-20121108

Action: Sample non-detected dichlorodifluoromethane results for were qualified estimated, (UJ).

The initial calibration RRF relative standard deviation (RSD) was greater than the 15% quality control limit for ethyl benzene for instrument 328 on 11/19/12.

Affected samples:

BPS1-DUP02-20121108 dilution re-analysis

BPS1-TT-MW305I-20121108 dilution re-analysis

Action: The non-detected ethyl benzene results for the samples were not reported from these dilution analyses and no validation action was necessary.

The VOC MS %R was less than the quality control limit methyl acetate for spiked sample BPS1-TT-MW306I-20121108.

Affected sample: BPS1-TT-MW306I-20121108

Action: The non-detected methyl acetate result for the sample was not qualified as the sample MSD %R and the batch LCS %R was compliant.

The VOC MSD %R was less than the quality control limit 1,4-dioxane for spiked sample BPS1-TT-MW306I-20121108.

Affected sample: BPS1-TT-MW306I-20121108

Action: The non-detected 1,4-dioxane result was rejected for an RRF criteria non-compliance and no further action was necessary.

The following VOC contaminants were detected in the blanks at the following maximum concentrations.

Analyte	Maximum Conc. µg/L	Action Level µg/L
Acetone [1]	4.7	47.0
1,2,3-Trichlorobenzene [1]	2.6	13.0
Acetone [2]	4.9	49.0
Methyl acetate [3]	1.5	7.5
Methyl acetate [4]	0.69	3.45
Acetone [5]	4.0	40.0
Acetone [6]	2.2	22.0

(1) Method blank for batch 1214055 affecting samples BPS1-TB20121101, BPS1-TT-MW302I1-20121101, BPS1-TT-MW302D-20121101, BPS1-TT-MW303S-20121101, BPS1-TT-MW303I1-20121102.
(2) Method blank for batch 1214198 affecting samples BPSI-TB20121105, BPSI-TT-MW303D-20121105, BPSI-TT-MW303I2-20121105, BPSI-TT-MW303I2-20121105, BPS1-TB20121106, BPS1-TT-MW307I-20121106, BPS1-TT-MW307D-20121106, BPS1-DUP01-20121106, BPS1-TT-MW304S-20121106, BPS1-TT-MW304I1-20121106, BPS1-TB20121107, BPS1-TT-MW306D-20121108, BPS1-TT-MW306I-20121108, BPS1-TT-MW304I2-20121108, BPS1-DUP02-20121108, and BPS1-TT-MW305I-20121108.
(3) Method blank for batch 1214413 affecting the samples BPS1-DUP02-20121108 and BPS1-TT-MW305I-20121108 dilution re-analyses.
(4) Trip blank sample BPS1-TB20121101affecting samples from 11/01/12.
(5) Trip blank sample BPS1-TB20121106 affecting samples from 11/06/12.
(6) Trip blank sample BPS1-TB20121107 affecting samples from 11/07/12.

An action level of ten times the maximum level for acetone and five times the maximum level for the other contaminants has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The trip blank samples were not qualified for trip blank contamination. No samples were qualified for blank contamination.

PCB

The Aroclor-1248 positive result column relative percent differences (RPDs) were greater than the 25% quality control limit.

Affected samples:

BPS1-DUP02-20121108 BPS1-TT-MW305I-20121108
BPS1-TT-MW306D-20121108 BPS1-TT-MW306I-20121108
BPSI-TT-MW303I2-20121105

Action: The Aroclor-1248 sample results were qualified estimated, (J).

The MS and MSD %Rs were greater than the quality control limit for Aroclor-1016 for spiked sample BPS1-TT-MW306I-20121108.

Affected sample: BPS1-TT-MW306I-20121108

Action: The sample had a non-detected result for Aroclor-1016 and was therefore not qualified.

Miscellaneous – Hexavalent Chromium

It was noted that the hexavalent chromium result for sample BPS1-TT-MW304I2-20121108 was greater than the total chromium result for the sample. The hexavalent chromium result was 152 µg/l while the total chromium result was 21 µg/l. A detailed look by the validation chemist of the raw data for these sample analytes did not reveal the reason for the illogical sample analyte results. The laboratory was contacted to investigate the total chromium/hexavalent chromium results and to indicate whether re-analysis of the sample was possible. A review of the sample Method 6010C raw data, used for the iron analysis, indicated a sample chromium result of 170 µg/l. The laboratory also reported that re-analysis for total chromium was not possible as the sample had been discarded. A review of historical data for the sample point indicated that the higher hexavalent chromium concentration was consistent with previous sample data. Additionally, the total chromium for the previous sample data was more consistent with the higher total chromium concentration from the Method 6010C (170 µg/l) analysis. The correspondence with the laboratory as well as the Method 6010C raw data which includes chromium is included in Appendix C of the data validation report. As a result of the total chromium concentration discrepancy, the sample BPS1-TT-MW304I2-20121108 total chromium result was qualified estimated, (J).

Metals

Negative signal drift was present in the metals laboratory blank at the following maximum concentration.

Analyte	Conc.
Iron [1]	-7.1 ug/L

[1] Blank affecting samples BPS1-TT-MW303I1-20121102, BPS1-TT-MW304I1-20121106, and BPS1-TT-MW307D-20121106 for dissolved iron.

No action is required because the negative drift is greater than the reporting limit for iron.

Additional Comments

Positive results below the Limit of Quantitation (LOQ) and above the Method Detection Limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Samples BPS1-DUP02-20121108 and BPS1-TT-MW305I-20121108 were analyzed for VOCs both undiluted and diluted 50X. Only trichloroethene was reported from the dilution analyses.

The samples listed below were analyzed diluted for Aroclors. Samples which were only analyzed at a dilution resulted in slightly elevated levels reported for non-detected Aroclor analytes.

Sample	Dilution
BPS1-DUP02-20121108	2X
BPS1-TT-MW303I1-20121102	2X
BPS1-TT-MW304I2-20121108	2X
BPS1-TT-MW305I-20121108	1X, 2X
BPS1-TT-MW306D-20121108	2X
BPS1-TT-MW306I-20121108	2X
BPSI-TT-MW303D-20121105	2X
BPSI-TT-MW303I2-20121105	2X

Sample BPS1-TT-MW304I2-20121108 was diluted 20X for the hexavalent chromium analysis.

The laboratory reported all positive results for Aroclors from column 1 with the exception of column result RPDs >40%, in which case the lower of the two column results was reported.

EXECUTIVE SUMMARY

Laboratory Performance Issues: The sample 1,4-dioxane non-detected results were rejected and the positive results were qualified for RRF criteria non-compliances. VOC sample results were qualified for CCV %D non-compliances. Sample iron results were qualified for blank contamination. The sample BPS1-TT-MW304I2-20121108 total chromium result was qualified as the result was inconsistent with the hexavalent chromium concentration and also inconsistent with historical sample total chromium data.

Other Factors Affecting Data Quality: Positive results below the Limit of Quantitation (LOQ) and above the Method Detection Limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit. Aroclor-1248 positive sample results were qualified for column RPD criteria non-compliances.

The data for these analyses were reviewed with reference to the SOP HW-24 Revision #2 - August 2008 Validating Volatile Organic Compounds by SW-846 Method 8260B, SOP HW-45 Revision 1 - Oct '06 Data Validation SOP of Organic Analysis of PCBs by Gas Chromatography SW-846 Method 8082A, SOP HW-02 Rev.13 – September 2006 Evaluation of Metals Data for the CLP Program; and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (October 2010).

Tetra Tech
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Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A - Qualified Analytical Results
Appendix B - Results as Reported by the Laboratory
Appendix C – Region II Data Validation Forms
Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02230	NSAMPLE	BPS1-DUP01-20121106			BPS1-DUP02-20121108			BPS1-DUP02-20121108RE1			BPS1-TB20121101		
SDG: 50063-17	LAB_ID	1211104-04			1211153-05			1211153-05RE1			1211071-05		
FRACTION: OV	SAMP_DATE	11/6/2012			11/8/2012			11/8/2012			11/1/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW307I-20121106			BPS1-TT-MW305I-20121108			BPS1-TT-MW305I-20121108					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.59	J	P				0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		1.4						0.5	U	
1,1-DICHLOROETHANE		0.5	U		4.6						0.5	U	
1,1-DICHLOROETHENE		0.5	U		2						0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U					0.5	UJ	C
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U					0.5	UJ	C
1,2-DIBROMOETHANE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U					0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,4-DIOXANE		25	UR	C	81	J	C				25	UR	C
2-BUTANONE		1	U		1	U					1	U	
2-HEXANONE		1	U		1	U					1	UJ	C
4-METHYL-2-PENTANONE		1	U		1	U					1	U	
ACETONE		2	U		2	U					2	U	
BENZENE		0.2	U		0.2	U					0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMOFORM		1	U		1	U					1	U	
BROMOMETHANE		0.5	U		0.5	U					0.5	U	
CARBON DISULFIDE		1	U		1	U					1	U	
CARBON TETRACHLORIDE		0.5	U		0.42	J	P				0.5	U	
CHLOROBENZENE		0.5	U		0.5	U					0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U					0.5	U	
CHLOROETHANE		0.5	U		0.5	U					0.5	U	
CHLOROFORM		0.2	U		0.3	J	P				0.2	U	
CHLOROMETHANE		0.5	U		0.5	U					0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		8.4						0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U					0.5	U	
CYCLOHEXANE		0.5	U		0.5	U					0.5	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C				0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TB20121106			BPS1-TB20121107			BPS1-TT-MW302D-20121101			BPS1-TT-MW302I1-20121101		
SDG: 50063-17	LAB_ID	1211104-01			1211153-01			1211071-02			1211071-01		
FRACTION: OV	SAMP_DATE	11/6/2012			11/7/2012			11/1/2012			11/1/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.35	J	P	0.6	J	P
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.31	J	P
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.25	J	P	1.2		
1,1-DICHLOROETHENE		0.5	U		0.5	U		1.3			0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	UJ	C	0.5	UJ	C
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	UJ	C	0.5	UJ	C
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	21	J	CP
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	UJ	C	1	UJ	C
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		4	J	P	2.2	J	P	2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.13	J	P	0.15	J	P
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW303I1-20121102			BPS1-TT-MW303S-20121101			BPS1-TT-MW304I1-20121106			BPS1-TT-MW304I2-20121108		
SDG: 50063-17	LAB_ID	1211071-04			1211071-03			1211104-06			1211153-04		
FRACTION: OV	SAMP_DATE	11/2/2012			11/1/2012			11/6/2012			11/8/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		1.9			0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		1			0.5	U		1.5			0.5	U	
1,1-DICHLOROETHENE		1.1			0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	C	0.5	UJ	C	0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	UJ	C	1	UJ	C	1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.66	J	P	0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.43	J	P	0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		1.6			0.5	U		21			1.9		
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	UJ	C	0.5	UJ	C

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW304S-20121106			BPS1-TT-MW305I-20121108			BPS1-TT-MW305I-20121108RE1			BPS1-TT-MW306D-20121108		
SDG: 50063-17	LAB_ID	1211104-05			1211153-06			1211153-06RE1			1211153-02		
FRACTION: OV	SAMP_DATE	11/6/2012			11/8/2012			11/8/2012			11/8/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.65	J	P				0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		1.6						0.5	U	
1,1-DICHLOROETHANE		0.5	U		4.5						0.5	U	
1,1-DICHLOROETHENE		0.5	U		1.9						0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U					0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U					0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U					0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U					0.5	U	
1,4-DIOXANE		25	UR	C	70	J	C				25	UR	C
2-BUTANONE		1	U		1	U					1	U	
2-HEXANONE		1	U		1	U					1	U	
4-METHYL-2-PENTANONE		1	U		1	U					1	U	
ACETONE		2	U		2	U					2	U	
BENZENE		0.2	U		0.2	U					0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMOFORM		1	U		1	U					1	U	
BROMOMETHANE		0.5	U		0.5	U					0.5	U	
CARBON DISULFIDE		1	U		1	U					1	U	
CARBON TETRACHLORIDE		0.5	U		0.42	J	P				0.5	U	
CHLOROBENZENE		0.5	U		0.5	U					0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U					0.5	U	
CHLOROETHANE		0.5	U		0.5	U					0.5	U	
CHLOROFORM		0.2	U		0.29	J	P				0.2	U	
CHLOROMETHANE		0.5	U		0.5	U					0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		9.4						0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U					0.5	U	
CYCLOHEXANE		0.5	U		0.5	U					0.5	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW306I-20121108			BPS1-TT-MW307D-20121106			BPS1-TT-MW307I-20121106			BPSI-TB20121105		
SDG: 50063-17	LAB_ID	1211153-03			1211104-03			1211104-02			1211079-01		
FRACTION: OV	SAMP_DATE	11/8/2012			11/6/2012			11/6/2012			11/5/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C

PROJ_NO: 02230	NSAMPLE	BPSI-TT-MW302I2-20121105			BPSI-TT-MW303D-20121105			BPSI-TT-MW303I2-20121105		
SDG: 50063-17	LAB_ID	1211079-04			1211079-02			1211079-03		
FRACTION: OV	SAMP_DATE	11/5/2012			11/5/2012			11/5/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C

PROJ_NO: 02230	NSAMPLE	BPS1-DUP01-20121106			BPS1-DUP02-20121108			BPS1-DUP02-20121108RE1			BPS1-TB20121101		
SDG: 50063-17	LAB_ID	1211104-04			1211153-05			1211153-05RE1			1211071-05		
FRACTION: OV	SAMP_DATE	11/6/2012			11/8/2012			11/8/2012			11/1/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW307I-20121106			BPS1-TT-MW305I-20121108			BPS1-TT-MW305I-20121108					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	U		0.5	U					0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U					0.5	U	
M+P-XYLENES		1	U		1	U					1	U	
METHYL ACETATE		1	U		1	U					0.69	J	CP
METHYL CYCLOHEXANE		1	U		1	U					1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U					0.5	U	
METHYLENE CHLORIDE		1	U		1	U					1	U	
O-XYLENE		0.2	U		0.2	U					0.2	U	
STYRENE		0.5	U		0.5	U					0.5	U	
TETRACHLOROETHENE		1.1			5						0.5	U	
TOLUENE		0.5	U		0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U					0.5	U	
TRICHLOROETHENE		0.86	J	P				3300			0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.85	J	P				0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U					0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TB20121106			BPS1-TB20121107			BPS1-TT-MW302D-20121101			BPS1-TT-MW302I1-20121101		
SDG: 50063-17	LAB_ID	1211104-01			1211153-01			1211071-02			1211071-01		
FRACTION: OV	SAMP_DATE	11/6/2012			11/7/2012			11/1/2012			11/1/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1	U		1	U		1	UJ	C	1	UJ	C
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.38	J	P	0.25	J	P
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		5.5			3.1		
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW303I1-20121102			BPS1-TT-MW303S-20121101			BPS1-TT-MW304I1-20121106			BPS1-TT-MW304I2-20121108		
SDG: 50063-17	LAB_ID	1211071-04			1211071-03			1211104-06			1211153-04		
FRACTION: OV	SAMP_DATE	11/2/2012			11/1/2012			11/6/2012			11/8/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.88	J	CP	1	UJ	C	1	U		1	U	
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		46			1.9			23			3.1		
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		10			1.6			5.6			0.87	J	P
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW304S-20121106			BPS1-TT-MW305I-20121108			BPS1-TT-MW305I-20121108RE1			BPS1-TT-MW306D-20121108		
SDG: 50063-17	LAB_ID	1211104-05			1211153-06			1211153-06RE1			1211153-02		
FRACTION: OV	SAMP_DATE	11/6/2012			11/8/2012			11/8/2012			11/8/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	U		0.5	U					0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U					0.5	U	
M+P-XYLENES		1	U		1	U					1	U	
METHYL ACETATE		1	U		1	U					1	U	
METHYL CYCLOHEXANE		1	U		1	U					1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U					0.5	U	
METHYLENE CHLORIDE		1	U		1	U					1	U	
O-XYLENE		0.2	U		0.2	U					0.2	U	
STYRENE		0.5	U		0.5	U					0.5	U	
TETRACHLOROETHENE		0.5	U		5.2						0.31	J	P
TOLUENE		0.5	U		0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U					0.5	U	
TRICHLOROETHENE		0.5	U					3400			1.5		
TRICHLOROFLUOROMETHANE		0.5	U		0.88	J	P				0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U					0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW306I-20121108			BPS1-TT-MW307D-20121106			BPS1-TT-MW307I-20121106			BPSI-TB20121105		
SDG: 50063-17	LAB_ID	1211153-03			1211104-03			1211104-02			1211079-01		
FRACTION: OV	SAMP_DATE	11/8/2012			11/6/2012			11/6/2012			11/5/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1	U		1	U		1	U		1	U	
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		1			0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.46	J	P	0.5	U		0.71	J	P	0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPSI-TT-MW302I2-20121105			BPSI-TT-MW303D-20121105			BPSI-TT-MW303I2-20121105		
SDG: 50063-17	LAB_ID	1211079-04			1211079-02			1211079-03		
FRACTION: OV	SAMP_DATE	11/5/2012			11/5/2012			11/5/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U	
METHYL ACETATE		1	U		1	U		1	U	
METHYL CYCLOHEXANE		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.72	J	P
TOLUENE		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		1.8			0.45	J	P	1.1		
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-DUP01-20121106			BPS1-DUP02-20121108			BPS1-DUP02-20121108RE1C			BPS1-FB-20121106		
SDG: 50063-17	LAB_ID	1211104-04			1211153-05			1211153-05RE1			1211133-08		
FRACTION: PCB	SAMP_DATE	11/6/2012			11/8/2012			11/8/2012			11/6/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW307I-20121106			BPS1-TT-MW305I-20121108			BPS1-TT-MW305I-20121108					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.16	U					0.08	U	
AROCLOR-1221		0.08	U		0.16	U					0.08	U	
AROCLOR-1232		0.08	U		0.16	U					0.08	U	
AROCLOR-1242		0.08	U		0.16	U					0.08	U	
AROCLOR-1248		0.36						1.1	J	U	0.08	U	
AROCLOR-1254		0.08	U		0.16	U					0.08	U	
AROCLOR-1260		0.08	U		0.16	U					0.08	U	
AROCLOR-1262		0.08	U		0.16	U					0.08	U	
AROCLOR-1268		0.08	U		0.16	U					0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-FB-20121106CON			BPS1-RB-20121106			BPS1-RB-20121106CON			BPS1-TT-MW302D-20121101		
SDG: 50063-17	LAB_ID	1211133-08			1211133-07			1211133-07			1211071-02		
FRACTION: PCB	SAMP_DATE	11/6/2012			11/6/2012			11/6/2012			11/1/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1221		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1232		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1242		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1248		0.08	U		0.08	U		0.08	U				
AROCLOR-1254		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1260		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1262		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1268		0.08	U		0.08	U		0.08	U		0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW302D-20121101RE1			BPS1-TT-MW302I1-20121101			BPS1-TT-MW302I1-20121101RE1			BPS1-TT-MW303I1-20121102		
SDG: 50063-17	LAB_ID	1211071-02RE1			1211071-01			1211071-01RE1			1211071-04		
FRACTION: PCB	SAMP_DATE	11/1/2012			11/1/2012			11/1/2012			11/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016					0.08	U					0.16	U	
AROCLOR-1221					0.08	U					0.16	U	
AROCLOR-1232					0.08	U					0.16	U	
AROCLOR-1242					0.08	U							
AROCLOR-1248		0.93						1.1			0.16	U	
AROCLOR-1254					0.08	U					0.16	U	
AROCLOR-1260					0.08	U					0.16	U	
AROCLOR-1262					0.08	U					0.16	U	
AROCLOR-1268					0.08	U					0.16	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW303I1-20121102RE1			BPS1-TT-MW303S-20121101			BPS1-TT-MW303S-20121101RE1			BPS1-TT-MW304I1-20121106		
SDG: 50063-17	LAB_ID	1211071-04RE1			1211071-03			1211071-03RE1			1211104-06		
FRACTION: PCB	SAMP_DATE	11/2/2012			11/1/2012			11/1/2012			11/6/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016					0.08	U					0.08	U	
AROCLOR-1221					0.08	U					0.08	U	
AROCLOR-1232					0.08	U					0.08	U	
AROCLOR-1242		3			0.08	U					0.08	U	
AROCLOR-1248								0.18	J	P			
AROCLOR-1254					0.08	U					0.08	U	
AROCLOR-1260					0.08	U					0.08	U	
AROCLOR-1262					0.08	U					0.08	U	
AROCLOR-1268					0.08	U					0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW304I1-20121106RE1			BPS1-TT-MW304I2-20121108			BPS1-TT-MW304I2-20121108RE1			BPS1-TT-MW304S-20121106		
SDG: 50063-17	LAB_ID	1211104-06RE1			1211153-04			1211153-04RE1			1211104-05		
FRACTION: PCB	SAMP_DATE	11/6/2012			11/8/2012			11/8/2012			11/6/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016					0.16	U					0.08	U	
AROCLOR-1221					0.16	U					0.08	U	
AROCLOR-1232					0.16	U					0.08	U	
AROCLOR-1242					0.16	U					0.08	U	
AROCLOR-1248		1.5						2.5			0.08	U	
AROCLOR-1254					0.16	U					0.08	U	
AROCLOR-1260					0.16	U					0.08	U	
AROCLOR-1262					0.16	U					0.08	U	
AROCLOR-1268					0.16	U					0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW304S-20121106CON			BPS1-TT-MW305I-20121108			BPS1-TT-MW305I-20121108RE2C			BPS1-TT-MW306D-20121108		
SDG: 50063-17	LAB_ID	1211104-05			1211153-06			1211153-06RE2			1211153-02		
FRACTION: PCB	SAMP_DATE	11/6/2012			11/8/2012			11/8/2012			11/8/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U					0.16	U	
AROCLOR-1221		0.08	U		0.08	U					0.16	U	
AROCLOR-1232		0.08	U		0.08	U					0.16	U	
AROCLOR-1242		0.08	U		0.08	U					0.16	U	
AROCLOR-1248		0.08	U					1.1	J	U			
AROCLOR-1254		0.08	U		0.08	U					0.16	U	
AROCLOR-1260		0.08	U		0.08	U					0.16	U	
AROCLOR-1262		0.08	U		0.08	U					0.16	U	
AROCLOR-1268		0.08	U		0.08	U					0.16	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW306D-20121108RE1C			BPS1-TT-MW306I-20121108			BPS1-TT-MW306I-20121108RE1			BPS1-TT-MW307D-20121106		
SDG: 50063-17	LAB_ID	1211153-02RE1			1211153-03			1211153-03RE1			1211104-03		
FRACTION: PCB	SAMP_DATE	11/8/2012			11/8/2012			11/8/2012			11/6/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016					0.16	U					0.08	U	
AROCLOR-1221					0.16	U					0.08	U	
AROCLOR-1232					0.16	U					0.08	U	
AROCLOR-1242					0.16	U					0.08	U	
AROCLOR-1248		1.1	J	U				2.7	J	U	0.31		
AROCLOR-1254					0.16	U					0.08	U	
AROCLOR-1260					0.16	U					0.08	U	
AROCLOR-1262					0.16	U					0.08	U	
AROCLOR-1268					0.16	U					0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW307I-20121106			BPSI-TT-MW302I2-20121105			BPSI-TT-MW302I2-20121105RE1			BPSI-TT-MW303D-20121105		
SDG: 50063-17	LAB_ID	1211104-02			1211079-04			1211079-04RE1			1211079-02		
FRACTION: PCB	SAMP_DATE	11/6/2012			11/5/2012			11/5/2012			11/5/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U					0.16	U	
AROCLOR-1221		0.08	U		0.08	U					0.16	U	
AROCLOR-1232		0.08	U		0.08	U					0.16	U	
AROCLOR-1242		0.08	U		0.08	U					0.16	U	
AROCLOR-1248		0.33						1.5			2.2		
AROCLOR-1254		0.08	U		0.08	U					0.16	U	
AROCLOR-1260		0.08	U		0.08	U					0.16	U	
AROCLOR-1262		0.08	U		0.08	U					0.16	U	
AROCLOR-1268		0.08	U		0.08	U					0.16	U	

PROJ_NO: 02230	NSAMPLE	BPSI-TT-MW303I2-20121105			BPSI-TT-MW303I2-20121105RE1		
SDG: 50063-17	LAB_ID	1211079-03			1211079-03RE1		
FRACTION: PCB	SAMP_DATE	11/5/2012			11/5/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.16	U				
AROCLOR-1221		0.16	U				
AROCLOR-1232		0.16	U				
AROCLOR-1242		0.16	U				
AROCLOR-1248					2	J	U
AROCLOR-1254		0.16	U				
AROCLOR-1260		0.16	U				
AROCLOR-1262		0.16	U				
AROCLOR-1268		0.16	U				

PROJ_NO: 02230	NSAMPLE	BPS1-Dup-20121105			BPS1-SB3025-2535			BPS1-SB3025-3545			BPS1-SB3025-4555		
SDG: 50063-17	LAB_ID	1211133-03			1211133-01			1211133-02			1211133-04		
FRACTION: PCB	SAMP_DATE	11/5/2012			11/5/2012			11/5/2012			11/6/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	96.0			96.0			96.0			94.0		
	DUP_OF	BPS1-SB3025-2535											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.014	U		0.014	U		0.013	U		0.014	U	
AROCLOR-1221		0.014	U		0.014	U		0.013	U		0.014	U	
AROCLOR-1232		0.014	U		0.014	U		0.013	U		0.014	U	
AROCLOR-1242		0.014	U		0.014	U		0.013	U		0.014	U	
AROCLOR-1248		0.014	U		0.014	U		0.013	U		0.014	U	
AROCLOR-1254		0.014	U		0.014	U		0.013	U		0.014	U	
AROCLOR-1260		0.014	U		0.014	U		0.013	U		0.014	U	
AROCLOR-1262		0.014	U		0.014	U		0.013	U		0.014	U	
AROCLOR-1268		0.014	U		0.014	U		0.013	U		0.014	U	

PROJ_NO: 02230	NSAMPLE	BPS1-SB3025-5565			BPS1-SB3025-5565RE1			BPS1-SB3025-6575		
SDG: 50063-17	LAB_ID	1211133-05			1211133-05RE1			1211133-06		
FRACTION: PCB	SAMP_DATE	11/6/2012			11/6/2012			11/6/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	81.0			81.0			85.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.016	U					0.015	U	
AROCLOR-1221		0.016	U					0.015	U	
AROCLOR-1232		0.016	U					0.015	U	
AROCLOR-1242		0.016	U					0.015	U	
AROCLOR-1248					0.0064	J	P	0.015	U	
AROCLOR-1254		0.016	U					0.015	U	
AROCLOR-1260		0.016	U					0.015	U	
AROCLOR-1262		0.016	U					0.015	U	
AROCLOR-1268		0.016	U					0.015	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW303I1-20121102			BPS1-TT-MW304I1-20121106			BPS1-TT-MW304I2-20121108			BPS1-TT-MW305I-20121108		
SDG: 50063-17	LAB_ID	1211071-04			1211104-06			1211153-04			1211153-06		
FRACTION: MISC	SAMP_DATE	11/2/2012			11/6/2012			11/8/2012			11/8/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		1	U		21.5			152			1	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW306I-20121108			BPS1-TT-MW307I-20121106			BPSI-TT-MW302I2-20121105			BPSI-TT-MW303I2-20121105		
SDG: 50063-17	LAB_ID	1211153-03			1211104-02			1211079-04			1211079-03		
FRACTION: MISC	SAMP_DATE	11/8/2012			11/6/2012			11/5/2012			11/5/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		1	U		1	U		2.9			1	U	

PROJ_NO: 02230	NSAMPLE	BPS1-DUP01-20121106			BPS1-DUP02-20121108			BPS1-TT-MW302D-20121101			BPS1-TT-MW302I1-20121101		
SDG: 50063-17	LAB_ID	1211104-04			1211153-05			1211071-02			1211071-01		
FRACTION: M	SAMP_DATE	11/6/2012			11/8/2012			11/1/2012			11/1/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW307I-20121106			BPS1-TT-MW305I-20121108								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		6.7			3.8			1.4			4		
IRON		110			630			19			22		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW303I1-20121102			BPS1-TT-MW303S-20121101			BPS1-TT-MW304I1-20121106			BPS1-TT-MW304I2-20121108		
SDG: 50063-17	LAB_ID	1211071-04			1211071-03			1211104-06			1211153-04		
FRACTION: M	SAMP_DATE	11/2/2012			11/1/2012			11/6/2012			11/8/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		4.9			3.8			30			21	J	Q
IRON		4800			60			500			120		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW304S-20121106			BPS1-TT-MW305I-20121108			BPS1-TT-MW306D-20121108			BPS1-TT-MW306I-20121108		
SDG: 50063-17	LAB_ID	1211104-05			1211153-06			1211153-02			1211153-03		
FRACTION: M	SAMP_DATE	11/6/2012			11/8/2012			11/8/2012			11/8/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		2.4			4.5			3.1			2.5		
IRON		14			770			39			25		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW307D-20121106			BPS1-TT-MW307I-20121106			BPSI-TT-MW302I2-20121105			BPSI-TT-MW303D-20121105		
SDG: 50063-17	LAB_ID	1211104-03			1211104-02			1211079-04			1211079-02		
FRACTION: M	SAMP_DATE	11/6/2012			11/6/2012			11/5/2012			11/5/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		13			5.5			8			62		
IRON		1100			99			100			2000		

PROJ_NO: 02230	NSAMPLE	BPSI-TT-MW303I2-20121105		
SDG: 50063-17	LAB_ID	1211079-03		
FRACTION: M	SAMP_DATE	11/5/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CHROMIUM		11		
IRON		90		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW303I1-20121102			BPS1-TT-MW304I1-20121106			BPS1-TT-MW307D-20121106		
SDG: 50063-17	LAB_ID	1211071-04			1211104-06			1211104-03		
FRACTION: MF	SAMP_DATE	11/2/2012			11/6/2012			11/6/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		0.7	J	P	22			0.23	J	P
IRON		260			8.2	J	P	10		

PROJ_NO: 02230	NSAMPLE	BPS1-Dup-20121105			BPS1-SB3025-2535			BPS1-SB3025-3545			BPS1-SB3025-4555		
SDG: 50063-17	LAB_ID	1211133-03			1211133-01			1211133-02			1211133-04		
FRACTION: MISC	SAMP_DATE	11/5/2012			11/5/2012			11/5/2012			11/6/2012		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	%			%			%			%		
	PCT_SOLIDS	96.0			96.0			96.0			94.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCENT SOLIDS		96			96			96			94		

PROJ_NO: 02230	NSAMPLE	BPS1-SB3025-5565			BPS1-SB3025-6575		
SDG: 50063-17	LAB_ID	1211133-05			1211133-06		
FRACTION: MISC	SAMP_DATE	11/6/2012			11/6/2012		
MEDIA: SOIL	QC_TYPE	NM			NM		
	UNITS	%			%		
	PCT_SOLIDS	81.0			85.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCENT SOLIDS		81			85		

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO:	**R. SOK**	**DATE:**	**FEBRUARY 20, 2013**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / PCB**
INORGANIC DATA VALIDATION – METALS / HEXAVALENT CHROMIUM,
NWIRP BETHPAGE, CTO WE44
SDG 50063-19

SAMPLES: 23 / Aqueous / VOC

BPS1-Dup03-20121113	BPS1-Dup04-20121114	BPS1-FW-MW01-20121114
BPS1-FW-MW02-20121114	BPS1-FW-MW03-20121114	BPS1-HN-MW27I-20121114
BPS1-HN-MW29I-20121114	BPS1-TB-20121112	BPS1-TB-20121113
BPS1-TB-20121114	BPS1-TT-MW301D-20121113	BPS1-TT-MW301I-20121113
BPS1-TT-MW301S-20121113	BPS1-TT-MW308D-20121113	BPS1-TT-MW308I-20121112
BPS1-TT-MW308S-20121112	BPS1-TT-MW309D-20121113	BPS1-TT-MW309I-20121112
BPS1-TT-MW309S-20121112	BPS1-TT-MW310S-20121114	BPS1-TT-MW313S-20121114
BPS1-TT-MW314I-20121114	BPS1-TT-MW314S-20121113	

20 / Aqueous / PCB / Total Metals – Iron & Chromium

BPS1-Dup03-20121113	BPS1-Dup04-20121114	BPS1-FW-MW01-20121114
BPS1-FW-MW02-20121114	BPS1-FW-MW03-20121114	BPS1-HN-MW27I-20121114
BPS1-HN-MW29I-20121114	BPS1-TT-MW301D-20121113	BPS1-TT-MW301I-20121113
BPS1-TT-MW301S-20121113	BPS1-TT-MW308D-20121113	BPS1-TT-MW308I-20121112
BPS1-TT-MW308S-20121112	BPS1-TT-MW309D-20121113	BPS1-TT-MW309I-20121112
BPS1-TT-MW309S-20121112	BPS1-TT-MW310S-20121114	BPS1-TT-MW313S-20121114
BPS1-TT-MW314I-20121114	BPS1-TT-MW314S-20121113	

1 / Aqueous / Dissolved Metals - Iron & Chromium

BPS1-TT-MW308S-20121112

11 / Aqueous / Hexavalent Chromium

BPS1-Dup03-20121113	BPS1-Dup04-20121114	BPS1-HN-MW27I-20121114
BPS1-HN-MW29I-20121114	BPS1-TT-MW301D-20121113	BPS1-TT-MW301I-20121113
BPS1-TT-MW301S-20121113	BPS1-TT-MW309D-20121113	BPS1-TT-MW309I-20121112
BPS1-TT-MW310S-20121114	BPS1-TT-MW314I-20121114	

Overview

The sample set for NWIRP Bethpage, CTO WE44, SDG 50063-19 consisted of twenty-three (23) aqueous samples including three (3) trip blank samples. Two (2) field duplicate samples were included in the Sample Delivery Group (SDG); BPS1-Dup03-20121113 / BPS1-TT-MW301D-20121113 and BPS1-Dup04-20121114 / BPS1-TT-MW310S-20121114. All aqueous samples were analyzed for volatile organic compounds (VOC) as listed above. Twenty (20) aqueous samples were analyzed for polychlorinated

biphenyls (PCB) and the total metals chromium and iron as listed above. One (1) aqueous sample was also analyzed for the dissolved metals iron and chromium as listed above. Eleven (11) aqueous samples were analyzed for hexavalent chromium as listed above.

The samples were collected by Tetra Tech on November 12, 13, and 14, 2012 and analyzed by TriMatrix Laboratories, Inc. All analyses were conducted in accordance with EPA Methods SW-846 8260C for VOCs, 8082A for PCB, 6010C for iron, 6020A for chromium, and EPA Method 7196A for hexavalent chromium, method analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

*	•	Data completeness
	•	Hold times
*	•	GC/MS System Tuning and Performance
	•	Initial/continuing Calibrations
	•	Blank Results
*	•	Laboratory Control Sample Recovery
	•	Matrix Spike/Matrix Spike Duplicate Recoveries
*	•	Surrogate Spike Recoveries
*	•	Internal Standard Recoveries
*	•	ICP Interference Results
*	•	ICP Serial Dilution Results
*	•	Field Duplicate Precision
*	•	Compound Identification
	•	Compound Quantitation
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

VOC

The initial calibration average relative response factor (RRF) was less than the 0.05 quality control limit for 1,4-dioxane for instrument 328 on 11/19/13 and on all continuing calibration verifications (CCV).

Affected samples: All samples
Action: The non-detected 1,4-dioxane results for all samples were qualified rejected, (UR).

The initial calibration RRF relative standard deviation (RSD) was greater than the 15% quality control limit for ethyl benzene for instrument 328 on 11/19/12.

Affected samples: All samples
Action: The non-detected ethyl benzene results for the samples were qualified estimated, (UJ).

The following VOC contaminants were detected in the blanks at the following maximum concentrations.

Analyte	Maximum Conc. µg/L	Action Level µg/L
Acetone [1]	6.0	60.0
Methyl acetate [1]	0.86	4.30
Acetone [2]	4.9	49.0
Methyl acetate [2]	1.2	6.0
Acetone [3]	4.8	48.0
Methyl acetate [3]	1.0	5.0
Acetone [4]	2.6	26.0
Methyl acetate [4]	1.4	6.0
Acetone [5]	30	300
Methyl acetate [5]	0.90	4.50
2-Butanone [5]	1.3	13.0
Acetone [6]	31	310
Chloroform [6]	0.76	3.80
1,2-Dichloroethane [6]	0.59	2.95
Methyl acetate [6]	0.88	4.40
2-Butanone [6]	1.1	11.0

(1) Method blank for batch 1214533 affecting samples BPS1-TT-MW308S-20121112, BPS1-TT-MW309S-20121112, BPS1-TT-MW308I-20121112, BPS1-TT-MW309I-20121112, and BPS1-TB-20121112.
(2) Method blank for batch 1214607 affecting samples BPS1-TB-20121113, BPS1-TT-MW308D-20121113, BPS1-TT-MW309D-20121113, BPS1-TT-MW301S-20121113, BPS1-TT-MW301D-20121113, BPS1-TT-MW314S-20121113, BPS1-TT-MW301I-20121113, and BPS1-Dup03-20121113.
(3) Method blank for batch 1214612 affecting samples BPS1-TB-20121114, BPS1-FW-MW01-20121114, BPS1-TT-MW314I-20121114, BPS1-FW-MW02-20121114, BPS1-TT-MW313S-20121114, BPS1-FW-MW03-20121114, BPS1-HN-MW29I-20121114, BPS1-TT-MW310S-20121114, BPS1-HN-MW27I-20121114, and BPS1-Dup04-20121114.
(4) Trip blank sample BPS1-TB-20121112 affecting samples from 11/12/12.
(5) Trip blank sample BPS1-TB-20121113 affecting samples from 11/13/12.
(6) Trip blank sample BPS1-TB-20121114 affecting samples from 11/14/12

An action level of ten times the maximum level for acetone and 2-butanone and five times the maximum level for the other contaminants has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The trip blank samples were not qualified for blank contamination. Sample methyl acetate and chloroform positive results were qualified for blank contamination.

PCB

The Aroclor-1248 positive result column RPD was greater than the 25% quality control limit.

Affected sample: BPS1-FW-MW01-20121114

Action: The Aroclor-1248 sample result was qualified estimated, (J). The positive result was reported from the lower of the two column results. The laboratory reported the lower of the two column results for all RPDs greater than 40%.

Miscellaneous – Hexavalent Chromium

The sample collection to analysis hold time of 24 hours was exceeded (<2X) for samples as listed.

Affected samples:

BPS1-TT-MW314I-20121114 BPS1-HN-MW29I-20121114
BPS1-TT-MW310S-20121114 BPS1-HN-MW27I-20121114
BPS1-Dup04-20121114

Action: The positive and non-detected sample results were qualified estimated, (J) and (UJ), respectively.

Metals

The total chromium and hexavalent chromium concentrations were nearly equal for the samples as listed below. This is noted for completeness. No validation action was necessary.

Sample	Total Chromium	Hexavalent Chromium
BPS1-Dup03-20121113	76 µg/L	82.4 µg/L
BPS1-HN-MW27I-20121114	8.8 µg/L	6.4 µg/L
BPS1-TT-MW301D-20121113	82 µg/L	81.1 µg/L
BPS1-TT-MW301I-20121113	7.8 µg/L	6.1 µg/L
BPS1-TT-MW309I-20121112	61 µg/L	55.1 µg/L
BPS1-TT-MW314I-20121114	33 µg/L	22.9 µg/L

Additional Comments

Positive results below the Limit of Quantitation (LOQ) and above the Method Detection Limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The VOC MS %R was less than the quality control limit 1,4-dioxane for spiked sample BPS1-TT-MW309D-20121113.

Affected sample: BPS1-TT-MW309D-20121113

Action: The non-detected 1,4-dioxane result was rejected for an RRF criteria non-compliance and no further action was necessary.

The samples listed below were analyzed diluted for Aroclors. Samples which were only analyzed at a dilution resulted in elevated levels reported for non-detected Aroclor analytes.

Sample	Dilution
BPS1-TT-MW301S-20121113	10X
BPS1-FW-MW03-20121114	2X

The laboratory reported all positive results for Aroclors from column 1 with the exception of column result RPDs >40%, in which case the lowest of the two column results was reported.

The following contaminant was detected in the metals continuing calibration blanks (CCB) at the following maximum concentrations.

Analyte	Maximum Conc.	Action Level
Chromium [1]	0.29 ug/L	1.45 ug/L
Chromium [2]	0.31 ug/L	1.55 ug/L

[1] CCB1 affecting all samples.
[2] CCB4 affecting samples BPS1-TT-MW301S-20121113, BPS1-TT-MW301D-20121113, BPS1-TT-MW314S-20121113, BPS1-TT-MW301I-20121113, BPS1-Dup03-20121113, BPS1-FW-MW01-20121114, BPS1-TT-MW314I-20121114, BPS1-FW-MW02-20121114, BPS1-TT-MW313S-20121114, BPS1-FW-MW03-20121114, BPS1-HN-MW29I-20121114, BPS1-TT-MW310S-20121114, BPS1-HN-MW27I-20121114, and BPS1-Dup04-20121114.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. If multiple CCBs have contamination, only the highest of the applicable CCB is listed above. No sample results were qualified for blank contamination.

The field duplicate sample pair samples BPS1-Dup03-20121113 and BPS1-TT-MW301D-20121113 had an RPD for the sample positive total iron results greater than the 30% quality control limit.

Affected samples: BPS1-Dup03-20121113 and BPS1-TT-MW301D-20121113

Action: No validation action was necessary as the positive sample total iron results were <5X the reporting limit (RL).

Samples BPS1-TT-MW309I-20121112, BPS1-TT-MW301D-20121113, and BPS1-Dup03-20121113 were diluted 10X for the hexavalent chromium analysis.

The field duplicate sample pair samples BPS1-Dup04-20121114 and BPS1-TT-MW310S-20121114 had detected and non-detected hexavalent chromium results respectively. No validation action was taken as the difference between the detected and non-detected result was <2X the hexavalent chromium reporting limit (RL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The sample 1,4-dioxane non-detected results were rejected for RRF criteria non-compliances. Sample VOC ethyl benzene non-detected results were qualified for the initial calibration RSD non-compliance. VOC sample results were qualified for blank contamination. Sample hexavalent chromium results were qualified for sample to analysis hold time non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Quantitation (LOQ) and above the Method Detection Limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit. Aroclor-1248 positive sample results were qualified for column RPD criteria non-compliances.

The data for these analyses were reviewed with reference to the SOP HW-24 Revision #2 - August 2008 Validating Volatile Organic Compounds by SW-846 Method 8260B, SOP HW-45 Revision 1 - Oct '06 Data Validation SOP of Organic Analysis of PCBs by Gas Chromatography SW-846 Method 8082A, SOP HW-02 Rev.13 – September 2006 Evaluation of Metals Data for the CLP Program; and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (October 2010).

Tetra Tech
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Data Validation Quality Assurance Officer

Attachments:
Appendix A - Qualified Analytical Results
Appendix B - Results as Reported by the Laboratory
Appendix C – Region II Data Validation Forms
Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02230	NSAMPLE	BPS1-Dup03-20121113			BPS1-Dup04-20121114			BPS1-FW-MW01-20121114			BPS1-FW-MW02-20121114		
SDG: 50063-19	LAB_ID	1211282-08			1211346-10			1211346-02			1211346-04		
FRACTION: OV	SAMP_DATE	11/13/2012			11/14/2012			11/14/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW301D-20121113			BPS1-TT-MW310S-20121114								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		3.2			0.57	J	P
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.9	J	P	0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		1.2			0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		22			0.34	J	P
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-FW-MW03-20121114			BPS1-HN-MW27I-20121114			BPS1-HN-MW29I-20121114			BPS1-TB-20121112		
SDG: 50063-19	LAB_ID	1211346-06			1211346-09			1211346-07			1211254-05		
FRACTION: OV	SAMP_DATE	11/14/2012			11/14/2012			11/14/2012			11/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF							BPS1-TT-MW310S-20121114					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.2	J	P	0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U		2.6	J	P
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.22	J	P	0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TB-20121113			BPS1-TB-20121114			BPS1-TT-MW301D-20121113			BPS1-TT-MW301I-20121113		
SDG: 50063-19	LAB_ID	1211282-01			1211346-01			1211282-05			1211282-07		
FRACTION: OV	SAMP_DATE	11/13/2012			11/14/2012			11/13/2012			11/13/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.63	J	P	0.59	J	P	0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1.3	J	P	1.1	J	P	1	U		1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		30			31			2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.87	J	P	0.76	J	P	0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW301S-20121113			BPS1-TT-MW308D-20121113			BPS1-TT-MW308I-20121112			BPS1-TT-MW308S-20121112		
SDG: 50063-19	LAB_ID	1211282-04			1211282-02			1211254-03			1211254-01		
FRACTION: OV	SAMP_DATE	11/13/2012			11/13/2012			11/12/2012			11/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U	B	0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW309D-20121113			BPS1-TT-MW309I-20121112			BPS1-TT-MW309S-20121112			BPS1-TT-MW310S-20121114		
SDG: 50063-19	LAB_ID	1211282-03			1211254-04			1211254-02			1211346-08		
FRACTION: OV	SAMP_DATE	11/13/2012			11/12/2012			11/12/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.45	J	P	0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.23	J	P	0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW313S-20121114			BPS1-TT-MW314I-20121114			BPS1-TT-MW314S-20121113		
SDG: 50063-19	LAB_ID	1211346-05			1211346-03			1211282-06		
FRACTION: OV	SAMP_DATE	11/14/2012			11/14/2012			11/13/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-Dup03-20121113			BPS1-Dup04-20121114			BPS1-FW-MW01-20121114			BPS1-FW-MW02-20121114		
SDG: 50063-19	LAB_ID	1211282-08			1211346-10			1211346-02			1211346-04		
FRACTION: OV	SAMP_DATE	11/13/2012			11/14/2012			11/14/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW301D-20121113			BPS1-TT-MW310S-20121114								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1	U	A	1	U	A	1	U	A	1	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		100			43		
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.62	J	P	0.5	U		9.4			3.7		
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-FW-MW03-20121114			BPS1-HN-MW27I-20121114			BPS1-HN-MW29I-20121114			BPS1-TB-20121112		
SDG: 50063-19	LAB_ID	1211346-06			1211346-09			1211346-07			1211254-05		
FRACTION: OV	SAMP_DATE	11/14/2012			11/14/2012			11/14/2012			11/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF							BPS1-TT-MW310S-20121114					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1	U	A	1	U	A	1	U	A	1.4	J	P
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		77			0.5	U		0.67	J	P	0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		2.8			0.5	U		0.26	J	P	0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TB-20121113			BPS1-TB-20121114			BPS1-TT-MW301D-20121113			BPS1-TT-MW301I-20121113		
SDG: 50063-19	LAB_ID	1211282-01			1211346-01			1211282-05			1211282-07		
FRACTION: OV	SAMP_DATE	11/13/2012			11/14/2012			11/13/2012			11/13/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.9	J	P	0.88	J	P	1	U	A	1	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.68	J	P	0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW301S-20121113			BPS1-TT-MW308D-20121113			BPS1-TT-MW308I-20121112			BPS1-TT-MW308S-20121112		
SDG: 50063-19	LAB_ID	1211282-04			1211282-02			1211254-03			1211254-01		
FRACTION: OV	SAMP_DATE	11/13/2012			11/13/2012			11/12/2012			11/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1	U	A	1	U	A	1	U	A	1.2	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.69	J	P	0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.95	J	P	0.5	U		0.81	J	P
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW309D-20121113			BPS1-TT-MW309I-20121112			BPS1-TT-MW309S-20121112			BPS1-TT-MW310S-20121114		
SDG: 50063-19	LAB_ID	1211282-03			1211254-04			1211254-02			1211346-08		
FRACTION: OV	SAMP_DATE	11/13/2012			11/12/2012			11/12/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1	U	A	1	U	A	1	U	A	1	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		1.1			0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		1.6			0.23	J	P	0.83	J	P	0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW313S-20121114			BPS1-TT-MW314I-20121114			BPS1-TT-MW314S-20121113		
SDG: 50063-19	LAB_ID	1211346-05			1211346-03			1211282-06		
FRACTION: OV	SAMP_DATE	11/14/2012			11/14/2012			11/13/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U	
METHYL ACETATE		1	U	A	1	U	A	1	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-Dup03-20121113			BPS1-Dup03-20121113RE1			BPS1-Dup04-20121114			BPS1-FW-MW01-20121114		
SDG: 50063-19	LAB_ID	1211282-08			1211282-08RE1			1211346-10			1211346-02		
FRACTION: PCB	SAMP_DATE	11/13/2012			11/13/2012			11/14/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW301D-20121113			BPS1-TT-MW301D-20121113			BPS1-TT-MW310S-20121114					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U					0.08	U		0.08	U	
AROCLOR-1221		0.08	U					0.08	U		0.08	U	
AROCLOR-1232		0.08	U					0.08	U		0.08	U	
AROCLOR-1242		0.08	U					0.08	U		0.08	U	
AROCLOR-1248					0.69			0.08	U		0.45	J	U
AROCLOR-1254		0.08	U					0.08	U		0.08	U	
AROCLOR-1260		0.08	U					0.08	U		0.08	U	
AROCLOR-1262		0.08	U					0.08	U		0.08	U	
AROCLOR-1268		0.08	U					0.08	U		0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-FW-MW02-20121114			BPS1-FW-MW03-20121114			BPS1-HN-MW27I-20121114			BPS1-HN-MW29I-20121114		
SDG: 50063-19	LAB_ID	1211346-04			1211346-06			1211346-09			1211346-07		
FRACTION: PCB	SAMP_DATE	11/14/2012			11/14/2012			11/14/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.091	U		0.17	U		0.08	U		0.086	U	
AROCLOR-1221		0.091	U		0.17	U		0.08	U		0.086	U	
AROCLOR-1232		0.091	U		0.17	U		0.08	U		0.086	U	
AROCLOR-1242		0.091	U		0.17	U		0.08	U		0.086	U	
AROCLOR-1248		0.091	U		2.3			1.2			1.5		
AROCLOR-1254		0.091	U		0.17	U		0.08	U		0.086	U	
AROCLOR-1260		0.091	U		0.17	U		0.08	U		0.086	U	
AROCLOR-1262		0.091	U		0.17	U		0.08	U		0.086	U	
AROCLOR-1268		0.091	U		0.17	U		0.08	U		0.086	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW301D-20121113			BPS1-TT-MW301I-20121113			BPS1-TT-MW301S-20121113			BPS1-TT-MW308D-20121113		
SDG: 50063-19	LAB_ID	1211282-05			1211282-07			1211282-04			1211282-02		
FRACTION: PCB	SAMP_DATE	11/13/2012			11/13/2012			11/13/2012			11/13/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U		0.8	U		0.08	U	
AROCLOR-1221		0.08	U		0.08	U		0.8	U		0.08	U	
AROCLOR-1232		0.08	U		0.08	U		0.8	U		0.08	U	
AROCLOR-1242		0.08	U		0.08	U		0.8	U		0.08	U	
AROCLOR-1248		0.67			0.73			9.9			0.056	J	P
AROCLOR-1254		0.08	U		0.08	U		0.8	U		0.08	U	
AROCLOR-1260		0.08	U		0.08	U		0.8	U		0.08	U	
AROCLOR-1262		0.08	U		0.08	U		0.8	U		0.08	U	
AROCLOR-1268		0.08	U		0.08	U		0.8	U		0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW308I-20121112			BPS1-TT-MW308S-20121112			BPS1-TT-MW309D-20121113			BPS1-TT-MW309I-20121112		
SDG: 50063-19	LAB_ID	1211254-03			1211254-01			1211282-03			1211254-04		
FRACTION: PCB	SAMP_DATE	11/12/2012			11/12/2012			11/13/2012			11/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.085	U		0.08	U		0.086	U		0.08	U	
AROCLOR-1221		0.085	U		0.08	U		0.086	U		0.08	U	
AROCLOR-1232		0.085	U		0.08	U		0.086	U		0.08	U	
AROCLOR-1242		0.085	U		0.08	U		0.086	U		0.08	U	
AROCLOR-1248		0.32			0.17	J	P	0.086	U		0.41		
AROCLOR-1254		0.085	U		0.08	U		0.086	U		0.08	U	
AROCLOR-1260		0.085	U		0.08	U		0.086	U		0.08	U	
AROCLOR-1262		0.085	U		0.08	U		0.086	U		0.08	U	
AROCLOR-1268		0.085	U		0.08	U		0.086	U		0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW309S-20121112			BPS1-TT-MW310S-20121114			BPS1-TT-MW313S-20121114			BPS1-TT-MW314I-20121114		
SDG: 50063-19	LAB_ID	1211254-02			1211346-08			1211346-05			1211346-03		
FRACTION: PCB	SAMP_DATE	11/12/2012			11/14/2012			11/14/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1221		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1232		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1242		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1248		0.9			0.08	U		0.08	U		0.29		
AROCLOR-1254		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1260		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1262		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1268		0.08	U		0.08	U		0.08	U		0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW314S-20121113		
SDG: 50063-19	LAB_ID	1211282-06		
FRACTION: PCB	SAMP_DATE	11/13/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.08	U	
AROCLOR-1221		0.08	U	
AROCLOR-1232		0.08	U	
AROCLOR-1242		0.08	U	
AROCLOR-1248		0.37		
AROCLOR-1254		0.08	U	
AROCLOR-1260		0.08	U	
AROCLOR-1262		0.08	U	
AROCLOR-1268		0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-Dup03-20121113			BPS1-Dup04-20121114			BPS1-FW-MW01-20121114			BPS1-FW-MW02-20121114		
SDG: 50063-19	LAB_ID	1211282-08			1211346-10			1211346-02			1211346-04		
FRACTION: M	SAMP_DATE	11/13/2012			11/14/2012			11/14/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW301D-20121113			BPS1-TT-MW310S-20121114								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		76			9.4			4.2			7.8		
IRON		19			3600			900			280		

PROJ_NO: 02230	NSAMPLE	BPS1-FW-MW03-20121114			BPS1-HN-MW27I-20121114			BPS1-HN-MW29I-20121114			BPS1-TT-MW301D-20121113		
SDG: 50063-19	LAB_ID	1211346-06			1211346-09			1211346-07			1211282-05		
FRACTION: M	SAMP_DATE	11/14/2012			11/14/2012			11/14/2012			11/13/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		5.7			8.8			11			82		
IRON		840			120			1900			14		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW301I-20121113			BPS1-TT-MW301S-20121113			BPS1-TT-MW308D-20121113			BPS1-TT-MW308I-20121112		
SDG: 50063-19	LAB_ID	1211282-07			1211282-04			1211282-02			1211254-03		
FRACTION: M	SAMP_DATE	11/13/2012			11/13/2012			11/13/2012			11/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		7.8			2.8			81			30		
IRON		56			44			35			3200		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW308S-20121112			BPS1-TT-MW309D-20121113			BPS1-TT-MW309I-20121112			BPS1-TT-MW309S-20121112		
SDG: 50063-19	LAB_ID	1211254-01			1211282-03			1211254-04			1211254-02		
FRACTION: M	SAMP_DATE	11/12/2012			11/13/2012			11/12/2012			11/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		36			4			61			6.4		
IRON		1600			220			91			43		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW310S-20121114			BPS1-TT-MW313S-20121114			BPS1-TT-MW314I-20121114			BPS1-TT-MW314S-20121113		
SDG: 50063-19	LAB_ID	1211346-08			1211346-05			1211346-03			1211282-06		
FRACTION: M	SAMP_DATE	11/14/2012			11/14/2012			11/14/2012			11/13/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		11			9.7			33			4.2		
IRON		2900			310			85			350		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW308S-20121112			BPS1-TT-MW308S-20121112RE		
SDG: 50063-19	LAB_ID	1211254-01			1211254-01		
FRACTION: MF	SAMP_DATE	11/12/2012			11/12/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		8.2					
IRON					23		

PROJ_NO: 02230	NSAMPLE	BPS1-Dup03-20121113			BPS1-Dup04-20121114			BPS1-HN-MW27I-20121114			BPS1-HN-MW29I-20121114		
SDG: 50063-19	LAB_ID	1211282-08			1211346-10			1211346-09			1211346-07		
FRACTION: MISC	SAMP_DATE	11/13/2012			11/14/2012			11/14/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW301D-20121113			BPS1-TT-MW310S-20121114								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		82.4			0.8	J	P	6.4			0.7	J	P

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW301D-20121113			BPS1-TT-MW301I-20121113			BPS1-TT-MW301S-20121113			BPS1-TT-MW309D-20121113		
SDG: 50063-19	LAB_ID	1211282-05			1211282-07			1211282-04			1211282-03		
FRACTION: MISC	SAMP_DATE	11/13/2012			11/13/2012			11/13/2012			11/13/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		81.1			6.1			1.2			1	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW309I-20121112			BPS1-TT-MW310S-20121114			BPS1-TT-MW314I-20121114		
SDG: 50063-19	LAB_ID	1211254-04			1211346-08			1211346-03		
FRACTION: MISC	SAMP_DATE	11/12/2012			11/14/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		55.1			1	U		22.9		

Tetra Tech, Inc. **INTERNAL CORRESPONDENCE**

TO:	**R. SOK**	**DATE:**	**FEBRUARY 21, 2013**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), BETHPAGE
CTO WE44
SAMPLE DELIVERY GROUP (SDG) 50063-20

SAMPLES: 11/Soil/PCB

BPS1-Dup-20121112
BPS1-SB3026-3545
BPS1-SB3026-5565
BPS1-SB3027-2535
BPS1-SB3027-4555
BPS1-SB3027-6575
BPS1-SB3026-2535
BPS1-SB3026-4555
BPS1-SB3026-6575
BPS1-SB3027-3545
BPS1-SB3027-5565

15/Aqueous/VOC

BPS1-Dup05-20121115
BPS1-RB-20121116
BPS1-TB-20121116
BPS1-TT-MW305D-20121115
BPS1-TT-MW306S-20121116
BPS1-TT-MW311I-20121115
TTAOC22-MW06-20121115
TTAOC22-MW11-20121116
BPS1-FB-20121116
BPS1-TB-20121115
BPS1-TT-MW302S-20121115
BPS1-TT-MW305S-20121115
BPS1-TT-MW307S-20121116
BPS1-TT-MW311S-20121115
TTAOC22-MW10-20121115

15/Aqueous/PCB

BPS1-Dup05-20121115
BPS1-FB-20121116
BPS1-RB-20121116
BPS1-TT-MW305D-20121115
BPS1-TT-MW306S-20121116
BPS1-TT-MW311I-20121115
TTAOC22-MW06-20121115
TTAOC22-MW11-20121116
BPS1-FB-20121113
BPS1-RB-20121114
BPS1-TT-MW302S-20121115
BPS1-TT-MW305S-20121115
BPS1-TT-MW307S-20121116
BPS1-TT-MW311S-20121115
TTAOC22-MW10-20121115

Overview

The sample set for NWIRP Bethpage SDG 50063-20 consisted of eleven (11) soil environmental samples, eleven (11) aqueous environmental samples, two (2) field blanks, two (2) rinsate blanks, and two (2) trip blanks. Fifteen (15) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). The eleven (11) soil environmental samples, eleven (11) environmental aqueous samples, the field blanks, and rinsate blanks were analyzed for polychlorinated biphenyls (PCB). Two field duplicate sample pairs were associated with this sample data group (SDG): BPS1-Dup-20121112/BPS1-SB3027-2535 and BPS1-Dup05-20121115/BPS1-TT-MW305S-20121115.

The samples were collected by Tetra Tech, Inc. on November 12-16, 2012 and analyzed by TriMatrix Laboratories. All analyses were conducted in accordance with EPA Methods SW-846 8260B and 8082A analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

* • Data completeness
* • Hold times
* • GC/MS System Tuning and Performance
  • Initial/continuing calibrations
  • Laboratory Method and Field Blank Results
* • Surrogate Spike Recoveries
* • Internal Standard Results
* • Laboratory Control Sample/Laboratory Control Sample Duplicate Results
  • Matrix Spike/Matrix Spike Duplicate Results
* • Field Duplicate Precision
* • Compound Identification
* • Compound Quantitation
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, and documentation supporting these findings is presented in Appendix C.

Volatiles (VOC)

The initial and continuing calibrations performed on instrument 328 had Relative Response Factors (RRFs) for 1,4-dioxane below the 0.05 quality control criterion. All aqueous samples were affected. The non-detected results reported for this compound in the affected samples were qualified as rejected, (UR).

The initial calibration performed on instrument 328 had a Percent Relative Standard Deviation (%RSD) for ethylbenzene above the 15% quality control limit. All aqueous samples were affected. The detected and non-detected results reported for ethylbenzene in the affected samples were qualified as estimated, (J) and (UJ), respectively.

The following contaminants were detected in the laboratory method and trip blanks at the following maximum concentrations:

Analyte	Maximum Concentration (µg/L)	Action Level (µg/L)
Acetone [1]	3.8	38
Methyl Acetate [1]	1.2	6
Methylene Chloride [1]	1.2	12
Acetone [2]	3.8	38

[1] Maximum concentration detected in the laboratory method blank, 1214677-BLK1, affecting all aqueous samples.
[2] Maximum concentration detected in the trip blank, BPS1-TB-20121116, affecting samples BPS1-FB-20121116,BPS1-RB-20121116, BPS1-TT-MW306S-20121116, BPS1-TT-MW307S-20121116, and TTAOC22-MW11-20121116.

An action level of 10X was used for the common laboratory contaminants, acetone and methylene chloride, and an action level of 5X the maximum contaminant level was used for methyl acetate to evaluate sample data for blank contamination. Sample aliquot and dilution factor, if applicable, were taken into consideration when evaluating for blank contamination. Detected results reported for methyl acetate in the environmental samples below the established action level were qualified as non-detected, (U). No action was taken for acetone or methylene chloride because no detections were made for these compounds in the associated environmental samples. The field, rinsate, and trip blanks are not qualified for blank contamination.

Polychlorinated Biphenyls (PCB)

The following PCB was detected in the laboratory method blank at the following maximum concentration:

Analyte	Maximum Concentration (µg/L)	Action Level (µg/L)
Aroclor 1248 [1]	0.28	1.4

[1] Maximum concentration detected in the laboratory method blank, 1214512-BLK2, affecting aqueous samples associated with preparation batch #1214512.

An action level of 5X the maximum contaminant level was used to evaluate sample data for blank contamination. Sample aliquot and dilution factor, if applicable, were taken into consideration when evaluating for blank contamination. Detected results reported for Aroclor 1248 in the associated environmental samples below the established action level were qualified as non-detected, (U).

Additional Comments

Region II data validation forms were not included this data validation report because at the time the data was being reviewed, the Region II website indicated the validation forms were in the process of being revised and are not available.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses of sample BPS1-SB3027-6575 yielded Percent Recoveries (%Rs) for Aroclor 1016 on both GC columns grossly above the upper quality control limit. No validation action was taken for the non-detected result reported for this PCB in the parent sample.

The following samples were analyzed at a dilution due to concentrations of PCBs.

Sample	Dilution
BPS1-Dup-20121112	20000X
BPS1-SB3026-3545	5X
BPS1-SB3026-4555	2X
BPS1-SB3026-6575	4X
BPS1-SB3027-2535	10000X
BPS1-SB3027-3545	4X
BPS1-SB3027-4555	4X
BPS1-SB3027-5565	10X
BPS1-SB3027-6575	10X
BPS1-RB-20121114	4X

Detected results reported below the Limit of Quantitation (LOQ) but above the Detection Limit (DL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: Initial and continuing calibration RRFs were below 0.05 for 1,4-dioxane. An initial calibration %RSD exceeded 15%. Contaminants were detected in the VOC and PCB laboratory method blanks.

Other Factors Affecting Data Quality: Acetone was detected in one trip blank. The PCB MS/MSD %Rs for Aroclor 1016 were grossly high. Some PCB samples required dilutions. Detected results below the LOQ were estimated.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (August, 2008), SOP #HW-45 USEPA Region II Hazardous Waste Support Branch Validating PCBs by Gas Chromatography SW-846 Method 8082A (October 2006), EPA Methods SW-846 8260C and 8082A analytical and reporting protocols, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (October, 2010).

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Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 02230	NSAMPLE	BPS1-Dup05-20121115			BPS1-FB-20121116			BPS1-RB-20121116			BPS1-TB-20121115		
SDG: 50063-20	LAB_ID	1211347-09			1211367-05			1211367-04			1211347-01		
FRACTION: OV	SAMP_DATE	11/15/2012			11/16/2012			11/16/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW305S-20121115											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		3.3	J	P	4.4	J	P	1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2.3	J	P	4.8	J	P	2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TB-20121116			BPS1-TT-MW302S-20121115			BPS1-TT-MW305D-20121115			BPS1-TT-MW305D-20121115RE1		
SDG: 50063-20	LAB_ID	1211367-01			1211347-07			1211347-04			1211347-04RE1		
FRACTION: OV	SAMP_DATE	11/16/2012			11/15/2012			11/15/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U				
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U				
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U				
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.44	J	P			
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.56	J	P			
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.96	J	P			
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U				
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U				
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U				
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U				
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C			
2-BUTANONE		1	U		1	U		1	U				
2-HEXANONE		1	U		1	U		1	U				
4-METHYL-2-PENTANONE		1	U		1	U		1	U				
ACETONE		6.1			2	U		2	U				
BENZENE		0.2	U		0.2	U		0.2	U				
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMOFORM		1	U		1	U		1	U				
BROMOMETHANE		0.5	U		0.5	U		0.5	U				
CARBON DISULFIDE		1	U		1	U		1	U				
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U				
CHLOROBENZENE		0.5	U		0.5	U		0.5	U				
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U				
CHLOROETHANE		0.5	U		0.5	U		0.5	U				
CHLOROFORM		0.2	U		0.2	U		0.18	J	P			
CHLOROMETHANE		0.5	U		0.5	U		0.5	U				
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.32	J	P			
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U				
CYCLOHEXANE		0.5	U		0.5	U		0.5	U				
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.22	J	P			

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW305S-20121115			BPS1-TT-MW306S-20121116			BPS1-TT-MW307S-20121116			BPS1-TT-MW311I-20121115		
SDG: 50063-20	LAB_ID	1211347-02			1211367-03			1211367-06			1211347-05		
FRACTION: OV	SAMP_DATE	11/15/2012			11/16/2012			11/16/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.12	J	P	0.43	J	P
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW311S-20121115			TTAOC22-MW06-20121115			TTAOC22-MW10-20121115			TTAOC22-MW11-20121116		
SDG: 50063-20	LAB_ID	1211347-03			1211347-06			1211347-08			1211367-02		
FRACTION: OV	SAMP_DATE	11/15/2012			11/15/2012			11/15/2012			11/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.2	J	P	0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	U		1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		2	U		2	U	
BENZENE		0.2	U		0.39	J	P	0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	U		1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.38	J	P	0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-Dup05-20121115			BPS1-FB-20121116			BPS1-RB-20121116			BPS1-TB-20121115		
SDG: 50063-20	LAB_ID	1211347-09			1211367-05			1211367-04			1211347-01		
FRACTION: OV	SAMP_DATE	11/15/2012			11/16/2012			11/16/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW305S-20121115											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1	U	A	0.81	J	P	1	J	P	0.98	J	P
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TB-20121116			BPS1-TT-MW302S-20121115			BPS1-TT-MW305D-20121115			BPS1-TT-MW305D-20121115RE1		
SDG: 50063-20	LAB_ID	1211367-01			1211347-07			1211347-04			1211347-04RE1		
FRACTION: OV	SAMP_DATE	11/16/2012			11/15/2012			11/15/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C			
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U				
M+P-XYLENES		1	U		1	U		1	U				
METHYL ACETATE		1	J	P	1	U	A	1	U	A			
METHYL CYCLOHEXANE		1	U		1	U		1	U				
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U				
METHYLENE CHLORIDE		1	U		1	U		1	U				
O-XYLENE		0.2	U		0.2	U		0.2	U				
STYRENE		0.5	U		0.5	U		0.5	U				
TETRACHLOROETHENE		0.5	U		0.37	J	P	1.8					
TOLUENE		0.5	U		0.5	U		0.5	U				
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U				
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U				
TRICHLOROETHENE		0.5	U		1.3						200		
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		1.2					
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U				

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW305S-20121115			BPS1-TT-MW306S-20121116			BPS1-TT-MW307S-20121116			BPS1-TT-MW311I-20121115		
SDG: 50063-20	LAB_ID	1211347-02			1211367-03			1211367-06			1211347-05		
FRACTION: OV	SAMP_DATE	11/15/2012			11/16/2012			11/16/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1	U	A	1	U	A	1	U	A	1	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		5.4		
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.32	J	P	0.69	J	P	0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.41	J	P	0.46	J	P
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW311S-20121115			TTAOC22-MW06-20121115			TTAOC22-MW10-20121115			TTAOC22-MW11-20121116		
SDG: 50063-20	LAB_ID	1211347-03			1211347-06			1211347-08			1211367-02		
FRACTION: OV	SAMP_DATE	11/15/2012			11/15/2012			11/15/2012			11/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHYLBENZENE		0.5	UJ	C	0.7	J	CP	0.5	UJ	C	0.5	UJ	C
ISOPROPYLBENZENE		0.5	U		1.6			0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1	U	A	1	U	A	1	U	A	1	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.83	J	P	0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.33	J	P	86			0.94	J	P
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-Dup05-20121115			BPS1-FB-20121113			BPS1-FB-20121116			BPS1-RB-20121114		
SDG: 50063-20	LAB_ID	1211347-09			1211348-12			1211367-05			1211348-13		
FRACTION: PCB	SAMP_DATE	11/15/2012			11/13/2012			11/16/2012			11/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW305S-20121115											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U		0.08	U		0.32	U	
AROCLOR-1221		0.08	U		0.08	U		0.08	U		0.32	U	
AROCLOR-1232		0.08	U		0.08	U		0.08	U		0.32	U	
AROCLOR-1242		0.08	U		0.08	U		0.08	U		0.32	U	
AROCLOR-1248		0.08	U		0.08	U		0.08	U		4.2		
AROCLOR-1254		0.08	U		0.08	U		0.08	U		0.32	U	
AROCLOR-1260		0.08	U		0.08	U		0.08	U		0.32	U	
AROCLOR-1262		0.08	U		0.08	U		0.08	U		0.32	U	
AROCLOR-1268		0.08	U		0.08	U		0.08	U		0.32	U	

PROJ_NO: 02230	NSAMPLE	BPS1-RB-20121116			BPS1-TT-MW302S-20121115			BPS1-TT-MW305D-20121115			BPS1-TT-MW305S-20121115		
SDG: 50063-20	LAB_ID	1211367-04			1211347-07			1211347-04			1211347-02		
FRACTION: PCB	SAMP_DATE	11/16/2012			11/15/2012			11/15/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1221		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1232		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1242		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1248		0.08	U		0.18	J	P	0.08	U		0.08	U	
AROCLOR-1254		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1260		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1262		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1268		0.08	U		0.08	U		0.08	U		0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW306S-20121116			BPS1-TT-MW307S-20121116			BPS1-TT-MW311I-20121115			BPS1-TT-MW311S-20121115		
SDG: 50063-20	LAB_ID	1211367-03			1211367-06			1211347-05			1211347-03		
FRACTION: PCB	SAMP_DATE	11/16/2012			11/16/2012			11/15/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1221		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1232		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1242		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1248		0.55	U	A	0.042	U	A	0.28			0.17	J	P
AROCLOR-1254		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1260		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1262		0.08	U		0.08	U		0.08	U		0.08	U	
AROCLOR-1268		0.08	U		0.08	U		0.08	U		0.08	U	

PROJ_NO: 02230	NSAMPLE	TTAOC22-MW06-20121115			TTAOC22-MW10-20121115			TTAOC22-MW11-20121116		
SDG: 50063-20	LAB_ID	1211347-06			1211347-08			1211367-02		
FRACTION: PCB	SAMP_DATE	11/15/2012			11/15/2012			11/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.094	U		0.08	U	
AROCLOR-1221		0.08	U		0.094	U		0.08	U	
AROCLOR-1232		0.08	U		0.094	U		0.08	U	
AROCLOR-1242		0.08	U		0.094	U		0.08	U	
AROCLOR-1248		0.041	J	P	0.48			0.24	U	A
AROCLOR-1254		0.08	U		0.094	U		0.08	U	
AROCLOR-1260		0.08	U		0.094	U		0.064	U	A
AROCLOR-1262		0.08	U		0.094	U		0.08	U	
AROCLOR-1268		0.08	U		0.094	U		0.08	U	

Tetra Tech, Inc. **INTERNAL CORRESPONDENCE**

TO: **R. SOK** **DATE:** **FEBRUARY 21, 2013**

FROM: **MICHELLE L. ALLEN** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TOTAL AND DISSOLVED IRON AND CHROMIUM/ HEXAVALENT CHROMIUM**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), BETHPAGE
CTO WE44
SAMPLE DELIVERY GROUP (SDG) 50063-20

SAMPLES: 13Aqueous/Total Iron & Chromium

BPS1-Dup05-20121115
BPS1-RB-20121116
BPS1-TT-MW305D-20121115
BPS1-TT-MW306S-20121116
BPS1-TT-MW311I-20121115
TTAOC22-MW06-20121115
TTAOC22-MW11-20121116
BPS1-FB-20121116
BPS1-TT-MW302S-20121115
BPS1-TT-MW305S-20121115
BPS1-TT-MW307S-20121116
BPS1-TT-MW311S-20121115
TTAOC22-MW10-20121115

11/Aqueous/Hexavalent Chromium

BPS1-FB-20121116
BPS1-TT-MW302S-20121115
BPS1-TT-MW306S-20121116
BPS1-TT-MW311I-20121115
TTAOC22-MW06-20121115
TTAOC22-MW11-20121116
BPS1-RB-20121116
BPS1-TT-MW305D-20121115
BPS1-TT-MW307S-20121116
BPS1-TT-MW311S-20121115
TTAOC22-MW10-20121115

2/Aqueous/Dissolved Iron & Chromium

BPS1-TT-MW306S-20121116
BPS1-TT-MW311S-20121115

Overview

The sample set for NWIRP Bethpage SDG 50063-20 consisted of eleven (11) aqueous environmental samples, one (1) field blank, and one (1) rinsate blank. The thirteen (13) aqueous samples were analyzed total iron and chromium. Two (2) aqueous environmental samples were analyzed for dissolved iron and chromium. Nine (9) environmental aqueous samples, the field blank, and rinsate blank were analyzed for hexavalent chromium. One field duplicate sample pair was associated with this sample data group (SDG): BPS1-Dup05-20121115/BPS1-TT-MW305S-20121115.

The samples were collected by Tetra Tech, Inc. on November 15 and 16, 2012 and analyzed by TriMatrix Laboratories. All analyses were conducted in accordance with EPA Methods SW-846 6010C, 6020A, and 7196A analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

* • Data Completeness
• Holding Times
* • ICP/MS Tune

- Initial and Continuing Calibrations
- * Laboratory Method/Calibration Blanks
- * ICP Interference Analysis
- * Laboratory Control Sample/Laboratory Control Sample Duplicate Results
- * Post Digestion Spike Results
- * Internal Standard Results
- * Field Duplicate Precision
- * Detection Limits
- * Analyte Quantitation

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, and documentation supporting these findings is presented in Appendix C.

Total & Dissolved Iron and Chromium (VOC)

No issues were noted.

Hexavalent Chromium

The 24 hour holding time was exceeded for samples BPS1-FB-20121116, BPS1-RB-20121116, BPS1-TT-MW306S-20121116, and TTAOC22-MW11-20121116. The laboratory received samples BPS1-TT-MW306S-20121116 and TTAOC22-MW11-20121116 outside the 24 hour holding time. No action was taken for the rinsate blank, BPS1-RB-20121116, because this sample was analyzed 1 minute outside the holding time. The detected results reported for the remaining samples were qualified as estimated, (J).

The Percent Recovery (%R) for Contract Reporting Detection Limit (CRDL) standard analyzed on 11/17/12 for hexavalent chromium was above the upper quality control limit. Samples BPS1-FB-20121116, BPS1-RB-20121116, BPS1-TT-MW306S-20121116, BPS1-TT-MW307S-20121116, and TTAOC22-MW11-20121116 were affected. No action was taken for sample BPS1-TT-MW307S-20121116 because hexavalent chromium was not detected in this sample. The detected results reported for hexavalent chromium in the remaining samples were qualified as estimated, (J).

Hexavalent chromium and chromium were detected in the field quality control samples at the following concentrations:

Sample	Hexavalent Chromium Concentration (µg/L)	Chromium Concentration (µg/L)
BPS1-FB-20121116	1.2	0.24
BPS1-RB-20121116	1.0	Non-detected

Due to the instability potential of hexavalent chromium, detections greater than the total chromium are unlikely. The detected results reported for hexavalent chromium in these field quality control samples were qualified as estimated, (J).

Additional Comments

Region II data validation forms were not included this data validation report because at the time the data was being reviewed, the Region II website indicated the validation forms were in the process of being revised and are not available.

Detected results reported below the Limit of Quantitation (LOQ) but above the Detection Limit (DL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: One hexavalent chromium CRDL standard was high.

Other Factors Affecting Data Quality: The laboratory received two samples outside the holding time for hexavalent chromium. Hexavalent chromium was detected in the field quality control blanks at concentrations higher than the total chromium results. Detected results below the LOQ were estimated.

The data for these analyses were reviewed with reference to the Region II "Validation of Metals for the Contract Laboratory Program (CLP) based on ILM05.3 (SOP HW-2 Revision 13, September 2006)", SW-846 Methods 6010C, 6020A, and 7196A analytical and reporting protocols, and the DOD document entitled "Quality System Manual (QSM) for Environmental Laboratories" (October 2010).

Tetra Tech, Inc.
Michelle L. Allen
Chemist/Data Validator

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Quality Assurance Manager

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 02230	NSAMPLE	BPS1-Dup05-20121115			BPS1-FB-20121116			BPS1-RB-20121116			BPS1-TT-MW302S-20121115		
SDG: 50063-20	LAB_ID	1211347-09			1211367-05			1211367-04			1211347-07		
FRACTION: M	SAMP_DATE	11/15/2012			11/16/2012			11/16/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW305S-20121115											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		1.7			0.24	J	P	0.5	U		1.1		
IRON		68			10	U		10	U		92		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW305D-20121115			BPS1-TT-MW305S-20121115			BPS1-TT-MW306S-20121116			BPS1-TT-MW307S-20121116		
SDG: 50063-20	LAB_ID	1211347-04			1211347-02			1211367-03			1211367-06		
FRACTION: M	SAMP_DATE	11/15/2012			11/15/2012			11/16/2012			11/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		1.7			1.7			4.6			1.6		
IRON		91			58			960			100		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW311I-20121115			BPS1-TT-MW311S-20121115			TTAOC22-MW06-20121115			TTAOC22-MW10-20121115		
SDG: 50063-20	LAB_ID	1211347-05			1211347-03			1211347-06			1211347-08		
FRACTION: M	SAMP_DATE	11/15/2012			11/15/2012			11/15/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		5.8			14			2.4			160		
IRON		130			1800			28000			1600		

PROJ_NO: 02230	NSAMPLE	TTAOC22-MW11-20121116		
SDG: 50063-20	LAB_ID	1211367-02		
FRACTION: M	SAMP_DATE	11/16/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CHROMIUM		48		
IRON		7000		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW306S-20121116			BPS1-TT-MW311S-20121115		
SDG: 50063-20	LAB_ID	1211367-03			1211347-03		
FRACTION: MF	SAMP_DATE	11/16/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		0.48	J	P	4.9		
IRON		9.5	J	P	26		

PROJ_NO: 02230	NSAMPLE	BPS1-FB-20121116			BPS1-RB-20121116			BPS1-TT-MW302S-20121115			BPS1-TT-MW305D-20121115		
SDG: 50063-20	LAB_ID	1211367-05			1211367-04			1211347-07			1211347-04		
FRACTION: MISC	SAMP_DATE	11/16/2012			11/16/2012			11/15/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		1.2	J	CHO	1	J	CO	0.4	J	P	1	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW306S-20121116			BPS1-TT-MW307S-20121116			BPS1-TT-MW311I-20121115			BPS1-TT-MW311S-20121115		
SDG: 50063-20	LAB_ID	1211367-03			1211367-06			1211347-05			1211347-03		
FRACTION: MISC	SAMP_DATE	11/16/2012			11/16/2012			11/15/2012			11/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.6	J	CHP	1	U		1	U		2.6		

PROJ_NO: 02230	NSAMPLE	TTAOC22-MW06-20121115			TTAOC22-MW10-20121115			TTAOC22-MW11-20121116		
SDG: 50063-20	LAB_ID	1211347-06			1211347-08			1211367-02		
FRACTION: MISC	SAMP_DATE	11/15/2012			11/15/2012			11/16/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		1	U		158			18.3		CH

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO:	**R. SOK**	**DATE:**	**APRIL 29, 2013**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / PCB**
NWIRP BETHPAGE, CTO WE44
SDG 50063-23

SAMPLES: 27 / Aqueous / VOC

BPS1-Dup01-20130220	BPS1-DUP02-20130221	BPS1-FB01-20130219
BPS1-HN-MW27I-20130218	BPS1-RB01-20130219	BPS1-TB01-20130218
BPS1-TB02-20130219	BPS1-TB03-20130220	BPS1-TB04-20130221
BPS1-TT-MW301D-20130221	BPS1-TT-MW308D-20130220	BPS1-TT-MW308I-20130221
BPS1-TT-MW308S-20130220	BPS1-TT-MW309D-20130221	BPS1-TT-MW309I-20130220
BPS1-TT-MW309S-20130220	BPS1-TT-MW310S-20130221	BPS1-TT-MW311I-20130219
BPS1-TT-MW311S-20130219	BPS1-TT-MW312I-20130220	BPS1-TT-MW312S-20130220
BPS1-TT-MW313S-20130221	BPS1-TT-MW314I-20130219	BPS1-TT-MW314S-20130219
TTAOC22-MW06-20130218	TTAOC22-MW10-20130218	TTAOC22-MW11-20130218

23 / Aqueous / PCB

BPS1-Dup01-20130220	BPS1-DUP02-20130221	BPS1-FB01-20130219
BPS1-HN-MW27I-20130218	BPS1-RB01-20130219	BPS1-TT-MW301D-20130221
BPS1-TT-MW308D-20130220	BPS1-TT-MW308I-20130221	BPS1-TT-MW308S-20130220
BPS1-TT-MW309D-20130221	BPS1-TT-MW309I-20130220	BPS1-TT-MW309S-20130220
BPS1-TT-MW310S-20130221	BPS1-TT-MW311I-20130219	BPS1-TT-MW311S-20130219
BPS1-TT-MW312I-20130220	BPS1-TT-MW312S-20130220	BPS1-TT-MW313S-20130221
BPS1-TT-MW314I-20130219	BPS1-TT-MW314S-20130219	TTAOC22-MW06-20130218
TTAOC22-MW10-20130218	TTAOC22-MW11-20130218	

Overview

The sample set for NWIRP Bethpage, CTO WE44, SDG 50063-23 consisted of twenty-seven (27) aqueous samples including four (4) aqueous trip blank samples, one (1) field blank sample and one (1) rinse blank sample. Two (2) field duplicate samples were included in the Sample Delivery Group (SDG); BPS1-Dup01-20130220 / BPS1-TT-MW309S-20130220 and BPS1-DUP02-20130221 / BPS1-TT-MW301D-20130221. All aqueous samples were analyzed for volatile organic compounds (VOC) as listed above. Twenty-three (23) of the aqueous samples were also analyzed for polychlorinated biphenyls (PCB) as listed above.

The samples were collected by Tetra Tech on February 18, 19, 20, and 21, 2013 and analyzed by TriMatrix Laboratories, Inc. All analyses were conducted in accordance with EPA Methods SW-846 8260C for VOCs and 8082A for PCB, method analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Hold times
* • GC/MS System Tuning and Performance

*	•	Initial/continuing Calibrations
	•	Blank Results
*	•	Laboratory Control Sample Recovery
	•	Matrix Spike/Matrix Spike Duplicate Recoveries
*	•	Surrogate Spike Recoveries
*	•	Internal Standard Recoveries
*	•	Field Duplicate Precision
	•	Compound Identification
	•	Compound Quantitation
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, Region II data validation forms are presented in Appendix C, and documentation supporting these findings is presented in Appendix D.

VOC

The following VOC contaminants were detected in the method blanks at the following maximum concentrations.

Analyte	Maximum Conc. µg/L	Action Level µg/L
Acetone (1)	1.4	14.0
Methyl acetate (1)	0.92	4.60
1,2,3-Trichlorobenzene (1)	2.7	13.5
1,2,4-Trichlorobenzene (1)	3.4	17.0
Acetone (2)	2.2	22.0
Methyl acetate (2)	1.0	5.0
1,2,3-Trichlorobenzene (2)	2.7	13.5

(1) Method blank for batch 1301792 affecting samples listed below:

BPS1-FB01-20130219	BPS1-HN-MW27I-20130218
BPS1-RB01-20130219	BPS1-TB01-20130218
BPS1-TB02-20130219	BPS1-TB03-20130220
BPS1-TT-MW308D-20130220	BPS1-TT-MW308S-20130220
BPS1-TT-MW309I-20130220	BPS1-TT-MW309S-20130220
BPS1-TT-MW311I-20130219	BPS1-TT-MW311S-20130219
BPS1-TT-MW312I-20130220	BPS1-TT-MW312S-20130220
BPS1-TT-MW314I-20130219	BPS1-TT-MW314S-20130219
TTAOC22-MW06-20130218	TTAOC22-MW10-20130218
TTAOC22-MW11-20130218	

(2) Method blank for batch 1301876 affecting samples listed below:

BPS1-Dup01-20130220	BPS1-DUP02-20130221
BPS1-TB04-20130221	BPS1-TT-MW301D-20130221
BPS1-TT-MW308I-20130221	BPS1-TT-MW309D-20130221
BPS1-TT-MW310S-20130221	BPS1-TT-MW313S-20130221

An action level of ten times the maximum level for acetone and five times the maximum level for the other contaminants has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The trip blank samples, rinse blank sample, and field blank sample results were

not qualified for method blank contamination. Sample methyl acetate and acetone positive results were qualified for blank contamination. Other VOC contaminants were also found in the trip blank samples, rinse blank sample, and field blank sample. These blank positive results were not used to qualify sample results as all of the samples had non-detected results for the detected contaminants.

The initial calibration average relative response factor (RRF) was less than the 0.05 criteria for 1,4-dioxane for instrument 328 on 02/26/13. All continuing calibration verifications (CCV) RRFs were also non-compliant.

Affected samples: All samples

Action: The non-detected 1,4-dioxane results for all samples were qualified rejected, (UR).

The CCV percent differences (%D) were greater than the 20% quality control limit carbon disulfide, 2-butanone, and 1,4-dioxane for instrument 328 on 02/28/13 @ 14:56 and for 1,4-dioxane on 03/01/13 @ 08:47.

Affected samples - 1,4-dioxane: All sample 1,4-dioxane results were affected.

Affected samples - carbon disulfide and 2-butanone:

BPS1-FB01-20130219	BPS1-HN-MW27I-20130218	BPS1-RB01-20130219
BPS1-TB01-20130218	BPS1-TB02-20130219	BPS1-TB03-20130220
BPS1-TT-MW308D-20130220	BPS1-TT-MW308S-20130220	BPS1-TT-MW309I-20130220
BPS1-TT-MW309S-20130220	BPS1-TT-MW311I-20130219	BPS1-TT-MW311S-20130219
BPS1-TT-MW312I-20130220	BPS1-TT-MW312S-20130220	BPS1-TT-MW314I-20130219
BPS1-TT-MW314S-20130219	TTAOC22-MW06-20130218	TTAOC22-MW10-20130218
TTAOC22-MW11-20130218		

Action: The affected sample carbon disulfide and 2-butanone positive and non-detected results were qualified estimated, (J) and (UJ), respectively. The 1,4-dioxane non-detected sample results were rejected for RRF criteria non-compliances and no further action was necessary.

PCB

The following samples had Aroclor-1248 positive result column RPDs greater than the 25% quality control limit.

Affected samples:

BPS1-HN-MW27I-20130218	BPS1-TT-MW311I-20130219
BPS1-TT-MW312I-20130220	TTAOC22-MW10-20130218

Action: The Aroclor-1248 sample results were qualified estimated, (J). The laboratory reported column 1 result for all samples regardless of the RPD.

The laboratory indicated in the PCB narrative that the sample BPS1-TT-MW311I-20130219 Aroclor 1248 result had a matrix interference..."A conclusive PCB Aroclor identification is not possible due to matrix interference and/or weathering of the sample. The identity of the reported Aroclor is tentative." The sample BPS1-TT-MW311I-20130219 positive Aroclor 1248 result was qualified estimated, (J).

Additional Comments

The VOC matrix spike (MS) and MS duplicate (MSD) percent recoveries (%R) were less than the quality control limit 1,4-dioxane for spiked sample BPS1-HN-MW27I-20130218. Additionally, the MS %R for methyl acetate was less than the quality control limit.

Affected sample: BPS1-HN-MW27I-20130218

Action: The non-detected 1,4-dioxane result was rejected for an RRF criteria non-compliance and no further action was necessary. No action was taken for the methyl acetate sample result as

the MSD %R and the MS/MSD RPD for methyl acetate were compliant.

Positive results below the Limit of Quantitation (LOQ) and above the Method Detection Limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The laboratory reported all positive results for Aroclors from column 1 regardless of column result RPDs.

Laboratory analyte results were reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The sample 1,4-dioxane non-detected results were rejected for RRF criteria non-compliances. VOC sample results were qualified for blank contamination and CCV %D non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Quantitation (LOQ) and above the Method Detection Limit (MDL) were qualified as estimated, (J), due to uncertainty near the detection limit. Aroclor-1248 positive sample results were qualified for column RPD criteria non-compliances and a matrix interference/weathering issue.

The data for these analyses were reviewed with reference to the SOP HW-24 Revision #2 - August 2008 Validating Volatile Organic Compounds by SW-846 Method 8260B, SOP HW-45 Revision 1 - October 2006 Data Validation SOP of Organic Analysis of PCBs by Gas Chromatography SW-846 Method 8082A, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (October 2010).

Tetra Tech
Joseph Kalinyak
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A - Qualified Analytical Results
Appendix B - Results as Reported by the Laboratory
Appendix C – Region II Data Validation Forms
Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Value Qualifier Key (Val Qual)

J – The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The result is an estimated non-detected quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - Value is a non-detect as reported by the laboratory.

UR – Non-detected result is considered rejected, (UR), as a result of technical non-compliances.

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 02230	NSAMPLE	BPS1-Dup01-20130220			BPS1-DUP02-20130221			BPS1-FB01-20130219			BPS1-HN-MW27I-20130218		
SDG: 50063-23	LAB_ID	1302295-08			1302315-07			1302268-07			1302260-04		
FRACTION: OV	SAMP_DATE	2/20/2013			2/21/2013			2/19/2013			2/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW309S-20130220			BPS1-TT-MW301D-20130221								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		3.8	J	CP	1	UJ	C
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		1.1	U	A	2	U		5			1.1	U	A
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	UJ	C	1	UJ	C
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.31	J	P	0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-RB01-20130219			BPS1-TB01-20130218			BPS1-TB02-20130219			BPS1-TB03-20130220		
SDG: 50063-23	LAB_ID	1302268-06			1302260-01			1302268-01			1302295-01		
FRACTION: OV	SAMP_DATE	2/19/2013			2/18/2013			2/19/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		4.2	J	CP	1	UJ	C	1	UJ	C	1	UJ	C
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		5.2			2.2	J	P	1.9	J	P	2	J	P
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	UJ	C	1	UJ	C	1	UJ	C	1	UJ	C
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.29	J	P	0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TB04-20130221			BPS1-TT-MW301D-20130221			BPS1-TT-MW308D-20130220			BPS1-TT-MW308I-20130221		
SDG: 50063-23	LAB_ID	1302315-01			1302315-06			1302295-06			1302315-04		
FRACTION: OV	SAMP_DATE	2/21/2013			2/21/2013			2/20/2013			2/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	U		1	UJ	C	1	U	
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2.4	J	P	2	U		2	U		2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	U		1	UJ	C	1	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.14	J	P	0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW308S-20130220			BPS1-TT-MW309D-20130221			BPS1-TT-MW309I-20130220			BPS1-TT-MW309S-20130220		
SDG: 50063-23	LAB_ID	1302295-04			1302315-05			1302295-05			1302295-07		
FRACTION: OV	SAMP_DATE	2/20/2013			2/21/2013			2/20/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.21	J	P	0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.26	J	P	0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.18	J	P	0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	UJ	C	1	U		1	UJ	C	1	UJ	C
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		1.3	U	A	1.3	U	A
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	UJ	C	1	U		1	UJ	C	1	UJ	C
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW310S-20130221			BPS1-TT-MW311I-20130219			BPS1-TT-MW311S-20130219			BPS1-TT-MW312I-20130220		
SDG: 50063-23	LAB_ID	1302315-02			1302268-03			1302268-02			1302295-02		
FRACTION: OV	SAMP_DATE	2/21/2013			2/19/2013			2/19/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	U		1	UJ	C	1	UJ	C	1	UJ	C
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		1.3	U	A	1.8	U	A	2	U	
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	U		1	UJ	C	1	UJ	C	1	UJ	C
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.52	J	P	0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW312S-20130220			BPS1-TT-MW313S-20130221			BPS1-TT-MW314I-20130219			BPS1-TT-MW314S-20130219		
SDG: 50063-23	LAB_ID	1302295-03			1302315-03			1302268-05			1302268-04		
FRACTION: OV	SAMP_DATE	2/20/2013			2/21/2013			2/19/2013			2/19/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	UJ	C	1	U		1	UJ	C	1	UJ	C
2-HEXANONE		1	U		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U		1	U	
ACETONE		2	U		2	U		1.4	U	A	1.5	U	A
BENZENE		0.2	U		0.2	U		0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	UJ	C	1	U		1	UJ	C	1	UJ	C
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.2	U		0.2	U		0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	TTAOC22-MW06-20130218			TTAOC22-MW10-20130218			TTAOC22-MW11-20130218		
SDG: 50063-23	LAB_ID	1302260-03			1302260-05			1302260-02		
FRACTION: OV	SAMP_DATE	2/18/2013			2/18/2013			2/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.16	J	P	0.21	J	P	0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		25	UR	C	25	UR	C	25	UR	C
2-BUTANONE		1	UJ	C	1	UJ	C	1	UJ	C
2-HEXANONE		1	U		1	U		1	U	
4-METHYL-2-PENTANONE		1	U		1	U		1	U	
ACETONE		3.8	U	A	1.3	U	A	1.4	U	A
BENZENE		0.24	J	P	0.2	U		0.2	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMOFORM		1	U		1	U		1	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		1	UJ	C	1	UJ	C	1	UJ	C
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.2	U		0.29	J	P	0.2	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-Dup01-20130220			BPS1-DUP02-20130221			BPS1-FB01-20130219			BPS1-HN-MW27I-20130218		
SDG: 50063-23	LAB_ID	1302295-08			1302315-07			1302268-07			1302260-04		
FRACTION: OV	SAMP_DATE	2/20/2013			2/21/2013			2/19/2013			2/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW309S-20130220			BPS1-TT-MW301D-20130221								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.9	U	A	0.97	U	A	1.4	J	P	1.1	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		3.6			0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.57	J	P	0.43	J	P	0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-RB01-20130219			BPS1-TB01-20130218			BPS1-TB02-20130219			BPS1-TB03-20130220		
SDG: 50063-23	LAB_ID	1302268-06			1302260-01			1302268-01			1302295-01		
FRACTION: OV	SAMP_DATE	2/19/2013			2/18/2013			2/19/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1.4	J	P	1	J	P	0.92	J	P	1	J	P
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		3.3			0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TB04-20130221			BPS1-TT-MW301D-20130221			BPS1-TT-MW308D-20130220			BPS1-TT-MW308I-20130221		
SDG: 50063-23	LAB_ID	1302315-01			1302315-06			1302295-06			1302315-04		
FRACTION: OV	SAMP_DATE	2/21/2013			2/21/2013			2/20/2013			2/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		1.1	J	P	0.88	U	A	0.87	U	A	0.85	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.75	J	P	0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.43	J	P	0.82	J	P	0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW308S-20130220			BPS1-TT-MW309D-20130221			BPS1-TT-MW309I-20130220			BPS1-TT-MW309S-20130220		
SDG: 50063-23	LAB_ID	1302295-04			1302315-05			1302295-05			1302295-07		
FRACTION: OV	SAMP_DATE	2/20/2013			2/21/2013			2/20/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.91	U	A	0.98	U	A	0.89	U	A	0.91	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		1.1			0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.84	J	P	1.4			0.21	J	P	0.52	J	P
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW310S-20130221			BPS1-TT-MW311I-20130219			BPS1-TT-MW311S-20130219			BPS1-TT-MW312I-20130220		
SDG: 50063-23	LAB_ID	1302315-02			1302268-03			1302268-02			1302295-02		
FRACTION: OV	SAMP_DATE	2/21/2013			2/19/2013			2/19/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.96	U	A	0.96	U	A	1.1	U	A	0.92	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		4.3			0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.73	J	P	0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW312S-20130220			BPS1-TT-MW313S-20130221			BPS1-TT-MW314I-20130219			BPS1-TT-MW314S-20130219		
SDG: 50063-23	LAB_ID	1302295-03			1302315-03			1302268-05			1302268-04		
FRACTION: OV	SAMP_DATE	2/20/2013			2/21/2013			2/19/2013			2/19/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.89	U	A	0.95	U	A	1	U	A	0.92	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	TTAOC22-MW06-20130218			TTAOC22-MW10-20130218			TTAOC22-MW11-20130218		
SDG: 50063-23	LAB_ID	1302260-03			1302260-05			1302260-02		
FRACTION: OV	SAMP_DATE	2/18/2013			2/18/2013			2/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.26	J	P	0.5	U		0.5	U	
ISOPROPYLBENZENE		1.9			0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U		1	U	
METHYL ACETATE		1.1	U	A	0.94	U	A	1	U	A
METHYL CYCLOHEXANE		1	U		1	U		1	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1	U		1	U		1	U	
O-XYLENE		0.2	U		0.2	U		0.2	U	
STYRENE		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		1			0.23	J	P
TOLUENE		0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.36	J	P	66			0.64	J	P
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02230	NSAMPLE	BPS1-Dup01-20130220			BPS1-Dup01-20130220RE1			BPS1-DUP02-20130221			BPS1-DUP02-20130221RE1		
SDG: 50063-23	LAB_ID	1302295-08			1302295-08RE1			1302315-07			1302315-07RE1		
FRACTION: PCB	SAMP_DATE	2/20/2013			2/20/2013			2/21/2013			2/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW309S-20130220			BPS1-TT-MW309S-20130220			BPS1-TT-MW301D-20130221			BPS1-TT-MW301D-20130221		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U					0.08	U				
AROCLOR-1221		0.08	U					0.08	U				
AROCLOR-1232		0.08	U					0.08	U				
AROCLOR-1242		0.08	U					0.08	U				
AROCLOR-1248					0.8						0.6		
AROCLOR-1254		0.08	U					0.08	U				
AROCLOR-1260		0.08	U					0.08	U				
AROCLOR-1262		0.08	U					0.08	U				
AROCLOR-1268		0.08	U					0.08	U				

PROJ_NO: 02230	NSAMPLE	BPS1-FB01-20130219			BPS1-HN-MW27I-20130218			BPS1-HN-MW27I-20130218RE1			BPS1-RB01-20130219		
SDG: 50063-23	LAB_ID	1302268-07			1302260-04			1302260-04RE1			1302268-06		
FRACTION: PCB	SAMP_DATE	2/19/2013			2/18/2013			2/18/2013			2/19/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.085	U					0.08	U	
AROCLOR-1221		0.08	U		0.085	U					0.08	U	
AROCLOR-1232		0.08	U		0.085	U					0.08	U	
AROCLOR-1242		0.08	U		0.085	U					0.08	U	
AROCLOR-1248		0.08	U					0.61	J	U	0.08	U	
AROCLOR-1254		0.08	U		0.085	U					0.08	U	
AROCLOR-1260		0.08	U		0.085	U					0.08	U	
AROCLOR-1262		0.08	U		0.085	U					0.08	U	
AROCLOR-1268		0.08	U		0.085	U					0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW301D-20130221			BPS1-TT-MW301D-20130221RE1			BPS1-TT-MW308D-20130220			BPS1-TT-MW308I-20130221		
SDG: 50063-23	LAB_ID	1302315-06			1302315-06RE1			1302295-06			1302315-04		
FRACTION: PCB	SAMP_DATE	2/21/2013			2/21/2013			2/20/2013			2/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U					0.089	U		0.08	U	
AROCLOR-1221		0.08	U					0.089	U		0.08	U	
AROCLOR-1232		0.08	U					0.089	U		0.08	U	
AROCLOR-1242		0.08	U					0.089	U		0.08	U	
AROCLOR-1248					0.56			0.089	U				
AROCLOR-1254		0.08	U					0.089	U		0.08	U	
AROCLOR-1260		0.08	U					0.089	U		0.08	U	
AROCLOR-1262		0.08	U					0.089	U		0.08	U	
AROCLOR-1268		0.08	U					0.089	U		0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW308I-20130221RE1			BPS1-TT-MW308S-20130220			BPS1-TT-MW308S-20130220RE1			BPS1-TT-MW309D-20130221		
SDG: 50063-23	LAB_ID	1302315-04RE1			1302295-04			1302295-04RE1			1302315-05		
FRACTION: PCB	SAMP_DATE	2/21/2013			2/20/2013			2/20/2013			2/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016					0.08	U					0.08	U	
AROCLOR-1221					0.08	U					0.08	U	
AROCLOR-1232					0.08	U					0.08	U	
AROCLOR-1242					0.08	U					0.08	U	
AROCLOR-1248		0.35						0.15	J	P	0.08	U	
AROCLOR-1254					0.08	U					0.08	U	
AROCLOR-1260					0.08	U					0.08	U	
AROCLOR-1262					0.08	U					0.08	U	
AROCLOR-1268					0.08	U					0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW309I-20130220			BPS1-TT-MW309I-20130220RE1			BPS1-TT-MW309S-20130220			BPS1-TT-MW309S-20130220RE1		
SDG: 50063-23	LAB_ID	1302295-05			1302295-05RE1			1302295-07			1302295-07RE1		
FRACTION: PCB	SAMP_DATE	2/20/2013			2/20/2013			2/20/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U					0.08	U				
AROCLOR-1221		0.08	U					0.08	U				
AROCLOR-1232		0.08	U					0.08	U				
AROCLOR-1242		0.08	U					0.08	U				
AROCLOR-1248					0.27						0.82		
AROCLOR-1254		0.08	U					0.08	U				
AROCLOR-1260		0.08	U					0.08	U				
AROCLOR-1262		0.08	U					0.08	U				
AROCLOR-1268		0.08	U					0.08	U				

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW310S-20130221			BPS1-TT-MW311I-20130219			BPS1-TT-MW311I-20130219RE1			BPS1-TT-MW311S-20130219		
SDG: 50063-23	LAB_ID	1302315-02			1302268-03			1302268-03RE1			1302268-02		
FRACTION: PCB	SAMP_DATE	2/21/2013			2/19/2013			2/19/2013			2/19/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U					0.08	U	
AROCLOR-1221		0.08	U		0.08	U					0.08	U	
AROCLOR-1232		0.08	U		0.08	U					0.08	U	
AROCLOR-1242		0.08	U		0.08	U					0.08	U	
AROCLOR-1248		0.08	U					0.32	J	QU			
AROCLOR-1254		0.08	U		0.08	U					0.08	U	
AROCLOR-1260		0.08	U		0.08	U					0.08	U	
AROCLOR-1262		0.08	U		0.08	U					0.08	U	
AROCLOR-1268		0.08	U		0.08	U					0.08	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW311S-20130219RE1			BPS1-TT-MW312I-20130220			BPS1-TT-MW312I-20130220RE1			BPS1-TT-MW312S-20130220		
SDG: 50063-23	LAB_ID	1302268-02RE1			1302295-02			1302295-02RE1			1302295-03		
FRACTION: PCB	SAMP_DATE	2/19/2013			2/20/2013			2/20/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016					0.089	U					0.094	U	
AROCLOR-1221					0.089	U					0.094	U	
AROCLOR-1232					0.089	U					0.094	U	
AROCLOR-1242					0.089	U					0.094	U	
AROCLOR-1248		0.19	J	P				0.16	J	PU	0.094	U	
AROCLOR-1254					0.089	U					0.094	U	
AROCLOR-1260					0.089	U					0.094	U	
AROCLOR-1262					0.089	U					0.094	U	
AROCLOR-1268					0.089	U					0.094	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW313S-20130221			BPS1-TT-MW314I-20130219			BPS1-TT-MW314I-20130219RE1			BPS1-TT-MW314S-20130219		
SDG: 50063-23	LAB_ID	1302315-03			1302268-05			1302268-05RE1			1302268-04		
FRACTION: PCB	SAMP_DATE	2/21/2013			2/19/2013			2/19/2013			2/19/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.08	U		0.08	U					0.08	U	
AROCLOR-1221		0.08	U		0.08	U					0.08	U	
AROCLOR-1232		0.08	U		0.08	U					0.08	U	
AROCLOR-1242		0.08	U		0.08	U					0.08	U	
AROCLOR-1248		0.08	U					0.27					
AROCLOR-1254		0.08	U		0.08	U					0.08	U	
AROCLOR-1260		0.08	U		0.08	U					0.08	U	
AROCLOR-1262		0.08	U		0.08	U					0.08	U	
AROCLOR-1268		0.08	U		0.08	U					0.08	U	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**R. SOK**	**DATE:**	**May 3, 2013**
FROM:	**MEGAN CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- TOTAL AND DISSOLVED CHROMIUM AND IRON, AND HEXAVALENT CHROMIUM**
NWIRP BETHPAGE
SDG 50063-23

SAMPLES: 23/Aqueous/

BPS1-Dup01-20130220	BPS1-DUP02-20130221
BPS1-FB01-20130219	BPS1-HN-MW27I-20130218
BPS1-RB01-20130219	BPS1-TT-MW301D-20130221
BPS1-TT-MW308D-20130220	BPS1-TT-MW308I-20130221
BPS1-TT-MW308S-20130220	BPS1-TT-MW309D-20130221
BPS1-TT-MW309I-20130220	BPS1-TT-MW309S-20130220
BPS1-TT-MW310S-20130221	BPS1-TT-MW311I-20130219
BPS1-TT-MW311S-20130219	BPS1-TT-MW312I-20130220
BPS1-TT-MW312S-20130220	BPS1-TT-MW313S-20130221
BPS1-TT-MW314I-20130219	BPS1-TT-MW314S-20130219
TTAOC22-MW06-20130218	TTAOC22-MW10-20130218
TTAOC22-MW11-20130218	

Overview

The sample set for NWIRP Bethpage, SDG 50063-23, consists of twenty one (21) aqyueous samples, one (1) field blank and one (1) rinsate blank. The SDG contained two field duplicate pair: BPS1-Dup01-20130220/ BPS1-TT-MW309S-20130220 and BPS1-DUP02-20130221/ BPS1-TT-MW301D-20130221.

All samples were analyzed for total chromium and iron. Samples BPS1-TT-MW308I-20130221 and BPS1-TT-MW312I-20130220 were analyzed for dissolved chromium and iron. Samples BPS1-DUP02-20130221, BPS1-FB01-20130219, BPS1-HN-MW27I-20130218, BPS1-RB01-20130219, BPS1-TT-MW301D-20130221, BPS1-TT-MW308D-20130220, BPS1-TT-MW309D-20130221, BPS1-TT-MW312S-20130220, BPS1-TT-MW314I-20130219, TTAOC22-MW06-20130218, TTAOC22-MW10-20130218, and TTAOC22-MW11-20130218 were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on February 18th, 19th, 20th, and 21st, 2013 and analyzed by TriMatrix Laboratories. Metals analyses were conducted using SW-846 methods 6010C (for iron) and 6020A (for chromium). Hexavalent chromium analyses were conducted using SW-846 method 7196A.

These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibration Verification Results
• Laboratory Method / Preparation Blank Analyses
* • ICP Interference Results
* • Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Duplicate Results

* • Field duplicate Precision
* • Laboratory Control Standard Results
* • ICP Serial Dilution Results
* • Detection Limits
  • Analyte Quantitation

Metals:

The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Iron [1]	7.1 ug/L	35.5 ug/L
Iron [2]	8.1 ug/L	40.5 ug/L
Iron [3]	8.9 ug/L	44.5 ug/L

[1] The maximum concentration found in a preparation blank affecting samples in preparation batch 1301660.
[2] The maximum concentration found in a preparation blank affecting samples in batch 1301706.
[3] The maximum concentration found in a calibration blank affecting samples analyzed on 2/26/13.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Detected iron results less than the blank action level were qualified non-detected (U) for laboratory blank contamination.

Hexavalent chromium results for the following samples were marginally greater than total chromium results: BPS1-DUP02-20130221, BPS1-TT-MW301D-20130221, BPS1-TT-MW308D-20130220, and TTAOC22-MW10-20130218. Although hexavalent chromium concentrations are slightly greater than total chromium, the results are essentially comparable (<20% difference). Positive chromium and hexavalent chromium results were qualified as estimated (J).

Region II worksheets were not completed due to limited scope with analysis of only 2 metals.

Notes

Positive results greater than the detection limit (DL) but less than the limit of quantitation (LOQ) were qualified as estimated (J).

Non-detected results were reported at the limit of detection (LOD).

Total and dissolved bottles for sample BPS1-TT-MW308I-2013022 were labeled incorrectly by the sampler. As per the project manager, the validator corrected the Form1s and database to match the sample collection.

The following samples were analyzed at a 5X dilution:

Sample ID	Analyte
BPS1-DUP02-20130221	hexavalent chromium
BPS1-TT-MW301D-20130221	hexavalent chromium
BPS1-TT-MW308D-20130220	hexavalent chromium

TTAOC22-MW10-20130218	chromium
TTAOC22-MW10-20130218	hexavalent chromium

Executive Summary

Laboratory Performance: Preparation blank contamination resulted in the qualification of iron results.

Other Factors Affecting Data Quality: Several samples were qualified because hexavalent chromium results were marginally greater that total chromium results.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Data Validation" as amended for Region II and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", October 2010.

The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C – Region II Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 02230	NSAMPLE	BPS1-Dup01-20130220			BPS1-DUP02-20130221			BPS1-FB01-20130219			BPS1-HN-MW27I-20130218		
SDG: 50063-23	LAB_ID	1302295-08			1302315-07			1302268-07			1302260-04		
FRACTION: M	SAMP_DATE	2/20/2013			2/21/2013			2/19/2013			2/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW309S-20130220			BPS1-TT-MW301D-20130221								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		5.8			65	J	Q	0.5	U		12		
IRON		30	U	A	13			6.6	J	A	68		

PROJ_NO: 02230	NSAMPLE	BPS1-RB01-20130219			BPS1-TT-MW301D-20130221			BPS1-TT-MW308D-20130220			BPS1-TT-MW308I-20130221		
SDG: 50063-23	LAB_ID	1302268-06			1302315-06			1302295-06			1302315-04		
FRACTION: M	SAMP_DATE	2/19/2013			2/21/2013			2/20/2013			2/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		0.5	U		65	J	Q	82	J	Q	29		
IRON		7.9	J	A	12			180			880		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW308S-20130220			BPS1-TT-MW309D-20130221			BPS1-TT-MW309I-20130220			BPS1-TT-MW309S-20130220		
SDG: 50063-23	LAB_ID	1302295-04			1302315-05			1302295-05			1302295-07		
FRACTION: M	SAMP_DATE	2/20/2013			2/21/2013			2/20/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		14			1.6			55			5.3		
IRON		440			150			47			30	U	A

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW310S-20130221			BPS1-TT-MW311I-20130219			BPS1-TT-MW311S-20130219			BPS1-TT-MW312I-20130220		
SDG: 50063-23	LAB_ID	1302315-02			1302268-03			1302268-02			1302295-02		
FRACTION: M	SAMP_DATE	2/21/2013			2/19/2013			2/19/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		16			0.73	J	P	18			12		
IRON		220			78			180			1200		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW312S-20130220			BPS1-TT-MW313S-20130221			BPS1-TT-MW314I-20130219			BPS1-TT-MW314S-20130219		
SDG: 50063-23	LAB_ID	1302295-03			1302315-03			1302268-05			1302268-04		
FRACTION: M	SAMP_DATE	2/20/2013			2/21/2013			2/19/2013			2/19/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		11			1.8			37			4.7		
IRON		420			180			650			450		

PROJ_NO: 02230	NSAMPLE	TTAOC22-MW06-20130218			TTAOC22-MW10-20130218			TTAOC22-MW11-20130218		
SDG: 50063-23	LAB_ID	1302260-03			1302260-05			1302260-02		
FRACTION: M	SAMP_DATE	2/18/2013			2/18/2013			2/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		1.9			110	J	Q	39		
IRON		38000			2600			680		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW308I-20130221			BPS1-TT-MW312I-20130220		
SDG: 50063-23	LAB_ID	1302315-04			1302295-02		
FRACTION: MF	SAMP_DATE	2/21/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CHROMIUM		7.5			6.5		
IRON		37	U	A	17	U	A

PROJ_NO: 02230	NSAMPLE	BPS1-DUP02-20130221			BPS1-FB01-20130219			BPS1-HN-MW27I-20130218			BPS1-RB01-20130219		
SDG: 50063-23	LAB_ID	1302315-07			1302268-07			1302260-04			1302268-06		
FRACTION: MISC	SAMP_DATE	2/21/2013			2/19/2013			2/18/2013			2/19/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	BPS1-TT-MW301D-20130221											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		75.4	J	Q	1	U		5.4			1	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW301D-20130221			BPS1-TT-MW308D-20130220			BPS1-TT-MW309D-20130221			BPS1-TT-MW312S-20130220		
SDG: 50063-23	LAB_ID	1302315-06			1302295-06			1302315-05			1302295-03		
FRACTION: MISC	SAMP_DATE	2/21/2013			2/20/2013			2/21/2013			2/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		73.4	J	Q	82.2	J	Q	1	U		1	U	

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW314I-20130219			TTAOC22-MW06-20130218			TTAOC22-MW10-20130218			TTAOC22-MW11-20130218		
SDG: 50063-23	LAB_ID	1302268-05			1302260-03			1302260-05			1302260-02		
FRACTION: MISC	SAMP_DATE	2/19/2013			2/18/2013			2/18/2013			2/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		21.9			1	U		111	J	Q	12		

PROJ_NO: 02230	NSAMPLE	BPS1-TT-MW314S-20130219RE1			TTAOC22-MW06-20130218			TTAOC22-MW10-20130218			TTAOC22-MW10-20130218RE1		
SDG: 50063-23	LAB_ID	1302268-04RE1			1302260-03			1302260-05			1302260-05RE1		
FRACTION: PCB	SAMP_DATE	2/19/2013			2/18/2013			2/18/2013			2/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016					0.08	U		0.08	U				
AROCLOR-1221					0.08	U		0.08	U				
AROCLOR-1232					0.08	U		0.08	U				
AROCLOR-1242					0.08	U		0.08	U				
AROCLOR-1248		0.37			0.08	U					0.24	J	U
AROCLOR-1254					0.08	U		0.08	U				
AROCLOR-1260					0.08	U		0.08	U				
AROCLOR-1262					0.08	U		0.08	U				
AROCLOR-1268					0.08	U		0.08	U				

PROJ_NO: 02230	NSAMPLE	TTAOC22-MW11-20130218		
SDG: 50063-23	LAB_ID	1302260-02		
FRACTION: PCB	SAMP_DATE	2/18/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
AROCLOR-1016		0.089	U	
AROCLOR-1221		0.089	U	
AROCLOR-1232		0.089	U	
AROCLOR-1242		0.089	U	
AROCLOR-1248		0.089	U	
AROCLOR-1254		0.089	U	
AROCLOR-1260		0.089	U	
AROCLOR-1262		0.089	U	
AROCLOR-1268		0.089	U	