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DATA SUMMARY REPORT FOR 2011 GROUNDWATER INVESTIGATION ACTIVITIES FOR SITES 2, 6A AND 10B NWIRP CALVERTON NY

4/1/2012

TETRA TECH, INC

Data Summary Report
for
2011 Groundwater Investigation Activities
at
Site 2 – Fire Training Area
Site 6A – Fuel Calibration Area
Site 10B – Engine Test House and Southern Area

Naval Weapons Industrial Reserve Plant
Calverton, New York

Naval Facilities Engineering Command
Mid-Atlantic

CONTRACT NUMBER N62470-08-D-1001
Contract Task Order WE08

April 2012

TETRA TECH

DATA SUMMARY REPORT
FOR
2011 GROUNDWATER INVESTIGATION ACTIVITIES
AT
SITE 2 – FIRE TRAINING AREA
SITE 6A – FUEL CALIBRATION AREA
SITE 10B – ENGINE TEST HOUSE, AND
SOUTHERN AREA

NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
CALVERTON, NEW YORK

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ACRONYMS

AS/SVE	Air sparging/soil vapor extraction
bgs	below ground surface
Bio-Study	Enhanced In-Situ Bioremediation Pilot Test
BTEX	benzene, toluene, ethyl benzene, and xylene
CE	chloroethane
CLEAN	Comprehensive Long-Term Environmental Action Navy
COC	Chain of custody
CN	cyanide
CTO	Contract Task Order
CY	cubic yards
DCA	1,1-dichloroethane
DCE	1,1-dichloroethene
DHB	Dehalobacter
DHC	Dehalococcoides
DO	dissolved oxygen
DPT	Direct-push technology
DRO	Diesel range organics
EE/CA	Engineering evaluation/cost analysis
ft/day	feet per day
GAC	Granular Activated Carbon
GOCO	Government-owned contractor-operated
GRO	Gasoline range organics
HNUS	Halliburton NUS
IDW	Investigation-derived waste
IR	Installation Restoration
MCL	Maximum Contaminant Level
MEE	methane, ethane, and ethene
mg/kg	milligrams per kilogram
MPC	Marine pollution control
msl	mean sea level
MS/MSD	matrix spike/matrix spike duplicate
NAVFAC	Naval Facilities Engineering Command Mid-Atlantic
NEESA	Naval Energy and Environmental support activity
NGC	Northrop Grumman Corporation
NWIRP	Naval Weapons Industrial Reserve Plant

ACRONYMS (Continued)

NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORC	Oxygen Release Compound
ORP	oxidation reduction potential
ORNL	Oak Ridge National Laboratory
PAH	Poly-nuclear aromatic hydrocarbons
PCB	Polychlorinated biphenyl
PCE	tetrachloroethene
PID	Photoionization detector
PRSC	Peconic River Sportsmen Club
PVC	Polyvinyl chloride
QA	Quality Assurance
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SCDHS	Suffolk County Department of Health Services
SVOC	Semi-volatile organic compound
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target analyte list
TCA	1,1,1-trichloroethane
TCE	trichloroethene
TCL	Target Compound List
TIC	Temporary identified compound
TOC	total organic carbon
TPH	Total petroleum hydrocarbons
Tetra Tech	Tetra Tech NUS, Inc.
USDOI	United States Department of Interior
USEPA	United States Environmental Protection Agency
UST	Underground storage tank
UXO	unexploded ordnance
VOC	Volatile organic compound
µg/L	microgram per liter
µg/kg	microgram per kilogram

1.0 INTRODUCTION

This Data Summary Report has been prepared for the Mid-Atlantic Division of the Naval Facilities Engineering Command (NAVFAC) under the Comprehensive Long-Term Environmental Action Navy (CLEAN) III contract number N62470-08-D-1001, Contract Task Order (CTO) WE08. The Data Summary Report presents the groundwater investigation activities conducted from April 2011 through September 2011, and also summarizes the activities conducted from November 2010 to March 2011 presented in the Interim Data Summary (Tetra Tech NUS, Inc. [Tetra Tech], 2011a) at the Naval Weapons Industrial Reserve Plant (NWIRP) located in Calverton, New York (Figures 1-1 and 1-2). The 2011 investigation activities consisted of the following: temporary well installation, monitoring well installation, groundwater, surface water, and sediment sampling at Installation Restoration Sites 2, 6A, 10B and the Southern Area, as presented in the Work Plan and subsequent Work Plan Addendums (Tetra Tech, 2008a). Groundwater investigation activities were conducted in accordance with the Navy Environmental Restoration (ER) Program 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 details the 2011 groundwater investigation activities conducted at the NWIRP Calverton Site 2 – Fire Training Area, Site 6A – Fuel Calibration Area, Site 10B – Engine Test House, and Southern Area. The primary objective was to conduct additional groundwater monitoring at the Sites and perform supplemental investigative activities in the Southern Area to address data gaps, expand the groundwater monitoring network, and further develop the conceptual site model for the Southern Area groundwater plume.

Groundwater monitoring activities detailed in this document are a continuation of the groundwater monitoring program at these sites, as presented in the Work Plan and subsequent Work Plan addendums (Tetra Tech, 2008a). A removal action at Site 2 was conducted in 2008 and 2009. In addition, remedial actions at Sites 6A and 10B were conducted in 2009 and 2010 to address contaminated soils and eliminate a continuing source of groundwater contamination at these sites. The objectives of groundwater monitoring activities are 1) to monitor the groundwater quality at the Sites, 2) evaluate temporal trends of site contaminants, 3) provide data to evaluate potential impacts of contaminated groundwater on downgradient receptors, and 4) further delineate the extent of volatile organic compound (VOC)-contaminated groundwater in the Southern Area.

The results from the groundwater monitoring program will be used to further evaluate the need for future corrective action and to refine the conceptual site model for Southern Area groundwater and potential impact on the Peconic River.

A detailed description of field activities is presented in Section 3.0 of this report. Field work conducted in from November 2010 to November 2011 is summarized as follows.

- Temporary monitoring well installation and sampling at Site 6A in December 2010
- Surveying of new sampling locations (December 2010)
- Monitoring well installation at Site 6A (December 2010)
- Temporary monitoring well installation and sampling in the Southern Area in June, October, and November 2011
- Monitoring well installation in the Southern Area in June and November 2011
- Groundwater sampling at Site 2 in March and September 2011
- Groundwater sampling at Site 6A,10B, and the Southern Area in March and September 2011
- Semi-annual surface water and sediment sampling of the Peconic River in March and September 2011
- Quarterly water monitoring at the Peconic River Sportsman's Club (PRSC) during November 2010, and February, April and June 2011

1.2 REPORT ORGANIZATION

This Data Summary Report provides general program implementation information and the approach used in conducting the groundwater investigation activities from November 2010 to November 2011. The plan 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 analytical results, and Section 5.0 presents the conclusion and recommendations.

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

2.1.1 Site Location and Layout

The Navy's Calverton facility is located in Suffolk County on Long Island, approximately 70 miles east of New York City (Figures 1-1 and 1-2). Formerly engaged in the manufacture of aircraft parts and subassemblies, the property known as NWIRP Calverton, New York was a Government-Owned Contractor-Operated (GOCO) installation leased by the Navy to the Northrop Grumman Corporation (NGC) until 1996. Since that time, a majority of the property contained within the perimeter fence (three noncontiguous parcels of land totaling approximately 209 acres that are being retained by the Navy to continue ER program activities [Sites 2, Site 7, and Site 6A/Site 10B/Southern Area]), has been conveyed to the Town of Riverhead (Figure 1-2).

Other than environmental investigation and cleanup work, there are no operations conducted on the Navy's 209 acres that generate hazardous waste.

Site 2-Fire Training Area

Site 2-Fire Training Area is located on the eastern side of a 9-acre clearing in the south central area of the NWIRP Calverton facility (see Figure 2-1). A circular, concrete pit built in 1983, in the southeast corner of the clearing was used to contain liquids for the fire training exercises. The pit was approximately 80 feet in diameter and was located about 500 feet north and 800 feet west of the facility south gate. During the 2008 removal action, the pit was removed. A 1,000-gallon, steel, above-ground, fuel storage tank, located approximately 75 feet north of the training pit was used to store fuels. This tank was removed in 1996. A 6,000 gallon fuel storage tank was located north of the training area prior to 1982. Little information is available on the 6,000-gallon storage tank, other than it was likely an aboveground tank located north of the concrete pit and is no longer present at this site (Tetra Tech, 2005a).

Site 6A-Fuel Calibration Area

Site 6A is located in Parcel B1 near the south-central portion of the former NWIRP Calverton facility, approximately 2,000 feet north of River Road and 1,500 feet west of the southern gate. Site 6A and related facilities were used in the testing of aircraft fuel and engine systems, which may have resulted in frequent, small fuel spills onto the area's pavement. Minor maintenance and repairs to the fuel and

engine systems were also conducted at the site, and solvents were used during these activities and were likely spilled during their use.

Site 6A consists of new and old fuel calibration pads (Figure 2-1). The old fuel calibration pad was located in what is now an open, grass-covered field in an area now partially covered by a wastewater treatment facility. No physical evidence exists of the old calibration area. The new fuel calibration pad is located north and east of the old calibration pad on a concrete apron. The concrete apron between the two fuel calibration pads was also used for the same activities. A shed, piping and fuel-filtering devices were located in the area in the 1980s. The equipment was likely removed in the 1980's (Tetra Tech, 2007a).

Former underground storage tanks (USTs) located near the old fuel calibration pad (south of Building 231), were removed in the early 1990s by Northrop Grumman.

Site 10B – Engine Test House

Site 10B is located approximately 1,000 feet south of Site 6A in Parcel B1. The area consisted of a building and surrounding pad. The building and a portion of the pad was removed during the 2009/2010 remedial action. To the north, east and south are sparse woods and to the west are open grassy areas. A drainage swale and culvert from Site 6A runs adjacent to and hydraulically up gradient of Site 10B. Groundwater from Site 6A can enter this swale and flow past Site 10B. Also, from the late 1980s to the early 1990s, groundwater from Site 6A was discharged into this drainage swale and culvert (Tetra Tech, 2007a).

Fuel-type contamination was found in the area of a former UST that was removed in the mid-1990s. Approximately 80 cubic yards (CY) of fuel-contaminated soil were excavated during removal of the UST. The excavation did not continue under the concrete pad at Site 10B.

Southern Area

The Southern Area is located southeast of Site 10B and extends to the Peconic River. This area was originally investigated because chlorinated solvents were detected in a Suffolk County monitoring well down gradient of the facility. There are no known or suspected contaminant sources within this area. However, the area is hydraulically down gradient of Site 6A, Site 10B, and the general NWIRP industrial complex. The groundwater flow direction through this area is southeast toward the Peconic River. The Peconic River is the likely end point for groundwater flow from this area.

The area is mostly wooded and includes two shallow ponds near the northern edge. The ponds receive runoff through a drainage swale and culvert from Site 6A. From the late 1980s to the early 1990s, groundwater from Site 6A was discharged into this drainage swale and culvert and into the western pond. As a result, the presence of chlorinated solvents in groundwater at the Southern Area may be attributable to Site 6A (Tetra Tech, 2007a).

The PRSC is located in the Southern Area. Water supply wells on the PRSC are classified as a Non-Community Public Water Supply under Part 5 Sub Part 5-1 of the New York State Sanitary Code.

2.1.2 Environmental Investigation History

Site 2-Fire Training Area

In 1982 and 1983, two spills of waste oil were reported at the Fire Rescue Training Area. As a result of the 1982 spill, the entire Fire Rescue Training Area was upgraded. Concrete berms were installed to contain the oil and water used in the training exercises. Piping in the area was modified to prevent spills (Naval Energy and Environmental support activity [NEESA], 1986).

Marine Pollution Control (MPC) of Calverton, New York removed 327 CY of contaminated soil in 1982 because of the spill that occurred in August 1982 from the 6,000-gallon storage tank. In addition, four groundwater monitoring wells were installed in the spill area. Following the second spill of approximately 300 gallons in 1983, seven additional monitoring wells were installed by MPC to monitor potential contamination resulting from the spills (Tetra Tech, 2005a).

A groundwater recovery well and oil-water separation system was installed at the Fire Training Area in December 1987. The system used a pumping well, an oil recovery well, and an oil/water separation tank (Halliburton [HNUS], 1992). This system consisted both of an active and a passive free product recovery system. The active recovery system included a groundwater pumping well, an oil recovery well, and an oil/water separator tank. The passive recovery system consisted of hydrophobic filters located in shallow wells. The active recovery system was shut down in 1993. Passive free product recovery continued until 1996. By December 1996, approximately 325 gallons of petroleum product had been removed from this site (Tetra Tech, 2005a).

In 1987, sampling activities at the Fire Training Area consisted of collecting 15 soil samples at five soil boring locations, six groundwater samples, and free product samples due to its presence in two of the monitoring wells. Each of the samples were analyzed for Target Compound List (TCL) volatile VOCs,

semi volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, cyanide (CN), polychlorinated biphenyls (PCBs), and pesticides.

Results of the soil boring samples indicated significant contamination by VOCs, SVOCs, PCBs, and pesticides. Contamination by inorganic parameters was limited. Volatile and semi volatile organic tentatively identified compounds (TICs) were identified in all soil-boring samples

Groundwater monitoring results from the six monitoring wells indicated the presence of significant contamination by VOCs, SVOCs, and inorganic compounds.

The results of the chemical analysis of the free product layer found in two of the monitoring wells indicated that significant concentrations of chlorinated VOCs were present. A limited number of significant TICs were identified.

In 1994 and 1995, a RCRA investigation was conducted (HNUS, 1995). Two rounds of groundwater samples were collected and analyzed for TCL VOCs, SVOCs, pesticide/PCB organic compounds, TAL metals/CN, and hexavalent chromium.

VOCs were detected at relatively high concentrations in Site 2 soil. The fire-training pit was the most likely primary source area. VOCs detected in soil included solvents and fuel-related contaminants. Solvents detected included 2-butanone (5,900 micrograms per kilogram [µg/kg]), chloroethane [CE] (330 µg/kg), dichlorobenzene (900 µg/kg), tetrachloroethene (PCE) (470 µg/kg), and 1,1,1-trichloroethane [TCA] (9,900 µg/kg). Fuel-related contaminants detected include ethylbenzene (3,700 µg/kg), toluene (6,100 µg/kg), and xylenes (85,000 µg/kg).

Groundwater testing results during the RCRA Facility Investigation (RFI) exhibited VOCs at concentrations above federal Maximum Contaminant Levels (MCLs) or New York groundwater quality standards: CE (1,100 micrograms per liter [µg/L]), 1, 1-dichloroethane (DCA) (1,200 µg/L), toluene (320 µg/L), TCA (140 µg/L), and xylenes (230 µg/L).

A pilot-scale air sparging/soil vapor extraction (AS/SVE) system started operation in 1995 to address the contamination. By June 1997, the maximum detected chlorinated VOC concentration was 78 µg/L (1, 2-dichloroethene) and the maximum detected fuel-related concentration for xylenes was 91 µg/L. The state groundwater standard for most VOCs is 5 µg/L. PCBs (18 µg/L), polynuclear aromatic hydrocarbons (PAHs) (3 µg/L), and lead (30.8 µg/L) were detected at concentrations above federal MCLs or state groundwater quality standards. Phthalates and pesticides were detected at concentrations below these standards in several monitoring well samples. Based on the similarity between chemicals found in Site 2 soil and groundwater, it is likely that soil contaminants have affected groundwater.

By 2000, approximately 80 pounds of target VOCs were removed. In addition, an estimated 30,000 pounds of organics had been destroyed through biodegradation. VOC concentrations in soil and groundwater had been reduced by approximately 70 to 95 percent.

In 1997, a Phase 2 Remedial Investigation (RI) was conducted (Tetra Tech, 2001). Four on-site and four off-site temporary monitoring wells were installed. Groundwater samples were collected from various depths at each location and analyzed for VOCs. In addition, one shallow and one intermediate monitoring well were installed. Two rounds of groundwater samples were collected from the monitoring wells and analyzed for VOCs. The results of the sampling indicated that the nature and extent of groundwater contamination had been defined, and there were no remaining data gaps.

The Navy conducted an Engineering Evaluation/Cost Analysis (EE/CA) in 1998 for several sites at NWIRP Calverton, including Site 2 (Tetra Tech, 1998). The analysis recommended that free product recovery be restarted at Site 2. Groundwater extraction tests were conducted in 1999 in anticipation of a new free product recovery system (vapor-assisted oil skimming). However, based on subsequent field-testing, several interferences were noted that impacted the ability to successfully extract and treat the groundwater. An alternate recommendation was made to recover product using passive techniques (i.e. absorbent pillows).

In May 2005, three surface water samples were collected from water located within the concrete pit. The samples were submitted for laboratory analysis. The purpose of the sampling was to determine if standing water inside the concrete pit could be discharged onsite. Results from the sampling indicated that no contamination was present in the water (Tetra Tech, 2005b).

In 2005, five surface soil locations were sampled and analyzed for total petroleum hydrocarbons (TPH) - diesel range organics (DRO), TPH- gasoline range organics (GRO), PAHs, pesticides, PCBs, and inorganics. There were eleven exceedances of PAHs [benzo(a)anthracene, benzo(a)pyrene; benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrenej], one PCB (Aroclor-1248) exceedance, and five exceedances of four metals (beryllium, calcium, manganese, and sodium) compared to screening levels.

In addition, thirty-eight soil borings were advanced during the field investigation. A total of twenty-nine samples were collected from twenty borings from depths ranging from 2 to 16 feet below ground surface (bgs) and submitted for laboratory analysis of VOCs, PAHs, PCBs, pesticides, metals, and TPH -DRO and GRO. Of the twenty-nine soil boring samples, there were 13 screening level exceedances of TPH-DRO. In addition, there were thirteen exceedances of four PAHs [benzo(a)anthracene, benzo(a)pyrene,

chrysene, and dibenzo(a,h)anthracene] in seven soil boring samples. There were no Technical and Administrative Guidance Memorandum (TAGM) 4046 exceedances of VOCs or PCBs in the twenty-nine soil boring samples. Excluding essential nutrients such as calcium, magnesium, potassium, and sodium, there were three exceedances of beryllium (Tetra Tech, 2005b). Most of the samples had detectable concentrations of metals, PAHs, and pesticides, but not at concentrations greater than TAGM 4046.

In January 2008, sixteen monitoring wells were sampled and analyzed for TCL and additional Suffolk County Department of Health Service (SCDHS) VOCs, and methane, ethane, and ethane (MEE). Twenty-one VOCs were detected in ten of the sixteen monitoring wells sampled. Of the ten monitoring wells that contained detectable limits of VOCs, only four contained VOCs at concentrations that exceeded (New York State Department of Health) NYSDOH MCLs. These four wells (monitoring wells FT-MW-02S, FT-PZT1, FT-PZT2, and FT-PZT3) are associated with the Fire Training Ring area, and in particular, an area in which free product had been identified. Ethylbenzene (36 µg/L), toluene (130 µg/L), total xylenes (300 µg/L), DCA (55 µg/L), 1,2-dichlorobenzene (48 µg/L), isopropylbenzene (13 µg/L), and vinyl chloride (20 µg/L) were detected above NYSDOH MCLs in these wells. In addition several other VOCs were also detected above NYSDOH MCLs, however, not consistently. These VOCs consisted of 1,1-dichloroethene (DCE) (9 µg/L), 1,2- dichlorobenzene (14 µg/L), chlorobenzene (5 µg/L), cis-1,2-dichloroethene (5 µg/L), and Chloromethane (13 µg/L). Laboratory results from MEE analysis indicated that only methane was detected in seven wells at a maximum concentration of 9,800 µg/L (Tetra Tech, 2008a).

From October 2008 to June 2009, a removal action was conducted to remove contaminated soil, the AS/SVE system, and the 80-foot concrete circular concrete pad. During the removal action, 10,860 tons of shallow petroleum contaminated soil (excavated to 6 ft bgs) and 546 tons of surficial coal (excavated to 2 ft bgs, northern portion of excavation contained PCBs) were excavated and disposed of offsite. In addition, the AS/SVE system was demolished, which included the abandonment of sixteen air injection wells, thirty-two air extraction wells, and twenty free product monitoring wells, as well as the removal of all piping, electrical lines, fuse boxes, and a moisture separator. Following excavation, 1,100 pounds of calcium oxyhydroxide (Regenesis® ORC [Oxygen Release Compound] Advanced) was applied to the excavation floor. The pit was then backfilled with clean fill, regraded, and vegetated.

In September 2009, thirteen monitoring wells were sampled analyzed for VOCs at Site 2. In addition, monitoring wells FT-MW-02S, 02I, 05S, and 05I were also analyzed for MEE. Fifteen VOCs were detected in four of the thirteen monitoring wells sampled. Of the four monitoring wells that contained detectable concentrations of VOCs, only one monitoring well, FT-MW-02S, contained VOCs (DCA, 1,2-dichlorobenzene, ethylbenzene, isopropylbenzene, and total xylenes) at concentrations equal to or

greater than the NYSDOH MCL of 5 µg/L. In addition, methane was detected in FT-MW-02S and FT-MW-05S (Tetra Tech, 2010).

In September 2010, 13 monitoring wells were sampled at Site 2 during the annual sampling event. Seventeen VOCs were detected in six of the thirteen monitoring wells sampled. Of the monitoring wells that contained detectable concentrations of VOCs, only one monitoring well, FT-MW02S, contained VOCs (DCA, ethylbenzene, m+p xylenes, o-xylene, and total xylenes) at concentrations equal to or greater than the NYSDOH MCL of 5 µg/L.

Site 6A - Fuel Calibration Area

Site 6A was investigated during the RFI (HNUS, 1995a), EE/CA for Sites 2, 6A, 7, and 10B (Tetra Tech, 1998), Phase 2 RI and Supplemental Groundwater Investigation (Tetra Tech, 2001), Site 6A and Southern Area Supplemental Investigation (Tetra Tech, 2005), a Site 6A Data Gap Investigation (Tetra Tech, 2006), and a Data Summary Report for Sites 6A, 10B, and Southern Area (Tetra Tech, 2008b). Soil data was collected during the RFI and data gap investigation; groundwater data was collected during all phases of investigation; and free product data was collected during the EE/CA.

The results of the RFI indicated the presence of VOCs at relatively low to moderate concentrations in Site 6A soils. The RFI also revealed that petroleum free product remains at the site and formed a smear zone in the vadose zone soils.

The January 2006 data gap investigation was performed to further define the extent of Site 6A petroleum and PCB contaminated soils. The results of this investigation more accurately defined the extent of Site 6A VOC and petroleum contamination. Additionally, this investigation adequately defined the extent of PCB contaminated soil within the area of VOC and petroleum contaminated soil at Site 6A.

Chlorinated solvents and fuel-type Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX) and VOCs have been consistently detected in Site 6A groundwater; however, concentrations have decreased significantly between 1994 and 2005. VOC concentrations in 1994 [TCA (15,000 µg/L), DCA (5,800 µg/L), CE (430 µg/L), toluene (330 µg/L), and xylenes (780 µg/L)] were approximately one to three orders of magnitude greater than concentrations detected in 2005 [TCA (12 µg/L), DCA (29 µg/L), CE (20 µg/L), toluene (3.8 µg/L), and xylenes (17 µg/L)]. Other chlorinated VOCs such as 1,2-dichloroethene (18.4 µg/L), PCE (1.8 µg/L), and trichloroethene (TCE) (4.04 µg/L) were detected in temporary wells sampled during the RFI in 1994; however, they have not been detected in permanent wells subsequently installed and sampled at the site.

Four SVOCs, including 1,2-dichlorobenzene (9 µg/L), 2-methylnaphthalene (74 µg/L), 4-methylphenol (84 µg/L), and naphthalene (120 µg/L), were detected in Site 6A groundwater during the 1995 RFI. The maximum concentrations of these SVOCs exceeded NYSDEC groundwater quality criteria.

VOCs detected in groundwater samples collected in 1997, 2000, and 2005 at concentrations greater than NYSDEC groundwater quality criteria included TCA, DCA, DCE, benzene, CE, ethylbenzene, toluene, and xylenes. VOCs detected in groundwater samples collected in 1997, 2000, and 2005 at concentrations less than NYSDEC groundwater quality criteria include 1,1,2-trichlorotrifluoroethane (Freon 113), 1,2-dichlorobenzene, PCE, and trans-1,2-dichloroethene. It should be noted that 1,2-dichlorobenzene was classified by the United States Environmental Protection Agency (USEPA) as an SVOC during previous sampling activities, but it is now classified as a VOC.

The area of the groundwater contamination in 1997 was approximately 100,000 square feet. The highest concentrations of contamination have typically been detected in the top 10 feet of the aquifer; however, contamination has been detected as deep as 52 feet bgs or approximately 47 feet below the water table. The total thickness of the water table aquifer is approximately 57 feet at Site 6A.

Free product recovery was an ongoing NGC operation at Site 6A until 1996. Approximately 1,900 gallons of petroleum product were recovered by the operation. Monitoring of free product thickness at Site 6A was performed in 1990, 1991, August 1995 through February 1996, November 1997, and March, April, and August 1998.

During the 2006 Data Gap Investigation soil borings were advanced using direct push technology (DPT) to more accurately define the extent of VOC and petroleum-contaminated soils. The soil cuttings were also inspected for the presence of free product. Using the available information, the free product remaining at Site 6A in 2006 was approximately 45,800 pounds, or the equivalent of 6,100 gallons. Based on this estimate, about 31 percent of the free product (1,900 of 6,100 gallons) was removed during previous efforts and approximately 69 percent remained at the site. The remaining free product is mostly adsorbed on site soils in a smear zone and is not directly recoverable as a liquid.

In January 2008, a total of twelve groundwater samples were collected at Site 6A and analyzed for VOCs and SVOCs. SVOCs were not detected in any of the monitoring wells. Eight VOCs were detected in four of the twelve monitoring wells sampled. Of the four monitoring wells that contained detectable concentrations of VOCs, only one well (FC-MW-05S) contained a VOC, CE at a concentration of 5 µg/L, equal to the NYSDOH MCL. Chloroethane was also detected in FC-MW-02S and FC-MW-07S. DCA (a primary Southern Area VOC) was detected in two wells (FC-MW-02S and FC-MW-05S). Methylcychlohexane, toluene, and xylenes were also detected in FC-MW-02S (Tetra Tech, 2008c).

Since SVOCs were not detected in the previous sampling event, the twelve groundwater samples collected in August 2008 at Site 6A were analyzed for VOCs. Similar to the January sampling event, eight VOCs were detected in four of the twelve monitoring wells sampled. Monitoring well (FC-MW-05S) contained CE at 5 µg/L, which is equal to the NYSDOH MCL. CE was also detected in FC-MW-02S and FC-MW-07S. DCA (a primary Southern Area VOC) was detected in two wells (FC-MW-02S and FC-MW-05S). Methylcychlohexane, toluene, and xylenes were also detected in FC-MW-02S (Tetra Tech, 2008d).

In September 2009, ten monitoring wells were sampled and analyzed for VOCs at Site 6A. In addition, monitoring wells FC-MW-04S, 04I, 05S, and 05I were also analyzed for MEE. VOCs were not detected in the monitoring wells sampled at Site 6A in 2009. FC-MW-02S, 02I, and 03S which were abandoned during excavation activities at Site 6A were not sampled during the 2009 sampling event. Methane was detected in FC-MW-04S and FC-MW-04I.

In 2009 and 2010, a remedial action to remove PCB and petroleum contaminated soil took place at Site 6A. The total excavation volume was 21,000 tons, of which approximately 498 tons were PCB-contaminated, 2,888 tons was solvent/petroleum contaminated, and 17,690 tons was petroleum contaminated. In addition, approximately 5,200 pounds of calcium oxyhydroxide was applied to promote biodegradation of residual contamination. After the excavation was completed, three wells in the excavation area that were abandoned were reinstalled as FC-MW02SR1, FC-MW02IR1, and FC-MW03SR1.

In September 2010, 13 monitoring wells were sampled at Site 6A during the annual sampling event. The groundwater samples were analyzed for VOCs and monitoring wells FC-MW02SR1, MW02IR1, MW03SR1, MW05S, and MW05I were also analyzed for MEE. Monitoring wells FC-MW02S, MW02I, and MW03S were abandoned during excavation activities at Site 6A in 2009 and were reinstalled in 2010 and sampled as FC-MW02SR1, MW02IR1, and MW03SR1. Fifteen VOCs were detected in the monitoring wells sampled at Site 6A. Of the monitoring wells that contained detectable concentrations of VOCs, three monitoring wells, FC-MW02SR1, MW03SR1, and MW05S, contained one or more VOCs (DCA, 2-butanone, ethylbenzene, m+p xylenes, o-xylene, and total xylenes) at concentrations equal to or greater than the NYSDOH MCL of 5 µg/L.

Site 10B - Engine Test House

Site 10B was investigated during the Phase 2 RFI (CF Braun, 1998), EE/CA for Sites 2, 6A, 7, and 10B (Tetra Tech, 1998), a Phase 2 RI and Supplemental Groundwater Investigation (Tetra Tech, 2001), and a Data Summary Report for Sites 6A, 10B, and Southern Area (Tetra Tech, 2008c). Soil samples were

collected during the RFI, groundwater data were collected during the RI and the Supplemental Groundwater Investigation, and free product data were collected for the EE/CA.

In 1997, 10 soil samples were collected at Site 10B from the soil/groundwater interface and analyzed for TPH-DRO, and GRO. Two samples contained TPH-DRO at concentrations of 7,700 milligrams per kilogram (mg/kg) and 8,500 mg/kg, respectively. NYSDEC does not have a criterion for TPH-DRO; however, these concentrations indicate that there are relatively high amounts of organic (fuel-related) contamination in the soil at these locations and that free product may still be present.

Prior to the 2008 Investigation, Site 10B was last investigated in 1997 by installing and sampling 16 temporary monitoring wells. Fuel-type VOCs were detected at concentrations greater than NYSDEC groundwater quality criteria in four monitoring well samples. The fuel-type compounds detected included benzene (maximum detection of 1.95 µg/L), ethylbenzene (maximum detection of 1,084 µg/L), toluene (maximum concentration of 337 µg/L), and xylenes (maximum concentration of 196 µg/L). Other temporary monitoring wells at Site 10B did not exhibit evidence of significant fuel-type VOC contamination.

The fuel-type VOC contamination was generally detected within the top 20 feet of the water table aquifer. Fuel-type contamination was also sporadically detected at low concentrations (less than 5 µg/L) at greater depths, but this contamination may be attributable to Site 6A.

Monitoring of free product thickness at Site 10B was performed several times from August 1995 through January 1996, and approximately three more times in March, April, and August 1998. Although TPH concentrations detected in soil samples collected at the soil/groundwater interface suggested that free product may be present, measurable free product was not observed during the 1995/1996 field activity and only a slight sheen was observed in two wells in March 1998. No product was able to be collected for analysis. The remaining free product is mostly adsorbed on site soils in a smear zone and is not directly recoverable as a liquid.

In 2008, two rounds of sampling including three groundwater samples were collected at Site 10B and analyzed for VOCs. TCA at 0.4 µg/L was the only VOC detected (Tetra Tech, 2008c and d).

From December 2008 to July 2009, a remedial action was conducted at Site 10B. Approximately 2,700 CY of soil was excavated to a depth of 8.0 feet bgs at the water table. Confirmation sampling was conducted and found clean side wall samples, except for portions of the southeastern sidewall, where additional excavations took place. After excavation, 1,900 lbs of dry form PermeOX Plus™ was applied to the excavation floor. The excavation area was backfilled with clean fill (AGVIQ/CH2MHill, 2009).

In September 2009 and September 2010 groundwater samples were collected from monitoring wells ET-MW-01S, 02S, and 03S at Site 10B. Groundwater samples were analyzed for VOCs. VOCs were not detected in the groundwater samples collected during the 2009 and 2010 sampling events.

Southern Area

Prior to the September 2011 groundwater sampling activities, investigations were conducted in 1997, 2000, 2004/2005, 2006, 2008, 2009, 2010, and March 2011. Groundwater samples were collected from temporary wells, monitoring wells, piezometers, and vertical profile borings during these investigations and sampling events. Surface water and sediments samples were also collected from the Peconic River during the 2004/2005, 2006, 2008, 2009, 2010, and March 2011 sampling events.

The groundwater contamination in the Southern Area consists mainly of the chlorinated solvent, TCA, and its associated breakdown products DCA, DCE, and CE. The contamination is believed to be associated with Site 6A, since the majority of the other potential sources areas have been excluded. The contamination is believed to have resulted from either intermittent releases at Sites 6A or from potential overland migration through a series of ditches and ponds in the area. The Southern Area includes VOC contamination in groundwater from Sites 6A to the Peconic River (see Figure 2-1). DCA is the dominant chemical representing approximately 80 percent of the total VOCs present. Other VOCs including benzene, toluene, ethylbenzene, xylene, freon, and chloroform are periodically identified in the groundwater, but do not appear to form a plume.

In 1974, SCDHS installed a groundwater monitoring well in the Southern Area, near River Road. Between 1977 and 1993, TCA was detected in seven of seventeen samples, with the maximum reported concentration of 120 µg/L in October 1980.

Northrop Grumman operated a free product recovery system at Site 6A. An investigation of this system from 1988 to 1992 found chlorinated VOCs in the discharge including TCA at 220 µg/L, DCA at 250 µg/L, and CE at 77 µg/L. The discharge was directed to a series of ditches, culverts, and ponds into the Southern Area.

From 1992 to 1995 the Site 6A RFI and addendum identified chlorinated solvents in the groundwater at Site 6A. Chlorinated VOCs detected consisted of TCA at 15,000 µg/L, DCA at 5,800 µg/L, and CE at 430 µg/L. The investigation did not find evidence that the plume at Site 6A had migrated beyond the immediate vicinity of Site 6A, (HNUS, 1995a, HNUS 1995b, and Tetra Tech 2001).

The Navy conducted a series of groundwater investigations in the Southern Area from 1997 to 2001. The investigations included sampling and analysis of groundwater in the Southern Area via temporary monitoring wells and a flow net study was conducted for the Peconic River (Tetra Tech, 2001).

- In 1997, nine vertical profile borings were installed in onsite and offsite portions of the Southern Area. Samples were collected at depths up to 80 feet bgs. Sample locations were north of River Road/Grumman Boulevard and along Connecticut Avenue. DCA was detected at a maximum concentration of 31 µg/L north of River Road, near the location of SA-MW-127. Contamination in this area is limited to less than 60 feet bgs.
- In 2000, four vertical profile borings were installed on Connecticut Avenue, River Road (southern extension), and PRSC property. DCA was detected at a maximum concentration of 130 µg/L on PRSC property at a depth of 95 feet bgs.
- In 2000, a flow net study was conducted for the Peconic River to a depth of 80 feet bgs. The study concluded that groundwater to a depth of 80 feet flowed into the Peconic River. In addition, DCA was detected at a maximum concentration of 220 µg/L near the intersection of Connecticut Avenue and River Road.

The Navy conducted additional investigations in the Southern Area in 2005. The investigations included sampling and analysis of groundwater in the Southern Area via temporary monitoring wells and piezometers, a flow net study for the Peconic River, and the collection of surface water samples (Tetra Tech, 2005).

- Comparison of temporary monitoring well sample results with piezometer/monitoring well results determined that in some locations with an aquitard, a vertical gradient could result in the false positive detections of VOCs at depth.
- DCA was detected at a concentration of 292 µg/L at a depth of 92 feet bgs in a vertical profile boring on the PRSC property and 125 µg/L in a piezometer (monitoring well) on Connecticut Avenue. Piezometers (monitoring wells) constructed near the Peconic River did not detect VOCs.
- Based on groundwater flow direction, the Navy attempted to install piezometers (monitoring wells) near the Peconic River. However, access was determined not to be feasible for a drilling rig downstream of Connecticut Avenue.
- Surface water samples did not detect VOCs.
- Flow net study determined that groundwater to a depth of 130 feet bgs flowed into the River.

From 2005 to 2006, the Navy prepared a Corrective Measures Study to address VOC contaminated groundwater. In addition, piezometers were installed near the Peconic River in areas of suspected

discharge; DCA was detected at 38 µg/L in one of the piezometers. Surface water and sediment samples were collected in the Peconic River and DCA was detected in one sample at a concentration of 0.5 µg/L in one of the four samples (Tetra Tech, 2006).

The Navy installed permanent monitoring wells along River Road/Grumman Boulevard and Connecticut Avenue between 2007 and 2008. The monitoring wells allowed groundwater flow directions to be determined, and supported the evaluation of contaminant migration. In addition, the Navy began quarterly sampling and analysis of groundwater wells on the PRSC (Tetra Tech, 2008c). Two rounds of groundwater, surface water, and sediment samples were collected in the Southern Area.

- DCA was detected at a maximum concentration of 470 µg/L in permanent monitoring wells located near the intersection of River Road and Grumman Boulevard.
- DCA was detected at a maximum concentration of 17 µg/L in a monitoring well located near the Peconic River. DCA was not previously detected in this well.
- DCA concentrations in a permanent monitoring well located on Connecticut Avenue decreased by approximately 50 percent between 2005 (125 µg/L) and 2008 (63 µg/L). DCA concentrations in a piezometer located just north of the Peconic River decreased by approximately 90 percent between 2006 (38 µg/L) and 2008 (4 µg/L).
- Site-related VOCs were not detected in four surface water and four sediment samples collected in the Peconic River.
- DCA was detected at a maximum concentration of 13 µg/L in one of four groundwater (potable water supply) wells located on PRSC. This well is treated with liquid phase granular activated carbon (GAC) and the treated effluent is below MCLs.

In 2009, a total of thirty groundwater samples were collected from permanent monitoring wells and a total of fifty-one groundwater samples were collected from seventeen temporary well locations. Groundwater samples were analyzed for VOCs and some of the monitoring wells were also analyzed for MEE. A total of eight surface water samples and eight sediment samples were collected in the Peconic River during the two rounds of sampling.

- Detections of TCA were found in six of the temporary wells and two of the permanent monitoring wells, with a maximum concentration of 280 µg/L.
- Detections of DCA were found in thirteen temporary wells and twelve of the permanent monitoring wells, with a maximum concentration of 1,200 µg/L.
- Detections of DCE were observed in six temporary wells and six permanent monitoring wells, with a maximum concentration of 55 µg/L.

- Detections of CE were observed in three temporary wells and one permanent monitoring well, with a maximum concentration of 91 µg/L.
- Ethane was detected in one monitoring well at 0.2 µg/L.
- Peconic River surface water samples did not have any detections while the sediment samples had only one detection of DCA with a concentration of 7.5 µg/kg. This detection was found in the March 2009 sampling event, but was not duplicated during the September 2009 event. DCA was detected at one of the two river piezometers in both the March and September event, of 4 µg/L and 17 µg/L respectively.
- DCE was detected at one of the two river piezometers at a concentration of 1.7 µg/L during the September event, but not in March.

Groundwater sampling, temporary well and piezometer installation, two pump tests, a biodegradation pilot study, and surface water/sediment sampling were conducted in 2010. Sampling of the permanent monitoring wells in the Southern Area was conducted in September 2010 and a temporary well installation/sampling event was conducted in December 2010. Additional piezometers were installed to fill in data gaps, both near the source area and downgradient, in March, June, July, and December 2010. The two pump tests were conducted in July 2010. The initial injection for the anaerobic Enhanced In-Situ Bioremediation Pilot Test (Bio-Study) was started in July 2010 and included periodic sampling and additional reinjections. The surface water/sediment sampling of the Peconic River occurred in July and September 2010. All samples were sampled for VOCs and select locations were sampled for MEE. To evaluate biodegradation, Bio-Study samples were also analyzed for nitrate/nitrite/sulfate/chloride, sulfide, total organic carbon (TOC), ferrous iron and manganese, dehalobacter (DHB), and dehalococcoides (DHC).

2.2 ENVIRONMENTAL SETTING

2.2.1 Topography and Drainage

NWIRP Calverton is located in an area underlain by permeable glacial material and characterized by limited surface water drainage features. Normal precipitation at the facility is expected to infiltrate rapidly into the soil. Wetland areas and both man-made and glacially formed lakes and ponds are located south and southwest of the facility. NWIRP Calverton occupies a relatively flat, intermorainal area. The topographic relief at NWIRP Calverton is 54 feet and elevations range from 30 to 84 feet above mean sea level (msl) (Tetra Tech, 2005).

2.2.2 Geology and Soils

NWIRP Calverton lies within the Atlantic Coastal Plain Physiographic Province. Generally, this region can be characterized as an area of relatively undissected low-lying plains. The Atlantic Coastal Plain is underlain by a thick sequence of unconsolidated deposits. The surface topography has been created or modified by Pleistocene glaciation (Isbister, 1966). The facility is underlain by approximately 1,300 feet of unconsolidated sediments that consist of four distinct geologic units. These units, in descending order, are the Upper Glacial Formation, the Magothy Formation, the Raritan Clay Member of the Raritan Formation, and the Lloyd Sand Member of the Raritan Formation (McClymonds and Franke, 1972).

Soil boring and sampling activities previously completed at NWIRP Calverton reveal that the sites are predominantly underlain by fine to coarse sediments of probable glacial fluvial origin. Three distinct lithofacies were encountered during previous field investigations. The upper lithofacies represent a mixture of soil, fill, and glacial deposits and consist predominantly of silty, fine-grained sand with varying amounts of peat and clay. Fill material, where present, is always associated with the upper lithofacies. The middle lithofacies consist of predominantly fine-grained sand with varying amounts of medium- to coarse-grained sand and pebbles, and are probably representative of undisturbed glacial deposits. The lower lithofacies consist of micaceous, silty clay and may represent the Magothy Formation.

Based on soil borings from 2010 an updated geologic cross section was generated. The plan view map identifying cross-section A-A' is presented as Figure 2-2. Cross section A-A' (Figure 2-3) starts at Site 6A-Fuel Calibration Area and runs to the southeast through Site 10B-Engine Test House, onsite Southern Area, offsite Southern Area, and the PRSC before proceeding south through the Peconic River. The cross section was drawn using lithology from boring logs (temporary and permanent monitoring wells) and geophysical logs (gamma logs). Emphasis was placed on the geophysical logs (where available) for lithologic contacts with verification of the contact information and lithologic descriptions based on the boring logs. As seen in Figure 2-3 most of the geological data was available in focused study areas of the groundwater plume.

Based on cross section A-A' (Figure 2-3), there is a fine to medium-grained sand down to approximately 50 feet bgs where a silty clay unit (aquitard) is encountered. This aquitard is about 25 feet thick at Site 6A and thins to the southeast, eventually pinching out between SA-PZ-145 and SA-MW-131. Beneath this silty clay unit is a thin silty fine to medium-grained sand with trace gravel followed by another thin silty clay unit that appears to be discontinuous across the area. Another fine to medium-grained sand is then encountered at depth and extends down to a deeper silty clay unit, which is interpreted to be continuous across the study area. Boring and gamma logs from the southeastern portion of the offsite Southern Area (SA-PZ-123 and SA-PZ-118) show that there is 100 feet of fine to medium-grained sand overlying a 10-foot thick silty clay layer.

The geologic units encountered within the study area appear to be generally flat, consistent with what would be expected for the glacial deposits on Long Island. The upper contact is believed to be an erosional surface and is expected to be flat to undulating, reflecting the former topography.

2.2.3 Surface Water and Hydrogeology

The majority of the facility; all of Sites 6A and 10B and the Southern Area are located within the Peconic River drainage basin. The north eastward-flowing Peconic River is located approximately 1,300 feet south of the facility at its closest point. The Peconic River discharges to Peconic Bay located 8.5 stream miles from the facility. Major surface water features near the facility include McKay Lake and Northeast Pond. McKay Lake is a man-made groundwater recharge basin located north of River Road, midway along the southern site border. Northeast Pond is located at the northeast corner of the facility. Several small drainage basins exist near Site 6A (Runway Ponds). All of these surface water features are land locked, with the exception of McKay Lake, which has an intermittent discharge to Swan Pond, located 1,500 feet to the south of NWIRP Calverton. Overhead flow from the drainage basins to the Peconic River may also occur periodically.

A number of small wetlands exist on the Calverton facility. The U.S. Department of the Interior (USDOI), Fish and Wildlife Department classifies the western half of the 2-acre Northeast Pond as palustrine, forested/scrub/shrub/emergent wetland. The drainage basins are classified as palustrine, scrub/shrub/emergent wetland (United Sates Department of Interior [USDOI], 1980).

The unconsolidated sediments that underlie NWIRP Calverton are generally coarse-grained with high porosities and permeabilities. These factors create aquifers with high yields and transmissivities. The Upper Glacial Formation, the Magothy Formation, and the Lloyd Sand are the major regional aquifers. The Upper Glacial and Magothy aquifers are of principle importance in Suffolk County because of their proximity to the ground surface. The Raritan Clay of the Raritan Formation has a very low permeability and acts as a regional confining layer that is believed to minimize the local risk of contamination to the underlying Lloyd Sand aquifer (McClymonds and Franke, 1972). The Lloyd Sand has not been extensively developed due to its depth and the abundant water available in the overlying aquifers. The Upper Glacial aquifer is widely used as a source of groundwater in Suffolk County. The water table beneath the NWIRP Calverton lies within this aquifer. Porosities in excess of 30 percent have been calculated for the Upper Glacial aquifer in adjoining Nassau County and the hydraulic conductivity is estimated at 270 feet per day (ft/day).

The Magothy aquifer is widely used as a source of groundwater in Suffolk County. The most productive units are coarser sand and gravel. The permeability of the Magothy is high and hydraulic conductivity has been calculated in excess of 70 ft/day.

The Upper Glacial and Magothy aquifers are believed to be hydraulically interconnected and to function as a single unconfined aquifer. Logs from on-site monitoring wells, previous hydrogeologic investigations, and geologic mapping indicate that although clay lenses that may create locally confining and/or perched conditions are present in both aquifers, these lenses are not widespread and do not function as regional aquitards (McClymonds and Franke, 1972; Fetter, 1976).

2.2.4 Groundwater Occurrence

Groundwater is encountered under unconfined conditions at shallow depths beneath NWIRP Calverton within the glacial deposits that form the uppermost hydrogeologic unit in the area. This shallow aquifer, commonly referred to as the upper glacial aquifer, extends to depths of approximately 14 to 150 feet bgs in the study area and is the aquifer of most concern in regards to groundwater quality issues related to the facility. The upper glacial aquifer is comprised primarily of highly permeable glacial outwash deposits, with till (unsorted mixtures of sand, silt, clay, and gravel) and glaciolacustirne clayey deposits. Geologic units observed at NWIRP Calverton are relatively flat with alternating units of sands and silts/clays.

At Site 6A - Fuel Calibration Area, groundwater monitoring wells screened within the upper glacial aquifer include the shallow and intermediate wells (designated with S and I, respectively). The shallow and intermediate wells are described as being located in the Upper Hydrogeologic Regime. In the Southern Area, groundwater monitoring wells screened within the upper glacial aquifer include the shallow and intermediate piezometers and monitoring wells (designated with S and I, respectively) and some of the deep wells and piezometers (designated D). These shallower wells are described as being in the Upper Hydrogeologic Regime.

The Upper Hydrogeologic Regime interacts directly with the Peconic River. Underlying the upper glacial aquifer is the Magothy aquifer that starts at approximately 140 to 150 feet bgs. This aquifer, comprised primarily of clayey fine to medium sand with minor silty clay horizons directly underlying the laterally extensive silty clay unit, is projected to be about 650 feet thick in north-central Suffolk County (including the NWIRP Calverton area), and is used regionally as a major source for water supplies.

Groundwater movement within the upper glacial and Magothy aquifers is primarily through the coarser-grained sediments towards local (i.e., wells, small streams) or regional (i.e., rivers) groundwater discharge points. Because of the expected low hydraulic conductivity of fine grained deposits in comparison to the

coarser sand/gravel deposits, local silt/clay lenses or the more extensive aquitard units are expected to serve as barriers to vertical groundwater migration.

Across the study area to the Peconic River, the water table was generally encountered within about 25 feet of ground surface (deepest at Site 2). Near the Peconic River, the depth to groundwater decreased to less than 10 feet from ground surface because groundwater (in general) appears to be discharging to the river in this area.

Groundwater Flow Directions

A local groundwater divide is believed to be present at NWIRP Calverton. Based on previously published information and on RFI data interpretations (HNUS, 1995a), the general direction of groundwater flow across the southern and eastern portions of NWIRP Calverton, including the study area, is east-southeast, towards the Peconic River, while groundwater in the northern portion of the facility flows northward towards Long Island Sound.

During the Phase 2 RI (Tetra Tech, 2001), a focused groundwater investigation was performed in the Southern Area to determine whether the Peconic River was the discharge point for the shallow groundwater migrating in this direction from the facility or whether some groundwater bypassed the river and migrated to areas further south. The study involved the installation of several well clusters on both sides and in the immediate vicinity of the river, the installation of two staff gauges in the river, and the collection of four rounds of water level data from the wells and staff gauges. Wells were screened to a maximum depth of approximately 80 feet bgs. Potentiometric surface interpretations based on water level data from the well clusters indicated that the river is the ultimate discharge point for groundwater to a depth of up to 80 feet bgs in this area.

In 1997, the Nature Conservancy - Long Island Chapter prepared several water table contour maps for the general Calverton area for shallowly screened wells (upper portions of the upper glacial aquifer). These maps indicated that the groundwater flow direction within the Southern Area is generally to the east-southeast, towards the Peconic River. An overall groundwater flow gradient across the study area of approximately 0.0012 was calculated based on the water table contour maps. This overall flow gradient was in good agreement with site-specific groundwater flow gradients observed during groundwater investigations.

Based on groundwater levels collected in September 2011 (Table 2-1) the potentiometric surface for the shallow wells in the western portion of the study area (Site 2-Fire Training Area) indicate groundwater flow is toward the southeast, with elevations ranging from 39 to 41 feet msl (Figure 2-4).

Figures 2-5 and 2-6 present the March and September 2011 groundwater elevations and potentiometric surfaces for the shallow wells from Site 6A, Site 10B, and the Southern Area. Based on this data, groundwater flow is toward the southeast from Site 6A toward the Peconic River, with groundwater elevations ranging from 39.50 (FC-MW08S) to 25.93 (SA-PZ118S) feet msl. During periods with heavier precipitation events, the groundwater flow direction is more to the south towards Donahue Pond on the PRSC property and during periods with fewer precipitation events, or more normalized conditions, groundwater flow shifts to the southeast and east due to the influence by the same water body. Donahue Pond is present due to a manmade earthen dam on the Peconic River. Groundwater likely flows under and around the earthen dam creating a localized disturbance from the typical flow.

The groundwater potentiometric surface map for intermediate (I) and deep (D) wells in the Southern Area were not provided in this report. The potentiometric surface contours for the intermediate zone generally mimicked the shallow contours and the deeper portion of the aquifer has shown consistent groundwater flow east-southeasterly towards the Peconic River. Where the aquitard unit is present in the Southern Area, a downward gradient has been observed across the aquitard. Analysis of vertical flow between the intermediate and deep wells at the SA-MW-127 well cluster has shown this downward vertical gradient. This gradient also suggests that the aquitard present beneath the northern portion of the study area plays a key role in limiting the vertical migration of contaminated groundwater, although the gradient is higher; the permeability is much lower between the two zones, resulting in an overall decrease in vertical groundwater velocity. Of particular interest is the discharge point for groundwater to a maximum depth of 130 feet msl, which is the maximum depth of contaminated groundwater in this area that was shown to discharge to the Peconic River.

Where the aquitard is not present (southeast portion of Southern Area) a slight upward gradient has been observed during groundwater monitoring, causing groundwater to flow up into the Peconic River. Analysis of vertical flow between the intermediate and deep wells at the well cluster SA-MW-131 displays this upward vertical gradient.

3.0 FIELD INVESTIGATION

3.1 FIELD AND SAMPLING ACTIVITIES

The groundwater investigation and monitoring activities conducted from November 2010 to November 2011 at Sites 2, 6A, 10B, and the Southern Area were performed as a continuance of the annual groundwater monitoring program, to further delineate the Southern Area groundwater plume, and to address data gaps in the current monitoring well network (Southern Area). The field and sampling activities included temporary well installation and sampling, monitoring well installation, sampling of new and existing monitoring wells, semi-annual surface water and sediment sampling in the Peconic River, and quarterly water supply well sampling at the PRSC. These activities were conducted to further evaluate site contaminants in groundwater; evaluate potential impacts of contaminated groundwater to downgradient receptors and support the Corrective Measures Study (CMS).

An Interim Data Summary (Tetra Tech, 2011b) was generated in June 2011 and summarized the fieldwork conducted from November 2010 to March 2011. The following subsections provide details on the groundwater investigation and monitoring activities, sampling locations, and type of samples that were collected from November 2010 through November 2011. Backup documentation included boring logs, well construction diagrams, and sample log sheets and is provided in the Appendices of this report.

3.1.1 Temporary Monitoring Well Installation/Sampling

In December 2010, additional temporary wells were advanced at Site 6A to further delineate the upgradient edge of the Southern Area groundwater plume. A total of twenty-three groundwater grab samples were collected at eight temporary well locations (SA-TW349-4145 and SA-TW358 through SA-TW364). Groundwater grab samples were collected at each temporary well location at various depths ranging from 11 to 45 feet bgs.

Prior to collecting groundwater samples, the top of the aquitard unit was confirmed at selected soil boring locations via macrocore soil sampling. The aquitard unit was observed at Site 6A at depths ranging from 50 to 60 feet bgs. During drilling, potable water was added to control flowing sands from entering the annulus of the rods as needed. Prior to sampling, the volume of water added during drilling was purged prior to sampling.

In June 2011, temporary wells were advanced in the area between Site 6A and the northern (onsite) portion of the Southern Area, north of the intersection of Grumman Boulevard and River Road. Forty-eight groundwater grab samples were collected at 16 temporary locations (SA-TW401 through SA-

TW416) (Figure 3-1). Temporary well locations consisted of two to four groundwater grab sample depths depending on the depth to groundwater and actual depth to the aquitard. Temporary well locations SA-TW401 through SA-TW407 were installed at Site 6A to further define the upgradient portion of the plume while SA-TW408 through SA-TW416 were installed in the Southern Area, north of the Grumman Boulevard and River Road intersection, to refine the plume boundary where potential seasonal fluctuations and suspect horizontal shifting may be occurring.

In October 2011, temporary wells were installed in the Southern Area as a continuation of the June temporary well program. Eighteen groundwater grab samples were collected from four locations (SA-TW417 through SA-TW420) along the patrol road, as shown in Figure 3-1.

In November 2011, additional temporary wells were installed in the Southern Area on Suffolk County Parklands property south of River Road and west of the PRSC access road to fill in observed data gaps. Twelve groundwater grab samples were collected from three locations (SA-TW365 through SA-TW367). Continuous soil borings were advanced to define actual depth to the aquitard and determine the groundwater grab sampling intervals. The depth to the aquitard ranged from 44 to 48.5 feet bgs, and the groundwater grab sampling intervals ranged from 14 to 46 feet bgs. Groundwater grab split-samples were collected by SCDHS at SA-TW365 and SA-TW367.

Groundwater grab sampling intervals ranged from approximately 11 to 52 feet bgs in the temporary wells installed in December 2010 and June, October, and November 2011. Depth to the aquitard at each location was estimated from previous soil borings or continuous soil borings were advanced to define the depth and determine sampling intervals. The aquitard had previously been observed in the northern portion of the Southern Area ranging from 40 to 60 feet bgs. The groundwater grab/temporary well locations are presented on Table 3-1, and the table includes soil boring locations and actual sampling depths for the groundwater grab samples. The temporary well locations can be found on Figure 3-1 and soil boring logs are presented in Appendix A.

Groundwater grab samples were collected from temporary wells installed via DPT rig using 4-foot long by 1-inch diameter stainless steel screen point samplers. A peristaltic pump was used to purge each temporary well for at least 10 minutes with a minimum volume of 2 gallons taken out to assure connectivity to the aquifer. The stainless steel screen point samplers were decontaminated with a steam pressure wash and/or Alconox soapy scrub and water rinse. All the samples were shipped via overnight courier to a fixed-based laboratory and analyzed for VOCs. Sample log sheets providing the details for the temporary well/groundwater grab samples collected from December 2010 to November 2011 are presented in Appendix B.

Quality Assurance/Quality Control (QA/QC) samples were collected during the sampling and included matrix spike/matrix spike duplicates (MS/MSD), field duplicates, field blanks, and rinsate blanks. The information was documented on QA sample log sheets, generated from December 2010 to November 2011, which can be found in Appendix C. The Chain of Custody (COC) forms from the December 2010 to November 2011 sampling events are presented in Appendix D.

3.1.2 Monitoring Well and Piezometer Installation

In December 2010, one monitoring well (FC-PZ05I1) was installed southeast of Site 6A (Figure 3-2) to fill a data gap observed during the temporary well program in September 2010 at this existing well cluster. The existing monitoring wells FC-MW05S and FC-MW05I are screened from 6-16 ft bgs and 48-58 ft bgs, respectively. Temporary well SA-TW348, located near this well cluster, exhibited concentrations of DCA at 1,500 µg/L from 21-25 feet bgs. Therefore, FC-MW05I1 was screened from 20-30 feet bgs to address this data gap and provide a permanent monitoring point for future sampling south of the 6A source area. A well construction summary for this piezometer is presented in Table 3-2. Soil Boring Logs can be found in Appendix A while the Well Construction Diagrams and Development Records are presented in Appendix E.

In June 2011, one piezometer was installed in the Southern Area, during groundwater investigation activities (Figure 3-3). This piezometer (SA-PZ-408) was installed in the Bio Study Area on June 10, 2011 to fill in an observed data gap. The piezometer was screened from 37 – 42 feet bgs in an area where the adjacent monitoring wells were screened either above or below the plume. A construction summary for this piezometer is presented in Table 3-3.

In November 2011, two piezometers (SA-PZ171 and SA-PZ172) were installed in the Southern Area on Suffolk County Parkland property south of River Road and west of PRSC access road to fill in observed data gaps. These piezometers were installed on November 16 and 17, 2011 and were screened from 41.5 – 46.5 feet bgs and 43.5 – 48.5 feet bgs, respectively, directly on top of the aquitard. Lithology was collected from soil borings advanced at each location.

The monitoring well and piezometers were installed using a DPT rig and constructed in a 3¼- inch diameter borehole. In order to control running sands, limited amounts of potable water was added as needed during the drilling. Soil cuttings were screened with a photoionization detector (PID) and visually inspected for signs of contamination. All offsite soil cuttings were containerized in 55-gallon drums and managed as solid investigation-derived waste (IDW).

The monitoring well and each piezometer was constructed using 1-inch diameter polyvinyl chloride (PVC) riser pipe and a 1-inch diameter 0.010-inch slot polyvinyl chloride (PVC) pre-packed well screen measuring 5-foot in length. A bentonite seal was placed above the screened interval and the remainder of the annular space was filled with bentonite/cement grout up to the ground surface. Monitoring wells and piezometers installed on Suffolk County property were fitted with a lockable steel protective casing. Each piezometer/monitoring well was developed by hand using a stainless steel foot valve and disposable poly tubing. Monitoring well construction summaries for the monitoring wells and piezometers are presented as Tables 3-2, 3-3, and 3-4. Soil Boring Logs can be found in Appendix A while the Construction Sheets and Development Records are presented in Appendix E.

3.1.3 Monitoring Well and Piezometer Sampling

Groundwater sampling was conducted at Sites 2, 6A, 10B, and the Southern Area in March and September 2011. Monitoring well construction details for Site 2 are presented on Table 3-4, the well construction details for Site 6A and 10B are presented as Table 3-2, and the Southern Area well details are presented on Table 3-3.

In March 2011, a facility wide groundwater sampling event was conducted at Sites 2, 6A, 10B, the Southern Area, and the Peconic River Area to help evaluate potential seasonal trends in groundwater. A total of 69 monitoring wells/piezometers were sampled including 13 monitoring wells at Site 2 (Figure 3-4), 14 monitoring wells at Site 6A (Figure 3-2), 3 monitoring wells at Site 10B (Figure 3-2), 19 monitoring wells and 16 piezometers in the Southern Area (Figure 3-3), and 4 piezometers in the Peconic River Area (Figure 3-3). All groundwater samples were analyzed for VOCs and select groundwater samples were also analyzed for MEE.

In June 2011, a temporary well/groundwater grab sampling event took place, which included the sampling of nine additional monitoring wells/piezometers (Figures 3-2, and 3-3). Three of these wells (FT-MW-05S, FT-MW-05I, and FT-PZ-05I1) are located at Site 6A while the remaining six wells (SA-PZ-133I, -133I1, -135I, -136I, -137I, and -139I) are located in the Southern Area. All groundwater samples were analyzed for VOCs.

In September 2011, another facility wide groundwater sampling event was conducted at Sites 2, 6A, 10B, the Southern Area, and the Peconic River. A total of 80 monitoring wells/piezometers were sampled including 13 monitoring wells at Site 2 (Figure 3-4), 14 monitoring wells at Site 6A (Figure 3-2), 3 monitoring wells at Site 10B (Figure 3-2), 28 monitoring wells and 18 piezometers in the Southern Area (Figure 3-3), and 4 piezometers in the Peconic River Area (Figure 3-3). All groundwater samples were analyzed for VOCs.

Groundwater samples were collected from the monitoring wells and piezometers using USEPA Region 3 low-flow (low-stress) purging and sampling techniques. Sampling occurred after field parameters stabilized and a minimum of three well screen volumes were purged. Field parameters including turbidity, dissolved oxygen, pH, specific conductance, and temperature were recorded during low-flow purging and sampling activities. D.O. and ferrous iron colorimetric field test kits were also used at select wells. Low-flow purge data sheets and groundwater sample log sheets for the samples collected from December 2010 to November 2011 can be found in Appendix F. All purge water was contained in 5-gallon buckets during sampling and later transferred to a 2,600 gallon polyethylene tank.

QA/QC samples were collected during the sampling events conducted from December 2010 to November 2011 and included MS/MSD, field duplicates, field blanks, and rinsate blanks. The sampling information was documented on QA sample log sheets, which are presented in Appendix C. The samples were recorded on a COC and stored on ice for preservation. All samples were shipped to Chemtech in Mountainside, NJ for VOC analysis and select samples for MEE analysis. The COC forms from the sampling events are provided in Appendix D.

On December 16, 2010, March 9, and September 27, 2011, groundwater levels were collected and recorded for site monitoring wells and are presented in Table 2-1. Groundwater level measurement sheets from December 2010, March 2011, and September 2011 can be found in Appendix G. In addition, groundwater levels from March and September 2011 were used to generate potentiometric surface maps for the shallow surficial aquifer and are presented as Figure 2-4, 2-5, and 2-6.

3.1.4 Peconic River Sportsman Club Sampling

During the November 2010 and February, April and June 2011 quarterly sampling events at the PRSC, water samples were collected from the four active water supply wells on PRSC property located south of Grumman Boulevard and west of Connecticut Avenue during each visit (Figure 3-3). Up to six samples were collected during each event to monitor the quality of groundwater in the supply wells and confirm effective treatment at the Activity Center supply well. The Activity Center supply well has an operating two-stage liquid phase GAC unit. Three treatment system samples were collected during each sampling event; one prior to treatment (CA-PRSC-02-01), one in between the first and second-unit carbon units (CA-PRSC-02-02) and another sample collected post treatment (CA-PRSC-02-03). Samples were also collected from the Main Lodge (CA-PRSC-01), a private residence (CA-PRSC-03), and the fire suppression system (CA-PRSC-04). During the June 2011 event, the fire suppression well was not running and CA-PRSC-04 was not collected. The water supply well at the Pistol Range trailer was not active during any these sampling events and therefore not sampled. All samples were analyzed for VOCs and COC forms for the sampling events are provided in Appendix D.

3.1.5 Survey

New monitoring wells, piezometers, and selected existing monitoring wells were surveyed by BANC3 Inc., a licensed New York surveyor, in December 2010. Vertical and horizontal measurements were collected and the survey results can be found in Appendix H.

3.1.6 Enhanced In-Situ Bioremediation Pilot Test

The Bio-Study was conducted in the onsite portion of the Southern Area, north of the intersection of River Road and Grumman Boulevard, and consisted of a periodic series of injections and sampling events. From December 2010 through November 2011, groundwater sampling events were conducted in December 2010, March 2011, and June 2011 and ethyl lactate injections occurred during March 2011 through April 2011.

Groundwater samples were collected from the associated piezometers/monitoring wells using low-flow (low-stress) purging and sampling techniques. Samples were collected after field parameters stabilized and a minimum of three well screen volumes were purged. Field parameters were recorded and used to determine stabilization during low-flow purging and sampling activities.

Field documentation, lab results, and a detailed discussion/evaluation of the sampling results can be found in the Enhanced In-Situ Bioremediation Pilot Test Data Summary Report (Tetra Tech, 2012).

3.1.7 Peconic River Sampling

The semi-annual sampling events were conducted in March and September 2011. Four surface water samples, four sediment samples, and four piezometers were collected along the river during each sampling event. These sample locations are located along the Peconic River from Connecticut Avenue to approximately 2,100 feet down river (Figure 3-3). This portion of the river represents the probable discharge area along the Peconic River for VOC-contaminated groundwater from the Southern Area Plume.

The surface water samples were collected at the northern edge of the sandy bottom portion of the stream at each location. Field parameters including temperature, conductivity, pH, dissolved oxygen (DO), and oxidation reduction potential (ORP) were recorded at each sampling location. The sediment samples were co-located with the surface water sample locations and collected from the fine grained silts or clays located in the upper six inches of the river bottom. Four piezometers located on the northside of the river were also sampled using a peristaltic pump and disposable polyethylene tubing. Each piezometer was

purged for at least 10 minutes while field parameters were recorded. All aqueous and sediment samples were analyzed for VOCs. Sample log sheets are presented in Appendix I.

3.2 FIELD OBSERVATIONS

The following summarizes some field observations made during the field activities conducted from November 2010 to November 2011.

- At Site 2, approximately 0.04 feet of floating free product was found in monitoring well FT-MW02S during September 2011.
- During the September 2011 sampling event FT-MW01S, FT-MW01I, and FT-MW03 could not be sampled due to unexploded ordnance (UXO) concerns, but they were sampled in October 2011 after access was cleared by a UXO technician.
- Several of the groundwater samples from temporary wells and piezometers were split with SCDHS in 2011. In addition to VOCs, SCDHS collected samples for metals (not field filtered), and inorganics (metals, nitrate, chloride, etc.).
- SA-PZ141 went dry during low flow purging and sampling.

4.0 ANALYTICAL RESULTS AND FINDINGS

4.1 INTRODUCTION

This section presents the results of the chemical analyses performed for water, groundwater, sediment, and surface water samples collected at NWIRP Calverton from November 2010 through November 2011. Samples collected during field sampling activities were shipped to CompuChem Environmental Testing Laboratories of Cary, North Carolina for analysis. Chain of Custodies that document sample collection can be found in Appendix D. All samples were analyzed for VOCs and select groundwater samples were analyzed for biodegradation indicators (i.e.,MEE). Laboratory analytical summary tables are presented in Appendix J and the validation summaries are provided in Appendix K.

Groundwater analytical results were screened against NYSDOH MCLs and federal MCLs. NYSDEC and Oak Ridge National Laboratory (ORNL) surface water and sediment values were used for screening surface water and sediment samples. Tables 4-1 (Site 2), 4-2 (Site 6A), 4-3 (Site 10B), 4-4 (Southern Area), 4-5 (Southern Area Temporary Wells), 4-6 (Peconic River surface water), 4-7 (Peconic River sediment), 4-8 (Peconic River Piezometers), and 4-9 (PRSC supply wells) present analytical summaries of VOC detections in samples. For comparison, analytical data from sampling conducted in 2008 through 2010 are also presented in these tables. Figures 4-1 (Site 2 monitoring wells), 4-2 (Site 6A and 10B monitoring wells), 4-3 (Southern Area Fence Line monitoring wells), 4-4 (Site 6A temporary monitoring wells), 4-5 (Fence Line/Offsite Low Concentration Southern Area temporary monitoring wells), 4-6 (Offsite Low Concentration Southern Area monitoring wells), 4-7 (Offsite High Concentration Southern Area monitoring wells), 4-8 (Peconic River piezometers, surface water, and sediment), and 4-9 (PRSC) present a summary of 2010 and 2011 detections. For additional historical VOC, results please refer to the figures in the 2010 Data Summary Report (Tetra Tech, 2011).

The primary chlorinated VOCs observed in the groundwater monitoring program at NWIRP Calverton consist of CE, DCA, DCE, PCE, and TCA while the primary non-chlorinated VOCs consist of benzene, ethylbenzene, isopropylbenzene, naphthalene, toluene, xylenes. Figure 4-10 presents the 2011 revised DCA isoconcentration contours for the Southern Area groundwater plume. The DCA isoconcentration map provides a graphical representation of the Southern Area groundwater plume. Other site-related chemicals of concern detected in Southern Area groundwater are found within the footprint of this DCA plume boundary.

4.2 Site 2-Fire Training Area Results

In March 2011 and September 2011, 13 monitoring wells were sampled at Site 2 during each groundwater sampling event. All groundwater samples were analyzed for VOCs and 6 monitoring wells were also analyzed for MEE during the March 2011 sampling event. Sixteen VOCs were detected in 6 of the 13 monitoring wells sampled during the March and September 2011 sampling events.

Of the VOC detections in the monitoring wells, FT-MW02S exceeded the NYSDOH MCL of 5 µg/L for TCE and xylenes, in March 2011. The detection of TCE at 12 µg/L was the first MCL exceedance of TCE since August 1994. This detection may have been the result of temporary mobilization of site contaminants during the excavation activities in 2009. During the September 2011 sampling event, TCE was below the NYSDOH MCLs. Evidence of 0.04 feet of floating free product was also observed at FT-MW02S in September 2011. Free product measurements at FT-MW02S have shown a decreasing trend from 0.1 feet in 2009, 0.07 feet in 2010, to 0.04 feet in 2011. Figure 4-1 presents the VOC exceedances and Table 4-1 presents the VOC detections at Site 2 since 2008.

	March 2011 FT-MW02S 10.5 – 20.5 ft bgs	**March 2011 D FT-MW02S 10.5 – 20.5 ft bgs**	**September 2011 FT-MW02S 10.5 – 20.5 ft bgs**	**September 2011 D FT-MW02S 10.5 – 20.5 ft bgs**
Volatile Organic Compounds (µg/l)				
Trichloroethene	**11**	**12**	ND	ND
m+p-xylenes	**7.8**	**7.6**	ND	ND
o-xylenes	**16**	**16**	3	2.8
Total xylenes	**24**	**24**	ND	ND

µg/L = micrograms per liter, ND = non detect, bgs = below ground surface, **BOLD values exceed NYSDOH MCLs**

Additional sampling of soils and groundwater at Site 2 was conducted in 2011 as a part of ongoing remedial investigation activities. These results will be presented under a separate cover.

4.3 Site 6A-Fuel Calibration Area Results

The results from previous investigations were used to select additional temporary well locations during the December 2010 and June 2011 investigations. The results are presented in Table 4-2 and Figure 4-2 and are discussed below. In addition, one new monitoring well (FC-PZ05I1) was installed in December 2010 and sampled in March 2011, June, 2011, and September 2011. Semi-annual groundwater monitoring was conducted in March 2011 and the annual groundwater monitoring event was conducted in September 2011. The results are presented in Table 4-2 and Figure 4-2 and are discussed below.

In December 2010, 24 groundwater grab samples were collected from 8 temporary monitoring well locations (SA-TW349 and SA-TW358 through SA-TW364) to address observed data gaps and further define the upgradient plume boundary near the Site 6A source area. Nineteen VOCs were detected in

these groundwater grab samples. TCA was detected in five of the samples with a maximum concentration of 17 µg/L in SA-TW362-1115, which was located just south of the former source area excavation. DCA was detected in five of the samples with a maximum concentration of 16 µg/L in SA-TW364-2125. DCE was only detected in one of the groundwater samples at 0.59 J µg/L (SA-TW364-3135). Chloroethane was detected in three of the groundwater samples with a maximum concentration of 9.9 µg/L observed in SA-TW364-2125. Petroleum constituents, ethylbenzene (120 µg/L), isopropylbenzene (53 µg/L), and naphthalene (210 µg/L), exceeded the NYSDOH MCLs in SA-TW364-2125. Temporary well SA-TW349 was advanced in September 2010 approximately 200 feet down gradient of the source area and MCL exceedances were observed in all three samples collected from 11 to 35 feet bgs. In December 2010, a deeper sample was collected at SA-TW349 from 41 to 45 feet bgs and no VOCs were detected.

In June 2011, 20 additional groundwater grab samples were collected from 7 temporary monitoring well locations (SA-TW401 to -TW407) and one piezometer (FC-PZ05I1) to better define the width of the plume in this area just downgradient of the Site 6A source area. Located on the western edge of the groundwater plume south of Site 6A, SA-TW404 and SA-TW406 showed concentrations of PCE (8.9 and 180 µg/L, respectively) exceeding the NYSDOH MCL at approximately 31 to 35 feet bgs. Groundwater grab samples were collected at similar depths to the west at SA-TW405 and SA-TW407. No VOCs were detected above MCLs and bounded these PCE detections to the west. As shown on Figure 4-2, detections of PCE have been observed periodically at FC-MW06S at concentrations ranging from 0.9 J to 12 µg/L. Figure 4-4 presents groundwater analytical exceedances and Table 4-5 provides an analytical summary of the detected compounds.

FC-PZ05I1 is located approximately 450 feet downgradient of the former Site 6A soil excavation. Based on temporary groundwater grab results in 2010, this well was installed in December 2010 due to the concentrations of VOCs detected in groundwater in this area and will be used for future groundwater monitoring of the source area.

In March 2011 and September 2011, all 14 monitoring wells at Site 6A were sampled. All of the groundwater samples were analyzed for VOCs and 6 monitoring wells were also analyzed for MEE during the March sampling event. Twenty-one VOCs were collectively detected in four monitoring wells sampled at Site 6A. Three monitoring wells, FC-MW02SR1, -MW03SR1, and -PZ05I1, contained two or more chlorinated VOCs and three or more non-chlorinated VOCs at concentrations equal or greater than the corresponding NYSDOH MCL (Figure 4-2 and Table 4-2).

FC-MW02SR1 and FC-MW03SR1 are located within the Site 6A, 2009/2010 soil excavation, while FC-PZ05I1, as mentioned above, is located approximately 450 feet downgradient of the soil excavation.

Chlorinated VOCs exceeded the NYSDOH MCL of 5 µg/L at FC-MW02SR1, in March 2011 and September 2011 with DCA detections of 16 to 14 µg/L, respectively. Chlorinated VOCs also exceeded the NYSDOH MCL at FC-MW03SR1 in September 2011 with DCA at 9.3 J µg/L and CE at 5 J µg/L. FC-PZ05I1 exhibited the highest VOC detections during the sampling events with concentrations ranging from 51 to 530 µg/L for TCA, 86 to 1,000 µg/L for DCA, 7.7 to 75 µg/L for DCE, and 31 to 250 J µg/L for CE. MCL exceedances for petroleum-related VOCs at FC-PZ05I1 included ethylbenzene at 26 J to 73 µg/L, and isopropylbenzene at 9.2 J to 38 µg/L.

4.4 Site 10B-Engine Test House Results

In March 2011 and September 2011, 3 monitoring wells were sampled at Site 10B. One VOC (chloromethane) was detected in ET-MW01S and ET-MW03S, but at concentrations below the NYSDOH MCL of 5 µg/L (Figure 4-2 and Table 4-3). Since 2008, no MCL exceedances have been observed at Site 10B (last six rounds of sampling).

4.5 Southern Area Results

For discussion purposes, the Southern Area has been split into four areas; the Fence Line Area, the Offsite High Concentration Area (greater than 500 µg/L), the Offsite Low Concentration Area (less than 500 µg/L), and the Peconic River Area (Figure 2-1). The Fence Line Area is characterized by monitoring wells located north of the Fence Line and below Site's 6A and 10B, with a focus on those monitoring points within the DCA isoconcentration contour depicted on Figure 4-3. The Offsite High Concentration Area (greater than 500 µg/L) is characterized by the 500 µg/L DCA isoconcentration contour line within the Southern Area plume (Figure 4-7). This area includes locations with current and/or previous DCA results approximately greater than or equal to 500 µg/L. The Offsite Low Concentration Area (less than 500 µg/L) is characterized by the 5 µg/L DCA isoconcentration contour line within the Southern Area plume (Figure 4-6). This area includes locations with current and/or previous DCA results that have not been observed at approximately greater than 500 µg/L. The Peconic River Area is characterized by monitoring points near and along the Peconic River (Figure 4-8) and includes the PRSC as shown on Figure 4-9.

4.5.1 Fence Line Area Results

In December 2010, March 2011, and September 2011, groundwater samples were collected from monitoring wells in the Fence Line Area downgradient from Site 6A and 10B. All of the groundwater samples were analyzed for VOCs and select monitoring wells were also sampled for MEE. A complete summary of detections are provided in Table 4-4 and the results are presented on Figure 4-3. Of the

observed VOC detections in these monitoring wells, 10 monitoring wells exhibited concentrations of chlorinated VOCs above NYSDOH MCLs. The highest VOC concentrations were observed in SA-PZ138I1, -PZ133I, -PZ133I1, and -PZ408. Monitoring well SA-PZ138I1 exhibited the highest VOC concentrations during the sample events with results ranging from 250 to 340 D µg/L for TCA, 1,100 to 1,200 D µg/L for DCA, 63 to 86 µg/L for DCE, and 150 to 320 µg/L for CE. During the March 2011 sampling event, non-chlorinated VOCs exceeded MCLs in only SA-PZ138I1, with 1,2,4-trichlorobenzene at 9.9 µg/L, 1,4-dichlorobenzene at 7.2 µg/L, and isopropyl benzene at 8.2 µg/L. The VOC results for SA-PZ138I1 are variable with no apparent analytical trend. In addition, SA-PZ133I1 and SA-PZ135 screened at approximately the same depth as SA-PZ138I have also exhibited fluctuating or varying VOC concentrations. Monitoring well SA-PZ133I has exhibited a decreasing trend in VOC concentrations.

Temporary wells were installed in the Fence line Area to address observed data gaps from prior sampling and also to provide additional delineation of VOCs in groundwater (Figure 4-5). In June 2011, a total of 48 groundwater samples were collected from 16 temporary monitoring well locations (SA-TW401 through 416) and one newly installed piezometer (SA-PZ408) and analyzed for VOCs. The groundwater grab sample collected from SA-TW408 (37 to 42 feet bgs), which was co-located with SA-PZ408, exhibited NYSDOH MCL exceedances of DCA (34 and 160 µg/L), CE (46 and 130 µg/L), and 1,4-dichlorobenzene (46 and 5.2 µg/L), respectively.

TCA, DCA, DCE, and CE exceeded the NYSDOH MCLs in groundwater grab samples collected from SA-TW409 through TW-416 during the June 2011 sampling event (Figure 4-5). These temporary well locations were advanced to evaluate a potential plume shift suspected in this area. Based on the elevated VOC concentrations observed in SA-TW416, four additional temporary wells SA-TW417 through SA-TW420 were advanced further west along the onsite patrol road in October 2011 to determine the western plume boundary in this area. The analytical results from these additional groundwater grab samples did not contain VOC concentrations above MCLs. Table 4-5 provides a summary of detections and Figure 4-5 presents these temporary well locations and the primary VOC detections at these locations.

4.5.2 Offsite High Concentration Area (greater than 500 µg/L) Results

In March 2011 and September 2011, groundwater samples were collected from monitoring wells in the Offsite High Concentration Area (greater than 500 µg/L). All of the groundwater samples were analyzed for VOCs and select monitoring wells were also sampled for MEE. A complete summary of detections are provided in Table 4-4 and the results are presented on Figure 4-7. All monitoring wells located in the high concentration area contained chlorinated VOCs above NYSDOH MCLs during both sampling events. The highest concentration of TCA (84 µg/L), DCA (530 µg/L), DCE (36 µg/L), and CE (40 µg/L) was observed in SA-PZ143I during the September 2011 sampling event.

In addition, temporary wells SA-TW409 to -TW416 were advanced in June 2011 to further define the upgradient portion of the Offsite High Concentration Area. DCA was detected at concentrations ranging from 360 to 850 µg/L in SA-TW413 to -TW416 at depths ranging from 37 to 42 ft bgs (Figure 4-5). These detections were used to define the width of the DCA plume at the fence line and support the VOC concentrations detected in permanent monitoring wells SA-PZ135I (located along the fence line), -PZ142 and -PZ143 (located south of the fence line).

Temporary well SA-TW367 was advanced in November 2011 to further define the Offsite High Concentration plume boundary to the south of the fence line. MCL exceedances of TCA (43 µg/L), DCA (420 µg/L), DCE (24 µg/L), and CE (44 µg/L) were observed at SA-TW367 (46 ft bgs). Two additional piezometers (SA-PZ171I and -PZ172I) were also installed in this area near SA-TW367 (Figure 4-7) for the same purpose. However, analytical results were not available for this report.

4.5.3 Offsite Low Concentration Area (less than 500 µg/L) Results

In March 2011 and September 2011, groundwater samples were collected from monitoring wells in the Offsite Low Concentration Area (less than 500 µg/L). All of the groundwater samples were analyzed for VOCs and select monitoring wells were also sampled for MEE. A complete summary of detections are provided in Table 4-4 and the results are presented on Figure 4-6. Of the observed VOC detections, 11 monitoring wells contained MCL exceedances for chlorinated VOCs. Of those 11 monitoring wells, three monitoring wells contained more than one MCL exceedance (SA-PZ123I1, -PZ140, and -PZ145I). The highest VOC concentrations (TCA at 9.3 µg/L, DCA at 85 µg/L, and DCE at 7.8 µg/L) were observed in SA-MW123I1 during the September 2011 sampling event.

Several of the monitoring wells have shown variability and fluctuating VOC concentrations over time. For example, results from monitoring well SA-MW131I located along the access road to the PRSC showed no VOC detections in 2009 after installation and development; however, subsequent sampling in September 2010, March 2011, and September 2011 exhibited concentrations of DCA at 130 µg/L, 16 µg/L and non-detect, respectively.

Eight rounds of groundwater sampling have been conducted at SA-PZ123I (70-80 ft bgs). VOC concentrations at this monitoring well have shown a decreasing trend over the several rounds of sampling conducted since 2005. Concentrations of DCA have decreased at this monitoring well from 125 to 37 µg/L throughout the six years of monitoring. However, co-located monitoring well SA-PZ123I1 (32-42 ft bgs) has shown an increasing trend for DCA) with non-detect in 2009 to 85 µg/L in September 2011.

4.5.4 Peconic River Area Sampling Results

A total of 4 surface water samples, 4 sediment samples, and 4 groundwater samples were collected along the Peconic River during each round of sampling conducted in March and September 2011. Surface water, sediment samples, and groundwater samples were analyzed for VOCs. Tables 4-6, 4-7, and 4-8 provides a summary of analytical detections in surface water, sediment samples, and groundwater respectively and also includes the analytical results from the 2008 through 2010 sampling events. Figure 4-8 presents the distribution of detected compounds for the sampling conducted in 2010 and 2011 only. The *2010 Data Summary Report* provides figures that contain historical sampling results for the groundwater, surface water and sediment sampling along the Peconic River from 2005 to 2010 (Tetra Tech, 2011).

No exceedances of the sediment screening values were observed in the March or September 2011 sampling events. TCE was detected at 6.2 J µg/L in SA-SW124 in September 2011. This was the first observed detection of TCE in surface water since sampling began in 2006 and the concentration exceeded the surface water screening level of 5 µg/L. TCE was also detected for the first time in SA-PZ148 (1 µg/L) and SA-PZ124 (0.94 µg/L) during the September 2011 sampling, but did not exceed the NYSDOH MCL of 5 µg/L. The source of these TCE detections is uncertain. DCA and DCE have been detected at SA-PZ124 over the last four rounds of sampling. The concentration of DCA in SA-PZ124 has been increasing since August 2008 (4 µg/L), with a concentration of 79 µg/L observed in the September 2011 sampling. DCA has also been detected in groundwater samples collected from SA-PZ118S and SA-PZ147. The March 2011 sampling event indicated DCA concentrations of 6.1 µg/L at SA-PZ118S and 17 µg/L at SA-PZ147. During the September 2011 event, these same wells indicated VOC concentrations below MCLs. Some fluctuations and variability in VOC concentrations have been observed at these monitoring locations along the Peconic River over several sampling events and are likely a result of changes in groundwater flow patterns from seasonal effects near the river.

Peconic River Sportsman's Club

Six water samples, with the exception of CA-PRSC04, were collected from four active water supply wells during each sampling event conducted at the PRSC in November 2010, February, April, and June 2011. In June 2011, the Fire Suppression system well did not start up during the normal weekly system check and sample CA-PRSC04 was not collected. Table 4-9 and Figure 4-9 presents the analytical detections from the 2010 and 2011 sampling events. The sample locations were as follows:

- CA-PRSC-01 (Main Lodge)
- CA-PRSC-02-01 (Activity Center pre-Carbon GAC)

- CA-PRSC-02 (Activity Center between Carbon GAC)
- CA-PRSC-02-03 (Activity Center after Carbon GAC)
- CA-PRSC-03 (Private Home)
- CA-PRSC-04 (Fire Suppression System)

At the Activity Center, the supply well has an operating two-stage liquid phase GAC unit. Samples are collected from this supply well as follows: 1) prior to treatment, 2) in between the first and second carbon unit and 3) after treatment. The pre-treatment sample, CA-PRSC-02-01, has consistently shown detections of DCA exceeding NYSDOH MCL over the fifteen rounds of sampling conducted at the PRSC. DCA was detected during the quarterly sampling as follows: November 2010 (11 µg/L), February (10 µg/L), April (10 µg/L), and June 2011 (12 µg/L). Historical sampling at this location has also shown detections of DCE, 1,2-dichloroethane, 1,2-dichloroethylene, cis-1,2-dichloroethene, TCE, toluene, benzene, and 1,2,4-trichlorobenzene at concentrations below NYSDOH MCLs. DCA has been detected at the pre-treatment sample location at concentrations ranging from 7-13 µg/L since quarterly sampling began in January 2008.

Table 4-9 provides a summary of the analytical results over the 13 rounds of sampling conducted at the PRSC. Figure 4-9 depicts the sampling locations and presents the analytical results for the quarterly sampling at the PRSC.

Based on the sampling results from the eleven quarterly sampling events from 2008 to 2011, similar analytical results have been observed at all six of the sample locations. Sample locations CA-PRSC-03 and CA-PRSC-04 have shown no detections of VOCs through all fifteen rounds of sampling. VOCs were not detected at sample locations CA-PRSC01, CA-PRSC03, and CA-PRSC04 during the 2010 and 2011 sampling events.

A GAC treatment system is currently in place at the Activity Center and remains in operation. A municipal public water supply line was installed to the PRSC entrance in 2011 and is planned to be connected to the PRSC facility in spring 2012. This will eliminate human health risks associated with exposure to VOCs in groundwater in the Off-Site Southern Area.

5.0 CONCLUSIONS

Conclusions based on the 2010-2011 groundwater investigative activities are as follows:

Site 2 (Former Fire Training Area):

1. For Site 2, NYSDOH MCL exceedances were observed in one of the thirteen monitoring wells (FT-MW02S) with the maximum detected non-chlorinated VOC concentration of 24 µg/L (xylenes) and maximum chlorinated VOC concentration of 12 µg/L (TCE). DCA was also detected, but at a concentration below the MCL during the October 2011 sampling. For comparison in 1994, the xylene concentration in this well was 230 µg/L and DCA was detected at 1,200 µg/L.

2. Approximately 0.04 feet (1/2 inch) of floating free product was also observed in monitoring well FT-MW02S during the September 2011 sampling. Free product measurements at FT-MW02S have shown a decreasing trend from 0.1 feet in 2009, 0.07 feet in 2010, to 0.04 feet in 2011.

3. Additional groundwater and soil sampling was conducted in 2011 at Site 2 as a part of an ongoing remedial investigation. Further evaluation of soils and groundwater at Site 2 will be provided under a separate cover.

Site 6A (Former Fuel Calibration Area):

1. For Site 6A, MCL exceedances were observed in three of the fourteen monitoring wells (FC-MW02SR1, FC-MW03SR1, and FC-PZ05I1). The highest concentrations of VOCs at Site 6A were detected in FC-PZ05I1, which was installed in 2010. Concentrations of DCA in this well ranged from 73 to 1,000 µg/L with no definitive trend apparent. This monitoring well is located approximately 450 feet downgradient (southeast) of the 2009/2010 excavation and can be used to monitor the source area groundwater and determine the need for further remedial action.

2. A temporary well program conducted in 2010/June 2011 better defined the upgradient edge of the groundwater plume near the Site 6A source area and also the width of the plume between Site 6A and 10B.

3. A total of 44 groundwater samples were collected and analyzed for VOCs during the temporary well program at Site 6A. In addition to the predominant DCA plume, PCE was

detected above the MCL in two of these samples [SA-TW404 (8.9 µg/L) and SA-TW406 (180 µg/L)]. Based on the location and absence of other VOCs, the PCE may be a separate release not related to Site 6A. PCE has not been observed in the downgradient groundwater.

Site 10B (Former Engine Test House):

1. For Site 10B, annual groundwater sampling was conducted at three monitoring wells. VOCs were detected, but at concentrations below MCL's during all rounds of sampling from January 2008 through September 2011. There has been no evidence of VOC mobilization from the 2009/2010 excavation activities.

Southern Area (Onsite and Offsite):

1. Based on the analytical data collected from groundwater sampling conducted in 2011, the Southern Area groundwater plume is reasonably well defined and Site 6A remains the probable source of groundwater contamination in the Southern Area.

2. Fluctuations in contaminant concentrations have been observed in several Southern Area monitoring wells. These fluctuations appear to be the result of variable groundwater flow patterns that are impacted by precipitation events and local influences from the PRSC Pond and Peconic River. These variations are more significant in the downgradient portion of the Southern Area. In 2011, a temporary well program near the onsite Southern Area fence line indicated the plume has shifted to the west. Future groundwater monitoring in the Southern Area will confirm observed fluctuations, plume shifting, and analytical trends.

3. Additional piezometers were installed on Suffolk County property as a part of the Site 2 remedial investigation. Groundwater sampling and surveying was conducted in early 2012 and analytical/survey data was not available for this report. These additional piezometers will help determine offsite groundwater flow in the southwestern portion of the Southern Area plume and further define the offsite Southern Area plume.

Peconic River Area:

1. Three VOCs (DCA, DCE, and Acetone) have been detected over multiple rounds of groundwater sampling along the Peconic River. DCA is the predominant VOC observed during the sampling since 2006 and concentrations have ranged from non-detect to 79 µg/L in these piezometers located along the Peconic River. VOC concentrations have fluctuated in these piezometers as the groundwater discharge points appear to shift northeast and

southwest along the river based on precipitation events and changes in groundwater flow patterns.

2. VOCs have not been detected above screening levels in the last 7 rounds of surface water sampling conducted on the Peconic River since 2006. TCE was detected for the first time in surface water sample SA-SW124 at 6.2 J µg/L during the September 2011 sampling event. In September 2011, TCE was also detected for the first time in piezometers SA-PZ124, SA-PZ147, and SA-PZ148 along the Peconic River, but at lower concentrations (0.94 J, 1 J, and 1 J µg/L, respectively). The source of this TCE in surface water is uncertain because similar or higher concentrations have not been detected in upgradient areas. Groundwater sampling in 2010 and 2011 indicated sporadic low detections of TCE ranging from 0.32 to 1.3 µg/L.

General Conclusions:

1. Primary VOCs detected in monitoring wells and piezometers at Site 6A and in the Southern Area consist of DCA, TCA, DCE, and CE. Other VOCs that have been detected periodically above MCLs include: isopropylbenzene, benzene, ethylbenzene, 1,2- dichlorobenzene , 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, naphthalene, xylenes, and vinyl chloride.

2. Facility wide groundwater monitoring and semi-annual surface water and sediment sampling on the Peconic River will continue to establish trends and support additional remedial action decisions as needed to address contamination.

3. The monitoring well network at each Site will be evaluated for data gaps and surplus monitoring wells and piezometers. A work plan will be generated to detail this evaluation and determine the need for additional monitoring wells, abandonment of existing wells, and present the long-term groundwater monitoring plan for the former NWIRP Calverton facility.

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TABLES

TABLE 2-1
GROUNDWATER AND SURFACE WATER ELEVATION SUMMARY
NWIRP CALVERTON, NEW YORK
PAGE 1 OF 1

	Well	Screened Interval (ft bgs)	Total Depth (ft BTOC)	Total Depth (ft MSL)	Dec 2010 Water Level (feet BTOC)	Mar 2011 Water Level (feet BTOC)	Sept 2011 Water Level (feet BTOC)	Surveyed TOC (ft MSL)	Ground Surface Elevation (ft MSL)	Dec 2010 Groundwater Elevation (ft MSL)	Mar 2011 Groundwater Elevation (ft MSL)	Sept 2011 Groundwater Elevation (ft MSL)
Site 2												
Shallow	FT-MW01S	18.5 - 28.5	30.1	33.78	23.34	22.93	22.84	63.88	62.12	40.54	40.95	41.04
	FT-MW02S	10.5 - 20.5	NA	NA	15.26	14.71	14.76	55.47	53.34	40.21	40.76	40.71
	FT-MW03S	21.5 - 31.5	32.54	34.33	26.15	25.75	25.55	66.87	64.38	40.72	41.12	41.32
	FT-MW04S	17 - 27	27.9	33.43	20.89	20.31	20.39	61.33	59.95	40.44	41.02	40.94
	FT-MW05S	7.5 - 17.5	19.71	31.77	11.72	11.23	11.36	51.48	49.37	39.76	40.25	40.12
	FT-MW06S	17 - 27	28.83	32.45	21.31	20.71	20.74	61.28	59.44	39.97	40.57	40.54
	FT-MW07S	25 - 35	36.44	33.86	30.1	29.56	29.43	70.3	68.33	40.2	40.74	40.87
	FT-MW08S	3 - 14	16.08	31.84	8.13	7.68	7.82	47.92		39.79	40.24	40.10
Intermediate	FT-MW01I	68 - 78	79.7	-15.54	23.07	22.64	22.52	64.16	62.11	41.09	41.52	41.64
	FT-MW02I	70 - 80	70.47	-14.9	15.13	14.6	14.61	55.57	53.26	40.44	40.97	40.96
	FT-MW05I	48 - 58	59.9	-7.98	12.13	11.65	11.77	51.92	49.87	39.79	40.27	40.15
	FT-MW06I	65 - 75	75.71	-13.72	22.3	21.71	21.75	61.99	60.38	39.69	40.28	40.24
	FT-MW08I	23 - 33	35.61	12.4	8.21	7.78	7.91	48.01		39.8	40.23	40.10
Sites 6A and 10B												
Shallow	FC-MW01S	5 - 15	16.74	30.76	8.81	8.17	8.55	47.5	***46.56***	38.69	39.33	38.95
	FC-MW02SR1	3 - 13			7.98	7.25	7.62	46.33	44.27	38.35	39.08	38.71
	FC-MW03SR1	3 - 13			7.54	6.84	7.25	45.83	43.72	38.29	38.99	38.58
	FC-MW04S	3 - 13	15.1	30.3	7.25	6.45	6.91	45.4	***44.46***	38.15	38.95	38.49
	FC-MW05S	6 - 16	17.74	30.29	10.33	9.5	9.97	48.03	***47.09***	37.7	38.53	38.06
	FC-MW06S	9 - 19	20.98	29.68	12.4	11.63	12.04	50.66	***49.72***	38.26	39.03	38.62
	FC-MW07S	5 - 15	17.01	31.33	10.36	9.54	10	48.34	***46.38***	37.98	38.80	38.34
	FC-MW08S	2 - 12	14.49	30.69	6.01	5.24	5.68	45.18	***43.22***	39.17	39.94	39.50
	ET-MW01S	7 - 17	19.12	28.41	10.38	9.54	10.06	47.53	45.22	37.15	37.99	37.47
	ET-MW02S	7 - 17	19	27.95	9.9	9.08	9.6	46.95	44.55	37.05	37.87	37.35
	ET-MW03S	7 - 17	19.48	28.33	10.81	9.94	10.45	47.81	45.31	37	37.87	37.36
Intermediate	FC-MW01I	48 - 58	57.51	-10.16	8.65	7.99	8.35	47.35	***46.41***	38.7	39.36	39.00
	FC-MW02IR1	NA			7.97	7.21	7.59	46.4	44.4	38.43	39.19	38.81
	FC-MW04I	40-50	51.38	-6.06	7.16	6.36	6.82	45.32	***44.37***	38.16	38.96	38.50
	FC-PZ05I1	20-30	30				9.94					-9.94
	FC-MW05I	48-58	59.37	-12.02	9.65	8.81	9.32	47.35	***46.4***	37.7	38.54	38.03
	FC-MW07I	48-58	60.07	-11.82	10.29	9.47	9.93	48.25	46.13	37.96	38.78	38.32
Southern Area												
Shallow	SA-MW-126S	5 - 15	17.57	22.22		4.71	5.07	39.79	37.4		35.08	34.72
	SA-MW-127S	5 - 15	17.15	23.42	6.91	6.35	6.9	40.57	38.38	33.66	34.22	33.67
	SA-MW-128S	7 - 17	18.81	21.73	9.18	8.44	9.08	40.54	38.26	31.36	32.10	31.46
	SA-MW-129S	19.5 - 20.5	31.32	20.6	22.44	21.79	22.23	51.92	49.75	29.48	30.13	29.69
	SA-MW-130S	9 - 19	21.64	26.96	13.73	12.72	13.33	48.6	45.83	34.87	35.88	35.27
	SA-MW-131S	4 - 14	16.31	22.28	8.59	8.07	8.56	38.59	36.2	30	30.52	30.03
	SA-MW-132S	4 - 14	16.9	19.85	5.87	5.38	5.87	36.75	34.09	30.88	31.37	30.88
	SA-PZ-118S	6 - 16	18.48	12.65	5.13	4.97	5.2	31.13	***29.12***	26	26.16	25.93
	SA-PZ-120S	8 - 18	21.11	11.37	6.52	6.21	6.47	32.48	29.92	25.96	26.27	26.01
	SA-PZ-122S	12 - 22	24.68	19.07	15.02	14.56	14.96	43.75	41.16	28.73	29.19	28.79
	SA-PZ-123S	7 - 17	19.07	17.89	9.18	8.94	9.22	36.96	34.5	27.78	28.02	27.74
	SA-PZ-144S	5 - 15	17.42	24.083	8.99	8.78	9.05	41.503	38.823	32.513	32.72	32.45
	SA-PZ-145S	5 - 15	17.79	23.166	9.77	9.07	9.69	40.956	37.947	31.186	31.89	31.27
	SA-PZ-146	3 - 6	8.55	30.147	3.83	3.83	3.92	38.697	33.169	34.867	34.87	34.78
	SA-PZ-164S	5 - 15	17.8	17.95	8.21	7.99	8.26	35.75	32.819	27.54	27.76	27.49
	SA-PZ-168S	5 - 15	18.05	16.668	7.22	7.02	7.29	34.718	31.868	27.498	27.70	27.43
Intermediate	SA-MW-126I	40 - 50	52.18	-12.21		4.84	5.2	39.97	37.54		35.13	34.77
	SA-MW-127I	36 - 46	48.2	-7.41	7.12	6.55	7.09	40.79	38.51	33.67	34.24	33.70
	SA-MW-128I	30 - 40	42.2	-1.24	9.63	8.9	9.54	40.96	38.59	31.33	32.06	31.42
	SA-MW-129I	50 - 60	62.42	-10.26	22.7	22.06	22.5	52.16	49.92	29.46	30.10	29.66
	SA-MW-130I	36 - 46	48.16	0.17	13.52	12.5	13.1	48.33	45.91	34.81	35.83	35.23
	SA-MW-131I	30 - 40	41.55	-3.31	8.29	7.73	8.22	38.24	36.03	29.95	30.51	30.02
	SA-MW-132I	27 - 37	40.08	-3.32	5.88	5.4	5.88	36.76	34.02	30.88	31.36	30.88
	SA-PZ-118I	50 - 60	61.24	-29.56	5.7	5.47	5.81	31.68	***29.67***	25.98	26.21	25.87
	SA-PZ-122I	39 - 49	51.22	-7.65	14.78	14.33	14.72	43.57	41.25	28.79	29.24	28.85
	SA-PZ-123I1	32 - 42	44.4	-6.89	9.71	9.46	9.74	37.51	34.5	27.8	28.05	27.77
	SA-PZ-133I	42 - 47	49.25	-7.705			7.87	41.545	39.511			33.68
	SA-PZ-133I1	35 - 40	42.52	-1.09			7.91	41.43	39.319			33.52
	SA-PZ-134I	39 - 44	46.75	-7.13	6.39	5.78	6.35	39.62	36.955	33.23	33.84	33.27
	SA-PZ-135I	41.5 - 46.5	48.14	-9.393	4.73		4.74	38.747	36.688	34.017		34.01
	SA-PZ-136I	44 - 49	50.59	-11.038	5.34	4.91	5.45	39.552	37.417	34.212	34.64	34.10
	SA-PZ-137I	49 - 54	56.22	-14.554	7.37	6.99	7.4	41.666	39.251	34.296	34.68	34.27
	SA-PZ-138I	48.5 - 53.5	56.3	-16.27	5.27	4.73	5.24	40.03	36.94	34.76	35.30	34.79
	SA-PZ-138I1	37 - 42	44.62	-4.821	5.14	4.58	5.1	39.799	37.2	34.659	35.22	34.70
	SA-PZ-139I	42.5 - 47.5	49.42	-7.143	8.16	7.57	8.13	42.277	39.951	34.117	34.71	34.15
	SA-PZ-140I	44.5 - 49.5	52.21	-5.81	14	13.35	13.92	46.4	43.319	32.4	33.05	32.48
	SA-PZ-141I	50.5 - 55.5	58.39	-12.307	13.99	13.44	14.29	46.083	43.793	32.093	32.64	31.79
	SA-PZ-142I	40.5 - 45.5	48.32	-1.058	15.32	14.68	15.21	47.262	44.47	31.942	32.58	32.05
	SA-PZ-143I	41 - 46	48.24	-1.846	14.81	14.26	14.74	46.394	43.95	31.584	32.13	31.65
	SA-PZ-144I	45 - 50	52.07	-10.309	8.91	8.7	8.95	41.761	38.927	32.851	33.06	32.81
	SA-PZ-145I	30 - 35	37.72	3.389	9.95	9.25	9.85	41.109	38.111	31.159	31.86	31.26
	SA-PZ-149I1	32 - 37	39.13	5.6	9.86	9.25	9.79	44.73	42.24	34.87	35.48	34.94
	SA-PZ-161I	41 - 46	47.98	-7.395	6.43	5.94	6.44	40.585	38.209	34.155	34.65	34.15
	SA-PZ-163I	32 - 42	44.49	-4.316	6.71	6.14	6.68	40.174	37.63	33.464	34.03	33.49
	SA-PZ-164I	60 - 80	82.75	-47.106	8.93	8.79	8.99	35.644	32.779	26.714	26.85	26.65
	SA-PZ-166I	60 - 80	80	-46.966	6.43	6.29	6.51	33.034	30.16	26.604	26.74	26.52
	SA-PZ-168I	60 - 80	82.68	-48.28	7.67	7.55	7.74	34.4	31.561	26.73	26.85	26.66
	SA-PZ-169I	60 - 80	80	-45.929	7.45	7.32	7.52	34.071	31.216	26.621	26.75	26.55
	SA-PZ-170I		44.74									
	SA-PZ-171I		48.79									
	SA-PZ-172I		49.62									
	SAPTW-1											
	SAPTW-2											
Deep	SA-MW-126D	74 - 84	86.87	-46.83		6.68	7.36	40.04	37.54		33.36	32.68
	SA-MW-127D	68 - 78	77.14	-36.57	8.51	8.1	8.8	40.57	38.51	32.06	32.47	31.77
	SA-MW-128D	58 - 68	70.24	-29.6	9.68	9.23	9.85	40.64	38.59	30.96	31.41	30.79
	SA-MW-129D	80 - 90	92.01	-39.82	22.63	22.02	22.45	52.19	49.92	29.56	30.17	29.74
	SA-MW-131D	60 - 70	71.85	-34.03	7.73	7.31	7.87	37.82	37.82	30.09	30.51	29.95
	SA-PZ-122D	122 - 132	134.49	-91.02	13.92	13.67	14.24	43.47	41.25	29.55	29.80	29.23
	SA-PZ-123I	70 - 80	83.66	-45.64	10.34	10.11	10.37	38.02	35.26	27.68	27.91	27.65
	SA-PZ-145D	50 - 55	57.8	-16.816	9.93	9.55	10.2	40.984	37.844	31.054	31.43	30.78
Staff Gauge and River Monitoring Point												
Surface Water			**TOG**									
	Staff Gauge #1 WS PRSC	NA	3.33		1.71	1.95	1.48	32.37		30.75	30.99	30.52
	Staff Gauge #2 ES PRSC	NA	3.33		1.58	1.78	1.66	32.41		30.66	30.86	30.74
	FT-10											
	FT-11											
	FT-12											
	FT-13											
	BM ES Conn Ave HDWL	NA	Concrete			4.92	5.33	30.44			25.52	25.11

Notes:
Bold and *Italics* = Indicates estimated
2009 elevations collected in NAVD88
ft bgs = feet below ground surface
ft BTOC = Feet Below Top of Casing
ft MSL = Feet Mean Sea Level
TOG = Top of Gauge

Table 3-1
Temporary Well/ Groundwater Grab Details
Southern Area
NWIRP Calverton, New York

Temporary Monitoring Well	Sampling Date	Screened Interval (feet bgs)	Analysis
SA-TW349-4145	12/16/2010	41 - 45	VOCs
SA-TW358-1115	12/14/2010	11 - 15	VOCs
SA-TW358-2125	12/14/2010	21 - 25	VOCs
SA-TW358-3135	12/14/2010	31 - 35	VOCs
SA-TW359-1115	12/14/2010	11 - 15	VOCs
SA-TW359-2125	12/14/2010	21 - 25	VOCs
SA-TW359-3135	12/14/2010	31 - 35	VOCs
SA-TW360-1115	12/15/2010	11 - 15	VOCs
SA-TW360-2125	12/15/2010	21 - 25	VOCs
SA-TW360-3135	12/15/2010	31 - 35	VOCs
SA-TW361-1115	12/15/2010	11 - 15	VOCs
SA-TW361-2125	12/15/2010	21 - 25	VOCs
SA-TW361-3135	12/15/2010	31 - 35	VOCs
SA-TW362-1115	12/16/2010	11 - 15	VOCs
SA-TW362-2125	12/16/2010	21 - 25	VOCs
SA-TW362-3135	12/16/2010	31 - 35	VOCs
SA-TW363-1115	12/14/2010	11 - 15	VOCs
SA-TW363-2125	12/13/2010	21 - 25	VOCs
SA-TW363-3135	12/13/2010	31 - 35	VOCs
SA-TW363-4145	12/13/2010	41 - 45	VOCs
SA-TW364-1115	12/13/2010	11 - 15	VOCs
SA-TW364-2125	12/13/2010	21 - 25	VOCs
SA-TW364-3135	12/13/2010	31 - 35	VOCs
SA-TW365-1418	11/16/2011	14 - 18	VOCs
SA-TW365-2024	11/16/2011	20 - 24	VOCs
SA-TW365-3034	11/16/2011	30 - 34	VOCs
SA-TW365-4044	11/16/2011	40 - 44	VOCs
SA-TW366-1519	11/15/2011	15 - 19	VOCs
SA-TW366-2529	11/15/2011	25 - 29	VOCs
SA-TW366-3539	11/15/2011	35 - 39	VOCs
SA-TW366-4246	11/15/2011	42 - 46	VOCs
SA-TW367-1620	11/15/2011	16 - 20	VOCs
SA-TW367-2630	11/15/2011	26 - 30	VOCs
SA-TW367-3640	11/15/2011	36 - 40	VOCs
SA-TW367-4246	11/15/2011	42 - 46	VOCs
SA-TW401-1115	6/3/2011	11 - 15	VOCs
SA-TW401-2125	6/3/2011	21 - 25	VOCs
SA-TW401-2630	6/3/2011	26 - 30	VOCs
SA-TW401-3135	6/3/2011	31 - 35	VOCs
SA-TW402-1115	6/2/2011	11 - 15	VOCs
SA-TW402-2125	6/2/2011	21 - 25	VOCs
SA-TW402-2630	6/2/2011	26 - 30	VOCs
SA-TW402-3135	6/2/2011	31 - 35	VOCs
SA-TW403-1115	6/2/2011	11 - 15	VOCs
SA-TW403-2125	6/2/2011	21 - 25	VOCs
SA-TW403-2630	6/2/2011	26 - 30	VOCs
SA-TW403-3135	6/2/2011	31 - 35	VOCs
SA-TW404-2125	6/3/2011	21 - 25	VOCs
SA-TW404-3135	6/3/2011	31 - 35	VOCs
SA-TW405-2125	6/6/2011	21 - 25	VOCs
SA-TW405-3135	6/6/2011	31 - 35	VOCs
SA-TW406-2125	6/6/2011	21 - 25	VOCs
SA-TW406-3135	6/6/2011	31 - 35	VOCs
SA-TW407-2125	6/6/2011	21 - 25	VOCs
SA-TW407-3135	6/6/2011	31 - 35	VOCs
SA-TW408-3337	6/10/2011	33 - 37	VOCs
SA-TW408-3842	6/10/2011	38 - 42	VOCs
SA-TW408-4347	6/10/2011	43 - 47	VOCs
SA-TW409-3337	6/9/2011	33 - 37	VOCs
SA-TW409-3842	6/9/2011	38 - 42	VOCs

Table 3-1
Temporary Well/ Groundwater Grab Details
Southern Area
NWIRP Calverton, New York

Temporary Monitoring Well	Sampling Date	Screened Interval (feet bgs)	Analysis
SA-TW409-4347	6/9/2011	43 - 47	VOCs
SA-TW410-3337	6/9/2011	33 - 37	VOCs
SA-TW410-3842	6/9/2011	38 - 42	VOCs
SA-TW410-4347	6/9/2011	43 - 47	VOCs
SA-TW411-3337	6/8/2011	33 - 37	VOCs
SA-TW411-3842	6/8/2011	38 - 42	VOCs
SA-TW411-4347	6/8/2011	43 - 47	VOCs
SA-TW412-3337	6/8/2011	33 - 37	VOCs
SA-TW412-3842	6/8/2011	38 - 42	VOCs
SA-TW412-4347	6/8/2011	43 - 47	VOCs
SA-TW413-3337	6/8/2011	33 - 37	VOCs
SA-TW413-3842	6/8/2011	38 - 42	VOCs
SA-TW413-4347	6/8/2011	43 - 47	VOCs
SA-TW414-3337	6/7/2011	33 - 37	VOCs
SA-TW414-3842	6/7/2011	38 - 42	VOCs
SA-TW414-4347	6/7/2011	43 - 47	VOCs
SA-TW415-3337	6/7/2011	33 - 37	VOCs
SA-TW415-3842	6/7/2011	38 - 42	VOCs
SA-TW415-4347	6/7/2011	43 - 47	VOCs
SA-TW416-3337	6/7/2011	33 - 37	VOCs
SA-TW416-3842	6/7/2011	38 - 42	VOCs
SA-TW416-4347	6/7/2011	43 - 47	VOCs
SA-TW416-4852	6/7/2011	48 - 52	VOCs
SA-TW417-2832	10/10/2011	28 - 32	VOCs
SA-TW417-3337	10/10/2011	33 - 37	VOCs
SA-TW417-3842	10/10/2011	38 - 42	VOCs
SA-TW417-4347	10/10/2011	43 - 47	VOCs
SA-TW417-4852	10/10/2011	48 - 52	VOCs
SA-TW418-2832	10/11/2011	28 - 32	VOCs
SA-TW418-3337	10/11/2011	33 - 37	VOCs
SA-TW418-3842	10/11/2011	38 - 42	VOCs
SA-TW418-4347	10/11/2011	43 - 47	VOCs
SA-TW418-4852	10/11/2011	48 - 52	VOCs
SA-TW419-2832	10/12/2011	28 - 32	VOCs
SA-TW419-3337	10/12/2011	33 - 37	VOCs
SA-TW419-3842	10/12/2011	38 - 42	VOCs
SA-TW419-4347	10/11/2011	43 - 47	VOCs
SA-TW419-4852	10/11/2011	48 - 52	VOCs
SA-TW420-2832	10/12/2011	28 - 32	VOCs
SA-TW420-3337	10/12/2011	33 - 37	VOCs
SA-TW420-3842	10/12/2011	38 - 42	VOCs
SA-TW420-4347	10/12/2011	43 - 47	VOCs
SA-TW420-4852	10/12/2011	48 - 52	VOCs

Notes:
bgs = below ground surface
VOCs = Volatile Organic Compounds

TABLE 3-2
SITE 6A AND SITE 10B
MONITORING WELL CONSTRUCTION DETAILS
NWIRP CALVERTON, NEW YORK

Monitoring Well	Installation Date	Total Depth (feet bgs)	Screened Interval Depth (feet bgs)	Reference Elevation Top of Casing (feet msl)	Ground Surface Elevation (feet msl)
Site 6A					
FC-MW01S	7/14/1994	15	5 - 15	48.56	46.56*
FC-MW01I	7/25/1994	58	48 - 58	48.40	46.41*
FC-MW02SR1	5/24/2010	14.5	NA	NA	NA
FC-MW02IR1	5/24/2010	52.5	NA	NA	NA
FC-MW03SR1	5/24/2010	14.5	NA	NA	NA
FC-MW04S	7/22/1994	13	3 - 13	46.46	44.46*
FC-MW04I	7/26/1994	50	40 - 50	46.37	44.37*
FC-MW05S	7/15/1994	16	6 - 16	48.03	45.50
FC-PZ05I1	12/16/2010	30	20 - 30	NA	NA
FC-MW05I	7/21/1994	58	48 - 58	47.35	45.43
FC-MW06S	7/20/1994	19	9 - 19	50.66	48.48
FC-MW07S	NA	15	5 - 15	48.34	45.89
FC-MW07I	9/10/2009	58	48 - 58	48.25	46.13
FC-MW08S	NA	12	2 - 12	45.22	43.22*
Site 10B					
ET-MW01S	1/3/2008	17	7 - 17	47.53	45.17
ET-MW02S	1/3/2008	17	7 - 17	46.95	44.52
ET-MW03S	1/4/2008	17	7 - 17	47.81	45.24

NOTES:
bgs = below ground surface
msl = mean sea level
FC = Fuel Calibration Area
ET = Engine Test House
MW = Monitoring Well
NA = Not Available
* Estimated

Table 3-3
Southern Area
Monitoring Well Construction Details
NWIRP Calverton, New York

Monitoring Well	Installation Date	Total Depth (feet bgs)	Screened Interval Depth (feet bgs)	Reference Elevation Top of Casing (feet msl)	Top Concrete Pad or Ground Surface Elevation (feet msl)
SA-PZ-118S	5/3/2007	16	6 - 16	31.13	29.23
SA-PZ-118I	5/3/2007	60	50 - 60	31.68	29.22
SA-PZ-120S	5/4/2007	18	8 - 18	32.35	30.34*
SA-PZ-122S	12/21/2007	22	12 - 22	43.75	41.11
SA-PZ-122I	12/20/2007	49	39 - 49	43.57	41.20
SA-PZ-122D	12/21/2007	132	122 - 132	43.47	41.31
SA-PZ-123S	1/2/2008	17	7 - 17	36.96	34.47
SA-PZ-123I1	1/2/2008	42	32 - 42	37.51	34.75
SA-PZ-123I	1/3/2008	80	70 - 80	38.02	35.16
SA-MW-126S	12/6/2007	15	5 - 15	39.79	37.36
SA-MW-126I	12/6/2007	50	40 - 50	39.97	37.52
SA-MW-126D	12/4/2007	84	74 - 84	40.04	37.37
SA-MW-127S	12/11/2007	15	5 - 15	40.57	38.26
SA-MW-127I	12/11/2007	46	36 - 46	40.79	38.43
SA-MW-127D	12/10/2007	78	68 - 78	40.57	38.46
SA-MW-128S	12/14/2007	17	7 - 17	40.54	38.19
SA-MW-128I	12/13/2007	40	30 - 40	40.96	38.62
SA-MW-128D	12/12/2007	68	58 - 68	40.64	38.34
SA-MW-129S	12/19/2007	29.5	19.5 - 29.5	51.92	49.75
SA-MW-129I	12/19/2007	60	50 - 60	52.16	49.92
SA-MW-129D	12/18/2007	90	80 - 90	52.19	49.92
SA-MW-130S	9/10/2009	19	9 - 19	48.6	45.83
SA-MW-130I	9/9/2009	50	36 - 46	48.33	45.91
SA-MW-131S	9/2/2009	14	4 - 14	38.59	36.2
SA-MW-131I	9/2/2009	40	30 - 40	38.24	36.03
SA-MW-131D	9/1/2009	70	60 - 70	37.82	35.84
SA-MW-132S	9/8/2009	14	4 - 14	36.75	34.09
SA-MW-132I	9/3/2009	37	27 - 37	36.76	34.02
SA-PZ-133I	3/23/2010	47	42 - 47	41.55	39.51
SA-PZ-133I1	3/23/2010	40	35 - 40	41.43	39.32
SA-PZ-134I	3/24/2010	44	39 - 44	39.62	36.96
SA-PZ-135I	3/23/2010	47	41.5 - 46.5	38.75	36.69
SA-PZ-136I	3/22/2010	53	44 - 49	39.55	37.42
SA-PZ-137I	3/23/2010	54	49 - 54	41.67	39.25
SA-PZ-138I	3/25/2010	54	48.5 - 53.5	40.03	36.94
SA-PZ-138I1	6/10/2010	42	37 - 42	39.799	37.2
SA-PZ-139I	3/25/2010	48	42.5 - 47.5	42.28	39.95
SA-PZ-140I	6/14/2010	49.5	44.5 - 49.5	46.4	43.319
SA-PZ-141I	6/15/2010	55.5	50.5 - 55.5	46.083	43.793
SA-PZ-142I	6/16/2010	45.5	40.5 - 45.5	47.262	44.47
SA-PZ-143I	6/17/2010	46	41 - 46	46.394	43.95
SA-PZ-144S	6/18/2010	15	5 - 15	41.503	38.823
SA-PZ-144I	6/19/2010	50	45 - 50	41.761	38.927
SA-PZ-145S	6/20/2010	15	5 - 15	40.956	37.947
SA-PZ-145I	6/21/2010	35	30 - 35	41.109	38.111
SA-PZ-145D	6/22/2010	55	50 - 55	40.984	37.844
SA-PZ-149I1	6/9/2010	37	32 - 37	44.73	42.24
SA-PZ-150I1	6/10/2010	40	35 - 40	NA	37.186
SA-PZ-151I1	6/10/2010	40	35 - 40	NA	37.505
SA-PZ-152I1	6/9/2010	40	35 - 40	NA	37.947
SA-PZ-153I1	6/9/2010	40	35 - 40	NA	39.701
SA-PZ-154I	6/8/2010	46	41 - 46	37.14	36.79
SA-PZ-155I	6/9/2010	46	41 - 46	40.24	37.36
SA-PZ-156I	6/9/2010	46	41 - 46		38.403
SA-PZ-157I	6/7/2010	46	41 - 46	39.51	37.297
SA-PZ-157I1	6/7/2010	38	33 - 38	39.761	37.313
SA-PZ-158I	6/7/2010	46	41 - 46	39.734	37.047
SA-PZ-158I1	6/8/2010	38	33 - 38	39.365	37.36
SA-PZ-159I	6/8/2010	46	40 - 46	39.166	37.059
SA-PZ-159I1	6/8/2010	38	33 - 38	39.369	37.14

Table 3-3
Southern Area
Monitoring Well Construction Details
NWIRP Calverton, New York

Monitoring Well	Installation Date	Total Depth (feet bgs)	Screened Interval Depth (feet bgs)	Reference Elevation Top of Casing (feet msl)	Top Concrete Pad or Ground Surface Elevation (feet msl)
SA-PZ-160I	6/8/2010	46	41 - 46	39.293	37.194
SA-PZ-160I1	6/8/2010	38	33 - 38	38.947	37.024
SA-PZ-161I	6/10/2010	46	41 - 46	40.585	38.209
SA-PZ-162I	6/11/2010	47	42 -47	NA	NA
SA-PZ-163I	6/10/2010	42	37 - 42	NA	NA
SA-PZ-164S	6/16/2010	15	5 - 15	NA	NA
SA-PZ-164I	6/16/2010	80	75 - 80	NA	NA
SA-PZ-165S	NA	NA	NA	NA	NA
SA-PZ-166I	NA	NA	NA	NA	NA
SA-PZ-167S	NA	NA	NA	NA	NA
SA-PZ-168S	6/18/2010	15	5 - 15	NA	NA
SA-PZ-168I	6/17/2010	80	75 - 80	NA	NA
SA-PZ-169I	NA	NA	NA	NA	NA
SA-PZ-170I	6/11/2010	42	37 - 42	NA	NA
SA-PZ-171I	11/17/2011	46.5	41.5 - 46.5	NA	NA
SA-PZ-172I	11/17/2011	48.5	43.5 - 48.5	NA	NA
SA-PZ-408	6/10/2011	42	37 - 42	NA	NA
SA-PZ-124		6	3 - 6	NA	NA
SA-PZ-125		6	3 - 6	NA	NA
SA-PZ-146	7/20/2010	5.88	3 - 6	38.70	33.17
SA-PZ-147	7/20/2010	6	3 - 6	NA	NA
SA-PZ-148	7/20/2010	6	3 - 6	NA	NA
Staff Gauges					
		TOG		TOG Elev.	
Staff Gauge #1 WS PRSC	9/29/2009	3.33	NA	32.37	NA
Staff Gauge #2 ES PRSC	9/29/2009	3.33	NA	32.41	NA
BM ES Conn Ave HDWL	NA	Concrete	NA	30.44	NA

NOTES:
bgs = below ground surface
msl = mean sea level
MW = Monitoring Well
NA = Not Available
TOG = Top of gauge
* Estimated

TABLE 3-4
SITE 2 - FIRE TRAINING AREA
MONITORING WELL CONSTRUCTION DETAILS
NWIRP CALVERTON, NEW YORK

Monitoring Well	Installation Date	Total Depth (feet bgs)	Screened Interval Depth (feet bgs)	Reference Elevation Top of Casing (feet msl)	Ground Surface Elevation (feet msl)
FT-MW01I	7/13/1994	78	68 - 78	64.16	62.11
FT-MW01S	6/30/1994	28.5	18.5 - 28.5	63.88	62.12
FT-MW02I	7/20/1994	80	70 - 80	55.57	53.26
FT-MW02S	7/5/1994	20.5	10.5 - 20.5	55.47	53.34
FT-MW03	6/30/1994	31.5	21.5 - 31.5	66.87	64.38
FT-MW04	7/1/1994	27	17 - 27	61.33	59.95
FT-MW05S	7/7/1994	17.5	7.5 - 17.5	51.48	49.37
FT-MW05I	7/19/1994	58	48 - 58	51.92	49.87
FT-MW06S	7/7/1994	27	17 - 27	61.28	59.44
FT-MW06I	7/14/1994	75	65 - 75	61.99	60.38
FT-MW07S	7/7/1994	35	25 - 35	70.3	68.33
FT-MW08S	6/7/1997	14	3 - 14	47.92	NA
FT-MW08I	6/21/1997	33	23 - 33	48.01	NA

NOTES:
bgs = below ground surface
msl = mean sea level
FT = Fire Training Area
MW = Monitoring Well
NA = Not Available

TABLE 4-1
GROUNDWATER ANALYTICAL DETECTIONS
SITE 2 - FORMER FIRE TRAINING AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	FT-MW01S (Jan-08)	FT-MW01S (Sept-09)	FT-MW01S (Sept-10)	FT-MW01S (Mar-11)	FT-MW01S (Oct-11)	FT-MW01I (Jan-08)	FT-MW01I (Sept-09)	FT-MW01I (Sept-10)	FT-MW01I (Mar-11)	FT-MW01I (Oct-11)	FT-MW02S (Jan-08)	FT-MW02S (Sept-09)	FT-MW02S (DUP) (Sept-09)	FT-MW02S (Sept-10)	FT-MW02S (DUP) (Sept-10)	FT-MW02S (Mar-11)	FT-MW02S (DUP) (Mar-11)	FT-MW02S (Sept-11)	FT-MW02S (DUP) (Sept-11)	FT-MW02I (Jan-08)
Screened Interval (ft bgs)				**18.5 - 28.5**	**18.5 - 28.5**	**18.5 - 28.5**	**18.5 - 28.5**	**18.5 - 28.5**	**68 - 78**	**68 - 78**	**68 - 78**	**68 - 78**	**68 - 78**	**10.5 - 20.5**	**10.5 - 20.5**	**10.5 - 20.5**	**10.5 - 20.5**	**10.5 - 20.5**	**10.5 - 20.5**	**10.5 - 20.5**	**10.5 - 20.5**	**10.5 - 20.5**	**70 - 80**
Volatile Organic Compounds (µg/l)																							
1,1,1-Trichloroethane	71-55-6	200	5																				
1,1-Dichloroethane	75-34-3		5											**17**	**5.7 J**	**5.9 J**	**15**	**11**		0.81 J	1.2	1.3	
1,1-Dichloroethene	75-35-4	7	5																				
1,2-Dichlorobenzene	95-50-1	600	5											**21**	**5.2 J**	**5.3 J**	4.3 J	4.2 J		0.58 J	3.9	3.7	
1,2-Dichloroethene (total)	540-59-0		5											**9 J**									
1,2,4-Trichlorobenzene	120-82-1	70	5								1.5 J				2.2 J								
1,4-Dichlorobenzene	106-46-7	75	5											**8**	2.0 J	1.6 J					1.3	1.2	
Benzene	71-43-2	5	5														0.31 J						
2-Butanone	78-93-3		50											6	10 J	8.1 J	15	12 J	26 J	13 J	6.1 J	6	
Carbon Disulfide	75-15-0		50														2.3 J						
Chlorobenzene	108-90-7	100	5											3 J									
Chloromethane	74-87-3		5																				
Chloroform	67-66-3	80	5						0.7 J														0.5 J
cis-1,2-Dichloroethene	156-59-2	70	5											**9**					4.1	2.8	0.73 J	0.88 J	
Cyclohexane	1735-17-7		50											1 J	1.7 J	1.7 J							
Ethylbenzene	100-41-4	700	5											**24**	**14 J**	**15 J**	**6.2**	**5.3**	4.7	4.8			
Isopropylbenzene	98-82-8		5											**8**	4.8 J	**5 J**	2.5 J	1.8 J	0.89 J	0.8 J			
Methylcyclohexane	108-87-2		50											3 J	2.5 J	2.5 J							
Tetrachloroethene	127-18-4	5	5																	0.91 J			
Toluene	108-88-3	1,000	5											**46**					4.5	4.4			
Trichloroethene	79-01-6	5	5											0.6 J			2.8 J	2.8 J	**11**	**12**		0.74 J	
Vinyl chloride	75-01-4	2	2											**3 J**	1.4 J	1.4 J					1.8	1.4	
m+p-xylenes	1330-20-7		5											**120**	**18 J**	**20 J**	**8.6 J**	**6.3 J**	**7.8**	**7.6**			
o-Xylene	95-47-6		5											**47**	4.7 J	**5.2 J**	**13**	**10**	**16**	**16**	3	2.8	
Xylenes (total)	1330-20-7	10,000	5											**170**	**23 J**	**25 J**	**22 J**	**16 J**	**24**	**24**			
Naphthalene	91-20-3		50								4.2 J				41 J	41 J	26	20	TIC	TIC			
*Acetone	67-64-1		50														**64**	**55**	27		12 J	9.5 J	
Methane, Ethene, Ethane (µg/l)																							
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9,100	240 J	340 J	230	230 D	470.6 D	NA	NA	NA	8.2 J

NOTES:
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ft bgs = feet below ground surface
NA = Not Analyzed
J = Estimated Value
DUP = Duplicate
TIC = Tentative Identified Compound
µg/L = Micrograms per liter
NYSDOH = New York State Department of Health
Blank cells = No Criteria or Not Detected
[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
Bold = Indicates Exceedances from NYSDOH MCLs
*Acetone was detected in some samples but is considered a lab contaminant

TABLE 4-1
GROUNDWATER ANALYTICAL DETECTIONS
SITE 2 - FORMER FIRE TRAINING AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	FT-MW02I (Sept-09)	FT-MW02I (Sept-10)	FT-MW02I (Mar-11)	FT-MW02I (Sept-11)	FT-MW03 (Jan-08)	FT-MW03 (Sept-09)	FT-MW03 (Sept-10)	FT-MW03 (Mar-11)	FT-MW03 (Oct-11)	FT-MW04 (Jan-08)	FT-MW04 (Sept-09)	FT-MW04 (Sept-10)	FT-MW04 (Mar-11)	FT-MW04 (Sept-11)	FT-MW05S (Jan-08)	FT-MW05S (Sept-09)	FT-MW05S (Sept-10)	FT-MW05S (Mar-11)	FT-MW05S (Sept-11)	FT-MW05I (Jan-08)	FT-MW05I (Sept-09)
Screened Interval (ft bgs)				**70 - 80**	**70 - 80**	**70 - 80**	**70 - 80**	**21.5 - 31.5**	**21.5 - 31.5**	**21.5 - 31.5**	**21.5 - 31.5**	**21.5 - 31.5**	**17 - 27**	**17 - 27**	**17 - 27**	**17 - 27**	**17 - 27**	**7.5 - 17.5**	**7.5 - 17.5**	**7.5 - 17.5**	**7.5 - 17.5**	**7.5 - 17.5**	**48 - 58**	**48 - 58**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5																					
1,1-Dichloroethane	75-34-3		5																					
1,1-Dichloroethene	75-35-4	7	5																					
1,2-Dichlorobenzene	95-50-1	600	5																					
1,2-Dichloroethene (total)	540-59-0		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5																					
1,4-Dichlorobenzene	106-46-7	75	5																					
Benzene	71-43-2	5	5																					
2-Butanone	78-93-3		50																					
Carbon Disulfide	75-15-0		50																					
Chlorobenzene	108-90-7	100	5																					
Chloromethane	74-87-3		5																					
Chloroform	67-66-3	80	5				0.5 J																0.8 J	
cis-1,2-Dichloroethene	156-59-2	70	5																					
Cyclohexane	1735-17-7		50																					
Ethylbenzene	100-41-4	700	5																					
Isopropylbenzene	98-82-8		5																					
Methylcyclohexane	108-87-2		50																					
Tetrachloroethene	127-18-4	5	5																					
Toluene	108-88-3	1,000	5																					
Trichloroethene	79-01-6	5	5					0.6 J	2.2 J			3.2												
Vinyl chloride	75-01-4	2	2																					
m+p-xylenes	1330-20-7		5																					
o-Xylene	95-47-6		5																					
Xylenes (total)	1330-20-7	10,000	5																					
Naphthalene	91-20-3		50																					1.8 J
*Acetone	67-64-1		50																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	ND	NA	30	2 J	ND	ND	NA	NA	NA

NOTES:
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TIC = Tentative Identified Compound
µg/L = Micrograms per liter
NYSDOH = New York State Department of Health
Blank cells = No Criteria or Not Detected
[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
Bold = Indicates Exceedances from NYSDOH MCLs
*Acetone was detected in some samples but is considered a lab contaminant

TABLE 4-1
GROUNDWATER ANALYTICAL DETECTIONS
SITE 2 - FORMER FIRE TRAINING AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	FT-MW05I (Sept-10)	FT-MW05I (Mar-11)	FT-MW05I (Sept-11)	FT-MW06S (Jan-08)	FT-MW06S (Sept-09)	FT-MW06S (Sept-10)	FT-MW06S (Mar-11)	FT-MW06S (Sept-11)	FT-MW06I (Jan-08)	FT-MW06I (Sept-09)	FT-MW06I (Sept-10)	FT-MW06I (Mar-11)	FT-MW06I (Sept-11)	FT-MW07 (Jan-08)	FT-MW07 (DUP) (Jan-08)	FT-MW07 (Sept-09)	FT-MW07S (Sept-10)	FT-MW07S (Mar-11)	FT-MW07S (Sept-11)	FT-MW08S (Jan-08)	FT-MW08S (Sept-09)	FT-MW08S (Sept-10)
Screened Interval (ft bgs)				**48 - 58**	**48 - 58**	**48 - 58**	**17 - 27**	**17 - 27**	**17 - 27**	**17 - 27**	**17 - 27**	**65 - 75**	**65 - 75**	**65 - 75**	**65 - 75**	**65 - 75**	**25 - 35**	**25 - 35**	**25 - 35**	**25 - 35**	**25 - 35**	**25 - 35**	**4 - 14**	**4 - 14**	**4 - 14**
Volatile Organic Compounds (µg/l)																									
1,1,1-Trichloroethane	71-55-6	200	5																						
1,1-Dichloroethane	75-34-3		5																				0.6 J		
1,1-Dichloroethene	75-35-4	7	5																						
1,2-Dichlorobenzene	95-50-1	600	5																				0.4 J		
1,2-Dichloroethene (total)	540-59-0		5																				0.4 J		
1,2,4-Trichlorobenzene	120-82-1	70	5																						
1,4-Dichlorobenzene	106-46-7	75	5																						
Benzene	71-43-2	5	5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50																	0.16 J					
Chlorobenzene	108-90-7	100	5																						
Chloromethane	74-87-3		5																						
Chloroform	67-66-3	80	5	0.52 J		0.79 J						0.6 J		0.51 J	0.63 J	0.52 J									
cis-1,2-Dichloroethene	156-59-2	70	5																				0.4 J		
Cyclohexane	1735-17-7		50																						
Ethylbenzene	100-41-4	700	5																						
Isopropylbenzene	98-82-8		5																						
Methylcyclohexane	108-87-2		50																						
Tetrachloroethene	127-18-4	5	5																						
Toluene	108-88-3	1,000	5																						
Trichloroethene	79-01-6	5	5																						
Vinyl chloride	75-01-4	2	2																						
m+p-xylenes	1330-20-7		5																						
o-Xylene	95-47-6		5																						
Xylenes (total)	1330-20-7	10,000	5																						
Naphthalene	91-20-3		50																						
*Acetone	67-64-1		50																						
Methane, Ethene, Ethane (µg/l)																									
Methane	74-82-8			0.45 J	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	960	NA	11

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µg/L = Micrograms per liter
NYSDOH = New York State Department of Health
Blank cells = No Criteria or Not Detected
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[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
Bold = Indicates Exceedances from NYSDOH MCLs
*Acetone was detected in some samples but is considered a lab contaminant

TABLE 4-1
GROUNDWATER ANALYTICAL DETECTIONS
SITE 2 - FORMER FIRE TRAINING AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	FT-MW08S (Mar-11)	FT-MW08S (Mar-11)	FT-MW08I (Jan-08)	FT-MW08I (Sept-09)	FT-MW08I (Sept-10)	FT-MW08I (Mar-11)	FT-MW08I (Sept-11)
Screened Interval (ft bgs)				**4 - 14**	**4 - 14**	**23 - 33**	**23 - 33**	**23 - 33**	**23 - 33**	**23 - 33**
Volatile Organic Compounds (µg/l)										
1,1,1-Trichloroethane	71-55-6	200	5							
1,1-Dichloroethane	75-34-3		5					2.2 J	1.2	
1,1-Dichloroethene	75-35-4	7	5							
1,2-Dichlorobenzene	95-50-1	600	5					2.5 J		
1,2-Dichloroethene (total)	540-59-0		5							
1,2,4-Trichlorobenzene	120-82-1	70	5							
1,4-Dichlorobenzene	106-46-7	75	5							
Benzene	71-43-2	5	5							
2-Butanone	78-93-3		50							
Carbon Disulfide	75-15-0		50							
Chlorobenzene	108-90-7	100	5							
Chloromethane	74-87-3		5							
Chloroform	67-66-3	80	5							
cis-1,2-Dichloroethene	156-59-2	70	5						0.54 J	
Cyclohexane	1735-17-7		50							
Ethylbenzene	100-41-4	700	5							
Isopropylbenzene	98-82-8		5					0.66 J		
Methylcyclohexane	108-87-2		50							
Tetrachloroethene	127-18-4	5	5							
Toluene	108-88-3	1,000	5							
Trichloroethene	79-01-6	5	5							
Vinyl chloride	75-01-4	2	2							
m+p-xylenes	1330-20-7		5							
o-Xylene	95-47-6		5					0.90 J		
Xylenes (total)	1330-20-7	10,000	5					0.90 J		
Naphthalene	91-20-3		50						TIC	
*Acetone	67-64-1		50							
Methane, Ethene, Ethane (µg/l)										
Methane	74-82-8			ND	NA	NA	NA	37	208 D	NA

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DUP = Duplicate
TIC = Tentative Identified Compound
µg/L = Micrograms per liter
NYSDOH = New York State Department of Health
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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
Bold = Indicates Exceedances from NYSDOH MCLs
*Acetone was detected in some samples but is considered a lab contaminant

TABLE 4-2
GROUNDWATER ANALYTICAL DETECTIONS
SITE 6A - FUEL CALIBRATION AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	FC-MW01S (Jan-08)	FC-MW01S (Aug-08)	FC-MW01S (Sept-09)	FC-MW01S (Sept-10)	FC-MW01S (Mar-11)	FC-MW01S (Sept-11)	FC-MW01I (Jan-08)	FC-MW01I (Aug-08)	FC-MW01I (Sept-09)	FC-MW01I (Sept-10)	FC-MW01I (Mar-11)	FC-MW01I (Sept-11)	FC-MW02S (Jan-08)	FC-MW02S (DUP) (Jan-08)	FC-MW02S (Aug-08)	FC-MW02S (DUP) (Aug-08)	FC-MW02SR1 (Sept-10)	FC-MW02SR1 (DUP) (Sept-10)	FC-MW02SR1 (Mar-11)	FC-MW02SR1 (Sept-11)	FC-MW02I (Jan-08)	FC-MW02I (Aug-08)	FC-MW02IR1 (Sept-10)
Screened Interval (ft bgs)				**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**48 - 58**	**48 - 58**	**48 - 58**	**48 - 58**	**48 - 58**	**48 - 58**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**			
Volatile Organic Compounds (µg/l)																										
1,1,1-Trichloroethane	71-55-6	200	5													2 J	2 J									
1,1-Dichloroethane	75-34-3		5												1.2	**6**	**6**	3	3	**11**	**11**	**16**	**14**	0.7 J		
1,1-Dichloroethene	75-35-4	7	5													0.7 J										
2-Butanone	78-93-3		50															1 J		18 J	33 J					
*Acetone	67-64-1		50		3 J											16	13	32	28				17	2 J	2 J	
cis-1,2-Dichloroethene	156-59-2	70	5												0.44 J								0.85 J			
Carbon Disulfide	75-15-0		50																	1.0 J						0.36 J
Chloroethane	75-00-3		5													4 J	4 J	3	3			**7.3**	4.4			
Chloromethane	74-87-3		5																							
Cyclohexane	110-82-7		50																			0.97 J	2.1			
Benzene	71-43-2	5	5																							
1,2-Dichlorobenzene	95-50-1	600	5												0.49 J					1.5 J	1.4 J	1.5	3.8			
1,2,4-Trichlorobenzene	120-82-1	70	5																							
Ethylbenzene	100-41-4	700	5													0.4 J	0.5 J			**6.3**	4.6 J	**6.8**	**6**			
Isopropylbenzene	98-82-8		5																	4.7 J	4.0 J	**5.6**	4.1			
Freon-113	76-13-1		50																					1 J		
Methylcyclohexane	108-87-2		50													1 J	1 J	0.4 J			1.7 J	1.9				
Methyl tert butyl Ether	1634-04-4		50																							
Tetrachloroethene	127-18-4	5	5																							
Trichloroethene	79-01-6	5	5																				0.5 J			
Toluene	108-88-3	1000	5													3 J	3 J	0.5 J	0.5 J		1.2 J	0.98 J				
Napthalene	91-20-3		50																	18	17	19 J**				
*Methylene Chloride	75-09-2	5	5																		16 J					
m+p-xylenes	1330-20-7		5													4 J	**5 J**			**21 J**	**13 J**	**17**	**25**			
o-Xylene	95-47-6		5													**5**	**5**	0.4 J	0.4 J	**17 J**	**12 J**	**11**	**11**			
Xylenes (total)	1330-20-7	10,000	5													**9 J**	**10 J**	0.4 J	0.4 J	**39 J**	**25 J**	**28**	**36**			
Methane, Ethene, Ethane (µg/l)																										
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	130	NA	3300 D	NA	NA	NA	0.32 J

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ft bgs = feet below ground surface
NA = Not Analyzed
J = Estimated Value
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[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website 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
Bold - Indicates Exceedances from NYSDOH MCLs
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants
**compund identified as "TIC" Tentatively Identified Compound

TABLE 4-2
GROUNDWATER ANALYTICAL DETECTIONS
SITE 6A - FUEL CALIBRATION AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	FC-MW02IR1 (Mar-11)	FC-MW02IR1 (Sept-11)	FC-MW03S (Jan-08)	FC-MW03S (Aug-08)	FC-MW03SR1 (Sept-10)	FC-MW03SR1 (Mar-11)	FC-MW03SR1 (Sept-11)	FC-MW04S (Jan-08)	FC-MW04S (Aug-08)	FC-MW04S (Sept-09)	FC-MW04S (Sept-10)	FC-MW04S (Mar-11)	FC-MW04S (Sept-11)	FC-MW04I (Jan-08)	FC-MW04I (Aug-08)	FC-MW04I (Sept-09)	FC-MW04I (DUP) (Sept-09)	FC-MW041 (Sept-10)	FC-MW04I (Mar-11)	FC-MW04I (Sept-11)	FC-MW05S (Jan-08)	FC-MW05S (Aug-08)	FC-MW05S (Sept-09)
Screened Interval (ft bgs)						**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**3 - 13**	**40 - 50**	**40 - 50**	**40 - 50**	**40 - 50**	**40 - 50**	**40 - 50**	**40 - 50**	**6 - 16**	**6 - 16**	**6 - 16**
Volatile Organic Compounds (µg/l)																										
1,1,1-Trichloroethane	71-55-6	200	5																						0.3 J	
1,1-Dichloroethane	75-34-3		5					1.3 J	1.1	**9.3 J**															4	
1,1-Dichloroethene	75-35-4	7	5																							
2-Butanone	78-93-3		50																							
*Acetone	67-64-1		50				3 J																			
cis-1,2-Dichloroethene	156-59-2	70	5																							
Carbon Disulfide	75-15-0		50																							
Chloroethane	75-00-3		5							**5 J**															**5**	
Chloromethane	74-87-3		5						0.57 J														0.63 J			
Cyclohexane	110-82-7		50																							
Benzene	71-43-2	5	5																							
1,2-Dichlorobenzene	95-50-1	600	5					1.8 J	2.9																	
1,2,4-Trichlorobenzene	120-82-1	70	5																							
Ethylbenzene	100-41-4	700	5					**23**	**46**	**23 J**																
Isopropylbenzene	98-82-8		5					**13**	**21**	**10 J**																
Freon-113	76-13-1		50														0.4 J									
Methylcyclohexane	108-87-2		50							2.1 J																
Methyl tert butyl Ether	1634-04-4		50																							
Tetrachloroethene	127-18-4	5	5																							
Trichloroethene	79-01-6	5	5																							
Toluene	108-88-3	1000	5																							
Napthalene	91-20-3		50	20 J**					30 J**																	
*Methylene Chloride	75-09-2	5	5																							
m+p-xylenes	1330-20-7		5					**15**	**19**																	
o-Xylene	95-47-6		5						**0.55 J**																	
Xylenes (total)	1330-20-7	10,000	5					**15**	**19.55**																	
Methane, Ethene, Ethane (µg/l)																										
Methane	74-82-8			ND	NA	NA	NA	69	1200 D	NA	NA	NA	4	NA	NA	NA	NA	NA	0.3 J	NA	NA	NA	NA	NA	NA	240 D

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Blank cells = No Criteria or Not Detected
ft bgs = feet below ground surface
NA = Not Analyzed
J = Estimated Value
µg/L = Micrograms per l
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website 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
Bold - Indicates Exceedances from NYSDOH MCLs
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants
**compund identified as "TIC" Tentatively Identified Compound

TABLE 4-2
GROUNDWATER ANALYTICAL DETECTIONS
SITE 6A - FUEL CALIBRATION AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	FC-MW05S (DUP) (Sept-09)	FC-MW05S (Sept-10)	FC-MW05S (Mar-11)	FC-MW05S (Jun-11)	FC-MW05S (Sept-11)	FC-MW05I (Jan-08)	FC-MW05I (Aug-08)	FC-MW05I (Sept-09)	FC-MW05I (Sept-10)	FC-MW05I (Mar-11)	FC-MW05I (Jun-11)	FC-MW05I (Sept-11)	FC-PZ05I1 (Dec-10)	FC-PZ05I1 (Mar-11)	FC-PZ05I1 DUP (Mar-11)	FC-PZ05I1 (Jun-11)	FC-PZ05I1 (Sept-11)	FC-PZ05I1 DUP (Sept-11)	FC-MW06S (Jan-08)	FC-MW06S (Aug-08)	FC-MW06S (Sept-09)	FC-MW06S (Sept-10)	FC-MW06S (Mar-11)	FC-MW06S (Sept-11)
Screened Interval (ft bgs)				**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**48 - 58**	**48 - 58**	**48 - 58**	**48 - 58**	**48 - 58**	**48 - 58**	**48 - 58**	**20 - 30**	**20 - 30**	**20 - 30**	**20 - 30**	**20 - 30**	**20 - 30**	**9 - 19**	**9 - 19**	**9 - 19**	**9 - 19**	**9 - 19**	**9 - 19**
Volatile Organic Compounds (µg/l)																											
1,1,1-Trichloroethane	71-55-6	200	5													**130**	**47**	**51**	**530**	**320 J**	**360 J**						
1,1-Dichloroethane	75-34-3		5		0.89 J				0.5 J			0.50 J		0.55 J		**470**	**73**	**86**	**1,000**	**790 J**	**830 J**						
1,1-Dichloroethene	75-35-4	7	5													**25**	4.1 J	**7.7 J**	**75**	**42 J**	**60 J**						
2-Butanone	78-93-3		50																								
*Acetone	67-64-1		50							3 J													3 J				
cis-1,2-Dichloroethene	156-59-2	70	5																								
Carbon Disulfide	75-15-0		50																								
Chloroethane	75-00-3		5													**140**	**29**	**31**	**220**	**230 J**	**250 J**						
Chloromethane	74-87-3		5						0.8 J						0.43 J			0.52 J		0.77 J							
Cyclohexane	110-82-7		50																	1							
Benzene	71-43-2	5	5		0.84 J											2.3 J	**9**	**11**	**18**	2.3	2.6 J						
1,2-Dichlorobenzene	95-50-1	600	5		0.98 J													0.54 J	2	4.5	3.5 J						
1,2,4-Trichlorobenzene	120-82-1	70	5						0.71 J			0.71 J						1.2									
Ethylbenzene	100-41-4	700	5		**6.8 J**											**52**	**63**	**73**	**78**	**30**	**26 J**						
Isopropylbenzene	98-82-8		5		**8.2 J**		2.9									**21**	**30**	**36**	**38**	**11**	**9.2 J**						
Freon-113	76-13-1		50						1 J				0.61 J			1.9 J	0.61 J	0.61 J									
Methylcyclohexane	108-87-2		50													1.9 J											
Methyl tert butyl Ether	1634-04-4		50																								
Tetrachloroethene	127-18-4	5	5																			**12**	0.9 J		2.5 J		
Trichloroethene	79-01-6	5	5																0.92 J	0.68 J							
Toluene	108-88-3	1000	5																0.7 J	0.56 J							
Napthalene	91-20-3		50		37 J											**110**	37 J**	46 J**								2.2 J**	
*Methylene Chloride	75-09-2	5	5													2.7 J											
m+p-xylenes	1330-20-7		5		2.0 J											**7.1 J**	2.9	2.6	**21**	**8.2 J**	4 J						
o-Xylene	95-47-6		5		0.40 J																						
Xylenes (total)	1330-20-7	10,000	5		2.4 J											**7.1 J**	2.9	2.6	**21**	**8.2 J**	4 J						
Methane, Ethene, Ethane (µg/l)																											
Methane	74-82-8			NA	240	18.9	NA	NA	NA	NA	NA	0.40 J	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
CAS = Chemical Abstracts Service
NA = Not Analyzed
MCL = Maximum contaminate level
J = Estimated Value
TIC = Tentative Identified Compound
µg/L = Micrograms per l
NYSDOH = New York State Department of Health
DUP = Duplicate
Blank cells = No Criteria or Not Detected
ft bgs = feet below ground surface
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website 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
Bold - Indicates Exceedances from NYSDOH MCLs
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants
**compund identified as "TIC" Tentatively Identified Compound

TABLE 4-2
GROUNDWATER ANALYTICAL DETECTIONS
SITE 6A - FUEL CALIBRATION AREA
NWIRP CALVERTON, NEW YORK
PAGE 4 of 4

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	FC-MW07S (Jan-08)	FC-MW07S (Aug-08)	FC-MW07S (Sept-09)	FC-MW07S (Sept-10)	FC-MW07S (Mar-11)	FC-MW07S (Sept-11)	FC-MW07I (Sept-09)	FC-MW07I (Sept-10)	FC-MW07I (Mar-11)	FC-MW07I (Sept-11)	FC-MW08S (Jan-08)	FC-MW08S (Aug-08)	FC-MW08S (Sept-09)	FC-MW08S (Sept-10)	FC-MW08S (Mar-11)	FC-MW08S (Sept-11)
Screened Interval (ft bgs)				**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**48 - 58**	**48 - 58**	**48 - 58**	**48 - 58**	**2 - 12**	**2 - 12**	**2 - 12**	**2 - 12**	**2 - 12**	**2 - 12**
Volatile Organic Compounds (µg/l)																			
1,1,1-Trichloroethane	71-55-6	200	5																
1,1-Dichloroethane	75-34-3		5																
1,1-Dichloroethene	75-35-4	7	5																
2-Butanone	78-93-3		50																
*Acetone	67-64-1		50		2 J														
cis-1,2-Dichloroethene	156-59-2	70	5																
Carbon Disulfide	75-15-0		50																
Chloroethane	75-00-3		5		1 J														
Chloromethane	74-87-3		5	0.6 J															
Cyclohexane	110-82-7		50																
Benzene	71-43-2	5	5																
1,2-Dichlorobenzene	95-50-1	600	5																
1,2,4-Trichlorobenzene	120-82-1	70	5																
Ethylbenzene	100-41-4	700	5				1.4 J		0.9 J										
Isopropylbenzene	98-82-8		5				0.91 J												
Freon-113	76-13-1		50																
Methylcyclohexane	108-87-2		50																
Methyl tert butyl Ether	1634-04-4		50									0.62 J							
Tetrachloroethene	127-18-4	5	5																
Trichloroethene	79-01-6	5	5																
Toluene	108-88-3	1000	5																
Napthalene	91-20-3		50																
*Methylene Chloride	75-09-2	5	5				**16**				**17**						**12**		
m+p-xylenes	1330-20-7		5				1.5 J												
o-Xylene	95-47-6		5																
Xylenes (total)	1330-20-7	10,000	5				1.5 J												
Methane, Ethene, Ethane (µg/l)																			
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
CAS = Chemical Abstracts Service
MCL = Maximum contaminate level
TIC = Tentative Identified Compound
NYSDOH = New York State Department of Health
DUP = Duplicate
Blank cells = No Criteria or Not Detected
ft bgs = feet below ground surface
NA = Not Analyzed
J = Estimated Value
µg/L = Micrograms per l
[1] (USEPA, 2007) Drinking Water Contaminants National Primary Drinking Water Regulations, from the USEPA website 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
Bold - Indicates Exceedances from NYSDOH MCLs
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants
**compund identified as "TIC" Tentatively Identified Compound

TABLE 4-3
GROUNDWATER ANALYTICAL DETECTIONS
SITE 10B - ENGINE TEST HOUSE
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	ET-MW01S (Jan-08)	ET-MW01S (Aug-08)	ET-MW01S (Sept-09)	ET-MW01S (Sept-10)	ET-MW01S (Mar-11)	ET-MW01S (Sept-11)	ET-MW01S (DUP) (Sept-11)	ET-MW02S (Jan-08)	ET-MW02S (Aug-08)	ET-MW02S (Sept-09)	ET-MW02S (Sept-10)	ET-MW02S (Mar-11)	ET-MW02S (Sept-11)	ET-MW03S (Jan-08)	ET-MW03S (DUP) (Jan-08)	ET-MW03S (Aug-08)	ET-MW03S (Sept-09)	ET-MW03S (Sept-10)	ET-MW03S (Mar-11)	ET-MW03S (Sept-11)
Screened Interval (ft bgs)				**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**
Volatile Organic Compounds (µg/l)																							
1,1,1-Trichloroethane	71-55-6	200	5								3 J	0.4 J		2.4 J									
Chloromethane	74-87-3		5						0.45 J	0.45 J													0.49 J
Methylene chloride	75-09-2		5				1.4 J							1.4 J							1.1 J		
Toluene	108-88-3	1,000	5				0.68 J							0.62 J							0.68 J		
Isopropylbenzene	98-82-8		5				0.83 J																
Ethylbenzene	100-41-4	700	5				0.55 J																

NOTES:
CAS = Chemical Abstracts Service
MCL = Maximum contaminat level
ft bgs = feet below ground surface
J = Estimated Values
DUP = Duplicate
µg/L= micrograms per liter
NYSDOH = New York State Department of Health
Blank cells = No Criteria or Not Detected
Bold = Indicates Exceedances from 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

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-MW126S (Jan-08)	SA-MW126S (Aug-08)	SA-MW126S (Sept-09)	SA-MW126S (Sept-10)	SA-MW126S (Mar-11)	SA-MW126S (Sept-11)	SA-MW126I (Jan-08)	SA-MW126I (Aug-08)	SA-MW126I (Sept-09)	SA-MW126I (Sept-10)	SA-MW126I (Mar-11)	SA-MW126I (Sept-11)	SA-MW126D (Jan-08)	SA-MW126D (Aug-08)	SA-MW126D (Sept-09)	SA-MW126D (Sept-10)	SA-MW126D (Mar-11)	SA-MW126D (Sept-11)	SA-MW126D (DUP) (Sept-11)	SA-MW127S (Jan-08)	SA-MW127S (DUP) (Jan-08)
Screened Interval (ft bgs)				**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**40 - 50**	**40 - 50**	**40 - 50**	**40 - 50**	**40 - 50**	**40 - 50**	**122 - 132**	**122 - 132**	**122 - 132**	**122 - 132**	**122 - 132**	**122 - 132**	**122 - 132**	**5 - 15**	**5 - 15**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5	0.4 J																				
1,1-Dichloroethane	75-34-3		5	1					1.7															
1,1-Dichloroethene	75-35-4	7	5																					
1,2-Dichlorobenzene	95-50-1		5																					
cis-1,2-Dichloroethene	156-59-2	70	5																					
1,2-Dichloroethane	107-06-2	5	5																					
1,2,3-Trichlorobenzene	123-61-5		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5																					
1,3-Dichlorobenzene	541-73-1		5																					
1,4-Dichlorobenzene	106-46-7	75	5																					
1,1,2-Trichlorotrifluoroethane	76-13-1		50																					
2-Butanone	78-93-3		50																					
2-Hexanone	591-78-6		50																					
*Acetone	67-64-1		50																					
Benzene	71-43-2	5	5																					
Carbon Disulfide	75-15-0		50													2 J								
Chlorobenzene	108-90-7	100	5																					
Chloroethane	75-00-3		5																					
Chloromethane	74-87-3		5																					
Chloroform	67-66-3	80	5																					
Cyclohexane	110-82-7		50																					
Isopropylbenzene	98-82-8		5																					
*Toluene	108-88-3	1,000	5	0.5 J	1								0.58 J										2 J	2
Vinyl Chloride	75-01-4	2	2																					
Methyl Acetate	79-20-9		50																					
*Methylene Chloride	75-09-2	5	5				14						15											
Naphthalene	91-20-3		50																					
Trichloroethene	79-01-6	5	5																					
Tetrachloroethene	127-18-4	5	5																					
Trans-1,2-Dichloroethene	156-60-5	100	5																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	74-84-0			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
CAS = Chemical Abstracts Service
Blank cells = No criteria or not detected
MCL = Maximum contaminat level
Bold = Indicates Exceedances from 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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-MW127S (Aug-08)	SA-MW127S (Sept-09)	SA-MW-127S (Sept-10)	SA-MW127S (Mar-11)	SA-MW127S (Sept-11)	SA-MW127I (Jan-08)	SA-MW127I (Aug-08)	SA-MW127I (Sept-09)	SA-MW127I (Sept-10)	SA-MW127I (DUP) (Sept-10)	SA-MW127I (Mar-11)	SA-MW127I (Sept-11)	SA-MW127D (Jan-08)	SA-MW127D (Aug-08)	SA-MW127D (Sept-09)	SA-MW127D (Sept-10)	SA-MW127D (Mar-11)	SA-MW127D (Sept-11)	SA-MW128S (Jan-08)	SA-MW128S (Aug-08)	SA-MW128S (Sept-09)
Screened Interval (ft bgs)				**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**36 - 46**	**36 - 46**	**36 - 46**	**36 - 46**	**36 - 46**	**36 - 46**	**36 - 46**	**68 - 78**	**68 - 78**	**68 - 78**	**68 - 78**	**68 - 78**	**68 - 78**	**7 - 17**	**7 - 17**	**7 - 17**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5						**94**	**94**	**61**	1.2 J	1.1	**8.1**	4.1									
1,1-Dichloroethane	75-34-3		5						**410**	**470**	**270 J**	**9.1 J**	**9.3**	**93**	**71**	0.6 J								
1,1-Dichloroethene	75-35-4	7	5						**30**	**27**	**20**			**5.6**	3.8									
1,2-Dichlorobenzene	95-50-1		5						0.7 J	3														
cis-1,2-Dichloroethene	156-59-2	70	5							0.3 J														
1,2-Dichloroethane	107-06-2	5	5						0.6 J															
1,2,3-Trichlorobenzene	123-61-5		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5						2 J	4	2.7 J													
1,3-Dichlorobenzene	541-73-1		5						0.7 J	3														
1,4-Dichlorobenzene	106-46-7	75	5						3 J	**13**	3.8 J													
1,1,2-Trichlorotrifluoroethane	76-13-1		50																					
2-Butanone	78-93-3		50																					
2-Hexanone	591-78-6		50																					
*Acetone	67-64-1		50																					
Benzene	71-43-2	5	5						0.9 J	1														
Carbon Disulfide	75-15-0		50																					
Chlorobenzene	108-90-7	100	5						0.5 J	1														
Chloroethane	75-00-3		5						**51**	**63**	**29**			**26**	**8.5**									
Chloromethane	74-87-3		5																					
Chloroform	67-66-3	80	5																					
Cyclohexane	110-82-7		50																					
Isopropylbenzene	98-82-8		5							1														
*Toluene	108-88-3	1,000	5										0.69 J											
Vinyl Chloride	75-01-4	2	2																					
Methyl Acetate	79-20-9		50																					
*Methylene Chloride	75-09-2	5	5										1.4 J											
Naphthalene	91-20-3		50																					
Trichloroethene	79-01-6	5	5																					
Tetrachloroethene	127-18-4	5	5																					
Trans-1,2-Dichloroethene	156-60-5	100	5																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	ND	0.39 J	ND	NA	NA	NA	35	15	15	6.1 J	NA	NA	NA	NA	0.97	ND	NA	NA	NA	2
Ethane	74-84-0			NA	0.2 J	ND	ND	NA	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	ND	ND	NA	NA	NA	ND

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
CAS = Chemical Abstracts Service
Blank cells = No criteria or not detected
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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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-MW128S (Sept-10)	SA-MW128S (Mar-11)	SA-MW128S (Sept-11)	SA-MW128I (Jan-08)	SA-MW128I (Aug-08)	SA-MW128I (Sept-09)	SA-MW128I (Sept-10)	SA-MW128I (Mar-11)	SA-MW128I (Sept-11)	SA-MW128D (Jan-08)	SA-MW128D (Aug-08)	SA-MW128D (Sept-09)	SA-MW128D (DUP) (Sept-09)	SA-MW128D (Sept-10)	SA-MW128D (Mar-11)	SA-MW128D (Sept-11)	SA-MW128D (DUP) (Sept-11)	SA-MW129S (Jan-08)	SA-MW129S (Aug-08)	SA-MW129S (DUP) (Aug-08)	SA-MW129S (Sept-09)
Screened Interval (ft bgs)				**7 - 17**	**7 - 17**	**7 - 17**	**30 - 40**	**30 - 40**	**30 - 40**	**30 - 40**	**30 - 40**	**30 - 40**	**58 - 68**	**58 - 68**	**58 - 68**	**58 - 68**	**58 - 68**	**58 - 68**	**58 - 68**	**58 - 68**	**19.5 - 29.5**	**19.5 - 29.5**	**19.5 - 29.5**	**19.5 - 29.5**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5				**48**	**35**	2.4 J	1.1 J														
1,1-Dichloroethane	75-34-3		5				**160**	**170**	**33**	**10 J**	**5.1**	**5**	**5**	**7**	2.9 J	3.1 J	1.6 J	2.1	2.6	2.7				1.4 J
1,1-Dichloroethene	75-35-4	7	5				**18**	**12**	2.5 J			0.68 J		0.4 J										
1,2-Dichlorobenzene	95-50-1		5																					
cis-1,2-Dichloroethene	156-59-2	70	5																					
1,2-Dichloroethane	107-06-2	5	5																					
1,2,3-Trichlorobenzene	123-61-5		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5				1	1																
1,3-Dichlorobenzene	541-73-1		5																					
1,4-Dichlorobenzene	106-46-7	75	5				0.9 J	0.7 J																
1,1,2-Trichlorotrifluoroethane	76-13-1		50																					
2-Butanone	78-93-3		50																					
2-Hexanone	591-78-6		50																					
*Acetone	67-64-1		50														2.8 J							
Benzene	71-43-2	5	5																					
Carbon Disulfide	75-15-0		50																					
Chlorobenzene	108-90-7	100	5																					
Chloroethane	75-00-3		5				**6**	**6**																
Chloromethane	74-87-3		5																					
Chloroform	67-66-3	80	5										0.4 J											
Cyclohexane	110-82-7		50																					
Isopropylbenzene	98-82-8		5																					
*Toluene	108-88-3	1,000	5							0.65 J														
Vinyl Chloride	75-01-4	2	2																					
Methyl Acetate	79-20-9		50																					
*Methylene Chloride	75-09-2	5	5							1.7 J														
Naphthalene	91-20-3		50																					
Trichloroethene	79-01-6	5	5																					
Tetrachloroethene	127-18-4	5	5																					
Trans-1,2-Dichloroethene	156-60-5	100	5																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	NA	NA	NA	NA	27	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	74-84-0			NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
CAS = Chemical Abstracts Service
Blank cells = No criteria or not detected
MCL = Maximum contaminat level
Bold = Indicates Exceedances from 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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-MW129S (Sept-10)	SA-MW129S (Mar-11)	SA-MW129S (Sept-11)	SA-MW129I (Jan-08)	SA-MW129I (Aug-08)	SA-MW129I (Sept-09)	SA-MW129I (Sept-10)	SA-MW129I (Mar-11)	SA-MW129I (Sept-11)	SA-MW129D (Jan-08)	SA-MW129D (Aug-08)	SA-MW129D (Sept-09)	SA-MW129D (Sept-10)	SA-MW129D (Mar-11)	SA-MW129D (Sept-11)	SA-MW130S (Sept-09)	SA-MW130S (Sept-10)	SA-MW130S (Mar-11)	SA-MW130S (Sept-11)	SA-MW130I (Sept-09)	SA-MW130I (Sept-10)
Screened Interval (ft bgs)				**19.5 - 29.5**	**19.5 - 29.5**	**19.5 - 29.5**	**50 - 60**	**50 - 60**	**50 - 60**	**50 - 60**	**50 - 60**	**50 - 60**	**80 - 90**	**80 - 90**	**80 - 90**	**80 - 90**	**80 - 90**	**80 - 90**	**9 - 19**	**9 - 19**	**9 - 19**	**9 - 19**	**36 - 46**	**36 - 46**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5																					0.62 J
1,1-Dichloroethane	75-34-3		5				2 J	4	2.3 J	1.4 J	**7**	2.2	0.9 J	3			2.7	3						
1,1-Dichloroethene	75-35-4	7	5								0.64 J		0.5 J	0.4 J				0.67 J						
1,2-Dichlorobenzene	95-50-1		5																					
cis-1,2-Dichloroethene	156-59-2	70	5																					
1,2-Dichloroethane	107-06-2	5	5																					
1,2,3-Trichlorobenzene	123-61-5		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5																					
1,3-Dichlorobenzene	541-73-1		5																					
1,4-Dichlorobenzene	106-46-7	75	5																					
1,1,2-Trichlorotrifluoroethane	76-13-1		50																					
2-Butanone	78-93-3		50																					
2-Hexanone	591-78-6		50						6.9 J															
*Acetone	67-64-1		50																					
Benzene	71-43-2	5	5																					
Carbon Disulfide	75-15-0		50																					
Chlorobenzene	108-90-7	100	5																					
Chloroethane	75-00-3		5										0.8 J											
Chloromethane	74-87-3		5			0.56 J						0.45 J												
Chloroform	67-66-3	80	5																					
Cyclohexane	110-82-7		50																					
Isopropylbenzene	98-82-8		5																					
*Toluene	108-88-3	1,000	5	0.69 J						0.61 J														
Vinyl Chloride	75-01-4	2	2																					
Methyl Acetate	79-20-9		50																					
*Methylene Chloride	75-09-2	5	5	3.2 J						2.8 J														
Naphthalene	91-20-3		50																					
Trichloroethene	79-01-6	5	5																					
Tetrachloroethene	127-18-4	5	5																					
Trans-1,2-Dichloroethene	156-60-5	100	5																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9	NA	NA	NA	0.2 J	NA
Ethane	74-84-0			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	ND	NA

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
CAS = Chemical Abstracts Service
Blank cells = No criteria or not detected
MCL = Maximum contaminat level
Bold = Indicates Exceedances from 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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-MW130I (Mar-11)	SA-MW130I (Sept-11)	SA-MW131S (Sept-09)	SA-MW131S (Sept-10)	SA-MW131S (Mar-11)	SA-MW131S (Sept-11)	SA-MW131I (Sept-09)	SA-MW131I (Sept-10)	SA-MW131I (Mar-11)	SA-MW131I (Sept-11)	SA-MW131D (Sept-09)	SA-MW131D (Sept-10)	SA-MW131D (Mar-11)	SA-MW131D (Sept-11)	SA-MW132S (Sept-09)	SA-MW132S (Sept-10)	SA-MW132S (Mar-11)	SA-MW132S (Sept-11)	SA-MW132I (Sept-09)	SA-MW132I (DUP) (Sept-09)	SA-MW132I (Sept-10)
Screened Interval (ft bgs)				**36 - 46**	**36 - 46**	**4 - 14**	**4 - 14**	**4 - 14**	**4 - 14**	**30 - 40**	**30 - 40**	**30 - 40**	**30 - 40**	**60 - 70**	**60 - 70**	**60 - 70**	**60 - 70**	**4 - 14**	**4 - 14**	**4 - 14**	**4 - 14**	**27 - 37**	**27 - 37**	**27 - 37**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5								**18 J**													
1,1-Dichloroethane	75-34-3		5								**130 J**	**16**		**15**	**13 J**	**18 J**	**20**		1.1 J			**5.4**	**5.1**	3.4 J
1,1-Dichloroethene	75-35-4	7	5								**13 J**	1.5		1.5 J	2.3 J	2 J	2.3						1.1 J	
1,2-Dichlorobenzene	95-50-1		5																					
cis-1,2-Dichloroethene	156-59-2	70	5																					
1,2-Dichloroethane	107-06-2	5	5																					
1,2,3-Trichlorobenzene	123-61-5		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5																					
1,3-Dichlorobenzene	541-73-1		5																					
1,4-Dichlorobenzene	106-46-7	75	5																					
1,1,2-Trichlorotrifluoroethane	76-13-1		50																					
2-Butanone	78-93-3		50																					
2-Hexanone	591-78-6		50																					
*Acetone	67-64-1		50												3.1 J									
Benzene	71-43-2	5	5																					
Carbon Disulfide	75-15-0		50																					
Chlorobenzene	108-90-7	100	5																					
Chloroethane	75-00-3		5																					
Chloromethane	74-87-3		5																		0.59 J			
Chloroform	67-66-3	80	5															2.9 J						
Cyclohexane	110-82-7		50																					
Isopropylbenzene	98-82-8		5																					
*Toluene	108-88-3	1,000	5																0.45 J					
Vinyl Chloride	75-01-4	2	2																					
Methyl Acetate	79-20-9		50																					
*Methylene Chloride	75-09-2	5	5																					
Naphthalene	91-20-3		50																					
Trichloroethene	79-01-6	5	5																					
Tetrachloroethene	127-18-4	5	5																					
Trans-1,2-Dichloroethene	156-60-5	100	5																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	NA	7	4.2	18.5	NA	4	54	19.2	NA	12	29	18.6	NA	7	NA	NA	NA	18	NA	NA
Ethane	74-84-0			NA	NA	ND	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	NA	NA	ND	NA	NA

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
CAS = Chemical Abstracts Service
Blank cells = No criteria or not detected
MCL = Maximum contaminat level
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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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-MW132I (Mar-11)	SA-MW132I (Sept-11)	SA-PZ118S (Jan-08)	SA-PZ118S (Aug-08)	SA-PZ118S (Sept-09)	SA-PZ118S (DUP) (Sept-09)	SA-PZ118S (Sept-10)	SA-PZ118S (Mar-11)	SA-PZ118S (DUP) (Mar-11)	SA-PZ118S (Sept-11)	SA-PZ118I (Jan-08)	SA-PZ118I (Aug-08)	SA-PZ118I (Sept-09)	SA-PZ118I (Sept-10)	SA-PZ118I (Mar-11)	SA-PZ118I (Sept-11)	SA-PZ120S (Jan-08)	SA-PZ120S (Aug-08)	SA-PZ120S (Sept-09)	SA-PZ120S (Sept-10)	SA-PZ120S (Mar-11)
Screened Interval (ft bgs)				**27 - 37**	**27 - 37**	**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**50 - 60**	**50 - 60**	**50 - 60**	**50 - 60**	**50 - 60**	**50 - 60**	**8 - 18**	**8 - 18**	**8 - 18**	**8 - 18**	**8 - 18**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5																					
1,1-Dichloroethane	75-34-3		5	4.6	**6.9**	4 J	**17**	2.5 J	2.1 J		**6.1**	**5.8**	3.5											
1,1-Dichloroethene	75-35-4	7	5	0.94 J	1.5	1 J	4				1.1	1.1	0.91 J											
1,2-Dichlorobenzene	95-50-1		5																					
cis-1,2-Dichloroethene	156-59-2	70	5																					
1,2-Dichloroethane	107-06-2	5	5																					
1,2,3-Trichlorobenzene	123-61-5		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5																					
1,3-Dichlorobenzene	541-73-1		5																					
1,4-Dichlorobenzene	106-46-7	75	5																					
1,1,2-Trichlorotrifluoroethane	76-13-1		50																					
2-Butanone	78-93-3		50																					
2-Hexanone	591-78-6		50																					
*Acetone	67-64-1		50																					
Benzene	71-43-2	5	5																					
Carbon Disulfide	75-15-0		50																					
Chlorobenzene	108-90-7	100	5																					
Chloroethane	75-00-3		5																					
Chloromethane	74-87-3		5												3									0.93 J
Chloroform	67-66-3	80	5																					
Cyclohexane	110-82-7		50																					
Isopropylbenzene	98-82-8		5																					
*Toluene	108-88-3	1,000	5																				0.49 J	
Vinyl Chloride	75-01-4	2	2																					
Methyl Acetate	79-20-9		50																					
*Methylene Chloride	75-09-2	5	5																					
Naphthalene	91-20-3		50																					
Trichloroethene	79-01-6	5	5																					
Tetrachloroethene	127-18-4	5	5																					
Trans-1,2-Dichloroethene	156-60-5	100	5																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	NA	NA	NA	210 J	290 J	150	235.4 J	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA
Ethane	74-84-0			NA	NA	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
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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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ120S (Sept-11)	SA-PZ122S (Jan-08)	SA-PZ122S (Aug-08)	SA-PZ122S (Sept-09)	SA-PZ122S (Sept-10)	SA-PZ122S (Mar-11)	SA-PZ122S (Sept-11)	SA-PZ122I (Jan-08)	SA-PZ122I (Aug-08)	SA-PZ122I (Sept-09)	SA-PZ122I (Sept-10)	SA-PZ122I (Mar-11)	SA-PZ122I (Sept-11)	SA-PZ122D (Jan-08)	SA-PZ122D (Aug-08)	SA-PZ122D (Sept-09)	SA-PZ122D (Sept-10)	SA-PZ122D (Mar-11)	SA-PZ122D (Sept-11)	SA-PZ122D (DUP) (Sept-11)	SA-PZ123S (Jan-08)
Screened Interval (ft bgs)				**8 - 18**	**12 - 22**	**12 - 22**	**12 - 22**	**12 - 22**	**12 - 22**	**12 - 22**	**39 - 49**	**39 - 49**	**39 - 49**	**39 - 49**	**39 - 49**	**39 - 49**	**122 - 132**	**122 - 132**	**122 - 132**	**122 - 132**	**122 - 132**	**122 - 132**	**122 - 132**	**7 - 17**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5																					
1,1-Dichloroethane	75-34-3		5								1 J			**9.7**				2	1.8 J	1.3 J	1.4	1.8 J		
1,1-Dichloroethene	75-35-4	7	5											1.2 J										
1,2-Dichlorobenzene	95-50-1		5																					
cis-1,2-Dichloroethene	156-59-2	70	5																					
1,2-Dichloroethane	107-06-2	5	5																					
1,2,3-Trichlorobenzene	123-61-5		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5																					
1,3-Dichlorobenzene	541-73-1		5																					
1,4-Dichlorobenzene	106-46-7	75	5																					
1,1,2-Trichlorotrifluoroethane	76-13-1		50																					
2-Butanone	78-93-3		50																					
2-Hexanone	591-78-6		50																					
*Acetone	67-64-1		50																					
Benzene	71-43-2	5	5																					
Carbon Disulfide	75-15-0		50																					
Chlorobenzene	108-90-7	100	5																					
Chloroethane	75-00-3		5																					
Chloromethane	74-87-3		5													0.5 J								
Chloroform	67-66-3	80	5																					
Cyclohexane	110-82-7		50																					
Isopropylbenzene	98-82-8		5																					
*Toluene	108-88-3	1,000	5					0.68 J						0.51 J						0.39 J				
Vinyl Chloride	75-01-4	2	2																					
Methyl Acetate	79-20-9		50																					
*Methylene Chloride	75-09-2	5	5																					
Naphthalene	91-20-3		50																					
Trichloroethene	79-01-6	5	5																					
Tetrachloroethene	127-18-4	5	5																					
Trans-1,2-Dichloroethene	156-60-5	100	5																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	74-84-0			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
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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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ123S (Aug-08)	SA-PZ123S (Sept-09)	SA-PZ123S (Sept-10)	SA-PZ123S (Mar-11)	SA-PZ123S (Sept-11)	SA-PZ123I1 (Jan-08)	SA-PZ123I1 (Aug-08)	SA-PZ123I1 (DUP) (Aug-08)	SA-PZ123I1 (Sept-09)	SA-PZ123I1 (Sept-10)	SA-PZ123I1 (DUP) (Sept-10)	SA-PZ123I1 (Mar-11)	SA-PZ123I1 (Sept-11)	SA-PZ123I (Jan-08)	SA-PZ123I (Aug-08)	SA-PZ123I (Sept-09)	SA-PZ123I (Sept-10)	SA-PZ123I (Mar-11)	SA-PZ123I (Sept-11)	SA-PZ133I (Mar-10)	SA-PZ133I (July-10)
Screened Interval (ft bgs)				**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**7 - 17**	**32 - 42**	**32 - 42**	**32 - 42**	**32 - 42**	**32 - 42**	**32 - 42**	**32 - 42**	**32 - 42**	**70 - 80**	**70 - 80**	**70 - 80**	**70 - 80**	**70 - 80**	**70 - 80**	**42 - 47**	**42 - 47**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5							2	2					**9.3**	1 J	1		0.59 J			**120**	**24**
1,1-Dichloroethane	75-34-3		5	0.7 J				2.6	**23**	**13**	**13**	**6.3**			**11**	**85**	**55**	**63**	**54**	**42 J**	**37**	**37**	**460**	**130**
1,1-Dichloroethene	75-35-4	7	5						3 J	2	2					**7.8**	**7**	**10**	**6.9**	**6.9 J**	4.9	4.7	**41**	**7.8**
1,2-Dichlorobenzene	95-50-1		5																				0.91 J	
cis-1,2-Dichloroethene	156-59-2	70	5																					
1,2-Dichloroethane	107-06-2	5	5															0.3 J						
1,2,3-Trichlorobenzene	123-61-5		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5						1 J	1	1 J					0.92 J	0.7 J			0.66 J	0.7 J	0.64 J	3 J	0.98 J
1,3-Dichlorobenzene	541-73-1		5																				0.65 J	0.7 J
1,4-Dichlorobenzene	106-46-7	75	5							0.5 J	0.5 J					0.54 J	0.6 J	0.6 J					2.2 J	
1,1,2-Trichlorotrifluoroethane	76-13-1		50																					
2-Butanone	78-93-3		50																					
2-Hexanone	591-78-6		50																					
*Acetone	67-64-1		50																					
Benzene	71-43-2	5	5																				1.1 J	
Carbon Disulfide	75-15-0		50																					
Chlorobenzene	108-90-7	100	5																					
Chloroethane	75-00-3		5													2	0.7 J				0.51 J	0.83 J	**67**	**9.6**
Chloromethane	74-87-3		5							3	3													
Chloroform	67-66-3	80	5			1.3 J																		
Cyclohexane	110-82-7		50																					
Isopropylbenzene	98-82-8		5																					
*Toluene	108-88-3	1,000	5											0.45 J										
Vinyl Chloride	75-01-4	2	2															**3**						
Methyl Acetate	79-20-9		50																					
*Methylene Chloride	75-09-2	5	5																					
Naphthalene	91-20-3		50																					
Trichloroethene	79-01-6	5	5																				0.32 J	
Tetrachloroethene	127-18-4	5	5																					
Trans-1,2-Dichloroethene	156-60-5	100	5																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	5 J	50	6.1 J	NA	NA	NA	NA	20 J	1.8	1.8	4.1 J	NA	NA	NA	32 J	18	16.9	NA	NA	NA
Ethane	74-84-0			NA	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
CAS = Chemical Abstracts Service
Blank cells = No criteria or not detected
MCL = Maximum contaminat level
Bold = Indicates Exceedances from 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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ133I (Aug-10)	SA-PZ133I (Dec-10)	SA-PZ133I (DUP Dec-10)	SA-PZ133I (Mar-11)	SA-PZ133I (Sept-11)	SA-PZ133I1 (Mar-10)	SA-PZ133I1 (DUP) (Mar-10)	SA-PZ133I1 (Mar-11)	SA-PZ133I1 (Sept-11)	SA-PZ134I (Mar-10)	SA-PZ135I (Mar-10)	SA-PZ135I (Dec-10)	SA-PZ135I (Mar-11)	SA-PZ135I (Sept-11)	SA-PZ136I (Mar-10)	SA-PZ136I (Dec-10)	SA-PZ136I (Mar-11)	SA-PZ136I (Sept-11)	SA-PZ137I (Mar-10)	SA-PZ137I (Sept-11)	SA-PZ138I (April-10)
Screened Interval (ft bgs)				**42 - 47**	**42 - 47**	**42 - 47**	**42 - 47**	**42 - 47**	**35 - 40**	**35 - 40**	**35 - 40**	**35 - 40**	**39 - 44**	**41.5 - 46.5**	**41.5 - 46.5**	**41.5 - 46.5**	**41.5 - 46.5**	**44 - 49**	**44 - 49**	**44 - 49**	**44 - 49**	**49 - 54**	**49 - 54**	**48.5 - 53.5**
Volatile Organic Compounds (µg/l)																								
1,1,1-Trichloroethane	71-55-6	200	5	**14**	**18**	**17**	**11**	4.2	2 J		**11**	**5.8**	**5.3**	**70**	**12**	**7.3**	**14**							
1,1-Dichloroethane	75-34-3		5	**98**	**130**	**130**	**63**	**31**	**26**	**23**	**130 D**	**100**	**31**	**260**	**54**	**34**	**53**	1.5 J	1.5 J	1.8	1.7		1.2	**8.7**
1,1-Dichloroethene	75-35-4	7	5	4.9 J	**6.9**	**6.7**	3.9	2	1.6 J	0.68 J	**6.6**	**6.4**	2.6 J	**22**	3.3 J	2.6	3.5							
1,2-Dichlorobenzene	95-50-1		5						0.36 J	0.41 J			0.43 J	0.91 J										
cis-1,2-Dichloroethene	156-59-2	70	5																					
1,2-Dichloroethane	107-06-2	5	5																					
1,2,3-Trichlorobenzene	123-61-5		5																					
1,2,4-Trichlorobenzene	120-82-1	70	5				0.84 J	0.89 J	0.75 J	0.91 J		0.62 J	1.5 J											
1,3-Dichlorobenzene	541-73-1		5										0.42 J											
1,4-Dichlorobenzene	106-46-7	75	5						1.2 J	1.3 J			1.3 J	0.38 J									0.61 J	
1,1,2-Trichlorotrifluoroethane	76-13-1		50																					
2-Butanone	78-93-3		50																					
2-Hexanone	591-78-6		50																					
*Acetone	67-64-1		50																					
Benzene	71-43-2	5	5		0.35 J									0.35 J										
Carbon Disulfide	75-15-0		50																					
Chlorobenzene	108-90-7	100	5																					
Chloroethane	75-00-3		5	**17**	**33**	**34**	**5.2**	1.9	4.9 J		**12**	**11**		**15**	**5.4 J**	1.2	2.8							
Chloromethane	74-87-3		5																					
Chloroform	67-66-3	80	5																					
Cyclohexane	110-82-7		50																					
Isopropylbenzene	98-82-8		5																					
*Toluene	108-88-3	1,000	5																					
Vinyl Chloride	75-01-4	2	2																					
Methyl Acetate	79-20-9		50																					
*Methylene Chloride	75-09-2	5	5																					
Naphthalene	91-20-3		50										1.5 J											
Trichloroethene	79-01-6	5	5																					
Tetrachloroethene	127-18-4	5	5																					
Trans-1,2-Dichloroethene	156-60-5	100	5																					
Methane, Ethene, Ethane (µg/l)																								
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	74-84-0			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
µg/L = micrograms per liter
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*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ138I (July-10)	SA-PZ138I (DUP) (July-10)	SA-PZ138I (Oct-10)	SA-PZ138I (DUP) (Oct-10)	SA-PZ138I (Dec-10)	SA-PZ138I (Mar-11)	SA-PZ138I (Jun-11)	SA-PZ138I1 (July-10)	SA-PZ138I1 (Oct-10)	SA-PZ138I1 (Dec-10)	SA-PZ138I1 (Mar-11)	SA-PZ138I1 (Jun-11)	SA-PZ138I1 (DUP) (Jun-11)	SA-PZ138I1 (Sept-11)	SA-PZ139I (April-10)	SA-PZ139I (July-10)	SA-PZ139I (Oct-10)	SA-PZ139I (Dec-10)	SA-PZ139I (Mar-11)	SA-PZ140I (June-10)
Screened Interval (ft bgs)				**48.5 - 53.5**	**48.5 - 53.5**	**48.5 - 53.5**	**48.5 - 53.5**	**48.5 - 53.5**	**48.5 - 53.5**	**48.5 - 53.5**	**37 - 42**	**37 - 42**	**37 - 42**	**37 - 42**	**37 - 42**	**37 - 42**	**37 - 42**	**42.5 - 47.5**	**42.5 - 47.5**	**42.5 - 47.5**	**42.5 - 47.5**	**42.5 - 47.5**	**44.5 - 49.5**
Volatile Organic Compounds (µg/l)																							
1,1,1-Trichloroethane	71-55-6	200	5	4.4 J	4.4 J	**8.1**	**8.2**	**5.6**		1.5	**220**	**170 J**	**260**	**340 D**	**320**	**300**	**250**	**35**	2.3 J	0.92 J	1.3 J		**17**
1,1-Dichloroethane	75-34-3		5	**20**	**20**	**33**	**32**	**20**	4.1	9.6	**980**	**970**	**1100**	**1200 D**	**1,500**	**1,500**	**1100**	**160**	**17**	**7.6**	**9.2**	**6.5**	**140**
1,1-Dichloroethene	75-35-4	7	5	1.2 J	1 J	1.7 J	2.0 J	1.2 J		0.6 J	**65**	**60 J**	**63**	**86**	**100**	**85**	**65**	**11**	0.94 J				**8.5**
1,2-Dichlorobenzene	95-50-1		5								**6.4 J**	**6.3 J**		3.7			1.9						
cis-1,2-Dichloroethene	156-59-2	70	5																				
1,2-Dichloroethane	107-06-2	5	5											1			0.81 J						
1,2,3-Trichlorobenzene	123-61-5		5														1.2						
1,2,4-Trichlorobenzene	120-82-1	70	5								**5.7 J**	**14 J**		**9.9**			4.8	0.84 J					
1,3-Dichlorobenzene	541-73-1		5								3.1 J	4.0 J		1.6									1.2 J
1,4-Dichlorobenzene	106-46-7	75	5								**13 J**	**16 J**		**7.2**				0.41 J					4.1 J
1,1,2-Trichlorotrifluoroethane	76-13-1		50																				
2-Butanone	78-93-3		50																				2.1 J
2-Hexanone	591-78-6		50																				
*Acetone	67-64-1		50																				
Benzene	71-43-2	5	5								3.4 J	4.4 J		2.6			1.6	0.35 J					
Carbon Disulfide	75-15-0		50																				
Chlorobenzene	108-90-7	100	5									1.1 J		0.55 J									0.58 J
Chloroethane	75-00-3		5		1.7 J						**210**	**230**	**320**	**240 D**	**250**	**280**	**150**	**22 J**	1.8 J				**19**
Chloromethane	74-87-3		5																				
Chloroform	67-66-3	80	5																				
Cyclohexane	110-82-7		50											1.4									
Isopropylbenzene	98-82-8		5								**6.5 J**	**11**		**8.2**			2.5						
*Toluene	108-88-3	1,000	5																				
Vinyl Chloride	75-01-4	2	2																				0.60 J
Methyl Acetate	79-20-9		50																				
*Methylene Chloride	75-09-2	5	5																				0.64 J
Naphthalene	91-20-3		50																				
Trichloroethene	79-01-6	5	5											0.97 J			0.65 J						
Tetrachloroethene	127-18-4	5	5																				
Trans-1,2-Dichloroethene	156-60-5	100	5																				
Methane, Ethene, Ethane (µg/l)																							
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	74-84-0			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
µg/L = micrograms per liter
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DUP = Duplicate
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[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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ140I (Sept-10)	SA-PZ140I (DUP) (Sept-10)	SA-PZ140I (Mar-11)	SA-PZ140I (Sept-11)	SA-PZ141I (June-10)	SA-PZ141I (Sept-11)	SA-PZ142I (June-10)	SA-PZ142I (Mar-11)	SA-PZ142I (DUP) (Mar-11)	SA-PZ142I (Sept-11)	SA-PZ143I (June-10)	SA-PZ143I (Sept-10)	SA-PZ143I (Mar-11)	SA-PZ143I (Sept-11)	SA-PZ144S (June-10)	SA-PZ144S (Mar-11)	SA-PZ144S (Sept-11)	SA-PZ144I (June-10)	SA-PZ144I (Mar-11)	SA-PZ144I (DUP) (Mar-11)
Screened Interval (ft bgs)				**44.5 - 49.5**	**44.5 - 49.5**	**44.5 - 49.5**	**44.5 - 49.5**	**50.5 - 55.5**	**50.5 - 55.5**	**40.5 - 45.5**	**40.5 - 45.5**	**40.5 - 45.5**	**40.5 - 45.5**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**5 - 15**	**5 - 15**	**5 - 15**	**45 - 50**	**45 - 50**	**45 - 50**
Volatile Organic Compounds (µg/l)																							
1,1,1-Trichloroethane	71-55-6	200	5	**9.0**	**10 J**	4.8	**8.4**			**60**	**40 J**	**35**	**17**	**110**	**110**	**62**	**84**						
1,1-Dichloroethane	75-34-3		5	**93**	**100 J**	**41**	**69**	2.8 J	**8.6**	**410**	**200 D**	**210 D**	**100**	**590**	**600**	**390 D**	**530**				3.7 J	4.4	4.2
1,1-Dichloroethene	75-35-4	7	5	**6.7**	**7.8 J**	3.1	**5.1**			**21**	**17 J**	**15**	**9.4**	**39**	**52**	**30**	**36**					0.6 J	0.52 J
1,2-Dichlorobenzene	95-50-1		5	0.64 J	0.47 J						0.88 J	0.79 J	0.62 J	1.6 J		0.66 J	0.86 J						
cis-1,2-Dichloroethene	156-59-2	70	5																				
1,2-Dichloroethane	107-06-2	5	5							0.55 J				0.83 J		0.7 J	0.64 J						
1,2,3-Trichlorobenzene	123-61-5		5										0.8 J			0.94 J	0.9 J						
1,2,4-Trichlorobenzene	120-82-1	70	5	1.9 J	1.4 J	1	0.83 J				1.7 J	1.5	2.3		**7.1 J**	3	3.2						
1,3-Dichlorobenzene	541-73-1		5	0.62 J	0.50 J						0.63 J	0.62 J		0.69 J									
1,4-Dichlorobenzene	106-46-7	75	5	2.2 J	2.1 J	1.3	0.89 J			1.5 J	3 J	2.8	2	3.1 J		1.3							
1,1,2-Trichlorotrifluoroethane	76-13-1		50																				
2-Butanone	78-93-3		50																				
2-Hexanone	591-78-6		50																				
*Acetone	67-64-1		50																				
Benzene	71-43-2	5	5							0.42 J				0.87 J		0.55 J	0.97 J						
Carbon Disulfide	75-15-0		50																				
Chlorobenzene	108-90-7	100	5							0.34 J													
Chloroethane	75-00-3		5	**14**	**15 J**	**5.7**	**6.8**			**36**	**28 J**	**27**	**7.8**	**44**		**47**	**40**						
Chloromethane	74-87-3		5						0.5 J								0.55 J						
Chloroform	67-66-3	80	5																				
Cyclohexane	110-82-7		50																				
Isopropylbenzene	98-82-8		5											0.90 J									
*Toluene	108-88-3	1,000	5												2.3 J								
Vinyl Chloride	75-01-4	2	2							1.7 J				**2.4 J**									
Methyl Acetate	79-20-9		50																				
*Methylene Chloride	75-09-2	5	5											0.56 J									
Naphthalene	91-20-3		50																				
Trichloroethene	79-01-6	5	5																				
Tetrachloroethene	127-18-4	5	5													0.6 J							
Trans-1,2-Dichloroethene	156-60-5	100	5																				
Methane, Ethene, Ethane (µg/l)																							
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	21.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	74-84-0			NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:
µg/L = micrograms per liter
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TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ144I (Sept-11)	SA-PZ145S (June-10)	SA-PZ145S (Sept-10)	SA-PZ145S (Mar-11)	SA-PZ145S (Sept-11)	SA-PZ145I (June-10)	SA-PZ145I (Sept-10)	SA-PZ145I (DUP) (Sept-10)	SA-PZ145I (Mar-11)	SA-PZ145I (Sept-11)	SA-PZ145D (June-10)	SA-PZ145D (DUP) (June-10)	SA-PZ145D (Sept-10)	SA-PZ145D (Mar-11)	SA-PZ145D (DUP) (Mar-11)	SA-PZ145D (Sept-11)	SA-PZ149I1 (July-10)	SA-PZ149I1 (Oct-10)	SA-PZ149I1 (Dec-10)	SA-PZ149I1 (Mar-11)	SA-PZ151I1 (July-10)	SA-PZ151I1 (Oct-10)
Screened Interval (ft bgs)				**45 - 50**	**5 - 15**	**5 - 15**	**5 - 15**	**5 - 15**	**30 - 35**	**30 - 35**	**30 - 35**	**30 - 35**	**30 - 35**	**50 - 55**	**50 - 55**	**50 - 55**	**50 - 55**	**50 - 55**	**50 - 55**	**32 - 37**	**32 - 37**	**32 - 37**	**32 - 37**	**35 - 40**	**35 - 40**
Volatile Organic Compounds (µg/l)																									
1,1,1-Trichloroethane	71-55-6	200	5						**8.7**	**6.1**	**5.9 J**	**5.6**	0.98 J							**6.6**				**110**	**36**
1,1-Dichloroethane	75-34-3		5	4.6					**91**	**66**	**69 J**	**72**	**62**	**18**	**19**	**19**	**24 J**	**24**	**28**	**40**	3.6 J	**6.7**	**18**	**490**	**180**
1,1-Dichloroethene	75-35-4	7	5	0.8 J					**8.2**	**8.4**	**8.7 J**	**7.4**	**5.8**	1.1 J	1 J	2.0 J	1.5 J	1.4	1.8	2.6 J		0.82 J	1.7	**33**	**14**
1,2-Dichlorobenzene	95-50-1		5																	1.6 J	1.2 J	3.0 J	**7.8**		3.6 J
cis-1,2-Dichloroethene	156-59-2	70	5																						
1,2-Dichloroethane	107-06-2	5	5																						
1,2,3-Trichlorobenzene	123-61-5		5																						
1,2,4-Trichlorobenzene	120-82-1	70	5							1.1 J	1.3 J		1.4				0.78 J						1.9		1.8 J
1,3-Dichlorobenzene	541-73-1		5																	1.1 J	1.0 J	2.7 J	**6**		2.5 J
1,4-Dichlorobenzene	106-46-7	75	5																	**5.4**	4.7 J	**13**	**28**		**11**
1,1,2-Trichlorotrifluoroethane	76-13-1		50																						
2-Butanone	78-93-3		50																						
2-Hexanone	591-78-6		50																						
*Acetone	67-64-1		50																						
Benzene	71-43-2	5	5																					1.1 J	1.3 J
Carbon Disulfide	75-15-0		50																						
Chlorobenzene	108-90-7	100	5																	1.3 J			**5.1**		
Chloroethane	75-00-3		5						**6.1**	4.5 J	4.1 J	2.1	3.1	0.99 J	0.83 J		0.58 J	0.57 J		**9.8**		**10**	**18**	**99**	**91**
Chloromethane	74-87-3		5	0.48 J			0.62 J						0.65 J					0.69 J	0.51 J						
Chloroform	67-66-3	80	5																						
Cyclohexane	110-82-7		50																						
Isopropylbenzene	98-82-8		5																	0.42 J		0.39 J	1.8		0.49 J
*Toluene	108-88-3	1,000	5																						
Vinyl Chloride	75-01-4	2	2						0.53 J																
Methyl Acetate	79-20-9		50																						
*Methylene Chloride	75-09-2	5	5																						
Naphthalene	91-20-3		50																						
Trichloroethene	79-01-6	5	5																						
Tetrachloroethene	127-18-4	5	5																						
Trans-1,2-Dichloroethene	156-60-5	100	5																						
Methane, Ethene, Ethane (µg/l)																									
Methane	74-82-8			NA	NA	7.6	ND	NA	NA	5.6	5.6	ND	NA	NA	NA	0.47 J	56.5	NA	NA	NA	NA	NA	NA	110	140 D
Ethane	74-84-0			NA	NA	ND	ND	NA	NA	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
CAS = Chemical Abstracts Service
Blank cells = No criteria or not detected
MCL = Maximum contaminat level
Bold = Indicates Exceedances from 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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ151I1 (DUP) (Oct-10)	SA-PZ151I1 (Dec-10)	SA-PZ151I1 (Mar-11)	SA-PZ151I1 (DUP) (Mar-11)	SA-PZ151I1 (Jun-11)	SA-PZ155I (July-10)	SA-PZ155I (DUP) (July-10)	SA-PZ155I (Oct-10)	SA-PZ155I (Dec-10)	SA-PZ155I (Mar-11)	SA-PZ155I (Jun-11)	SA-PZ157I (July-10)	SA-PZ157I (Oct-10)	SA-PZ157I (Dec-10)	SA-PZ157I (Mar-11)	SA-PZ157I (Jun-11)	SA-PZ157I1 (July-10)	SA-PZ157I1 (Oct-10)	SA-PZ157I1 (Dec-10)	SA-PZ157I1 (DUP) (Dec-10)	SA-PZ157I1 (Mar-11)	SA-PZ157I1 (Jun-11)
Screened Interval (ft bgs)				**35 - 40**	**35 - 40**	**35 - 40**	**35 - 40**	**35 - 40**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**33 - 38**	**33 - 38**	**33 - 38**	**33 - 38**	**33 - 38**	**33 - 38**
Volatile Organic Compounds (µg/l)																									
1,1,1-Trichloroethane	71-55-6	200	5	**35**	**32**	**36 J**	**39 J**		**38**	**36**	**15**	**16**	**19**	**7.8**	**46**	**15**	**17**	**21**	**9.7**	**73**	**48 J**	**20**	**21**	**20 J**	**23**
1,1-Dichloroethane	75-34-3		5	**170**	**190**	**310 D**	**310 D**	**390**	**150**	**150**	**65**	**70**	**70**	**43**	**180**	**65**	**75**	**71**	**45**	**340**	**220**	**100**	**100**	**190 D**	**280**
1,1-Dichloroethene	75-35-4	7	5	**13**	**13**	**20 J**	**22 J**	**24**	**12**	**11**	3.7 J	3.4 J	**5.4**	**2.4**	**13**	4.2 J	4.1 J	**5.2**	3.4	**23**	**17 J**	**7.6**	**7.9**	**14 J**	**19**
1,2-Dichlorobenzene	95-50-1		5	3.6 J	**5.8 J**	**6.9 J**	**7.5 J**			0.4 J											2.3 J	2.1 J	2.2 J	**7.4 J**	**7.4 J**
cis-1,2-Dichloroethene	156-59-2	70	5			0.76 J																		0.59 J	
1,2-Dichloroethane	107-06-2	5	5																						
1,2,3-Trichlorobenzene	123-61-5		5																						
1,2,4-Trichlorobenzene	120-82-1	70	5	1.8 J		**9.6 J**	**11 J**												0.85 J					**9.4 J**	**6.3 J**
1,3-Dichlorobenzene	541-73-1		5	2.3 J	4.0 J	**5.3 J**	**5.8 J**														1.3 J	1.4 J	1.4 J	**5.6 J**	**5.9 J**
1,4-Dichlorobenzene	106-46-7	75	5	**11**	**22**	**23 J**	**26**		0.31 J												**6.1 J**	**7.3**	**7.4**	**26 J**	**26**
1,1,2-Trichlorotrifluoroethane	76-13-1		50																0.7 J						
2-Butanone	78-93-3		50																						
2-Hexanone	591-78-6		50																						
*Acetone	67-64-1		50																						
Benzene	71-43-2	5	5	1.2 J	1.6 J	2.1 J	2.3 J		0.33 J	0.31 J					0.43 J					0.81 J	0.84 J			1.7 J	
Carbon Disulfide	75-15-0		50																						
Chlorobenzene	108-90-7	100	5			2.7 J	3 J															0.73 J		3 J	
Chloroethane	75-00-3		5	**91**	**140**	**220 D**	**220 D**	**260**	**17**	**19**			**7.5**	**2.2**	**24**	**5.7**	**7.6**	3.3	3.4 J	**57**	**57 J**	**49**	**49**	**160 D**	**200**
Chloromethane	74-87-3		5																						
Chloroform	67-66-3	80	5																						
Cyclohexane	110-82-7		50			0.82 J																			
Isopropylbenzene	98-82-8		5	0.47 J	1.1 J	2.5 J	2.7 J																	1.7 J	
*Toluene	108-88-3	1,000	5																						
Vinyl Chloride	75-01-4	2	2																						
Methyl Acetate	79-20-9		50																						
*Methylene Chloride	75-09-2	5	5																						
Naphthalene	91-20-3		50																						
Trichloroethene	79-01-6	5	5			0.53 J	0.58 J																		
Tetrachloroethene	127-18-4	5	5																						
Trans-1,2-Dichloroethene	156-60-5	100	5																						
Methane, Ethene, Ethane (µg/l)																									
Methane	74-82-8			300 D	210 D	402.2 D	319.5 D	344.1	9	12	3.7	2.5	8.1	ND	14	2.7	12	ND	ND	80	66	78 D	90 D	258.4 D	207.53
Ethane	74-84-0			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA

NOTES:
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NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
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Blank cells = No criteria or not detected
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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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ157I1 (Sept-11)	SA-PZ158I (July-10)	SA-PZ158I (Oct-10)	SA-PZ158I (Dec-10)	SA-PZ158I (Mar-11)	SA-PZ158I1 (July-10)	SA-PZ158I1 (Oct-10)	SA-PZ158I1 (Dec-10)	SA-PZ158I1 (Mar-11)	SA-PZ159I (July-10)	SA-PZ159I (Oct-10)	SA-PZ159I (Dec-10)	SA-PZ159I (Mar-11)	SA-PZ159I (Jun-11)	SA-PZ159I1 (July-10)	SA-PZ159I1 (Oct-10)	SA-PZ159I1 (Dec-10)	SA-PZ159I1 (Mar-11)	SA-PZ159I1 (Jun-11)	SA-PZ159I1 (DUP) (Jun-11)	SA-PZ160I (July-10)	SA-PZ160I (Oct-10)
Screened Interval (ft bgs)				**33 - 38**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**33 - 38**	**33 - 38**	**33 - 38**	**33 - 38**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**33 - 38**	**33 - 38**	**33 - 38**	**33 - 38**			**41 - 46**	**41 - 46**
Volatile Organic Compounds (µg/l)																									
1,1,1-Trichloroethane	71-55-6	200	5	**46**	**51**	**7.9**	**9.4**	**11 J**	**66**	**39**	**49**	**21 J**	**75**	**5.6**	**25**	**18**	**15**	**41**	**44 J**	**38**	**13**	3.2	2.8	**53**	**37**
1,1-Dichloroethane	75-34-3		5	**540**	**230**	**43**	**42**	**43 J**	**340**	**160**	**200**	**170 D**	**300**	**35**	**100**	**65**	**130**	**250**	**200**	**180**	**89 J**	**59**	**62**	**210 J**	**150 J**
1,1-Dichloroethene	75-35-4	7	5	**25**	**15**	2.6 J	2.1 J	3 J	**19**	**12**	**15**	**12 J**	**22**	2.2 J	**6.7**	4.9	**7.3**	**18**	**14 J**	**12**	**8.8**	3.6	3.7	**17**	**11**
1,2-Dichlorobenzene	95-50-1		5	**5.9**						1.2 J	2.1 J	**5 J**					0.72 J				**5**	**6.4**	**6**		
cis-1,2-Dichloroethene	156-59-2	70	5	1.1								0.63 J													
1,2-Dichloroethane	107-06-2	5	5	0.57 J																1.9 J					
1,2,3-Trichlorobenzene	123-61-5		5	3.4													2					2.6	2.8		
1,2,4-Trichlorobenzene	120-82-1	70	5	**9.6**						1.4 J	2.0 J	**6.9 J**					1.2				4.2	2.7	2.8	1.9 J	
1,3-Dichlorobenzene	541-73-1		5	4.5						0.69 J	1.3 J	3.5 J									3.6	4.3	4.4		
1,4-Dichlorobenzene	106-46-7	75	5	**19**						2.8 J	**6.4**	**17 J**					2.3	1.7 J		**5.4 J**	**17**	**21**	**22**		
1,1,2-Trichlorotrifluoroethane	76-13-1		50																						
2-Butanone	78-93-3		50																						
2-Hexanone	591-78-6		50																						
*Acetone	67-64-1		50																		48				
Benzene	71-43-2	5	5	2.1	0.52 J				0.77 J	0.51 J	0.77 J	1.4 J	0.57 J				0.81 J	0.64 J	0.52 J		0.98 J	0.91 J	0.79 J	0.48 J	
Carbon Disulfide	75-15-0		50																						
Chlorobenzene	108-90-7	100	5	1.7							0.70 J	1.8 J									2	3.9	3.8		
Chloroethane	75-00-3		5	**430**	**26**			1.6 J	**52**	**27**	**62**	**130 D**	**35**	3.3 J	**9.7**	3.3	**99**	**50**	**39 J**	**50**	**87**	**66**	**70**	**26**	**13 J**
Chloromethane	74-87-3		5																		0.99 J				
Chloroform	67-66-3	80	5																						
Cyclohexane	110-82-7		50	0.75 J																					
Isopropylbenzene	98-82-8		5									4.7J						0.29 J			0.63 J	2.6	2.5		
*Toluene	108-88-3	1,000	5																						
Vinyl Chloride	75-01-4	2	2																						
Methyl Acetate	79-20-9		50																		3.8				
*Methylene Chloride	75-09-2	5	5																					4.5 J	
Naphthalene	91-20-3		50																						
Trichloroethene	79-01-6	5	5	0.73 J																					
Tetrachloroethene	127-18-4	5	5																						
Trans-1,2-Dichloroethene	156-60-5	100	5	0.58 J																					
Methane, Ethene, Ethane (µg/l)																									
Methane	74-82-8			NA	NA	NA	NA	NA	NA	NA	NA	NA	13	29	2.4	ND	39.01	130 J	51 D	53 D	195.4 D	39.01	264 J	0.6	6.4
Ethane	74-84-0			NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
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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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-4
GROUNDWATER ANALYTICAL DETECTIONS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ160I (Dec-10)	SA-PZ160I (Mar-11)	SA-PZ160I (Jun-11)	SA-PZ160I1 (July-10)	SA-PZ160I1 (Oct-10)	SA-PZ160I1 (Dec-10)	SA-PZ160I1 (Mar-11)	SA-PZ160I1 (Jun-11)	SA-PZ161I (July-10)	SA-PZ161I (Oct-10)	SA-PZ161I (Dec-10)	SA-PZ161I (Mar-11)	SA-PZ161I (DUP) (Mar-11)	SA-PZ161I (Sept-11)	SA-PZ161I (DUP) (Sept-11)	SA-PZ166I (Sept-10)	SA-PZ408 (Jun-11)	SA-PZ408 (Sept-11)
Screened Interval (ft bgs)				**41 - 46**	**41 - 46**	**41 - 46**	**33 - 38**	**33 - 38**	**33 - 38**	**33 - 38**	**33 - 38**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**41 - 46**	**60 - 80**	**37 - 42**	**37 - 42**
Volatile Organic Compounds (µg/l)																					
1,1,1-Trichloroethane	71-55-6	200	5	**41**	**30 J**	**14**	**43**	**40 J**	**39**	**47**	**16**	**100**	**18**	**16**	**26**	**30**	**6.5**	**6.6**			**60**
1,1-Dichloroethane	75-34-3		5	**160**	**130 D**	**85**	**250**	**200**	**180**	**210 D**	**190**	**530**	**110**	**97**	**140 D**	**140 D**	**88**	**83**		**160**	**420**
1,1-Dichloroethene	75-35-4	7	5	**11**	**9.3 J**	**4.8**	**17**	**15 J**	**13**	**17**	**13**	**31**	**6.9**	**5.9**	**10**	**10**	**5.9**	**5.6**		**13**	**25**
1,2-Dichlorobenzene	95-50-1		5							2.2	**5.2 J**										2
cis-1,2-Dichloroethene	156-59-2	70	5																		0.98 J
1,2-Dichloroethane	107-06-2	5	5																		0.66 J
1,2,3-Trichlorobenzene	123-61-5		5																		2.5
1,2,4-Trichlorobenzene	120-82-1	70	5		0.63 J					2.7											**8.6**
1,3-Dichlorobenzene	541-73-1		5							1.2											1.3
1,4-Dichlorobenzene	106-46-7	75	5							**5.2**											**5.2**
1,1,2-Trichlorotrifluoroethane	76-13-1		50																		
2-Butanone	78-93-3		50							1.5 J											
2-Hexanone	591-78-6		50																		
*Acetone	67-64-1		50		7 J																
Benzene	71-43-2	5	5				0.5 J	0.51 J		0.82 J											1.6
Carbon Disulfide	75-15-0		50																		
Chlorobenzene	108-90-7	100	5							0.66 J											
Chloroethane	75-00-3		5	**21**	**11 J**	**6**	**34**	**42 J**	**33**	**55**	**140**	**51**	**9.5**	**8**	**9.5**	**11**	**8**	**8.2**		**130**	**230**
Chloromethane	74-87-3		5														0.53	J			
Chloroform	67-66-3	80	5																		
Cyclohexane	110-82-7		50																		0.54 J
Isopropylbenzene	98-82-8		5																		
*Toluene	108-88-3	1,000	5																0.64 J		
Vinyl Chloride	75-01-4	2	2																		
Methyl Acetate	79-20-9		50																		
*Methylene Chloride	75-09-2	5	5																2.7 J		
Naphthalene	91-20-3		50																		
Trichloroethene	79-01-6	5	5																		0.58 J
Tetrachloroethene	127-18-4	5	5																		
Trans-1,2-Dichloroethene	156-60-5	100	5																		
Methane, Ethene, Ethane (µg/l)																					
Methane	74-82-8			15	4.2	ND	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	180.24	NA
Ethane	74-84-0			ND	ND	ND	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	ND	NA

NOTES:
µg/L = micrograms per liter
MCL = Maximum contaminat level
NA = Not Analyzed
J = Estmated Value
D = Diluted Value
DUP = Duplicate
ft bgs = feet below ground surface
NYSDOH = New York State Department of Health
CAS = Chemical Abstracts Service
Blank cells = No criteria or not detected
MCL = Maximum contaminat level
Bold = Indicates Exceedances from 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
*Several Methylene Chloride, Toluene, and Acetone detections were attributable to laboratory blank contamination. Remaining detections of these compounds are also questionable and future sampling should determine validity of these detections.

TABLE 4-5
GROUNDWATER ANALYTICAL DETECTIONS TEMPORARY WELLS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW-118-1620 (Jun-11)	SA-TW-118-2125 (Jun-11)	SA-TW-118-2630 (Jun-11)	SA-TW-301-15 (Mar-09)	SA-TW-301-30 (Mar-09)	SA-TW-301-50 (Mar-09)	SA-TW-301-50 (DUP) (Mar-09)	SA-TW-302-15 (Mar-09)	SA-TW-302-30 (Mar-09)	SA-TW-302-54 (Mar-09)	SA-TW-303-15 (Mar-09)	SA-TW-303-30 (Mar-09)	SA-TW-303-54 (Mar-09)	SA-TW-304-15 (Mar-09)	SA-TW-304-30 (Mar-09)	SA-TW-304-50 (Mar-09)	SA-TW-304-50 (DUP) (Mar-09)	SA-TW-305-15 (Mar-09)	SA-TW-305-30 (Mar-09)	SA-TW-305-55 (Mar-09)	SA-TW-306-15 (Mar-09)	SA-TW-306-30 (Mar-09)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1																								
Benzene	71-43-2	5	5																						
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50														2.1 J								
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5																						
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5																						
Chloroform	67-66-3		50																						
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50																						
1,2-Dichlorobenzene	95-50-1	600	5																						
1,3-Dichlorobenzene	541-73-1		5																						
1,4-Dichlorobenzene	106-46-7	75	5																			2.5 J			
1,1-Dichloroethane	75-34-3		5										1.3 J								1.6 J	1.5 J			
1,1-Dichloroethene	75-35-4	7	5																						
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5																						
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5	0.51 J	1																				
Methyl Cyclohexane	108-87-2		50																						
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5										0.81 JB												
Naphthalene	91-20-3		50				5.3 B																		
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5																						
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5																						
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5				1.3 J																		
1,2,4-Trichlorobenzene	120-82-1		5				**5.1**																		
Trichloroethene	79-01-6	5	5																						
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5																						

NOTES:
µg/L - micrograms per liter DUP - Duplicate
MCL - Maximum Contaminant Leve J - Estimated Value
NYSDOH - New York State Department of Health
CAS No. - Chemical Abstract Service number
Blank cells - No criteria or not detected
Bold - Indicates Exceedances from 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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

TABLE 4-5
GROUNDWATER ANALYTICAL DETECTIONS TEMPORARY WELLS
SOUTHERN AREA
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW-306-51 (Mar-09)	SA-TW-307-15 (Mar-09)	SA-TW-307-30 (Mar-09)	SA-TW-307-49 (Mar-09)	SA-TW-308-15 (Mar-09)	SA-TW-308-30 (Mar-09)	SA-TW-308-49 (Mar-09)	SA-TW-309-15 (Mar-09)	SA-TW-309-30 (Mar-09)	SA-TW-309-54 (Mar-09)	SA-TW-310-15 (Sept-09)	SA-TW-310-29 (Sept-09)	SA-TW-310-53 (Sept-09)	SA-TW-311-15 (Sept-09)	SA-TW-311-28 (Sept-09)	SA-TW-311-51 (Sept-09)	SA-TW-312-12 (Sept-09)	SA-TW-312-25 (Sept-09)	SA-TW-312-46 (Sept-09)	SA-TW-313-14 (Sept-09)	SA-TW-313-25 (Sept-09)	SA-TW-313-47 (Sept-09)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1														9.0 J	6.7 J			5.1 J					4.8 J	
Benzene	71-43-2	5	5																						
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50																						
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5																						
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5																			**91**			
Chloroform	67-66-3		50																						
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50																						
1,2-Dichlorobenzene	95-50-1	600	5																						
1,3-Dichlorobenzene	541-73-1		5																						
1,4-Dichlorobenzene	106-46-7	75	5																						
1,1-Dichloroethane	75-34-3		5	3.1 J			1.8 J			4.2 J									**200**			**1200 J**			**12**
1,1-Dichloroethene	75-35-4	7	5																**17**			**55**			1.3 J
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5																						
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5																						
Methyl Cyclohexane	108-87-2		50																						
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5									0.68 J												1.1 J	0.95 J
Naphthalene	91-20-3		50																						
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5																						
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5																**54**			**280**			2.2 J
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5		1.2 J																				
1,2,4-Trichlorobenzene	120-82-1		5																						
Trichloroethene	79-01-6	5	5																						
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5																						

NOTES:
µg/L - micrograms per liter DUP - Duplicate
MCL - Maximum Contaminant Leve J - Estimated Value
NYSDOH - New York State Department of Health
CAS No. - Chemical Abstract Service number
Blank cells - No criteria or not detected
Bold - Indicates Exceedances from 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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW-313-47 (DUP) (Sept-09)	SA-TW-314-12 (Sept-09)	SA-TW-314-25 (Sept-09)	SA-TW-314-44 (Sept-09)	SA-TW-315-13 (Sept-09)	SA-TW-315-25 (Sept-09)	SA-TW-315-45 (Sept-09)	SA-TW-316-12 (Sept-09)	SA-TW-316-25 (Sept-09)	SA-TW-316-37 (Sept-09)	SA-TW-317-15 (Sept-09)	SA-TW-317-25 (Sept-09)	SA-TW-317-44.5 (Sept-09)	SA-TW318-4650 (Mar-10)	SA-TW319-3842 (Mar-10)	SA-TW319-4549 (Mar-10)	SA-TW320-1115 (Mar-10)	SA-TW320-3034 (Mar-10)	SA-TW320-5155 (Mar-10)	SA-TW320-5155 (DUP) (Mar-10)	SA-TW321-1115 (Mar-10)	SA-TW321-3034 (Mar-10)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1															5.0 J					9.3 J				
Benzene	71-43-2	5	5																		2.2 J				
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50																						
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5																						
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5				**14**						2.9 J								**270**				
Chloroform	67-66-3		50																				0.27 J		
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50																						
1,2-Dichlorobenzene	95-50-1	600	5																		2.9 J				
1,3-Dichlorobenzene	541-73-1		5																						
1,4-Dichlorobenzene	106-46-7	75	5				1.9 J														0.68 J				
1,1-Dichloroethane	75-34-3		5	**13**			**94**			**62**			**240 J**			**6.3**	0.95 J	**22**	**59**		**1200**	3.1 J	3.1 J	0.95 J	**6.9**
1,1-Dichloroethene	75-35-4	7	5	1.7 J			3.9 J			3.7 J			**12**					0.89 J	2.6 J		**86 J**				
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5																						
Freon 113	76-13-1		50																			1.1 J	0.94 J		
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5																		**14**				
Methyl Cyclohexane	108-87-2		50																						
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5													0.90 J									
Naphthalene	91-20-3		50																						
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5																						
Toluene	108-88-3	1,000	5		0.75 J		0.74 J																		
1,1,1-Trichloroethane	71-55-6	200	5	2 J			**12**			2.6 J			**51**				0.32 J		**7.6**		**440**			0.51 J	0.45 J
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5																						
1,2,4-Trichlorobenzene	120-82-1		5										2.3 J								0.69 J				
Trichloroethene	79-01-6	5	5																		0.70 J				
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5																						

NOTES:
µg/L - micrograms per liter DUP - Duplicate
MCL - Maximum Contaminant Leve J - Estimated Value
NYSDOH - New York State Department of Health
CAS No. - Chemical Abstract Service number
Blank cells - No criteria or not detected
Bold - Indicates Exceedances from 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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW321-4953 (Mar-10)	SA-TW322-1115 (Mar-10)	SA-TW322-2630 (Mar-10)	SA-TW322-3842 (Mar-10)	SA-TW322-4549 (Mar-10)	SA-TW322-4549 (DUP) (Mar-10)	SA-TW323-1418 (Mar-10)	SA-TW323-3034 (Mar-10)	SA-TW323-5256 (Mar-10)	SA-TW324-1216 (Mar-10)	SA-TW324-3034 (Mar-10)	SA-TW324-4549 (Mar-10)	SA-TW325-1822 (June-10)	SA-TW325-3236 (June-10)	SA-TW325-5054 (June-10)	SA-TW326-1822 (June-10)	SA-TW326-3236 (June-10)	SA-TW326-4246 (June-10)	SA-TW327-1014 (June-10)	SA-TW327-2630 (June-10)	SA-TW327-4145 (June-10)	SA-TW327-4145 (DUP) (June-10)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1																6.3 J								
Benzene	71-43-2	5	5				2.2 J														0.3 J			0.44 J	0.41 J
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50												0.26 J										
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5																						
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5				**140 J**	4.2 J													**22**			**34**	**36**
Chloroform	67-66-3		50							0.44 J															
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50																						
1,2-Dichlorobenzene	95-50-1	600	5				1.9 J													1.1 J	0.36 J				
1,3-Dichlorobenzene	541-73-1		5																						
1,4-Dichlorobenzene	106-46-7	75	5				1.5 J	0.42 J									0.49 J			2.9 J	0.71 J			1.2 J	1.2 J
1,1-Dichloroethane	75-34-3		5	2.4 J		**24**	**1000**	**71**	**70**						0.55 J					**32**	**310**			**310**	**330**
1,1-Dichloroethene	75-35-4	7	5			1.6 J	**90**	3.9 J	1.9 J											1.4 J	**15**			**19**	**17**
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5																						
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5																						
Methyl Cyclohexane	108-87-2		50																						
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5																						
Naphthalene	91-20-3		50																						
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5																						
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5	0.48 J			**320**	**14**	**13 J**												**44**			**67**	**68**
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5																						
1,2,4-Trichlorobenzene	120-82-1		5				2.7 J													2.1 J	1.8 J				
Trichloroethene	79-01-6	5	5				0.64 J																		
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5																						

NOTES:
µg/L - micrograms per liter DUP - Duplicate
MCL - Maximum Contaminant Leve J - Estimated Value
NYSDOH - New York State Department of Health
CAS No. - Chemical Abstract Service number
Blank cells - No criteria or not detected
Bold - Indicates Exceedances from 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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW328-812 (June-10)	SA-TW328-2327 (June-10)	SA-TW328-3640 (June-10)	SA-TW329-1014 (June-10)	SA-TW329-2630 (June-10)	SA-TW329-4044 (June-10)	SA-TW330-1822 (Mar-10)	SA-TW330-3034 (Mar-10)	SA-TW330-5054 (Mar-10)	SA-TW330-1822 (Mar-10)	SA-TW330-3034 (Mar-10)	SA-TW330-5054 (Mar-10)	SA-TW331-1115 (June-10)	SA-TW331-2125 (June-10)	SA-TW331-2125 (DUP) (June-10)	SA-TW331-3135 (June-10)	SA-TW332-1115 (June-10)	SA-TW332-2125 (June-10)	SA-TW332-3135 (June-10)	SA-TW333-1115 (June-10)	SA-TW333-2125 (June-10)	SA-TW333-3135 (June-10)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1															2.8 J	2.8 J	2.6 J							13 J
Benzene	71-43-2	5	5		0.88 J				1.9 J																2.2 J
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50													0.32 J									
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5		0.54 J																				
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5		**29**	**10**		4.9 J	**39 J**													**11**		1.6 J	**240**
Chloroform	67-66-3		50																						
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50																						
1,2-Dichlorobenzene	95-50-1	600	5		1.4 J	0.4 J			0.94 J													1.5 J		0.88 J	3.4 J
1,3-Dichlorobenzene	541-73-1		5		0.89 J																				
1,4-Dichlorobenzene	106-46-7	75	5		3.8 J	0.97 J			1 J																
1,1-Dichloroethane	75-34-3		5		**360**	**170**	**5.2**	**44**	**900**													**32**		3.1 J	**740**
1,1-Dichloroethene	75-35-4	7	5		**19**	**12**		2.2 J	**69**													1.0 J			**43**
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5																						
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5		1.7 J			0.29 J	1.3 J															1.7 J	**8.3 J**
Methyl Cyclohexane	108-87-2		50																						
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5																						
Naphthalene	91-20-3		50						7.9																
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5														**190**	**190**							
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5		**19**	**28**		1.9 J	**170**			1.4 J			1.4 J							**9.9**		0.39 J	**250**
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5																						
1,2,4-Trichlorobenzene	120-82-1		5		0.81 J	1.2 J			1 J																
Trichloroethene	79-01-6	5	5						0.4 J																
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5																						

NOTES:
µg/L - micrograms per liter
DUP - Duplicate
MCL - Maximum Contaminant Leve
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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW334-1115 (June-10)	SA-TW334-2125 (June-10)	SA-TW334-2125 (DUP) (June-10)	SA-TW334-3135 (June-10)	SA-TW335-1115 (June-10)	SA-TW335-2125 (June-10)	SA-TW335-3135 (June-10)	SA-TW335-4145 (June-10)	SA-TW335-4145 (DUP) (June-10)	SA-TW336-1115 (June-10)	SA-TW336-2125 (June-10)	SA-TW336-3135 (June-10)	SA-TW337-1115 (June-10)	SA-TW337-2125 (June-10)	SA-TW337-3135 (June-10)	SA-TW338-1115 (June-10)	SA-TW338-2125 (June-10)	SA-TW338-2125 (DUP) (June-10)	SA-TW338-3135 (June-10)	SA-TW339-1115 (June-10)	SA-TW339-2125 (June-10)
Volatile Organic Compounds (µg/L)																								
Acetone	67-64-1			2.1 J	1.9 J			2.2 J	5.1 J	24 J				2.6 J	4.9 J									
Benzene	71-43-2	5	5						**1.3 J**	**7.2 J**					1 J							2.6 J		
n-Butyl Benzene	104-51-8		5																					
2-Butanone	78-93-3		50																					
Carbon Disulfide	75-15-0		50																				0.21 J	
Carbon Tetrachloride	56-23-5	5	5																					
Chlorobenzene	108-90-7	100	5											0.42 J	0.8 J									
Chlorodibromomethane	124-48-1		50																					
Chloroethane	75-00-3		5						**76**	**470**					**110**							**240**		
Chloroform	67-66-3		50																					
Chloromethane	74-87-3		5								0.52 J													
Cyclohexane	110-82-7		50																			0.98 J		
1,2-Dichlorobenzene	95-50-1	600	5						1.8 J					0.71 J	1.9 J							1.8 J		
1,3-Dichlorobenzene	541-73-1		5											0.51 J	1.5 J									
1,4-Dichlorobenzene	106-46-7	75	5											2.2 J	**6.4 J**				0.33 J			1.9 J		
1,1-Dichloroethane	75-34-3		5				0.84 J		**280**	**2100**		1.3 J	1.2 J		**240**	1.4 J		1.2 J				**950**		
1,1-Dichloroethene	75-35-4	7	5						**16**	**110**					**15**							**37**		
1,2-Dichloroethane	107-06-2	5	5																					
cis-1,2-Dichloroethene	156-59-2	70	5																					
Ethyl Benzene	100-41-4	700	5																					
Freon 113	76-13-1		50																					
2-Hexanone	591-78-6		50																					
Isopropyl Benzene	98-82-8		5						**5.2 J**	**23 J**					**11**							4.5 J		
Methyl Cyclohexane	108-87-2		50																					
Methyl tert-butyl ether	1634-04-4		10																					
4-Methyl-2-Pentanone	108-10-1		50																					
Methylene Chloride	75-09-2		5																					
Naphthalene	91-20-3		50																		1.1 J			
Styrene	100-42-5	100	5																					
Tetrachloroethene	127-18-4	5	5																					
Toluene	108-88-3	1,000	5																					
1,1,1-Trichloroethane	71-55-6	200	5						**70**	**570**	0.6 J	0.59 J			**55**							**130**		
1,1,2-Trichloroethane	79-00-5	5	5																					
1,2,3-Trichlorobenzene	87-61-6		5																					
1,2,4-Trichlorobenzene	120-82-1		5																					
Trichloroethene	79-01-6	5	5																			0.34 J		
Vinyl Chloride	75-01-4	2	2						1.3 J	**8.1 J**					1.3 J									
Xylenes (total)	1330-20-7	10,000	5																					

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*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW339-3135 (June-10)	SA-TW340-2125 (June-10)	SA-TW340-3135 (June-10)	SA-TW340-4145 (June-10)	SA-TW341-1115 (June-10)	SA-TW341-2125 (June-10)	SA-TW341-3135 (June-10)	SA-TW341-4145 (June-10)	SA-TW342-1115 (June-10)	SA-TW342-2125 (June-10)	SA-TW342-3135 (June-10)	SA-TW342-3135 (DUP) (June-10)	SA-TW342-4145 (June-10)	SA-TW343-1115 (June-10)	SA-TW343-2125 (June-10)	SA-TW343-3135 (June-10)	SA-TW343-4145 (June-10)	SA-TW344-1115 (June-10)	SA-TW344-2125 (June-10)	SA-TW344-3135 (June-10)	SA-TW344-4145 (June-10)	SA-TW345-4145 (June-10)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1																								
Benzene	71-43-2	5	5			3.1 J	0.46 J												3.8 J						
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50											1.9 J											
Carbon Disulfide	75-15-0		50							0.16 J				0.16 J	0.19 J				0.17 J				0.16 J		
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5			1 J																			
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5			**310 J**	**10 J**											**8.9**	**970 J**	4.1 J					
Chloroform	67-66-3		50											0.27 J											
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50																4.7 J						
1,2-Dichlorobenzene	95-50-1	600	5			2.1 J	0.66 J							0.73 J	0.56 J				**6.1**			0.49 J			
1,3-Dichlorobenzene	541-73-1		5			2.1 J																			
1,4-Dichlorobenzene	106-46-7	75	5			**8.8 J**								0.33 J					0.31 J			0.57 J			
1,1-Dichloroethane	75-34-3		5			**460 J**	3.1 J							2.5 J	2.5 J			**24**	**1400 J**	**14**					**5 J**
1,1-Dichloroethene	75-35-4	7	5			**21 J**	1.3 J											0.78 J	**60**						
1,2-Dichloroethane	107-06-2	5	5			0.54 J																			
cis-1,2-Dichloroethene	156-59-2	70	5																1.1 J						
Ethyl Benzene	100-41-4	700	5			**5.6 J**												0.46 J	**19**						
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50											2.6 J											
Isopropyl Benzene	98-82-8		5			**19 J**	2.7 J											0.67 J	**17**						
Methyl Cyclohexane	108-87-2		50																2.5 J						
Methyl tert-butyl ether	1634-04-4		10				1.3 J																0.28 J		
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5																						
Naphthalene	91-20-3		50			27 J													**98**						
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5							**38**															
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5			**70 J**	0.99 J											0.65 J	**120**	2.1 J			1.1 J		
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5																						
1,2,4-Trichlorobenzene	120-82-1		5			1.9 J	2.6 J																		
Trichloroethene	79-01-6	5	5			0.43 J													1.3 J						
Vinyl Chloride	75-01-4	2	2																**3.8 J**						
Xylenes (total)	1330-20-7	10,000	5																**6.5**						0.42 J

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*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW346-1115 (Sept-10)	SA-TW346-2125 (Sept-10)	SA-TW346-3135 (Sept-10)	SA-TW346-4145 (Sept-10)	SA-TW347-1115 (Sept-10)	SA-TW347-2125 (Sept-10)	SA-TW347-3135 (Sept-10)	SA-TW348-1115 (Sept-10)	SA-TW348-2125 (Sept-10)	SA-TW348-3135 (Sept-10)	SA-TW349-1115 (Sept-10)	SA-TW349-2125 (Sept-10)	SA-TW349-3135 (Sept-10)	SA-TW349-4145 (Dec-10)	SA-TW350-1115 (Sept-10)	SA-TW350-2125 (Sept-10)	SA-TW350-3135 (Sept-10)	SA-TW351-1115 (Sept-10)	SA-TW351-2125 (Sept-10)	SA-TW351-2125 (DUP) (Sept-10)	SA-TW351-3135 (Sept-10)	SA-TW351-4145 (Sept-10)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1												5.2 J		7.2 J	6.6 J								6.5 J	
Benzene	71-43-2	5	5									4.6 J		3.2 J	2.0 J	**17**									
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50																						
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5																						
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5									**340**			**500**	**250**									
Chloroform	67-66-3		50																						
Chloromethane	74-87-3		5											0.45 J											
Cyclohexane	110-82-7		50									5.6													
1,2-Dichlorobenzene	95-50-1	600	5									3.8 J			1.7 J	2.5 J									
1,3-Dichlorobenzene	541-73-1		5																						
1,4-Dichlorobenzene	106-46-7	75	5																						
1,1-Dichloroethane	75-34-3		5		1.0 J	**38**			1.3 J	0.70 J		**1500**	4.0 J	1.9 J	**1200**	**1300**									
1,1-Dichloroethene	75-35-4	7	5									**72**			**61**	**76**									
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5									**120**		**50**	3.3 J	**16**									
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5								0.52 J	**35**		**15**	**6.3**	**17**		1.8 J							
Methyl Cyclohexane	108-87-2		50									7.1			2.0 J	2.4 J									
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5																						
Naphthalene	91-20-3		50									**190**		**63**	**61**	**150**									
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5																						
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5			**15**				1.2 J		**550**			**830**	**1200**						0.92 J	1 J	1.1 J	
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5																						
1,2,4-Trichlorobenzene	120-82-1		5																						
Trichloroethene	79-01-6	5	5												1.2 J	0.95 J									
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5									**65**		**120**	1.3 J	**17**									

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*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs (1)	NYSDOH MCLs (2)	SA-TW352-1620 (Sept-10)	SA-TW352-2630 (Sept-10)	SA-TW352-3640 (Sept-10)	SA-TW353-1620 (Sept-10)	SA-TW353-2630 (Sept-10)	SA-TW353-3640 (Sept-10)	SA-TW354-1620 (Sept-10)	SA-TW354-2630 (Sept-10)	SA-TW354-3640 (Sept-10)	SA-TW355-1620 (Sept-10)	SA-TW355-2630 (Sept-10)	SA-TW355-3640 (Sept-10)	SA-TW356-1620 (Sept-10)	SA-TW356-2630 (Sept-10)	SA-TW356-3640 (Sept-10)	SA-TW357-1620 (Sept-10)	SA-TW357-2630 (Sept-10)	SA-TW357-3640 (Sept-10)	SA-TW358-1115 (Dec-10)	SA-TW358-2125 (Dec-10)	SA-TW358-3135 (Dec-10)	SA-TW359-1115 (Dec-10)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1									5.7 J									4.1 J		4.8 J				
Benzene	71-43-2	5	5																						
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50																						
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5																						
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5																						
Chloroform	67-66-3		50																						
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50																						6.1
1,2-Dichlorobenzene	95-50-1	600	5																						
1,3-Dichlorobenzene	541-73-1		5																						
1,4-Dichlorobenzene	106-46-7	75	5																						
1,1-Dichloroethane	75-34-3		5			1.4 J			1.5 J			2.1 J			**5.7**			**33**			**38**				
1,1-Dichloroethene	75-35-4	7	5															1.6 J			3.7 J				
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5																						
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5																						
Methyl Cyclohexane	108-87-2		50																						
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5																						
Naphthalene	91-20-3		50																						
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5																						
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5																						
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5																						
1,2,4-Trichlorobenzene	120-82-1		5									1.3 J						0.84 J			1.5 J				
Trichloroethene	79-01-6	5	5																						
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5																						

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*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW359-2125 (Dec-10)	SA-TW359-3135 (Dec-10)	SA-TW360-1115 (Dec-10)	SA-TW360-1115 (DUP) (Dec-10)	SA-TW360-2125 (Dec-10)	SA-TW360-3135 (Dec-10)	SA-TW361-1115 (Dec-10)	SA-TW361-2125 (Dec-10)	SA-TW361-3135 (Dec-10)	SA-TW362-1115 (Dec-10)	SA-TW362-2125 (Dec-10)	SA-TW362-3135 (Dec-10)	SA-TW363-1115 (Dec-10)	SA-TW363-1115 (DUP) (Dec-10)	SA-TW363-2125 (Dec-10)	SA-TW363-3135 (Dec-10)	SA-TW363-4145 (Dec-10)	SA-TW364-1115 (Dec-10)	SA-TW364-2125 (Dec-10)	SA-TW364-3135 (Dec-10)	SA-TW365-1418 (Nov-11)	SA-TW365-2024 (Nov-11)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1																								
Benzene	71-43-2	5	5													1 J	1.1 J					1.3 J			
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50																						
Carbon Tetrachloride	56-23-5	5	5																			0.94 J			
Chlorobenzene	108-90-7	100	5																						
Chlorodibromomethane	124-48-1		50														0.53 J								
Chloroethane	75-00-3		5													0.6 J	1 J					**9.9**			
Chloroform	67-66-3		50													0.78 J	0.92 J					0.45 J			
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50													5.4	5.1		30						
1,2-Dichlorobenzene	95-50-1	600	5																						
1,3-Dichlorobenzene	541-73-1		5																						
1,4-Dichlorobenzene	106-46-7	75	5																						
1,1-Dichloroethane	75-34-3		5										4.9 J			**6.5**	**6.6**	1.6 J	1.1 J			**16**			
1,1-Dichloroethene	75-35-4	7	5																			0.59 J			
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5										0.45 J			**120**	**120**								
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5										0.44 J			**53**	**50**					**17**			
Methyl Cyclohexane	108-87-2		50										0.44 J			1.6 J	1.6 J								
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50													3.3 J	1.3 J	**62**	**120**			1.7 J			
Methylene Chloride	75-09-2		5										0.84 J												
Naphthalene	91-20-3		50													**210**	**240**					19			
Styrene	100-42-5	100	5													0.65 J	0.58 J					0.89 J			
Tetrachloroethene	127-18-4	5	5											0.49 J					0.98 J						
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5										**17**			2.2 J	2 J	0.51 J	0.55 J			**6.8**			
1,1,2-Trichloroethane	79-00-5	5	5													**8.1**	**7.9**								
1,2,3-Trichlorobenzene	87-61-6		5																						
1,2,4-Trichlorobenzene	120-82-1		5																						
Trichloroethene	79-01-6	5	5																						
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5													**180**	**170**					3.7 J			

NOTES:
µg/L - micrograms per liter DUP - Duplicate
MCL - Maximum Contaminant Leve J - Estimated Value
NYSDOH - New York State Department of Health
CAS No. - Chemical Abstract Service number
Blank cells - No criteria or not detected
Bold - Indicates Exceedances from 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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW365-3034 (Nov-11)	SA-TW365-4044 (Nov-11)	SA-TW365-4044 (DUP) (Nov-11)	SA-TW366-1519 (Nov-11)	SA-TW366-2529 (Nov-11)	SA-TW366-3539 (Nov-11)	SA-TW366-4246 (Nov-11)	SA-TW367-1620 (Nov-11)	SA-TW367-2630 (Nov-11)	SA-TW367-3640 (Nov-11)	SA-TW367-4246 (Nov-11)	SA-TW367-4246 (DUP) (Nov-11)	SA-TW401-1115 (Jun-11)	SA-TW401-2125 (Jun-11)	SA-TW401-2630 (Jun-11)	SA-TW401-3135 (Jun-11)	SA-TW402-1115 (Jun-11)	SA-TW402-2125 (Jun-11)	SA-TW402-2630 (Jun-11)	SA-TW402-2630 (DUP) (Jun-11)	SA-TW402-3135 (Jun-11)	SA-TW403-1115 (Jun-11)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1									3.3 J				1.2 J			6.6	26						12 J	
Benzene	71-43-2	5	5															0.87 J	**5.3**		**20**	**6.2**	**5.9 J**	4.7	
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50																						
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5																						
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5		**10 J**	**11 J**			**25 J**			**15 J**	**6.7**	**44 J**	**47**		0.9 J	1.4	**10**	2.1	**160 J**	**58**	**54 J**	**79**	1.9
Chloroform	67-66-3		50																						
Chloromethane	74-87-3		5														0.72 J	0.58 J			2			0.68 J	
Cyclohexane	110-82-7		50															2.8			2.2			1.2	
1,2-Dichlorobenzene	95-50-1	600	5						0.96 J					1.5 J	1.3						1.2		1.1 J	**6.1**	
1,3-Dichlorobenzene	541-73-1		5																					3.2	
1,4-Dichlorobenzene	106-46-7	75	5						3.9 J					3.7 J	3.8									**13**	
1,1-Dichloroethane	75-34-3		5	**6.3**	**53 J**	**57 J**			**230 D**	0.76 J		**200 JD**	**120**	**420 JD**	**500 D**			2.2	**24**	0.86 J	**660 J**	**100**	**100 J**	**280 J**	1.6
1,1-Dichloroethene	75-35-4	7	5		3 J	3.61 J			**13 J**			**9.2 J**	**5.2**	**24 J**	**26**				2.6		**49**	**7.2**	**6.9 J**	**17**	
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5														3.7	**69**	**23**		**140 J**			**23**	
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5														**12**	**53**	**23**		**42**	**24**	**23 J**	**21**	1.8
Methyl Cyclohexane	108-87-2		50																						
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5																						
Naphthalene	91-20-3		50																						
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5																						
Toluene	108-88-3	1,000	5																		1.3				
1,1,1-Trichloroethane	71-55-6	200	5		3.9 J	3.1 J			**17 J**			**11 J**		**43 J**	**43**			**5**	**23**		**270 J**	**46**	**43 J**	**110**	
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5																					**7.2**	
1,2,4-Trichlorobenzene	120-82-1		5						1.8 J					3.7 J	3.2							4.8	4.6 J	**24**	
Trichloroethene	79-01-6	5	5																		0.85 J				
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5															4.9	**17.1**		**79.1**			2.1	

NOTES:
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MCL - Maximum Contaminant Leve J - Estimated Value
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CAS No. - Chemical Abstract Service number
Blank cells - No criteria or not detected
Bold - Indicates Exceedances from 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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW403-2125 (Jun-11)	SA-TW403-2630 (Jun-11)	SA-TW403-3135 (Jun-11)	SA-TW404-2125 (Jun-11)	SA-TW404-3135 (Jun-11)	SA-TW405-2125 (Jun-11)	SA-TW405-2125 (DUP) (Jun-11)	SA-TW405-3135 (Jun-11)	SA-TW406-2125 (Jun-11)	SA-TW406-3135 (Jun-11)	SA-TW407-2125 (Jun-11)	SA-TW407-3135 (Jun-11)	SA-TW408-3337 (Jun-11)	SA-TW408-3842 (Jun-11)	SA-TW408-4347 (Jun-11)	SA-TW409-3337 (Jun-11)	SA-TW409-3842 (Jun-11)	SA-TW409-4347 (Jun-11)	SA-TW410-3337 (Jun-11)	SA-TW410-3842 (Jun-11)	SA-TW410-3842 (DUP) (Jun-11)	SA-TW410-4347 (Jun-11)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1				4.5 J	7.6																			
Benzene	71-43-2	5	5													0.75 J	1.1								
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50																						
Carbon Disulfide	75-15-0		50																						
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5													3.8									
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5	3.9		1.2										**46**	**110**	4.7				**5.2**			
Chloroform	67-66-3		50																						
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50																						
1,2-Dichlorobenzene	95-50-1	600	5													**6.4**	1.2								
1,3-Dichlorobenzene	541-73-1		5													4.7	0.64 J								
1,4-Dichlorobenzene	106-46-7	75	5													**26**	2.9								
1,1-Dichloroethane	75-34-3		5	1.7	**26**	**56**										**34**	**190**	**50**	**13**	3.7	**7.2**	**22**	**11**	**10**	**25**
1,1-Dichloroethene	75-35-4	7	5		1.4	3.3										3.3	**11**	3.3	0.83 J			1.3	0.93 J	0.76 J	1.2
1,2-Dichloroethane	107-06-2	5	5																						
cis-1,2-Dichloroethene	156-59-2	70	5													0.61 J	0.6 J								
Ethyl Benzene	100-41-4	700	5																						
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5													0.62 J									
Methyl Cyclohexane	108-87-2		50																						
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5																						
Naphthalene	91-20-3		50																						
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5				3.8	**8.9**			0.93 J	2	**180**												
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5		**8.6**	**15**											**19**	**11**							
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5													1.3	1.4								
1,2,4-Trichlorobenzene	120-82-1		5	0.59 J												3.7	4.3								
Trichloroethene	79-01-6	5	5																						
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5																						

NOTES:
µg/L - micrograms per liter DUP - Duplicate
MCL - Maximum Contaminant Leve J - Estimated Value
NYSDOH - New York State Department of Health
CAS No. - Chemical Abstract Service number
Blank cells - No criteria or not detected
Bold - Indicates Exceedances from 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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW411-3337 (Jun-11)	SA-TW411-3842 (Jun-11)	SA-TW411-4347 (Jun-11)	SA-TW412-3337 (Jun-11)	SA-TW412-3842 (Jun-11)	SA-TW412-4347 (Jun-11)	SA-TW413-3337 (Jun-11)	SA-TW413-3842 (Jun-11)	SA-TW413-3842 (Jun-11) (DUP)	SA-TW413-4347 (Jun-11)	SA-TW414-3337 (Jun-11)	SA-TW414-3842 (Jun-11)	SA-TW414-4347 (Jun-11)	SA-TW415-3337 (Jun-11)	SA-TW415-3842 (Jun-11)	SA-TW415-4347 (Jun-11)	SA-TW416-3337 (Jun-11)	SA-TW416-3842 (Jun-11)	SA-TW416-4347 (Jun-11)	SA-TW416-4852 (Jun-11)	SA-TW417-2832 (Oct-11)	SA-TW417-3337 (Oct-11)
Volatile Organic Compounds (µg/L)																									
Acetone	67-64-1			8.2 J		7.3 J		8 J		11 J	6.6 J	4.6 J	5.2 J												
Benzene	71-43-2	5	5							0.71 J				2.1	1.3	1.4 J	2 J				1				
n-Butyl Benzene	104-51-8		5																						
2-Butanone	78-93-3		50					7 J																	
Carbon Disulfide	75-15-0		50																						
Carbon Tetrachloride	56-23-5	5	5																						
Chlorobenzene	108-90-7	100	5											1.6											
Chlorodibromomethane	124-48-1		50																						
Chloroethane	75-00-3		5	**10 J**		**7.9 J**	**15 J**	**16 J**	1.4	**63 J**	**30 J**	**33 J**	**19 J**	**110 J**	**79 J**	**88 J**	**100 J**	**20 J**	1	**50 J**	**80 J**	**76 J**			
Chloroform	67-66-3		50																						
Chloromethane	74-87-3		5																						
Cyclohexane	110-82-7		50											1.2											
1,2-Dichlorobenzene	95-50-1	600	5							0.91 J				**6.1**	1.4	1.9 J	2.6 J				0.77 J	0.74 J			
1,3-Dichlorobenzene	541-73-1		5											3.5		0.79 J	0.8 J								
1,4-Dichlorobenzene	106-46-7	75	5				0.8 J	1.1 J		1.7 J				**16**	2	3.6 J	3.3 J								
1,1-Dichloroethane	75-34-3		5	**64 J**	**10 J**	**48 J**	**89 J**	**100 J**	**25**	**360 J**	**280 J**	**260 J**	**180 J**	**710**	**530**	**580**	**850**	**170**	**6.9**	**140**	**440**	**390**	1.9		
1,1-Dichloroethene	75-35-4	7	5	2.9 J	0.62 J	2.3 J	**5.4 J**	**7.6 J**	1.3	**27 J**	**19 J**	**18 J**	**11 J**	**41**	**37**	**34 J**	**45 J**	**9.9**	0.53 J	**5.9**	**18**	**17**			
1,2-Dichloroethane	107-06-2	5	5											0.72 J	0.72 J	0.55 J									
cis-1,2-Dichloroethene	156-59-2	70	5																						
Ethyl Benzene	100-41-4	700	5																						
Freon 113	76-13-1		50																						
2-Hexanone	591-78-6		50																						
Isopropyl Benzene	98-82-8		5											**6.2**		0.62 J	3.4 J				0.7 J	1.1			
Methyl Cyclohexane	108-87-2		50																						
Methyl tert-butyl ether	1634-04-4		10																						
4-Methyl-2-Pentanone	108-10-1		50																						
Methylene Chloride	75-09-2		5																						
Naphthalene	91-20-3		50																						
Styrene	100-42-5	100	5																						
Tetrachloroethene	127-18-4	5	5																						
Toluene	108-88-3	1,000	5																						
1,1,1-Trichloroethane	71-55-6	200	5	2.5 J			**5.3 J**	**18 J**	2.1	**75 J**	**55 J**	**53 J**	**23 J**	**150**	**160**	**150**	**210**	**56**		**32**	**120**	**120**			
1,1,2-Trichloroethane	79-00-5	5	5																						
1,2,3-Trichlorobenzene	87-61-6		5											2.7	0.51 J	0.53 J	1.1 J								
1,2,4-Trichlorobenzene	120-82-1		5				0.74 J	0.9 J		1.8 J	0.75 J	0.84 J		**9.1**	1.6	1.4 J	3.7 J								
Trichloroethene	79-01-6	5	5											0.69 J											
Vinyl Chloride	75-01-4	2	2																						
Xylenes (total)	1330-20-7	10,000	5																						

NOTES:
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NYSDOH - New York State Department of Health
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Blank cells - No criteria or not detected
Bold - Indicates Exceedances from NYSDOH MCLs
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[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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-TW417-3337 (DUP) (Oct-11)	SA-TW417-3842 (Oct-11)	SA-TW417-4347 (Oct-11)	SA-TW417-4852 (Oct-11)	SA-TW418-2832 (Oct-11)	SA-TW418-3337 (Oct-11)	SA-TW418-3842 (Oct-11)	SA-TW418-4347 (Oct-11)	SA-TW418-4852 (Oct-11)	SA-TW419-2832 (Oct-11)	SA-TW419-3337 (Oct-11)	SA-TW419-3842 (Oct-11)	SA-TW419-4347 (Oct-11)	SA-TW419-4347 (DUP) (Oct-11)	SA-TW419-4852 (Oct-11)	SA-TW420-2832 (Oct-11)	SA-TW420-3337 (Oct-11)	SA-TW420-4347 (Oct-11)	SA-TW420-4852 (Oct-11)
Volatile Organic Compounds (µg/L)																						
Acetone	67-64-1																					
Benzene	71-43-2	5	5																			
n-Butyl Benzene	104-51-8		5																			
2-Butanone	78-93-3		50																			
Carbon Disulfide	75-15-0		50					1.1	1.1		0.89 J										0.74 J	
Carbon Tetrachloride	56-23-5	5	5																			
Chlorobenzene	108-90-7	100	5																			
Chlorodibromomethane	124-48-1		50																			
Chloroethane	75-00-3		5																			
Chloroform	67-66-3		50																			
Chloromethane	74-87-3		5																			
Cyclohexane	110-82-7		50																			
1,2-Dichlorobenzene	95-50-1	600	5																			
1,3-Dichlorobenzene	541-73-1		5																			
1,4-Dichlorobenzene	106-46-7	75	5																			
1,1-Dichloroethane	75-34-3		5															1.5 J				
1,1-Dichloroethene	75-35-4	7	5																			
1,2-Dichloroethane	107-06-2	5	5																			
cis-1,2-Dichloroethene	156-59-2	70	5																			
Ethyl Benzene	100-41-4	700	5																			
Freon 113	76-13-1		50																			
2-Hexanone	591-78-6		50																			
Isopropyl Benzene	98-82-8		5																			
Methyl Cyclohexane	108-87-2		50																			
Methyl tert-butyl ether	1634-04-4		10																			
4-Methyl-2-Pentanone	108-10-1		50																			
Methylene Chloride	75-09-2		5																			
Naphthalene	91-20-3		50																			
Styrene	100-42-5	100	5																			
Tetrachloroethene	127-18-4	5	5																			
Toluene	108-88-3	1,000	5																			
1,1,1-Trichloroethane	71-55-6	200	5																			
1,1,2-Trichloroethane	79-00-5	5	5																			
1,2,3-Trichlorobenzene	87-61-6		5																			
1,2,4-Trichlorobenzene	120-82-1		5																			
Trichloroethene	79-01-6	5	5																			
Vinyl Chloride	75-01-4	2	2																			
Xylenes (total)	1330-20-7	10,000	5																			

NOTES:
µg/L - micrograms per liter DUP - Duplicate
MCL - Maximum Contaminant Leve J - Estimated Value
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[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
*Acetone and Methylene Chloride were detected in some samples but are considered lab contaminants

TABLE 4-6
SURFACE WATER ANALYTICAL DETECTIONS
SOUTHERN AREA PECONIC RIVER
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	NYSDEC SWQS [1]	ONL SWV [2]	SA-SW-124 (Aug-08)	SA-SW-124 (Mar-09)	SA-SW-124 (Sept-09)	SA-SW-124 (July-10)	SA-SW-124 (Sept-10)	SA-SW-124 (DUP) (Sept-10)	SA-SW-124 (Mar-11)	SA-SW-124 (DUP) (Mar-11)	SA-SW-124 (Sept-11)	SA-SW-125 (Aug-08)	SA-SW-125 (Mar-09)	SA-SW-125 (Sept-09)	SA-SW-125 (July-10)	SA-SW-125 (Sept-10)	SA-SW-125 (Mar-11)	SA-SW-125 (Sept-11)	SA-SW-201 (Jan-08)	SA-SW-201 (Aug-08)	SA-SW-201 (Mar-09)	SA-SW-201 (Sept-09)	SA-SW-201 (July-10)	SA-SW-201 (DUP) (July-10)
Volatile Organic Compounds (µg/l)																									
1,1,1-Trichloroethane	71-55-6	5	11																						
1,1-Dichloroethane	75-34-3	5	47					0.46 J	0.56 J	0.61 J	0.76 J	1.8 J													
1,1-Dichloroethene	75-35-4											1.2 J													
1,2,4-Trichlorobenzene	120-82-1	5	110		4.9 J																				
Acetone	67-64-1								3.5 J																
Toluene	108-88-3	6,000	9.8																						
Methylene Chloride	75-09-2																								
Trichloroethene	79-01-6	5	47									**6.2 J**													

NOTES:
CAS - Chemical Abstracts Service
µg/L - micrograms per liter
SW - Surface Water
DUP - Duplicate
J - Estmated Value
MCL - Maximum contaminat level
Blank cells - No criteria or not detected
NYSDEC- New York State Department of Environmental Conservation
SWQS - Surface Water Quality Standards
ORNL SWV - Oak Ridge National Laboratory Surface Water Values
Bold - Indicates Exceedances from NYSDEC SWQS
[1] Peconic River is Class C Surface Water 6 NYCRR Part 703 Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations, Section 703.5, Table 1,Water Quality Standards and Surface Waters and Groundwater.
http://www.dec.ny.gov/regs/4590.html
[2] Oak Ridge National Laboratory (surface water) - Table 1 (secondary chronic values), Toxilogical Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision (Suter and Tsao, 1996).
http://www.hsrd.ornl.gov/ecorisk/tm96r2.pdf

TABLE 4-6
SURFACE WATER ANALYTICAL DETECTIONS
SOUTHERN AREA PECONIC RIVER
NWIRP CALVERTON, NEW YORK
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Chemical	CAS No.	NYSDEC SWQS [1]	ONL SWV [2]	SA-SW-201 (Sept-10)	SA-SW-201 (Mar-11)	SA-SW-201 (Sept-11)	SA-SW-201 (DUP) (Sept-11)	SA-SW-204 (Jan-08)	SA-SW-204 (Aug-08)	SA-SW-204 (DUP) (Aug-08)	SA-SW-204 (Mar-09)	SA-SW-204 (Sept-09)	SA-SW-204 (DUP) (Sept-09)	SA-SW-204 (July-10)	SA-SW-204 (Sept-10)	SA-SW-204 (Mar-11)	SA-SW-204 (Sept-11)
Volatile Organic Compounds (µg/l)																	
1,1,1-Trichloroethane	71-55-6	5	11				0.84 J										
1,1-Dichloroethane	75-34-3	5	47														
1,1-Dichloroethene	75-35-4																
1,2,4-Trichlorobenzene	120-82-1	5	110														
Acetone	67-64-1			4.2 J													
Toluene	108-88-3	6,000	9.8														
Methylene Chloride	75-09-2																
Trichloroethene	79-01-6	5	47														

NOTES:
CAS - Chemical Abstracts Service
µg/L - micrograms per liter
SW - Surface Water
DUP - Duplicate
J - Estmated Value
MCL - Maximum contaminat level
Blank cells - No criteria or not detected
NYSDEC- New York State Department of Environmental Conservation
SWQS - Surface Water Quality Standards
ORNL SWV - Oak Ridge National Laboratory Surface Water Values
Bold - Indicates Exceedances from NYSDEC SWQS
[1] Peconic River is Class C Surface Water 6 NYCRR Part 703 Surface Water a
Groundwater Quality Standards and Groundwater Effluent Limitations, Sectior
Table 1,Water Quality Standards and Surface Waters and Groundwater.
http://www.dec.ny.gov/regs/4590.html
[2] Oak Ridge National Laboratory (surface water) - Table 1 (secondary chronic
Toxilogical Benchmarks for Screening Potential Contaminants of Concern for
Aquatic Biota: 1996 Revision (Suter and Tsao, 1996).
http://www.hsrd.ornl.gov/ecorisk/tm96r2.pdf

TABLE 4-7
SEDIMENT ANALYTICAL DETECTIONS
SOUTHERN AREA PECONIC RIVER
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	ORNL Sediment Values [1]	NYSDEC Unrestricted Soil Cleanup Objectives [2]	NYSDEC Ecological Soil Cleanup Objectives [2]	SA-SD-124 (Aug-08)	SA-SD-124 (Mar-09)	SA-SD-124 (Sept-09)	SA-SD-124 (July-10)	SA-SD-124 (Sept-10)	SA-SD-124 (DUP) (Sept-10)	SA-SD-124 (Mar-11)	SA-SD-124 (DUP) (Mar-11)	SA-SD-124 (Sept-11)	SA-SD-125 (Aug-08)	SA-SD-125 (Mar-09)	SA-SD-125 (DUP) (Mar-09)	SA-SD-125 (Sept-09)	SA-SD-125 (DUP) (Sept-09)	SA-SD-125 (July-10)	SA-SD-125 (Sept-10)	SA-SD-125 (Mar-11)	SA-SD-125 (Sept-11)	SA-SD-201 (Mar-09)	SA-SD-201 (Sept-09)	SA-SD-201 (July-10)	SA-SD-201 (Sept-10)
Volatile Organic Compounds (µg/kg)																										
1,1-Dichloroethane	75-34-3	27	270			7.5		8.8 J	7.6 J																	
1,2,4-Trichlorobenzene	120-82-1	9,600						9.1 J	9.7 J				3.3 J													
1,4-Dichlorobenzene	106-46-7	340	1,800	20,000				4.1 J																		
2-Butanone	78-93-3	270						63 J	23 J	6.1 J																
2-Hexanone	591-78-6	22															11 J									
*Acetone	67-64-1	8.7	50	2,200				**260 J**	**130 J**	46			**7.8 J**													
Carbon disulfide	75-15-0	0.85						**3.4 J**																		
Methylene Chloride	75-09-2	370	50	12,000							3.5 J	3.5 J														
Toluene	108-88-3	780	700	36,000												39	2.5 J									
Naphthalene	91-20-3	240	12,000														3.7 J									
Tetrachloroethene	127-18-4	410	1,300	2,000																						

NOTES:
CAS - Chemical Abstracts Service
µg/kg - micrograms per kilogram
MCL - Maximum contaminat level
SD - Sediment
DUP - Duplicate
J - Estmated Value
Blank cells - No criteria or not detected
NYSDEC- New York State Department of Environmental Conservation
MCL - Maximum contaminat level
ORNL - Oak Ridge National Laboratory
Bold - Indicates Exceedances of at least one of the following criteria:

[1] Oak Ridge National Laboratory (sediment) - Table 3 (secondary chronic values), Toxilogical Benchmarks for Screening Potential Contaminants of Concern for Effects on Sediment-Associated Biota: 1997 Revision (Jones et al., 1997). Benchmarks are based on protection of ecological receptors in the sediment pore water.

[2] NYSDEC, Subpart 375-6: Remedial Program Soil Cleanup Objectives, October 8, 2007. If two values are presented, the second value is based on 706.1, protection of benthic organisms. http://www.dec.ny.gov/regs/15507.html

*Acetone was detected in some samples but is considered a typical lab contaminant

TABLE 4-7
SEDIMENT ANALYTICAL DETECTIONS
SOUTHERN AREA PECONIC RIVER
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	ORNL Sediment Values [1]	NYSDEC Unrestricted Soil Cleanup Objectives [2]	NYSDEC Ecological Soil Cleanup Objectives [2]	SA-SD-201 (Mar-11)	SA-SD-201 (Sept-11)	SA-SD-201 (DUP) (Sept-11)	SA-SD-204 (Aug-08)	SA-SD-204 (DUP) (Aug-08)	SA-SD-204 (Mar-09)	SA-SD-204 (Sept-09)	SA-SD-204 (DUP) (Sept-09)	SA-SD-204 (July-10)	SA-SD-204 (Sept-10)	SA-SD-204 (Mar-11)	SA-SD-204 (Sept-11)
Volatile Organic Compounds (µg/kg)																
1,1-Dichloroethane	75-34-3	27	270													
1,2,4-Trichlorobenzene	120-82-1	9,600														
1,4-Dichlorobenzene	106-46-7	340	1,800	20,000												
2-Butanone	78-93-3	270									7.1 J					
2-Hexanone	591-78-6	22														
*Acetone	67-64-1	8.7	50	2,200											22 J	
Carbon disulfide	75-15-0	0.85														
Methylene Chloride	75-09-2	370	50	12,000	2 J	2.8 J										
Toluene	108-88-3	780	700	36,000												
Naphthalene	91-20-3	240	12,000													
Tetrachloroethene	127-18-4	410	1,300	2,000												30 J

NOTES:
CAS - Chemical Abstracts Service
µg/kg - micrograms per kilogram
MCL - Maximum contaminat level
SD - Sediment
DUP - Duplicate
J - Estmated Value
Blank cells - No criteria or not detected
NYSDEC- New York State Department of Environmental Conservation
MCL - Maximum contaminat level
ORNL - Oak Ridge National Laboratory
Bold - Indicates Exceedances of at least one of the following criteria:

[1] Oak Ridge National Laboratory (sediment) - Table 3 (secondary chronic values), Toxilogical Benchmarks for Screening Potential Contaminants of Concern for Effects on Sediment-Associated Biota: 1997 Revision (Jones et al., 1997). Benchmarks are based on protection of ecological receptors in the sediment pore water.

[2] NYSDEC, Subpart 375-6: Remedial Program Soil Cleanup Objectives, October 8, 2007. If two values are presented, the second value is based on 706.1, protection of benthic organisms. http://www.dec.ny.gov/regs/15507.html

*Acetone was detected in some samples but is considered a typical lab contaminant

TABLE 4-8
GROUNDWATER ANALYTICAL DETECTIONS
PECONIC RIVER PIEZOMETERS
NWIRP CALVERTON, NEW YORK
PAGE 1 of 2

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ118S (Jan-08)	SA-PZ118S (Aug-08)	SA-PZ118S (Sept-09)	SA-PZ118S (DUP) (Sept-09)	SA-PZ118S (Sept-10)	SA-PZ118S (Mar-11)	SA-PZ118S (DUP) (Mar-11)	SA-PZ118I (Jan-08)	SA-PZ118I (Aug-08)	SA-PZ118I (Sept-09)	SA-PZ118I (Sept-10)	SA-PZ118I (Mar-11)	SA-PZ118I (Sept-11)	SA-PZ124 (Aug-08)	SA-PZ124 (Sept-09)	SA-PZ124 (July-10)	SA-PZ124 (Sept-10)	SA-PZ124 (Mar-11)	SA-PZ124 (DUP) (Mar-11)	SA-PZ124 (Sept-11)	SA-PZ124 (DUP) (Sept-11)	SA-PZ125 (Aug-08)	SA-PZ125 (Sept-09)	SA-PZ125 (July-10)
Screened Interval (ft bgs)				**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**6 - 16**	**50 - 60**	**50 - 60**	**50 - 60**	**50 - 60**	**50 - 60**	**50 - 60**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**
Volatile Organic Compounds (µg/l)																											
1,1,1-Trichloroethane	71-55-6	200	5																		3.6	3.8 J		2.6 J			
1,1-Dichloroethane	75-34-3		5	4 J	**17**	2.5 J	2.1 J		**6.1**	**5.8**							4	**17**	**15**	**22**	**54**	**58 J**	**79**	**67 J**			
1,1-Dichloroethene	75-35-4	7	5	1 J	4				1.1	1.1								1.7 J	2.1 J	**5.2**	4.7	4.8 J	**6.5**	**5 J**			
1,2,4-Trichlorobenzene	120-82-1	70	5																								
Carbon disulfide	75-15-0		50																						0.5 J		
Chloroethane	75-00-3		5																		2.3	2.2 J	2.7 J	2.2 J			
Chloromethane	74-87-3		5									3															
Trichloroethene	79-01-6	5	5																					0.94 J			

NOTES:
CAS = Chemical Abstracts Service
µg/L = micrograms per liter
PZ = Piezometer
ft bgs = feet below ground surface
MCL = Maximum contaminat level
NA = Not Analyzed
NYSDOH = New York State Department of Health
J = Estmated Value
DUP = Duplicate
Blank cells = No criteria or not detected
MCL = Maximum contaminat level
Bold - Indicates Exceedances from 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

TABLE 4-8
GROUNDWATER ANALYTICAL DETECTIONS
PECONIC RIVER PIEZOMETERS
NWIRP CALVERTON, NEW YORK
PAGE 2 of 2

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	SA-PZ125 (DUP) (July-10)	SA-PZ125 (Sept-10)	SA-PZ125 (Mar-11)	SA-PZ125 (Sept-11)	SA-PZ147 (July-10)	SA-PZ147 (Sept-10)	SA-PZ147 (Mar-11)	SA-PZ147 (Sept-11)	SA-PZ148 (July-10)	SA-PZ148 (Sept-10)	SA-PZ148 (DUP) (Sept-10)	SA-PZ148 (Mar-11)	SA-PZ148 (Sept-11)
Screened Interval (ft bgs)				**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**	**3 - 6**
Volatile Organic Compounds (µg/l)																
1,1,1-Trichloroethane	71-55-6	200	5													
1,1-Dichloroethane	75-34-3		5						4.4 J	**17**	0.77 J					
1,1-Dichloroethene	75-35-4	7	5							3						
1,2,4-Trichlorobenzene	120-82-1	70	5							0.87 J						
Carbon disulfide	75-15-0		50													
Chloroethane	75-00-3		5													
Chloromethane	74-87-3		5													
Trichloroethene	79-01-6	5	5								1 J					1 J

NOTES:
CAS = Chemical Abstracts Service
µg/L = micrograms per liter
PZ = Piezometer
ft bgs = feet below ground surface
MCL = Maximum contaminat level
NA = Not Analyzed
NYSDOH = New York State Department of Health
J = Estmated Value
DUP = Duplicate
Blank cells = No criteria or not detected
MCL = Maximum contaminat level
Bold - Indicates Exceedances from 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

TABLE 4-9
GROUNDWATER ANALYTICAL RESULTS
PECONIC RIVER SPORTSMANS CLUB
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	CA-PRSC-01 (Jan-08)	CA-PRSC-01 (Jun-08)	CA-PRSC-01 (Aug-08)	CA-PRSC-01 (Dec-08)	CA-PRSC-01 (Mar-09)	CA-PRSC-01 (Jun-09)	CA-PRSC-01 (Sept-09)	CA-PRSC-01 (Nov-09)	CA-PRSC-01 (Feb-10)	CA-PRSC-01 (Apr-10)	CA-PRSC-01 (Jul-10)	CA-PRSC-01 (Nov-10)	CA-PRSC-01 (Feb-11)	CA-PRSC-01 (Apr-11)	CA-PRSC-01 (Jun-11)	CA-PRSC-01 (DUP) (Jun-11)	CA-PRSC-02-01 (Jan-08)	CA-PRSC-02-01 (DUP) (Jan-08)	CA-PRSC-02-01 (Jun-08)	CA-PRSC-02-01 (Aug-08)	CA-PRSC-02-01 (Dec-08)	CA-PRSC-02-01 (DUP) (Dec-08)	CA-PRSC-02-01 (Mar-09)
Volatile Organic Compounds (µg/L)																										
1,1-Dichloroethane	75-34-3		5																	**12**	**12**	**7**	**13**	**12**	**12**	**12**
1,1-Dichloroethene	75-35-4	7	5																		5 J	4	4	5	5	3.3 J
1,2-Dichloroethane	107-06-2	5	5																	0.5 J	0.6 J	0.6 J		0.4 J	0.4 J	
Chloromethane	74-87-3		5																							
cis-1,2-Dichloroethene	156-59-2		5																	2 J	1 J	2	1 J	1	1	
Isopropylbenzene	98-82-8		5																							
Methyl tert-butyl ether	1634-04-4		50																							
Trichloroethene	79-01-6	5	5																	0.8 J	0.8 J	0.7 J	0.6 J	0.9 J	0.9 J	
Vinyl Chloride	75-01-4	2	2																			1 J				
Benzene	71-43-2	5	5																					0.3 J	0.3 J	
Napthalene	91-20-3		50						3.4 J																	
Toluene	108-88-3	1,000	5																							
1,2,4-Trichlorobenzene	120-82-1		5																							
Styrene	9003-53-6	100	5														0.79 J									

NOTES:
µg/L = micrograms per liter
CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
NYSDOH = New York State Department of Health
J = Estimated Value
Blank cells = No criteria or not detected
Bolded values are detections above criteria
[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

TABLE 4-9
GROUNDWATER ANALYTICAL RESULTS
PECONIC RIVER SPORTSMANS CLUB
NWIRP CALVERTON, NEW YORK
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Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	CA-PRSC-02-01 (Jun-09)	CA-PRSC-02-01 (DUP) (Jun-09)	CA-PRSC-02-01 (Sept-09)	CA-PRSC-02-01 (Nov-09)	CA-PRSC-02-01 (Feb-10)	CA-PRSC-02-01 (Apr-10)	CA-PRSC-02-01 (Jul-10)	CA-PRSC-02-01 (Nov-10)	CA-PRSC-02-01 (DUP) (Nov-10)	CA-PRSC-02-01 (Feb-11)	CA-PRSC-02-01 (Apr-11)	CA-PRSC-02-01 (Jun-11)	CA-PRSC-02-02 (Jan-08)	CA-PRSC-02-02 (Jun-08)	CA-PRSC-02-02 (Aug-08)	CA-PRSC-02-02 (Dec-08)	CA-PRSC-02-02 (Mar-09)	CA-PRSC-02-02 (Jun-09)	CA-PRSC-02-02 (Sept-09)	CA-PRSC-02-02 (Nov-09)	CA-PRSC-02-02 (Feb-10)	CA-PRSC-02-02 (Apr-10)	CA-PRSC-02-02 (Jul-10)
Volatile Organic Compounds (µg/L)																										
1,1-Dichloroethane	75-34-3		5	**12**	**12**	**11**	**9.3**	**12**	**9.9**	**11**	**11**	**11**	**10**	**10**	**12**				0.4 J		1.1 J	1.2 J		2.1 J	2.4 J	
1,1-Dichloroethene	75-35-4	7	5	3.6 J	3.5 J	**6**	4.4 J	**5.4**	3.4 J	3.5 J	3.9 J	3.9 J	3.9	4.2	3.6											
1,2-Dichloroethane	107-06-2	5	5						0.42 J									0.8 J								
Chloromethane	74-87-3		5																							
cis-1,2-Dichloroethene	156-59-2		5	1.3 J	1.3 J		1.4 J	1.2 J	1.2 J	1.3 J	1.2 J	1.2 J	1.1	1.2	1.4											
Isopropylbenzene	98-82-8		5													2 J		1	0.6 J						0.47 J	
Methyl tert-butyl ether	1634-04-4		50																							
Trichloroethene	79-01-6	5	5						0.64 J	0.75 J			0.7 J	0.68 J	0.66 J											
Vinyl Chloride	75-01-4	2	2																							
Benzene	71-43-2	5	5																							
Napthalene	91-20-3		50				2.4 J																			
Toluene	108-88-3	1,000	5					1.2 J																		
1,2,4-Trichlorobenzene	120-82-1		5							0.53 J																
Styrene	9003-53-6	100	5																							

NOTES:
µg/L = micrograms per liter
CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
NYSDOH = New York State Department of Health
J = Estimated Value
Blank cells = No criteria or not detected
Bolded values are detections above criteria
[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

TABLE 4-9
GROUNDWATER ANALYTICAL RESULTS
PECONIC RIVER SPORTSMANS CLUB
NWIRP CALVERTON, NEW YORK

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	CA-PRSC-02-02 (Nov-10)	CA-PRSC-02-02 (Feb-11)	CA-PRSC-02-02 (Apr-11)	CA-PRSC-02-02 (Jun-11)	CA-PRSC-02-03 (Jan-08)	CA-PRSC-02-03 (Jun-08)	CA-PRSC-02-03 (DUP) (Jun-08)	CA-PRSC-02-03 (Aug-08)	CA-PRSC-02-03 (Dec-08)	CA-PRSC-02-03 (Mar-09)	CA-PRSC-02-03 (Jun-09)	CA-PRSC-02-03 (Sept-09)	CA-PRSC-02-03 (Nov-09)	CA-PRSC-02-03 (Feb-10)	CA-PRSC-02-03 (Apr-10)	CA-PRSC-02-03 (Jul-10)	CA-PRSC-02-03 (Nov-10)	CA-PRSC-02-03 (Feb-11)	CA-PRSC-02-03 (Apr-11)	CA-PRSC-02-03 (Jun-11)	CA-PRSC-03 (Jan-08)	CA-PRSC-03 (Jun-08)	CA-PRSC-03 (Aug-08)
Volatile Organic Compounds (µg/L)																										
1,1-Dichloroethane	75-34-3		5																							
1,1-Dichloroethene	75-35-4	7	5																							
1,2-Dichloroethane	107-06-2	5	5																							
Chloromethane	74-87-3		5					0.8 J																		
cis-1,2-Dichloroethene	156-59-2		5																							
Isopropylbenzene	98-82-8		5							0.4 J	1								0.32 J							
Methyl tert-butyl ether	1634-04-4		50					0.7 J																		
Trichloroethene	79-01-6	5	5																							
Vinyl Chloride	75-01-4	2	2																							
Benzene	71-43-2	5	5																							
Napthalene	91-20-3		50																							
Toluene	108-88-3	1,000	5																							
1,2,4-Trichlorobenzene	120-82-1		5																							
Styrene	9003-53-6	100	5																							

NOTES:
µg/L = micrograms per liter
CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
NYSDOH = New York State Department of Health
J = Estimated Value
Blank cells = No criteria or not detected
Bolded values are detections above criteria
[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

TABLE 4-9
GROUNDWATER ANALYTICAL RESULTS
PECONIC RIVER SPORTSMANS CLUB
NWIRP CALVERTON, NEW YORK
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Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	CA-PRSC-03 (Dec-08)	CA-PRSC-03 (Mar-09)	CA-PRSC-03 (DUP) (Mar-09)	CA-PRSC-03 (Jun-09)	CA-PRSC-03 (Sept-09)	CA-PRSC-03 (DUP) (Sept-09)	CA-PRSC-03 (Nov-09)	CA-PRSC-03 (DUP) (Nov-09)	CA-PRSC-03 (Feb-10)	CA-PRSC-03 (DUP) (Feb-10)	CA-PRSC-03 (Apr-10)	CA-PRSC-03 (DUP) (Apr-10)	CA-PRSC-03 (Jul-10)	CA-PRSC-03 (DUP) (Jul-10)	CA-PRSC-03 (Nov-10)	CA-PRSC-03 (Feb-11)	CA-PRSC-03 (DUP) (Feb-11)	CA-PRSC-03 (Apr-11)	CA-PRSC-03 (DUP) (Apr-11)	CA-PRSC-03 (Jun-11)	CA-PRSC-04 (Jan-08)	CA-PRSC-04 (Jun-08)	CA-PRSC-04 (Aug-08)
Volatile Organic Compounds (µg/L)																										
1,1-Dichloroethane	75-34-3		5																							
1,1-Dichloroethene	75-35-4	7	5																							
1,2-Dichloroethane	107-06-2	5	5																							
Chloromethane	74-87-3		5																							
cis-1,2-Dichloroethene	156-59-2		5																							
Isopropylbenzene	98-82-8		5																							
Methyl tert-butyl ether	1634-04-4		50																							
Trichloroethene	79-01-6	5	5																							
Vinyl Chloride	75-01-4	2	2																							
Benzene	71-43-2	5	5																							
Napthalene	91-20-3		50																							
Toluene	108-88-3	1,000	5																							
1,2,4-Trichlorobenzene	120-82-1		5																							
Styrene	9003-53-6	100	5																							

NOTES:
µg/L = micrograms per liter
CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
NYSDOH = New York State Department of Health
J = Estimated Value
Blank cells = No criteria or not detected
Bolded values are detections above criteria
[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

Chemical	CAS No.	Federal MCLs [1]	NYSDOH MCLs [2]	CA-PRSC-04 (Dec-08)	CA-PRSC-04 (Mar-09)	CA-PRSC-04 (Jun-09)	CA-PRSC-04 (Sept-09)	CA-PRSC-04 (Nov-09)	CA-PRSC-04 (Feb-10)	CA-PRSC-04 (Apr-10)	CA-PRSC-04 (Jul-10)	CA-PRSC-04 (Nov-10)	CA-PRSC-04 (Feb-11)	CA-PRSC-04 (Apr-11)
Volatile Organic Compounds (µg/L)														
1,1-Dichloroethane	75-34-3		5											
1,1-Dichloroethene	75-35-4	7	5											
1,2-Dichloroethane	107-06-2	5	5											
Chloromethane	74-87-3		5											
cis-1,2-Dichloroethene	156-59-2		5											
Isopropylbenzene	98-82-8		5											
Methyl tert-butyl ether	1634-04-4		50											
Trichloroethene	79-01-6	5	5											
Vinyl Chloride	75-01-4	2	2											
Benzene	71-43-2	5	5											
Napthalene	91-20-3		50											
Toluene	108-88-3	1,000	5											
1,2,4-Trichlorobenzene	120-82-1		5											
Styrene	9003-53-6	100	5											

NOTES:

µg/L = micrograms per liter

CAS = Chemical Abstracts Service

MCL = Maximum contaminant level

NYSDOH = New York State Department of Health

J = Estimated Value

Blank cells = No criteria or not detected

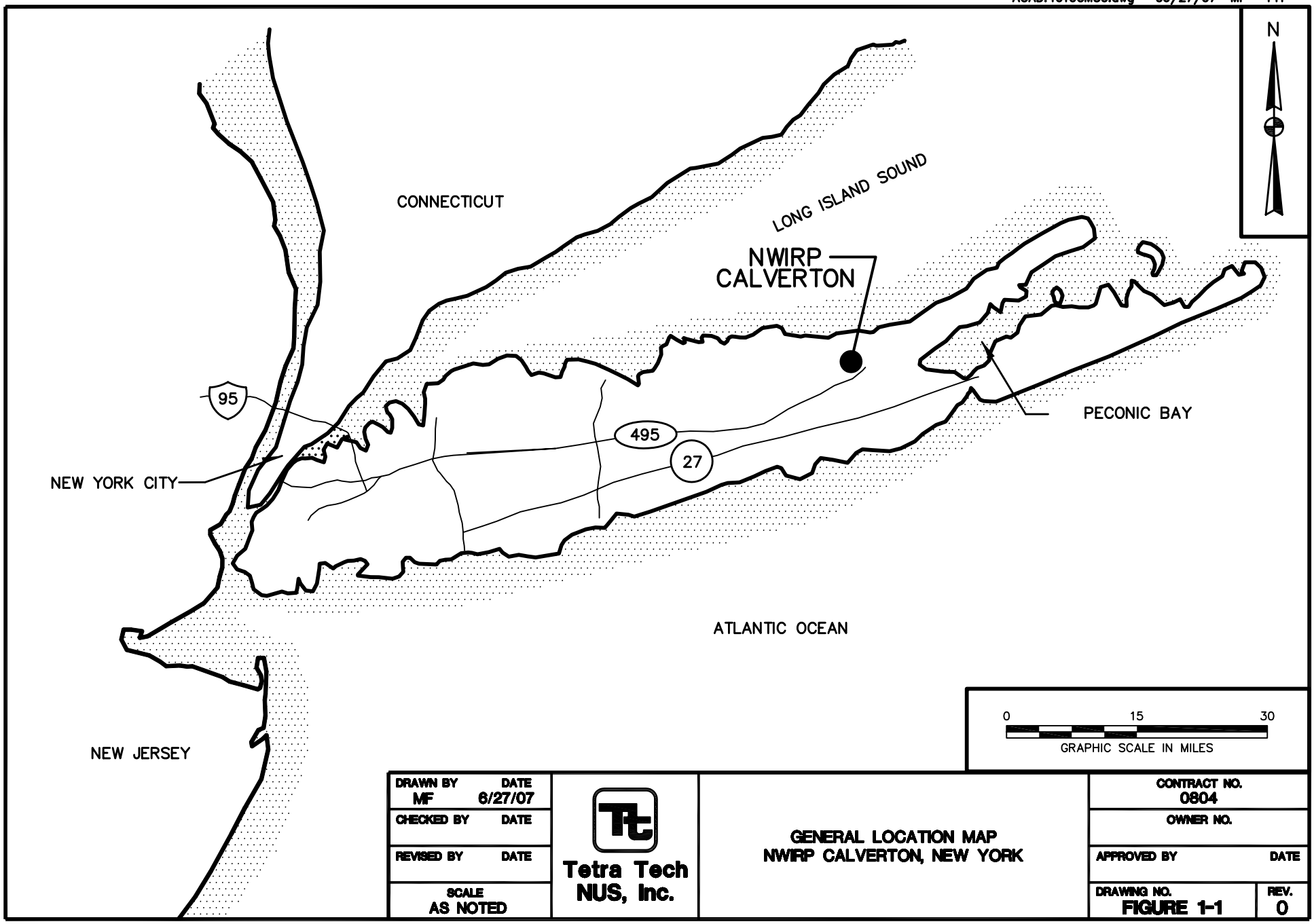
Bolded values are detections above criteria

[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

FIGURES

ACAD:1610CM30.dwg 06/27/07 MF PIT



DRAWN BY MF	DATE 6/27/07	Tetra Tech NUS, Inc.	CONTRACT NO. 0804
CHECKED BY	DATE	GENERAL LOCATION MAP NWIRP CALVERTON, NEW YORK	OWNER NO.
REVISED BY	DATE		APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1-1 / REV. 0

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

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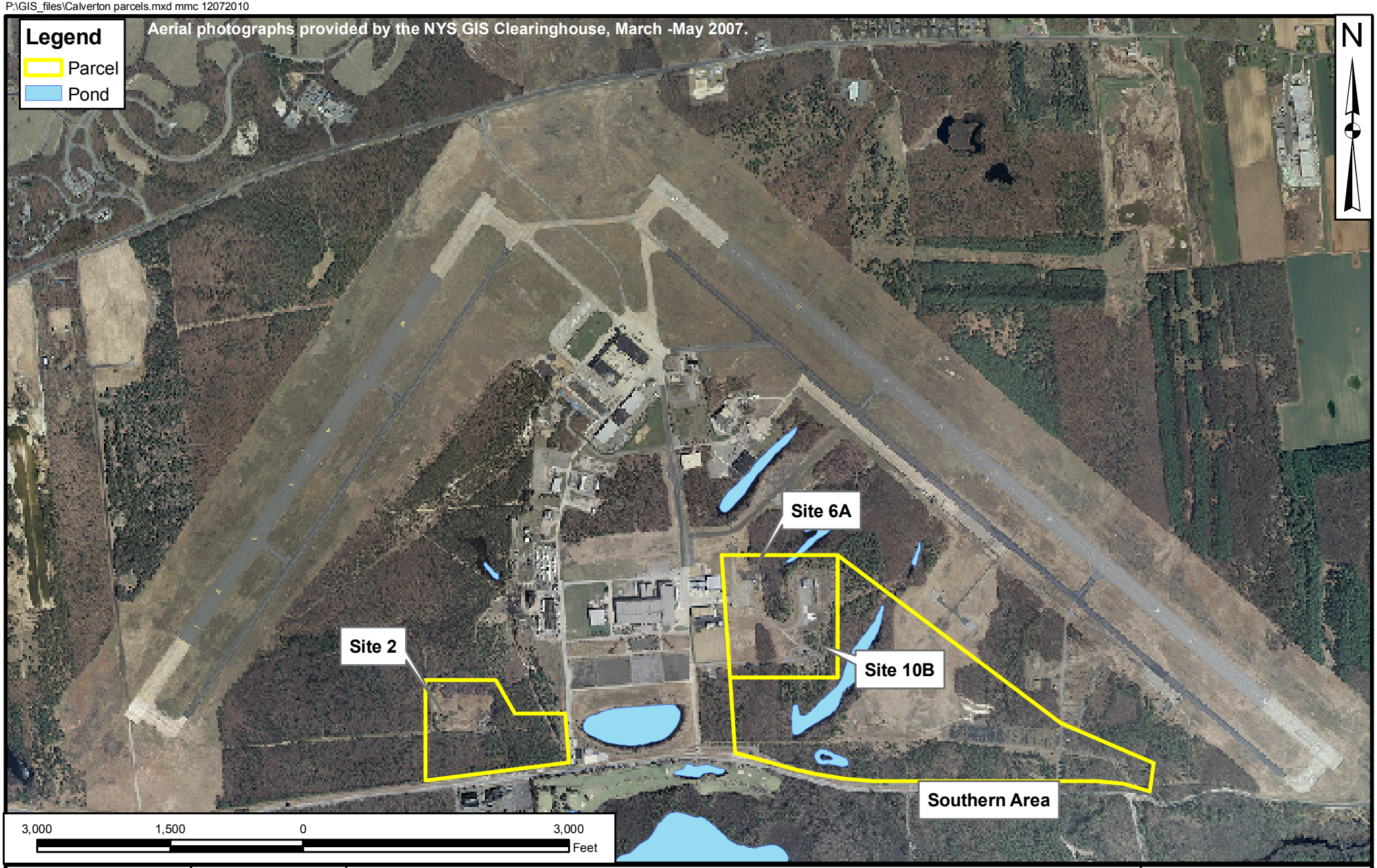
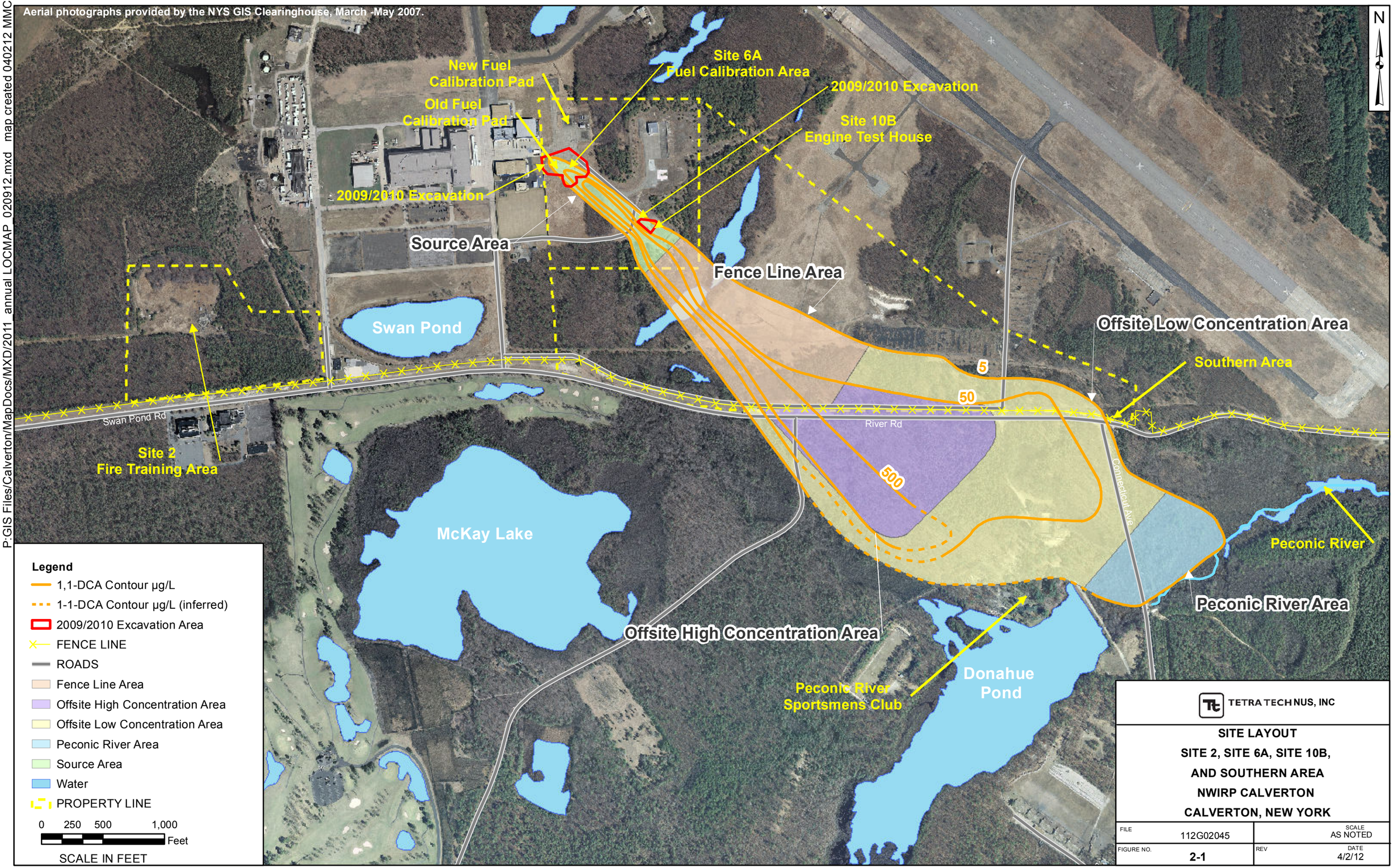


DRAWN BY M. CUSHING	DATE 12/7/10	TETRA TECH	CONTRACT NUMBER 112G01655
CHECKED BY	DATE	**SITE LOCATION MAP**	APPROVED BY / DATE
REVISED BY	DATE	**NWIRP Calverton, New York**	APPROVED BY / DATE
SCALE AS NOTED			FIGURE NO. 1-2 / REV 0

P:GIS Files/Calverton/MapDocs/MXD/2011_annual LOCMAP_020912.mxd map created 040212 MMC

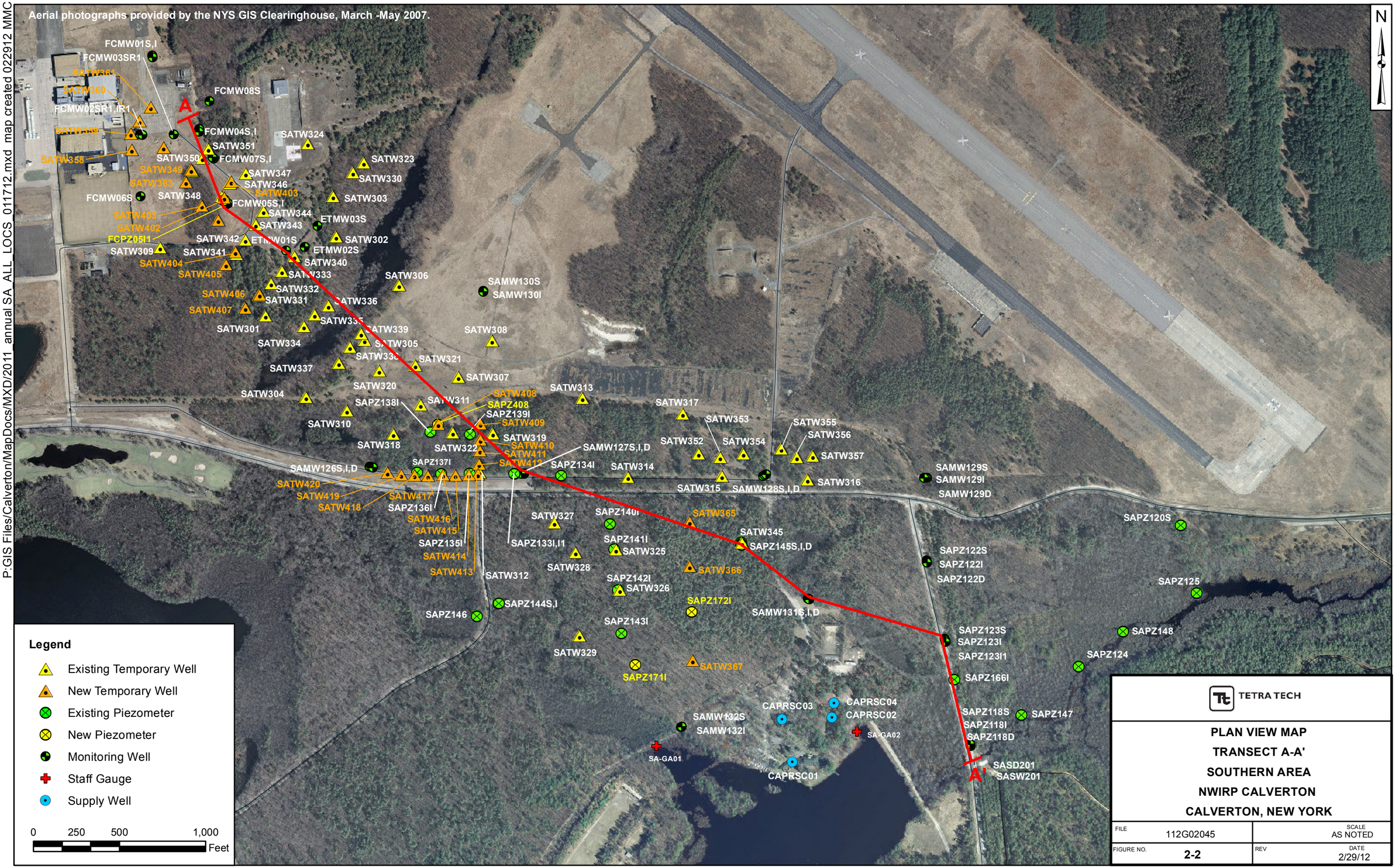


TETRA TECH NUS, INC

SITE LAYOUT
SITE 2, SITE 6A, SITE 10B,
AND SOUTHERN AREA
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE 112G02045	SCALE AS NOTED
FIGURE NO. 2-1	REV / DATE 4/2/12

P:GIS Files/Calverton/MapDocs/MXD/2011_annual SA_ALL_LOCS_011712.mxd map created 022912 MMC

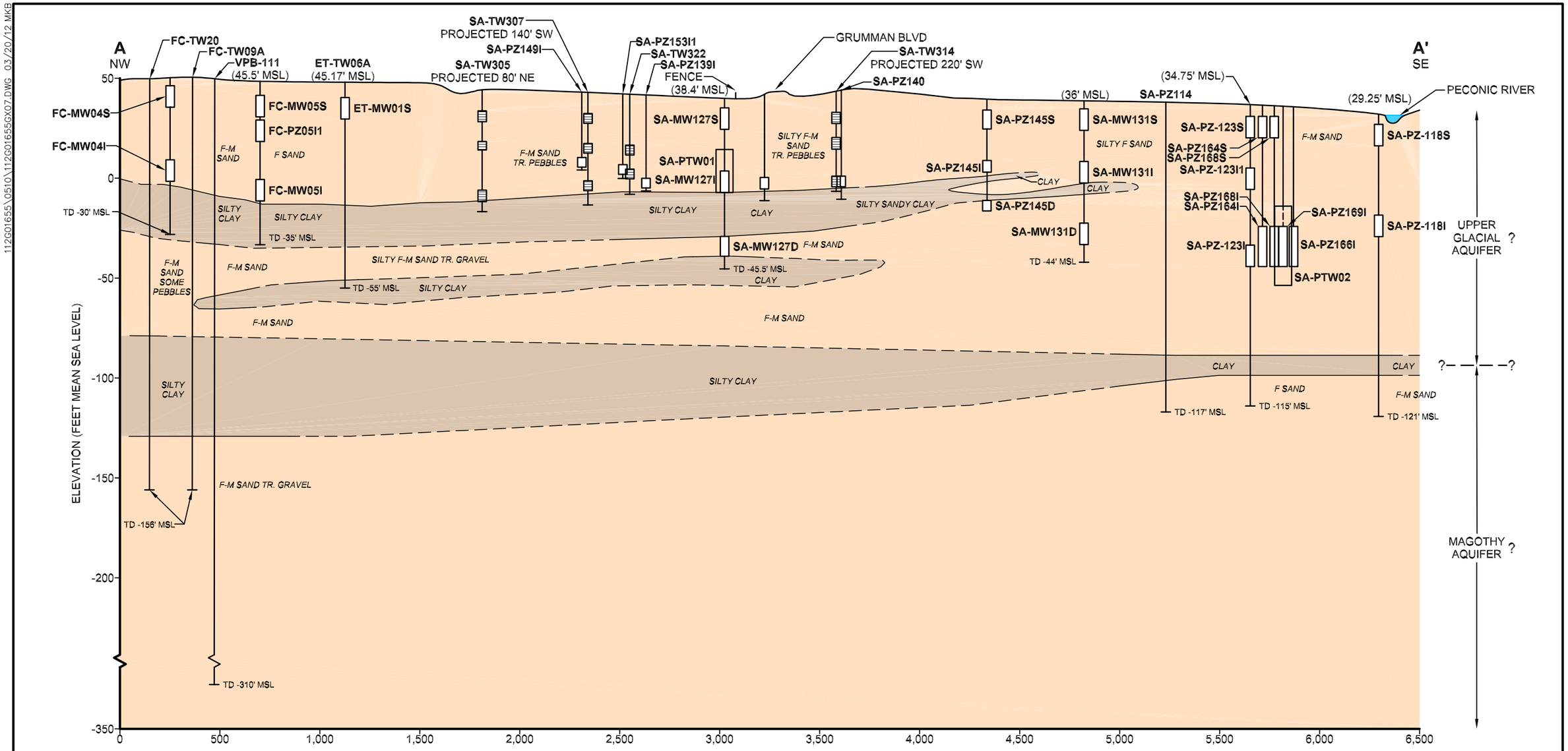


TETRA TECH

PLAN VIEW MAP
TRANSECT A-A'
SOUTHERN AREA
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	2-2	REV	DATE 2/29/12

112G01655\0510\112G01655GX07.DWG 03/20/12 MKB



LEGEND

(45.5' MSL) GROUND SURFACE ELEVATION (FEET MEAN SEA LEVEL)

GROUND SURFACE

F SAND — LITHOLOGY

SA-MW131S — MONITORING WELL SCREEN

TEMPORARY WELL SCREEN

CONFINING UNIT

TD -35' MSL — TOTAL DEPTH (FEET MEAN SEA LEVEL)

0 500 1,000

SCALE IN FEET
10x VERTICAL EXAGGERATION

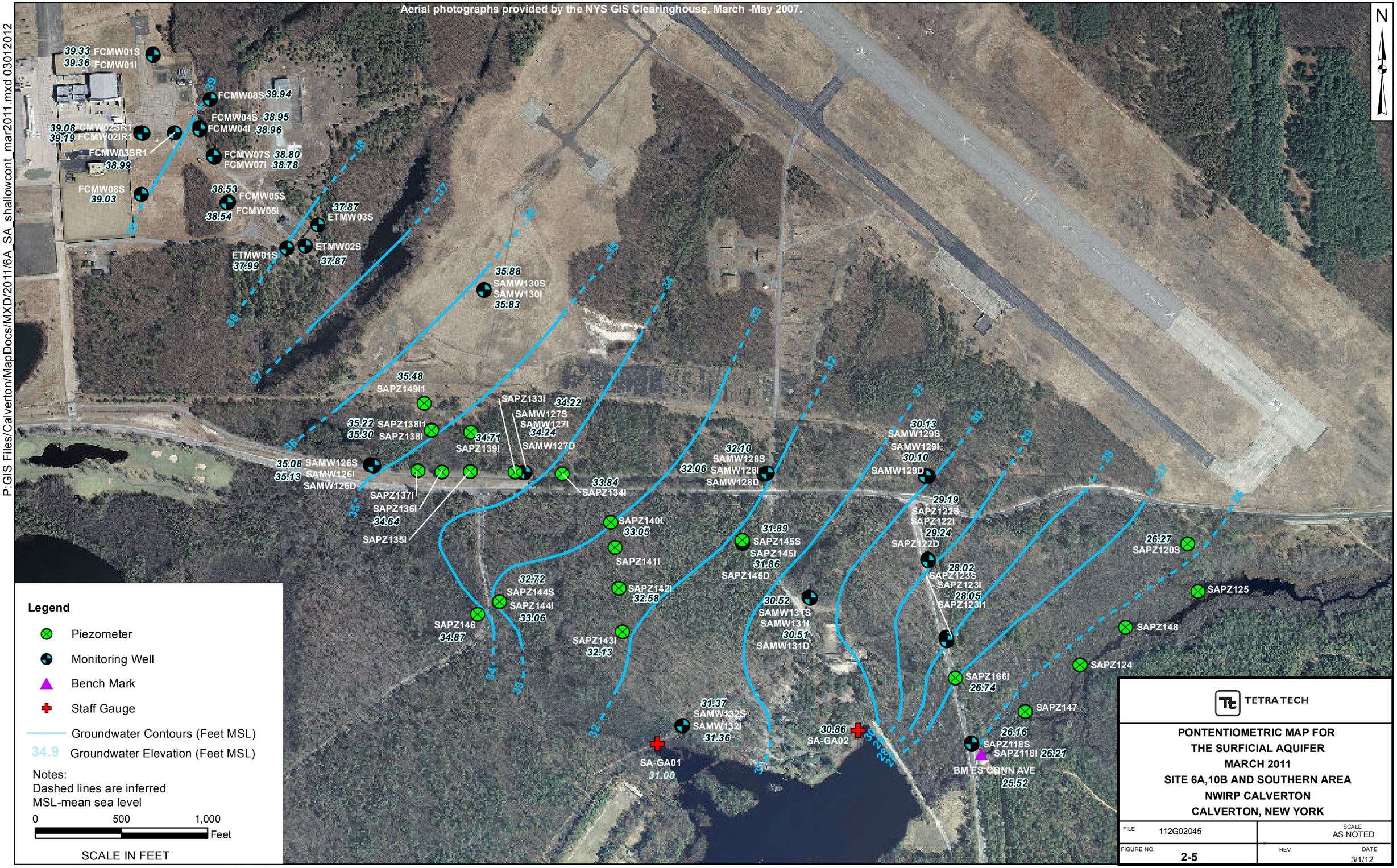
TETRA TECH

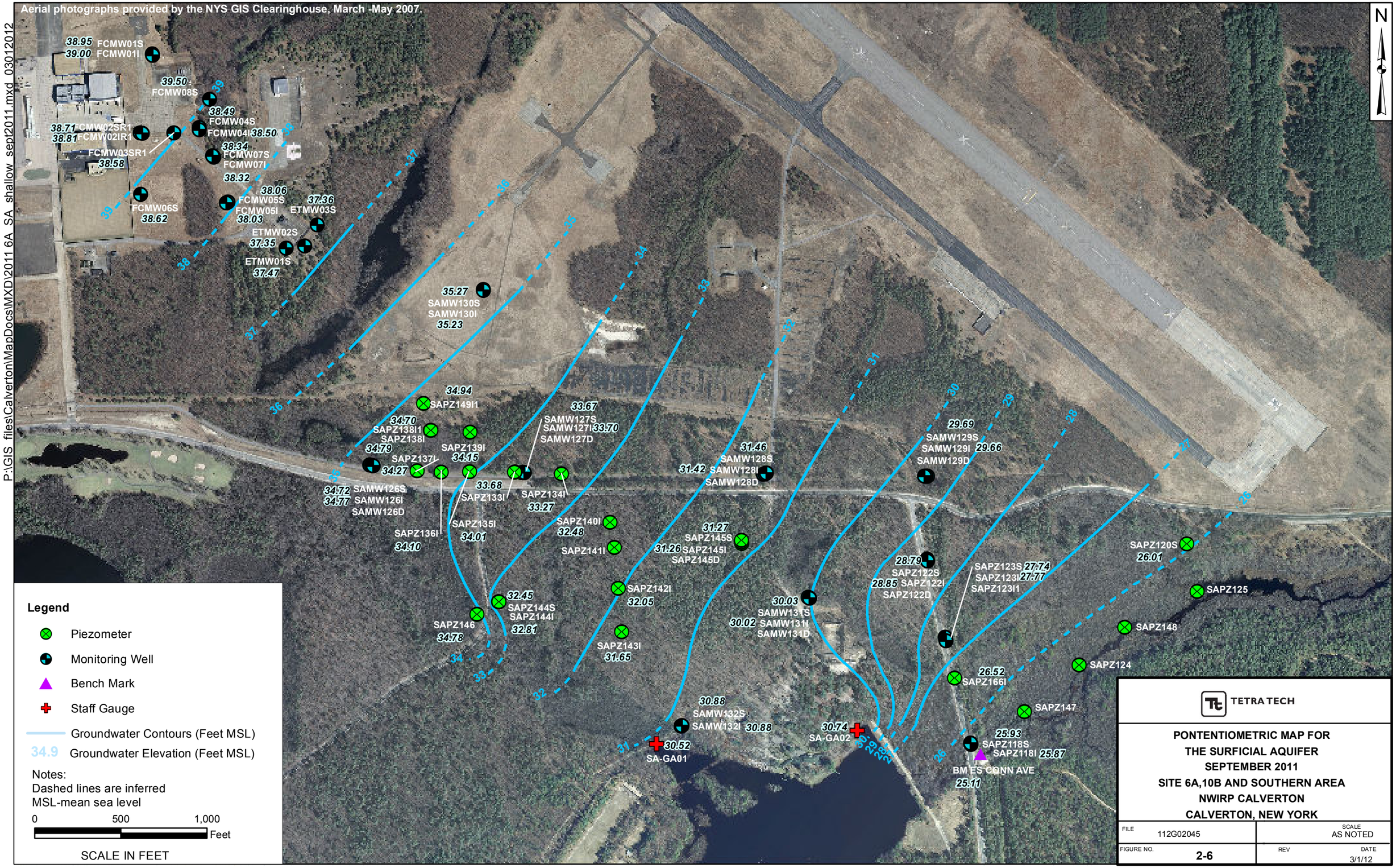
GEOLOGIC CROSS–SECTION A – A'
NAVAL WEAPONS INDUSTRIAL
RESERVE PLANT
CALVERTON, NEW YORK

FILE	SCALE
112G01655GX07	AS NOTED
FIGURE NUMBER	REV / DATE
FIGURE 2–3	0 / 03/20/12

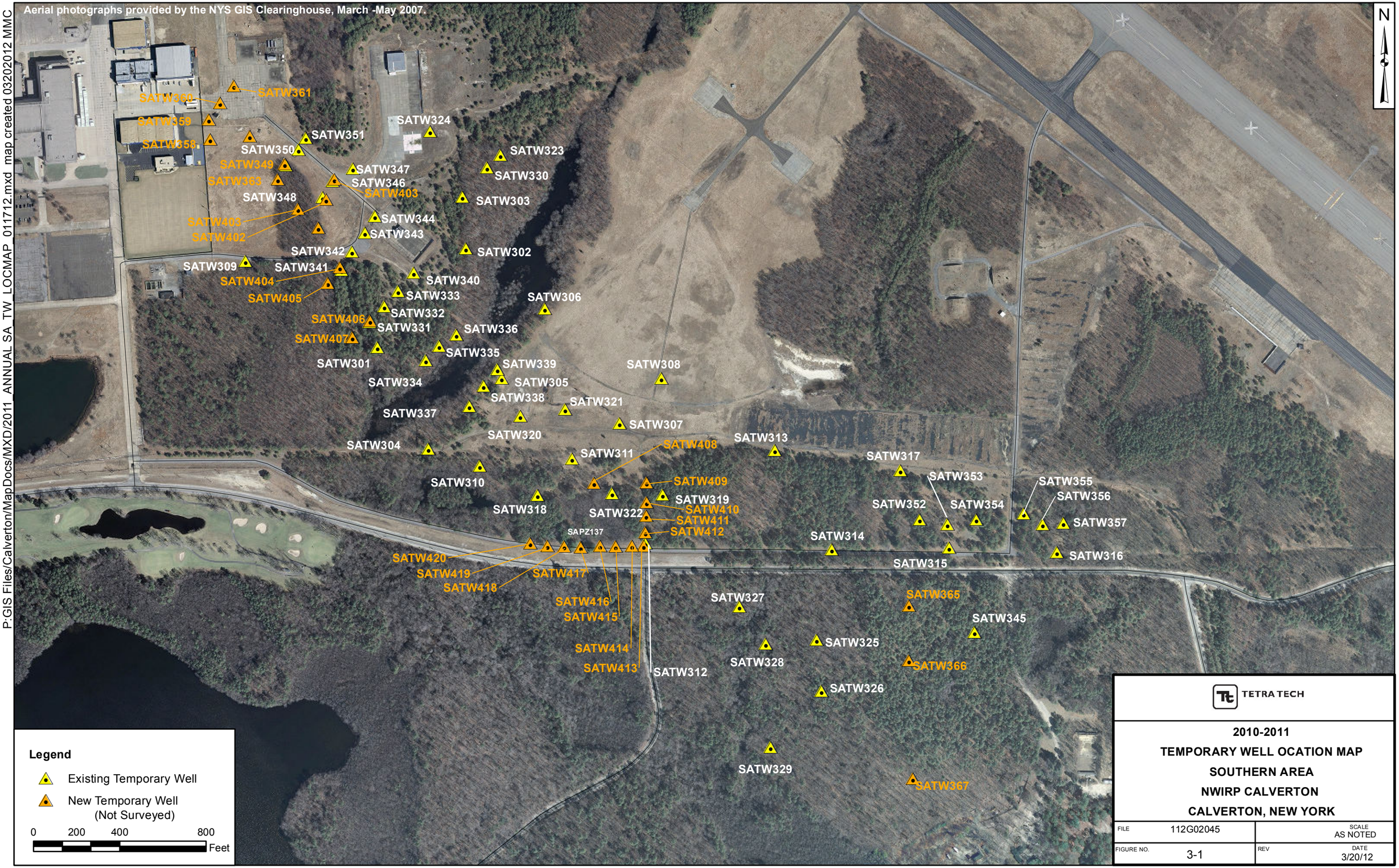
P:GIS Files/Calverton/MapDocs/MXD/2011_ANNUAL Site2_shallowsept2011.mxd map created MMC 02082012

P:GIS Files/Calverton/MapDocs/MXD/2011/6A_SA_shallowcont_mar2011.mxd 03012012




Aerial photographs provided by the NYS GIS Clearinghouse, March -May 2007.
P:\GIS files\Calverton\MapDocs\MXD\2011 6A SA shallow sept2011.mxd 03012012
N
38.95 FCMW01S
39.00 FCMW01I
39.50 FCMW08S
38.49 FCMW04S
38.71 CMW02SR1
38.81 FCMW02IR1
FCMW04I 38.50
FCMW03SR1
38.58
38.34 FCMW07S
FCMW07I
38.32
38.06 FCMW05S
FCMW05I
38.03
FCMW06S
38.62
37.36 ETMW03S
ETMW02S
37.35
ETMW01S
37.47
35.27 SAMW130S
SAMW130I
35.23
34.94 SAPZ149I1
34.70 SAPZ138I1
SAPZ138I
34.79
SAPZ139I
34.15
SAPZ137I
34.27
33.67 SAMW127S
SAMW127I 33.70
SAMW127D
31.46 SAMW128S
31.42 SAMW128I
SAMW128D
29.69 SAMW129S
SAMW129I 29.66
SAMW129D
34.72 SAMW126S
34.77 SAMW126I
SAMW126D
33.68 SAPZ133I
SAPZ134I
33.27
SAPZ136I
34.10
SAPZ135I
34.01
SAPZ140I
32.48
SAPZ141I
31.27 SAPZ145S
31.26 SAPZ145I
SAPZ145D
28.79 SAPZ122S
28.85 SAPZ122I
SAPZ122D
SAPZ123S 27.74
SAPZ123I 27.77
SAPZ123I1
SAPZ120S
26.01
SAPZ125
SAPZ148
SAPZ124
32.45 SAPZ144S
SAPZ144I
32.81
SAPZ146
34.78
SAPZ142I
32.05
SAPZ143I
31.65
30.03 SAMW131S
30.02 SAMW131I
SAMW131D
26.52 SAPZ166I
SAPZ147
30.88 SAMW132S
SAMW132I 30.88
30.52
SA-GA01
30.74
SA-GA02
25.93 SAPZ118S
SAPZ118I 25.87
BM ES CONN AVE
25.11
39
38
37
36
35
34
33
32
31
30
29
28
27
26
Legend
Piezometer
Monitoring Well
Bench Mark
Staff Gauge
Groundwater Contours (Feet MSL)
34.9 Groundwater Elevation (Feet MSL)
Notes:
Dashed lines are inferred
MSL-mean sea level
0 500 1,000
Feet
SCALE IN FEET
TETRA TECH
PONTENTIOMETRIC MAP FOR
THE SURFICIAL AQUIFER
SEPTEMBER 2011
SITE 6A,10B AND SOUTHERN AREA
NWIRP CALVERTON
CALVERTON, NEW YORK
FILE 112G02045
SCALE AS NOTED
FIGURE NO. 2-6
REV
DATE 3/1/12

P:GIS Files/Calverton/MapDocs/MXD/2011_ANNUAL SA_TW_LOCMAP_011712.mxd map created 03202012 MMC



TETRA TECH

2010-2011

TEMPORARY WELL OCATION MAP

SOUTHERN AREA

NWIRP CALVERTON

CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	3-1	REV	DATE 3/20/12

P:GIS Files/Calverton/MapDocs/MXD/2011_annual Site6a10b_locmap_01172012.mxd map created 02292012 MMC

TETRA TECH

SITE 6A-FUEL CALIBRATION AREA
SITE 10B-ENGINE TEST HOUSE
MONITORING WELL LOCATION MAP
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	3-2	REV / DATE	2/29/12

P:GIS Files/Calverton/MapDocs/MXD/2011_annual SA_MWPZ_011712.mxd map created 03202012MMC

Aerial photographs provided by the NYS GIS Clearinghouse, March -May 2007.

TETRA TECH

MONITORING WELL & PIEZOMETER LOCATION MAP
SOUTHERN AREA
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	3-3	REV	DATE 3/20/12

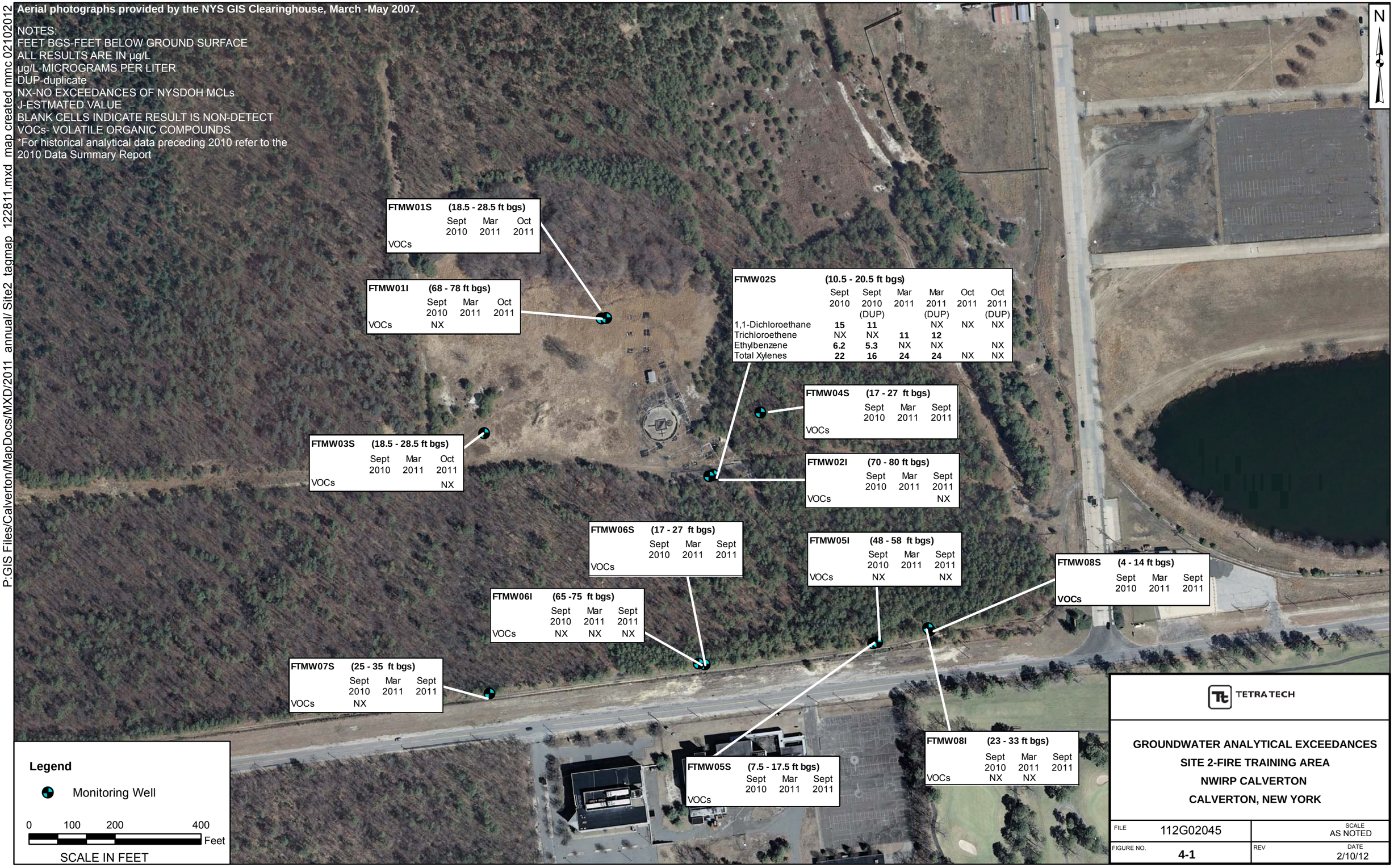
P:GIS Files/Calverton/MapDocs/MXD/2011_ANNUAL Site2_locmap_01172012.mxd map created 02092012 MMC

TETRA TECH

SITE 2 - FIRE TRAINING AREA
MONITORING WELL LOCATION MAP
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE 112G02045	SCALE AS NOTED
FIGURE NO. 3-4	REV / DATE 2/9/12

P:GIS Files/Calverton/MapDocs/MXD/2011 annual/ Site2 tagmap 122811.mxd map created mmc 02102012



Aerial photographs provided by the NYS GIS Clearinghouse, March -May 2007.

NOTES:
FEET BGS-FEET BELOW GROUND SURFACE
ALL RESULTS ARE IN µg/L
µg/L-MICROGRAMS PER LITER
DUP-duplicate
NX-NO EXCEEDANCES OF NYSDOH MCLs
J-ESTMATED VALUE
BLANK CELLS INDICATE RESULT IS NON-DETECT
VOCs- VOLATILE ORGANIC COMPOUNDS
*For historical analytical data preceding 2010 refer to the 2010 Data Summary Report

TETRA TECH

GROUNDWATER ANALYTICAL EXCEEDANCES
SITE 2-FIRE TRAINING AREA
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	4-1	REV	DATE 2/10/12

P:GIS Files/Calverton/MapDocs/MXD/2011 annual/Site6A10b_tagmap_121911.mxd mmc 03202012

Aerial photographs provided by the NYS GIS Clearinghouse, March -May 2007.

NOTES:
FEET BGS-FEET BELOW GROUND SURFACE
ALL RESULTS ARE IN µg/L
µg/L-MICROGRAMS PER LITER
DUP-duplicate
NX-NO EXCEEDANCES OF NYSDOH MCLs
J-ESTMATED VALUE
BLANK CELLS INDICATE RESULT IS NON-DETECT
VOCs- VOLATILE ORGANIC COMPOUNDS
BOLDED VALUES ARE GREATER THAN OR EQUAL TOO NYSDOH MCLs
*For historical analytical data preceding 2010 refer to the 2010 Data Summary Report
** Screen interval unavailable

N

**FCMW01I (48 - 58 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			NX

**FCMW01S (5 - 15 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			

**FCMW08S (2 - 12 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			

**FCMW03SR1 (3 - 13 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
1,1-Dichloroethane	NX	NX	**9.3 J**
Chloroethane			**5 J**
Ethylbenzene	**23**	**46**	**23 J**
Xylenes (Total)	**15**	**19**	
Isopropylbenzene	**13**	**21**	**10 J**
Methane	69	1,200 D	NA

**FCMW04S (3 - 13 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			

**FCMW04I (40 - 50 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			NX

**FCMW02SR1 (3 - 13 ft bgs)

	Sept 2010	Sept 2010 (Dup)	Mar 2011	Sept 2011
1,1-Dichloroethane	**11**	**11**	**16**	**14**
Chloroethane			**7.3**	NX
Ethylbenzene	**6.3**	NX	**6.8**	**6**
Total Xylenes	**39 J**	**25 J**	**28**	**36**
Isopropylbenzene	NX	NX	**5.6**	NX
Methane	130	NA	3,300 D	NA

**FCMW07I (48 - 58 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX	NX	

**FCMW07S (5 - 15 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		NX

**FCMW05I (48 - 58 ft bgs)

	Sept 2010	Mar 2011	June 2011	Sept 2011
VOCs	NX	NX	NX	NX

**FCMW02IR1 (42 - 52 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX	NX	

**FCMW06S (17 - 27 ft bgs)

	Jan 2008	Aug 2008	Sept 2009	Sept 2010	Mar 2011	Sept 2011
PCE	**12**	0.9 J		2.5 J		

**ETMW01S (7 - 17 ft bgs)

	Sept 2010	Mar 2011	Sept 2011	Sept 2011 (DUP)
VOCs	NX		NX	NX

**ETMW03S (7 - 17 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		NX

**FCPZ05I1 (20 - 30 ft bgs)

	Dec 2010	Mar 2011 (DUP)	Mar 2011	June 2011	Sept 2011	Sept 2011 (DUP)
1,1,1-Trichloroethane	**130**	**47**	**51**	**530**	**320 J**	**360 J**
1,1-Dichloroethane	**470**	**73**	**86**	**1,000**	**790 J**	**830 J**
1,1-Dichloroethene	**25**	NX	**7.7**	**75**	**42 J**	**60 J**
Chloroethane	**140**	**29**	**31**	**220**	**230 J**	**250 J**
Benzene	NX	**9**	**11**	**12**	NX	NX
Ethylbenzene	**52**	**63**	**73**	**78**	**30**	**26 J**
Isopropylbenzene	**21**	**30**	**36**	**38**	**11**	**9.2 J**
Naphthalene	**110**	NX	NX			
Total Xylenes	**7.1 J**	NX	NX	**21**	**8.2 J**	NX

**ETMW02S (7 - 17 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		

**FCMW05S (6 - 16 ft bgs)

	Sept 2010	Mar 2011	June 2011	Sept 2011
Ethylbenzene	**6.8 J**			
Isopropylbenzene	**8.2 J**		NX	
Methane	240	18.9	NA	NA

5
50
500

Legend

- New Piezometer
- Monitoring Well
- 1,1-DCA Contour µg/L
- 1-1-DCA Contour µg/L (inferred)
- 2009/2010 Excavation Area
- Fence Line Area
- Offsite High Concentration Area
- Offsite Low Concentration Area
- Peconic River Area
- Source Area

0 200 400
Feet

TETRA TECH

GROUNDWATER ANALYTICAL EXCEEDANCES
SITE 6A-FUEL CALIBRATION AREA
SITE 10B-ENGINE TEST HOUSE
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	**4-2**	REV / DATE	3/20/12

P:GIS Files/Calverton/MapDocs/MXD/2011_annual/SA_tagmap_122111-part1.mxd mmc 03202012

Aerial photographs provided by the NYS GIS Clearinghouse, March -May 2007.

NOTES:
FEET BGS-FEET BELOW GROUND SURFACE
ALL RESULTS ARE IN µg/L
µg/L-MICROGRAMS PER LITER
DUP-duplicate
ND-NON-DETECT
NX-NO EXCEEDANCE OF MCLs
J-ESTMATED VALUE
D-DILUTED SAMPLE
VOCs- VOLATILE ORGANIC COMPOUNDS
BOLDED VALUES ARE GREATER THAN OR EQUAL TOO NYSDOH MCLs
1,1,1-TCA -1,1,1-TRICHLOROETHANE
1,1-DCA -1,1-DICHLOROETHANE
1,1-DCE -1,1-DICHLOROETHENE
1,2-DBNZ -1,2-DICHLOROBENZENE
1,4-DBNZ -1,4-DICHLOROBENZENE
1,2,3-TBNZ -1,2,3-TRICHLOROBENZENE
1,2,4-TBNZ -1,2,4-TRICHLOROBENZENE
IBNZ-ISOPROPYLBENZENE
CA- CHLOROETHANE
*For historical analytical data preceding 2010 refer to the 2010 Data Summary Report

N

Legend
- New Piezometer
- Piezometer
- Monitoring Well
- Fence Line
- 1,1-DCA Contour µg/L
- 1-1-DCA Contour µg/L (inferred)
- Fence Line Area
- Offsite High Concentration Area
- Offsite Low Concentration Area
- Peconic River Area
- Source Area

0 400 800 Feet

SA-PZ-138I1 (37 - 42 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011	Sept 2011
1,1,1-TCA	**220**	**170 J**	**260**	**340 D**	**250**
1,1-DCA	**980**	**970**	**1,100**	**1,200 D**	**1,100**
1,1-DCE	**65**	**60 J**	**63**	**86**	**65**
CA	**210**	**230**	**320**	**240 D**	**150**
1,2-DBNZ	**6.4**	**6.3 J**		NX	NX
1,2,4-TBNZ	**5.7 J**	**14 J**		**9.9**	NX
1,4-DBNZ	**13 J**	**16 J**		**7.2**	
IBNZ	**6.5 J**	**11**		**8.2**	NX

SAPZ408 (37 - 42 ft bgs)

	June 2011	Sept 2011
1,1,1-TCA		**60**
1,1-DCA	**160**	**420**
1,1-DCE	**13**	**25**
CA	**130**	**230**
1,2,4-TBNZ	**8.6**	
1,4-DBNZ	**5.2**	

SAMW130S (9 - 19 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			

SAMW130I (36 - 46 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		

SA-PZ-138I (48.5 - 53.5 ft bgs)

	July 2010	July 2010 (DUP)	Oct 2010	Dec 2010	Dec 2010 (DUP)	Mar 2011
1,1,1-TCA	NX	NX	**8.1**	**8.2**	**5.6**	
1,1-DCA	**20 J**	**20 J**	**33**	**32**	**20**	NX

SAMW126I (40 - 50 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		

SAMW126S (5 - 15 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		NX

SAMW126D (122 - 132 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			

SA-PZ-139I (42.5 - 47.5 ft bgs)

	July 2010	Oct 2010	Dec 2010	Mar 2011
1,1-DCA	**17**	**7.6**	**9.2**	**6.5**

SAMW128S (7 - 17 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			

SAMW128I (30 - 40 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
1,1-DCA	**10 J**	**5.1**	**5**

SA-PZ-133I (42 - 47 ft bgs)

	Mar 2010	July 2010	Aug 2010	Dec 2010	Dec 2010 (DUP)	Mar 2011	Sept 2011
1,1,1-TCA	**120**	**24**	**14**	**18**	**17**	**11**	NX
1,1-DCA	**460**	**130**	**98**	**130**	**130**	**63**	**31**
1,1-DCE	**41**	**7.8**	NX	**6.9**	**6.7**	NX	NX
CA	**67**	**9.6**	**17**	**33**	**34**	**5.2**	NX

SAMW128D (58 - 68 ft bgs)

	Sept 2010	Mar 2011	Sept 2011	Sept 2011 (DUP)
VOCs	NX	NX	NX	NX

SAMW129S (19.5 - 29.5 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		NX

SAMW129I (50 - 60 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
1,1-DCA	NX	**7**	NX

SAMW129D (80 - 90 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs		NX	NX

SA-PZ-134I (39 - 44 ft bgs)

	Mar 2010
1,1,1-TCA	**5.3**
1,1-DCA	**31**

SA-PZ-137I (49 - 54 ft bgs)

	Mar 2010	Sept 2011
VOCs		NX

SA-PZ-136I (44 - 49 ft bgs)

	Mar 2010	Dec 2010	Mar 2011	Sept 2011
VOCS	NX	NX	NX	NX

SAMW127S (5 - 15 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			

SAMW127D (68 - 78 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			

SA-PZ-135I (41.5 - 46 ft bgs)

	Mar 2010	Dec 2010	Mar 2011	Sept 2011
1,1,1-TCA	**70**	**12**	**7.3**	**14**
1,1-DCA	**260**	**54**	**34**	**53**
1,1-DCE	**22**	NX	NX	NX
CA	**15 J**	**5.4 J**	NX	NX

SA-PZ-133I1 (35 - 40 ft bgs)

	Mar 2010	Mar 2010 (DUP)	Mar 2011	Sept 2011
1,1,1-TCA	NX		**11**	**5.8**
1,1-DCA	**26**	**23**	**130 D**	**100**
1,1-DCE	NX	NX	**6.6**	**6.4**
CA	NX		**12**	**11**

SAMW127I (36 - 46 ft bgs)

	Sept 2010	Sept 2010 (DUP)	Mar 2011	Sept 2011
1,1,1-TCA	NX	NX	**8.1**	NX
1,1-DCA	**9.1 J**	**9.3**	**93**	**71**
1,1-DCE			**5.6**	NX
CA			**26**	**8.5**

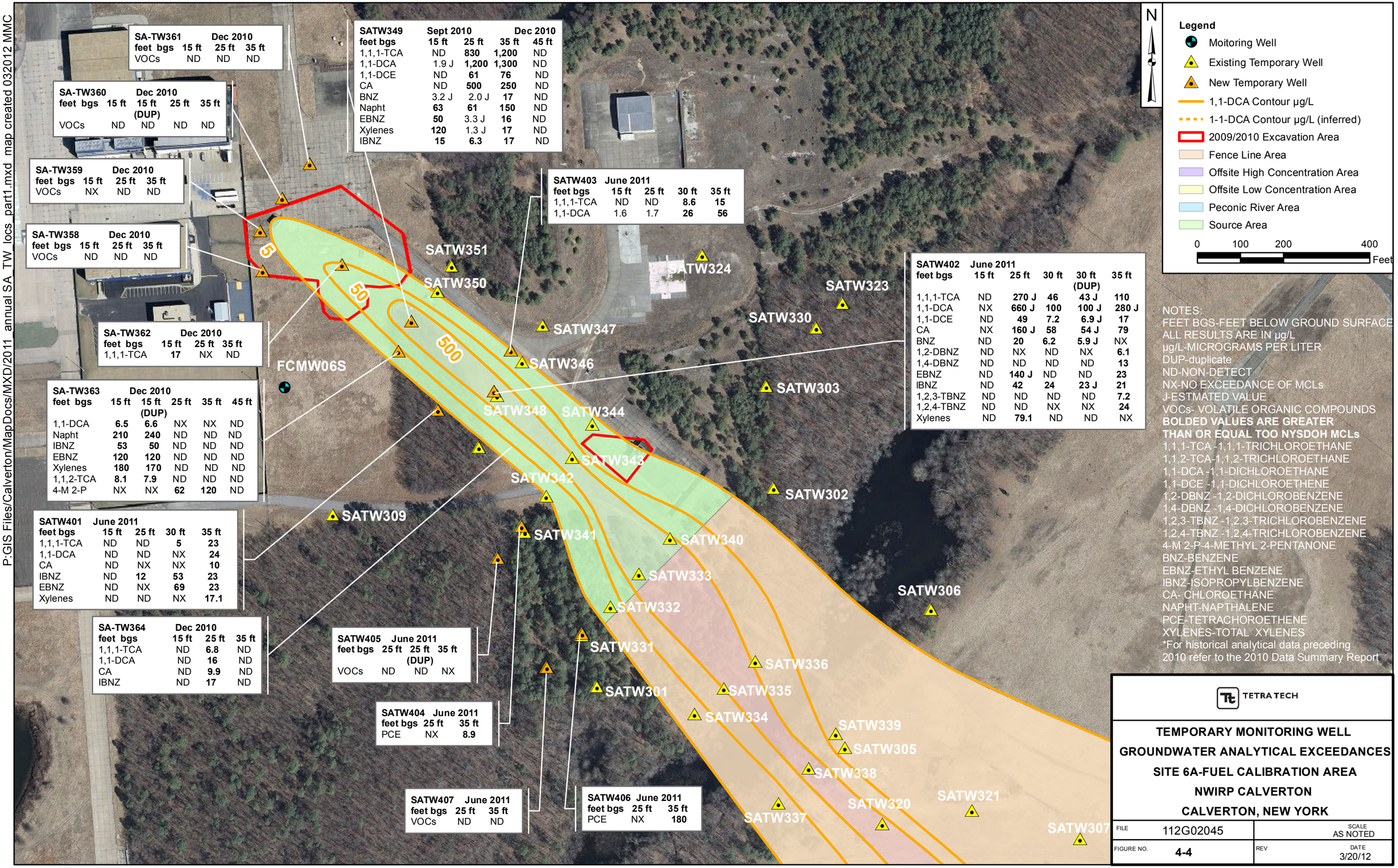
500 50 5

TETRA TECH

GROUNDWATER ANALYTICAL EXCEEDANCES
FENCE LINE AREA
SOUTHERN AREA
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	4-3	REV	DATE 3/20/12

P:GIS Files/Calverton/MapDocs/MXD/2011_annual SA_TW_locs_part1.mxd map created 032012 MMC



SA-TW361	Dec 2010		
feet bgs	15 ft	25 ft	35 ft
VOCs	ND	ND	ND

SA-TW360	Dec 2010			
feet bgs	15 ft	15 ft (DUP)	25 ft	35 ft
VOCs	ND	ND	ND	ND

SA-TW359	Dec 2010		
feet bgs	15 ft	25 ft	35 ft
VOCs	NX	ND	ND

SA-TW358	Dec 2010		
feet bgs	15 ft	25 ft	35 ft
VOCs	ND	ND	ND

SA-TW362	Dec 2010		
feet bgs	15 ft	25 ft	35 ft
1,1,1-TCA	17	NX	ND

SA-TW363	Dec 2010				
feet bgs	15 ft	15 ft (DUP)	25 ft	35 ft	45 ft
1,1-DCA	6.5	6.6	NX	NX	ND
Napht	210	240	ND	ND	ND
IBNZ	53	50	ND	ND	ND
EBNZ	120	120	ND	ND	ND
Xylenes	180	170	ND	ND	ND
1,1,2-TCA	8.1	7.9	ND	ND	ND
4-M 2-P	NX	NX	62	120	ND

SATW349	Sept 2010		Dec 2010	
feet bgs	15 ft	25 ft	35 ft	45 ft
1,1,1-TCA	ND	830	1,200	ND
1,1-DCA	1.9 J	1,200	1,300	ND
1,1-DCE	ND	61	76	ND
CA	ND	500	250	ND
BNZ	3.2 J	2.0 J	17	ND
Napht	63	61	150	ND
EBNZ	50	3.3 J	16	ND
Xylenes	120	1.3 J	17	ND
IBNZ	15	6.3	17	ND

SATW403	June 2011			
feet bgs	15 ft	25 ft	30 ft	35 ft
1,1,1-TCA	ND	ND	8.6	15
1,1-DCA	1.6	1.7	26	56

SATW402	June 2011				
feet bgs	15 ft	25 ft	30 ft	30 ft (DUP)	35 ft
1,1,1-TCA	ND	270 J	46	43 J	110
1,1-DCA	NX	660 J	100	100 J	280 J
1,1-DCE	ND	49	7.2	6.9 J	17
CA	NX	160 J	58	54 J	79
BNZ	ND	20	6.2	5.9 J	NX
1,2-DBNZ	ND	NX	ND	NX	6.1
1,4-DBNZ	ND	ND	ND	ND	13
EBNZ	ND	140 J	ND	ND	23
IBNZ	ND	42	24	23 J	21
1,2,3-TBNZ	ND	ND	ND	ND	7.2
1,2,4-TBNZ	ND	ND	NX	NX	24
Xylenes	ND	79.1	ND	ND	NX

SATW401	June 2011			
feet bgs	15 ft	25 ft	30 ft	35 ft
1,1,1-TCA	ND	ND	5	23
1,1-DCA	ND	ND	NX	24
CA	ND	NX	NX	10
IBNZ	ND	12	53	23
EBNZ	ND	NX	69	23
Xylenes	ND	ND	NX	17.1

SA-TW364	Dec 2010		
feet bgs	15 ft	25 ft	35 ft
1,1,1-TCA	ND	6.8	ND
1,1-DCA	ND	16	ND
CA	ND	9.9	ND
IBNZ	ND	17	ND

SATW405	June 2011		
feet bgs	25 ft	25 ft (DUP)	35 ft
VOCs	ND	ND	NX

SATW404	June 2011	
feet bgs	25 ft	35 ft
PCE	NX	8.9

SATW407	June 2011	
feet bgs	25 ft	35 ft
VOCs	ND	ND

SATW406	June 2011	
feet bgs	25 ft	35 ft
PCE	NX	180

NOTES:
FEET BGS-FEET BELOW GROUND SURFACE
ALL RESULTS ARE IN µg/L
µg/L-MICROGRAMS PER LITER
DUP-duplicate
ND-NON-DETECT
NX-NO EXCEEDANCE OF MCLs
J-ESTMATED VALUE
VOCs- VOLATILE ORGANIC COMPOUNDS
BOLDED VALUES ARE GREATER THAN OR EQUAL TOO NYSDOH MCLs
1,1,1-TCA -1,1,1-TRICHLOROETHANE
1,1,2-TCA-1,1,2-TRICHLOROETHANE
1,1-DCA -1,1-DICHLOROETHANE
1,1-DCE -1,1-DICHLOROETHENE
1,2-DBNZ -1,2-DICHLOROBENZENE
1,4-DBNZ -1,4-DICHLOROBENZENE
1,2,3-TBNZ -1,2,3-TRICHLOROBENZENE
1,2,4-TBNZ -1,2,4-TRICHLOROBENZENE
4-M 2-P-4-METHYL 2-PENTANONE
BNZ-BENZENE
EBNZ-ETHYL BENZENE
IBNZ-ISOPROPYLBENZENE
CA- CHLOROETHANE
NAPHT-NAPTHALENE
PCE-TETRACHOROETHENE
XYLENES-TOTAL XYLENES
*For historical analytical data preceding 2010 refer to the 2010 Data Summary Report

TETRA TECH

TEMPORARY MONITORING WELL
GROUNDWATER ANALYTICAL EXCEEDANCES
SITE 6A-FUEL CALIBRATION AREA
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	4-4	REV	DATE 3/20/12

P:GIS Files/Calverton/MapDocs/MXD/2011_annual SA_TW_locs_part2.mxd map created 03222012 MMC

Aerial photographs provided by the NYS GIS Clearinghouse, March -May 2007.

N

Legend

- Existing Temporary Well
- New Temporary Well
- Fence Line
- 1,1-DCA Contour µg/L
- 1-1-DCA Contour µg/L (inferred)
- Fence Line Area
- Offsite High Concentration Area
- Offsite Low Concentration Area
- Peconic River Area
- Source Area

0 100 200 400 Feet

SATW339 SATW308 SATW321 SATW320 SATW307 SATW311 SATW318 SATW322 SATW319 SATW313 SATW317 SATW352 SATW354 SATW356 SATW355 SATW353 SATW357 SATW342 SATW314 SATW315 SATW316 SATW327 SATW345 SATW325 SATW326 SATW329 SATW367

5 50 500

SA-TW408	June 2011		
feet bgs	37 ft	42 ft	47 ft
1,1,1-TCA	ND	**19**	**11**
1,1-DCA	**34**	**190**	**50**
1,1-DCE	NX	**11**	NX
1,2-DBNZ	**6.4**	NX	ND
1,4-DBNZ	**26**	NX	ND
CA	**46**	**110**	NX
IBNZ	ND	**17**	ND

SA-TW409	June 2011		
feet bgs	37 ft	42 ft	47 ft
1,1-DCA	**13**	NX	**7.2**

SA-TW410	June 2011			
feet bgs	37 ft	42 ft	42 ft (DUP)	47 ft
1,1-DCA	**22**	**11**	**10**	**25**
CA	**5.2**	ND	ND	ND

SA-TW411	June 2011		
feet bgs	37 ft	42 ft	47 ft
1,1-DCA	**64 J**	**10 J**	**48 J**
CA	**10 J**	ND	**7.9 J**

SA-TW412	June 2011		
feet bgs	37 ft	42 ft	47 ft
1,1,1-TCA	**5.3 J**	**18 J**	NX
1,1-DCA	**89 J**	**100 J**	**25**
1,1-DCE	**5.4 J**	**7.6 J**	NX
CA	**15 J**	**16 J**	NX

SA-TW413	June 2011			
feet bgs	37 ft	42 ft	42 ft (DUP)	47 ft
1,1,1-TCA	**75 J**	**55 J**	**53 J**	**23 J**
1,1-DCA	**360 J**	**280 J**	**260 J**	**180 J**
1,1-DCE	**27 J**	**19 J**	**18 J**	**11 J**
CA	**63 J**	**30 J**	**33 J**	**19 J**

SA-TW365	Nov 2011				
feet bgs	18 ft	24 ft	34 ft	44 ft	44 ft (DUP)
1,1-DCA	ND	ND	**6.3**	**53 J**	**57 J**
CA	ND	ND	ND	**10 J**	**11 J**

SA-TW366	Nov 2011			
feet bgs	19 ft	29 ft	39 ft	46 ft
1,1,1-TCA	ND	ND	**17 J**	ND
1,1-DCA	ND	ND	**230 D**	NX
1,1-DCE	ND	ND	**13 J**	ND
CA	ND	ND	**25 J**	ND

SA-TW414	June 2011		
feet bgs	37 ft	42 ft	47 ft
1,1,1-TCA	**150**	**160**	**150**
1,1-DCA	**710**	**530**	**580**
1,1-DCE	**41**	**37**	**34 J**
1,2-DBNZ	**6.1**	NX	NX
1,4-DBNZ	**16**	NX	NX
1,2,4-TBNZ	**9.1**	NX	NX
CA	**110 J**	**79 J**	**88 J**
IBNZ	**6.2**	ND	NX

SA-TW415	June 2011		
feet bgs	37 ft	42 ft	47 ft
1,1,1-TCA	**210**	**56**	ND
1,1-DCA	**850**	**170**	**6.9**
1,1-DCE	**45 J**	**9.9 J**	NX
CA	**100 J**	**20 J**	NX

SA-TW416	June 2011		
feet bgs	37 ft	42 ft	47 ft
1,1,1-TCA	**32**	**120**	**120**
1,1-DCA	**140**	**440**	**390**
1,1-DCE	**5.9**	**18**	**17**
CA	**80 J**	**80 J**	**76 J**

SA-TW420	Oct 2011			
feet bgs	32 ft	37 ft	47 ft	52 ft
VOCs	ND	ND	NX	ND

SA-TW419	Oct 2011				
feet bgs	32 ft	37 ft	42 ft	47 ft	47 ft (DUP)
VOCs	ND	ND	ND	ND	ND

SA-TW418	Oct 2011				
feet bgs	32 ft	37 ft	42 ft	47 ft	52 ft
VOCs	NX	NX	ND	NX	ND

SA-TW417	Oct 2011					
feet bgs	32 ft	37 ft	37 ft (DUP)	42 ft	47 ft	52 ft
VOCs	ND	ND	ND	ND	ND	ND

VOCs- VOLATILE ORGANIC COMPOUNDS
1,1,1-TCA -1,1,1-TRICHLOROETHANE
1,1-DCA -1,1-DICHLOROETHANE
1,1-DCE -1,1-DICHLOROETHENE
1,2-DBNZ -1,2-DICHLOROBENZENE
1,4-DBNZ -1,4-DICHLOROBENZENE
1,2,4-TBNZ -1,2,4-TRICHLOROBENZENE
IBNZ-ISOPROPYLBENZENE
CA- CHLOROETHANE
*For historical analytical data preceding 2010 refer to the 2010 Data Summary Report

NOTES:
FEET BGS-FEET BELOW GROUND SURFA
ALL RESULTS ARE IN µg/L
ND-NON-DETECT
NX-NO EXCEEDANCE OF MCLs
D-DILUTED SAMPLE
J-ESTMATED VALUE
µg/L-MICROGRAMS PER LITER
BOLDED VALUES ARE GREATER THAN OR EQUAL TOO NYSDOH MCLs

TETRA TECH

TEMPORARY MONITORING WELL GROUNDWATER ANALYTICAL EXCEEDANCES FENCE LINE/OFFSITE LOW CONCENTRATION SOUTHERN AREA NWIRP CALVERTON CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	**4-5**	REV	DATE 3/22/12

P:GIS Files/Calverton/MapDocs/MXD/2011_annual/SA_tagmap_122111-part2.mxd mmc 03222012

Aerial photographs provided by the NYS GIS Clearinghouse, March -May 2007.

N

SAPZ145S (5 - 15 ft bgs)

	June 2010	Sept 2010	Mar 2011	Sept 2011
VOCs			NX	

SAPZ145D (50 - 55 ft bgs)

	June 2010	June 2010 (DUP)	Sept 2010	Mar 2011	Mar 2011 (DUP)	Sept 2011
1,1-Dichloroethane	**18**	**19**	**19**	**24 J**	**24**	**28**

SAPZ145I (30 - 35 ft bgs)

	June 2010	Sept 2010	Sept 2010 (DUP)	Mar 2011	Sept 2011
1,1,1-Trichloroethane	**8.7**	**6.1**	**5.9 J**	**5.6**	NX
1,1-Dichloroethane	**91**	**66**	**69 J**	**72**	**62**
1,1-Dichloroethene	**8.2**	**8.4**	**8.7 J**	**7.4**	**5.8**
Chloroethane	**6.1**	NX	NX	NX	NX

SAMW129I (50 - 60 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
1,1-DCA	NX	**7**	NX

SAMW128I (30 - 40 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
1,1-DCA	**10 J**	**5.1**	**5**

SAPZ140I (44.5 - 49.5 ft bgs)

	June 2010	Sept 2010	Sept 2010 (DUP)	Mar 2011	Sept 2011
1,1,1-Trichloroethane	**17**	**9**	**10**	NX	**8.4**
1,1-Dichloroethane	**140**	**93**	**100**	**41**	**69**
1,1-Dichloroethene	**8.5**	**6.7**	**7.8**	NX	**5.1**
Chloroethane	**19**	**14**	**15 J**	**5.7**	**6.8**

SAMW131D (60 - 70 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
1,1-Dichloroethane	**13 J**	**18 J**	**20**

SAPZ122S (12 - 22 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		

SAPZ122I (39 - 49 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
1,1-Dichloroethane	**9.7**		NX

SAPZ141I (50.5 - 55.5 ft bgs)

	June 2010	Sept 2011
1,1-Dichloroethane	NX	**8.6**

SAPZ122D (122 - 132 ft bgs)

	Sept 2010	Mar 2011	Sept 2011	Sept 2011 (DUP)
VOCs	NX	NX	NX	NX

500

50

5

SAPZ172

SAPZ171

SAMW131S (4 - 14 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs			

SAPZ144S (5 - 15 ft bgs)

	June 2010	Mar 2011	Sept 2011
VOCs			

SAMW131I (30 - 40 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
1,1,1-Trichloroethane	**18 J**		
1,1-Dichloroethane	**130 J**	**16**	
1,1-Dichloroethene	**13 J**	NX	

SAPZ144I (45 - 50 ft bgs)

	June 2010	Mar 2011	Mar 2011 (DUP)	Sept 2011
VOCs	NX	NX	NX	NX

SAMW132S (4 - 14 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		NX

SAPZ123I1 (32 - 42 ft bgs)

	Sept 2010	Sept 2010 (DUP)	Mar 2011	Sept 2011
1,1,1-Trichloroethane				**9.3**
1,1-Dichloroethane			**11**	**85**
1,1-Dichloroethene				**7.8**

SAPZ123S (7 - 17 ft bgs)

	Sept 2010	Mar 2011	Sept 2011
VOCs	NX		NX

SAMW132I (27 - 37 ft bgs)

	Sept 2010	Sept 2010 (DUP)	Mar 2011	Sept 2011
1,1-Dichloroethane	3.4 J	NX	NX	**6.9**

SAPZ123I (70 - 80 ft bgs)

	2005	2005	2006	Jan 2008	Aug 2008	Sept 2009	Sept 2010	Mar 2011	Sept 2011
1,1,1-Trichloroethane	**7.6**		3 J	1 J	1		0.59 J		
1,1-Dichloroethane	**97**	**125**	**91**	**55**	**63**	**54**	**42 J**	**37**	**37**
1,1-Dichloroethene	**20**	**22**	**15**	**7**	**10**	**6.9**	**6.9 J**	4.9	4.7
Toluene	**10.1**								
Vinyl Chloride					**3**				

Legend

- Piezometer
- New Piezometer (Not Surveyed)
- Monitoring Well
- Fence Line
- 1,1-DCA Contour µg/L
- 1-1-DCA Contour µg/L (inferred)
- Fence Line Area
- Offsite High Concentration Area
- Offsite Low Concentration Area
- Peconic River Area
- Source Area

0 400 800 Feet

NOTES:
FEET BGS-FEET BELOW GROUND SURFACE
ALL RESULTS ARE IN µg/L
µg/L-MICROGRAMS PER LITER
NX-NO EXCEEDANCE OF MCLs
BLANK CELLS INDICATE RESULT IS NON-DETECT
D-DILUTED SAMPLE
J-ESTMATED VALUE
BOLDED VALUES ARE GREATER THAN OR EQUAL TOO NYSDOH MCLs
VOCs- VOLATILE ORGANIC COMPOUNDS
*For historical analytical data preceding 2010 refer to the 2010 Data Summary Report

TETRA TECH

GROUNDWATER ANALYTICAL EXCEEDANCES
OFFSITE LOW CONCENTRATION AREA
(5-500 µg/L)
SOUTHERN AREA
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	**4-6**	REV	DATE 3/22/12

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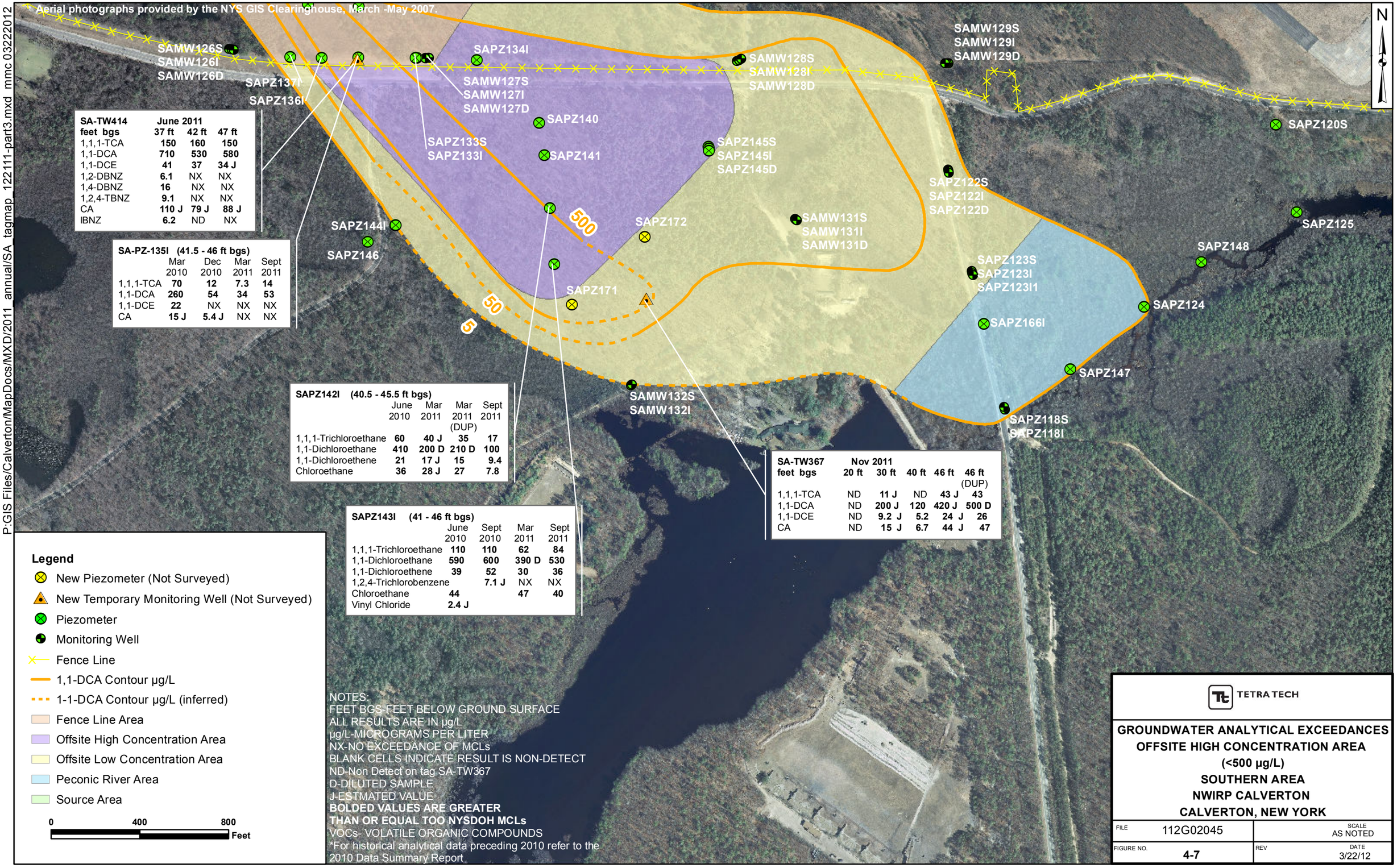

SA-TW414 June 2011

feet bgs	37 ft	42 ft	47 ft
1,1,1-TCA	**150**	**160**	**150**
1,1-DCA	**710**	**530**	**580**
1,1-DCE	**41**	**37**	**34 J**
1,2-DBNZ	**6.1**	NX	NX
1,4-DBNZ	**16**	NX	NX
1,2,4-TBNZ	**9.1**	NX	NX
CA	**110 J**	**79 J**	**88 J**
IBNZ	**6.2**	ND	NX

SA-PZ-135I (41.5 - 46 ft bgs)

	Mar 2010	Dec 2010	Mar 2011	Sept 2011
1,1,1-TCA	**70**	**12**	**7.3**	**14**
1,1-DCA	**260**	**54**	**34**	**53**
1,1-DCE	**22**	NX	NX	NX
CA	**15 J**	**5.4 J**	NX	NX

SAPZ142I (40.5 - 45.5 ft bgs)

	June 2010	Mar 2011	Mar 2011 (DUP)	Sept 2011
1,1,1-Trichloroethane	**60**	**40 J**	**35**	**17**
1,1-Dichloroethane	**410**	**200 D**	**210 D**	**100**
1,1-Dichloroethene	**21**	**17 J**	**15**	**9.4**
Chloroethane	**36**	**28 J**	**27**	**7.8**

SAPZ143I (41 - 46 ft bgs)

	June 2010	Sept 2010	Mar 2011	Sept 2011
1,1,1-Trichloroethane	**110**	**110**	**62**	**84**
1,1-Dichloroethane	**590**	**600**	**390 D**	**530**
1,1-Dichloroethene	**39**	**52**	**30**	**36**
1,2,4-Trichlorobenzene		**7.1 J**	NX	NX
Chloroethane	**44**		**47**	**40**
Vinyl Chloride	**2.4 J**			

SA-TW367 Nov 2011

feet bgs	20 ft	30 ft	40 ft	46 ft	46 ft (DUP)
1,1,1-TCA	ND	**11 J**	ND	**43 J**	**43**
1,1-DCA	ND	**200 J**	**120**	**420 J**	**500 D**
1,1-DCE	ND	**9.2 J**	**5.2**	**24 J**	**26**
CA	ND	**15 J**	**6.7**	**44 J**	**47**

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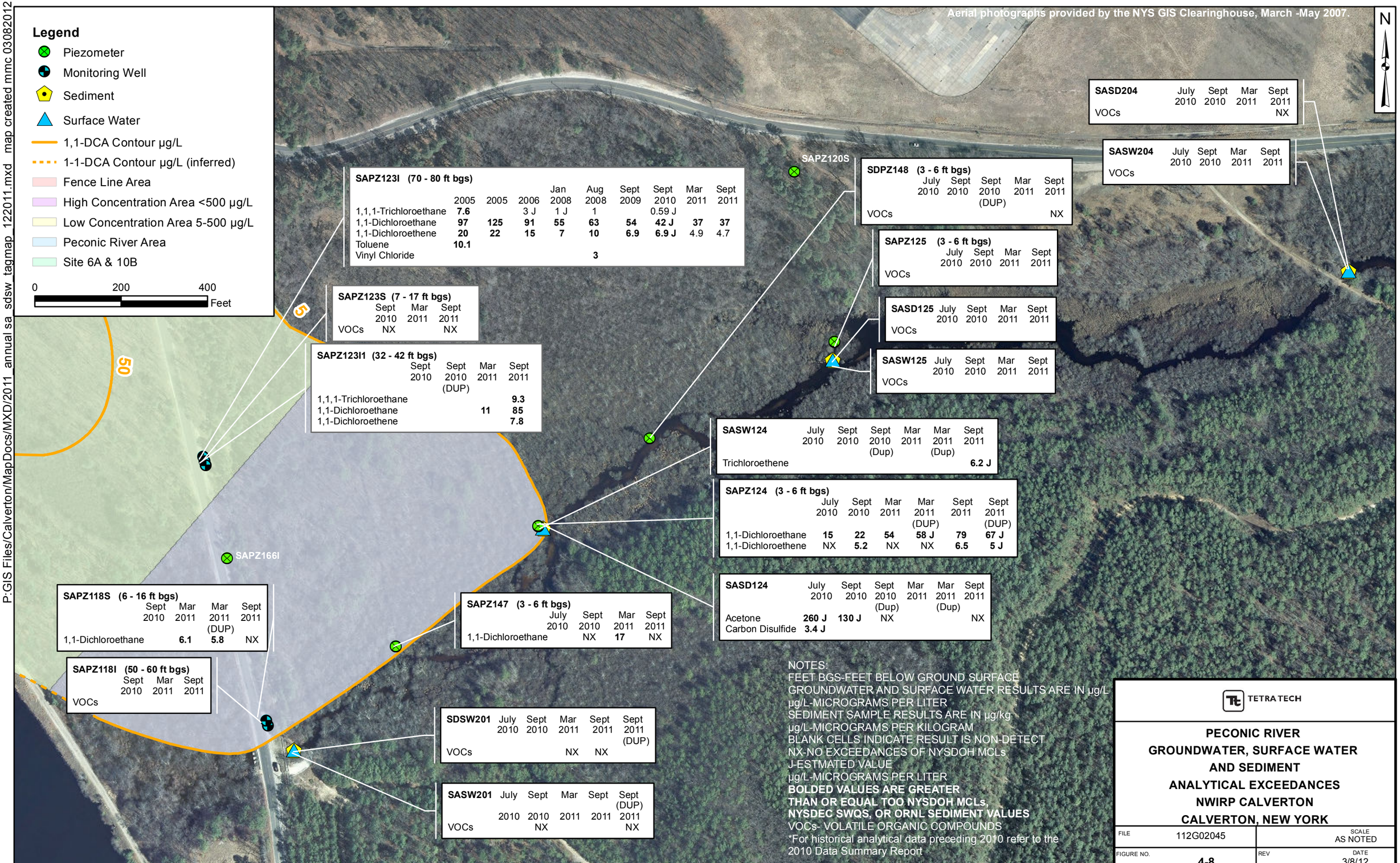
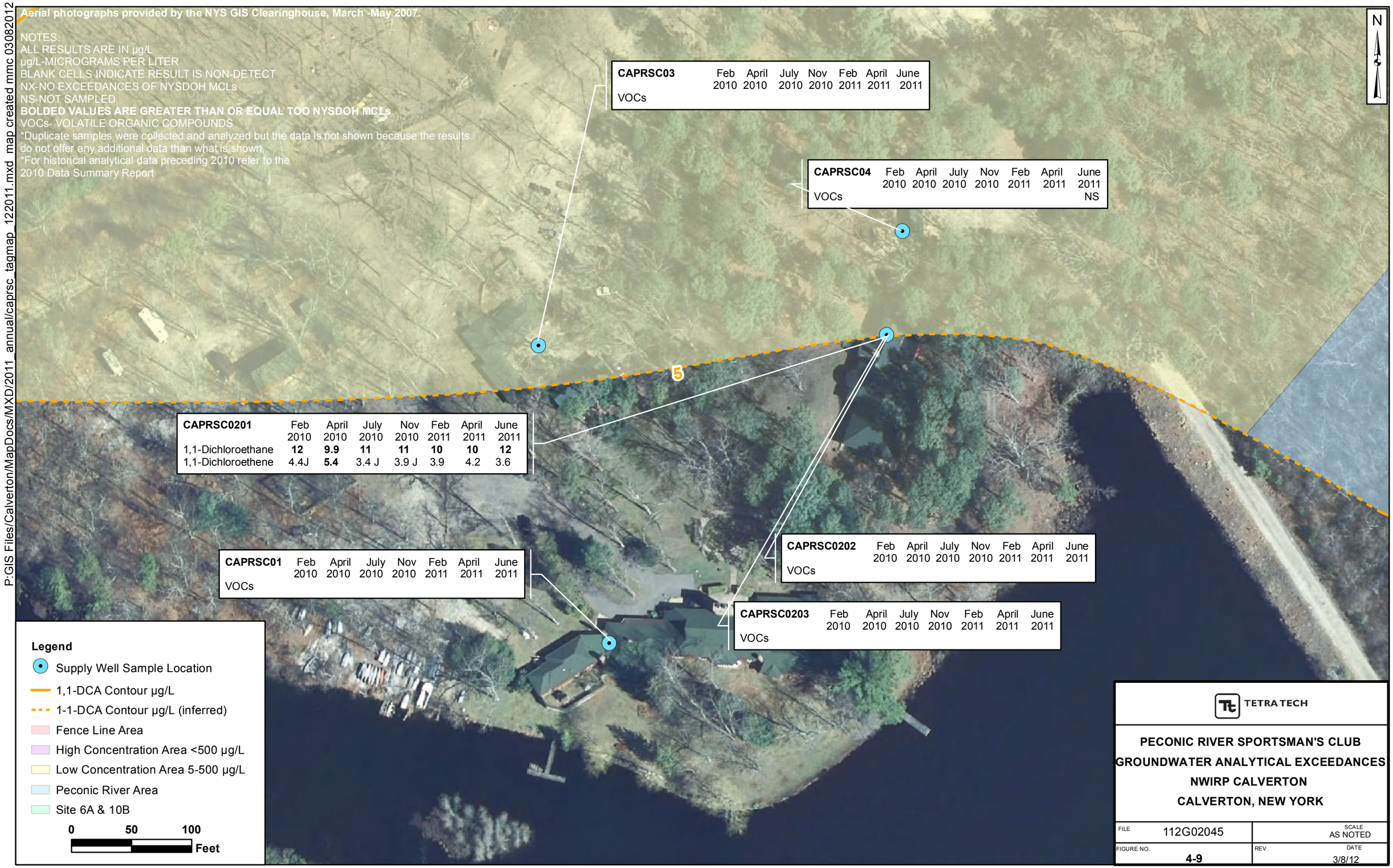


TETRA TECH

PECONIC RIVER
GROUNDWATER, SURFACE WATER AND SEDIMENT
ANALYTICAL EXCEEDANCES
NWIRP CALVERTON
CALVERTON, NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	4-8	REV	DATE 3/8/12

P:GIS Files/Calverton/MapDocs/MXD/2011_annual/caprsc_tagmap_122011.mxd map created mmc 03082012



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TETRA TECH

2008 TO 2011 COMPOSITE
1,1,-DICHLOROETHANE (DCA)
ISOCONCENTRATION CONTOUR MAP
NWIRP CALVERTON NEW YORK

FILE	112G02045	SCALE	AS NOTED
FIGURE NO.	4-10	REV	DATE 3/8/12

APPENDICES

(SEE ATTACHED CD)

Appendix A

Soil Boring Logs

Tetra Tech NUS, Inc.

BORING LOG

JB 11-14-11

PROJECT NAME: NWIRP Calverton
PROJECT NUMBER: 112G02750
DRILLING COMPANY: Zebra
DRILLING RIG: Geoprobe 7720DT

BORING No.: ~~SA-PZ~~ SA-TW-365
DATE: 11-14-11
GEOLOGIST: J. Birkett
DRILLER: L. Reiss

	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**
1103	S-1			3/5		loose	Brn	Organic matter and F-M sand		moist	0	0	0	0
						loose	Brn	F-M sand some silt and F. organics tr. sm. to med pebbles		moist				
							light brn				0.1	0	0	0
						m. dense	tan	F-M sand tr. silt		moist				
		5						↓ ↓			0.2	0	0	0
1106	S-2			3.25/5		m. dense	tan	F-M sand tr. silt		moist	0.1	0	0	0
											0	0	0	0
		10									0	0	0	0
1109	S-3			3/5		m. dense	tan	F-M sand tr. silt and small pebbles		moist	0	0	0	0
					▽									
							light Brn	F-M sand tr. silt and sm pebbles		wet	0	0	0	0
		15									0	0	0	0
1116	S-4			2.5/5		m. dense	light Brn	F-M sand tr. silt and sm. to med pebbles and C. sand		wet	0	0	0	0
											0	0	0	0
		20									0	0	0	0
1127	S-5			2/5		m. dense	light Brn	F-M sand tr. silt and C. sand		wet	0	0	0	0
											0	0	0	0
		25									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. to 15' bgs

Drilling Area Background (ppm): 0.0

Remarks: Continuous (2 inch × 5 foot) macrocores in acetate sleeve
Discrete macrocores below

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NWIRP Calverton
PROJECT NUMBER: 112G02750
DRILLING COMPANY: Zebra
DRILLING RIG: Geoprobe 7720DT

BORING No.: SA-TW-365
DATE: 11-14-11
GEOLOGIST: J. Birkett
DRILLER: L. Reiss

	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												
1137	S-6			3.5/5		M. dense	light Brn	F-M sand tr. silt and G sand		wet	0	0	0	0
											0	0	0	0
						M. dense	light Brn	F-M sand some silt and mica		progressively more				
		30					to gray			mica as you deepen and finer grained	0	0	0	0
1149	S-7			1.5/5		M. dense	Grayish tan	F sand some silt and M. sand and mica		wet	0	0	0	0
											0	0	0	0
		35									0	0	0	0
1204	S-8			1.5/5		M. dense	Grayish tan	F-M sand ~~some~~ tr. silt and mica		wet	0	0	0	0
											0	0	0	0
		40									0	0	0	0
1215	S-9			2.5/5		M. dense	Gray	F-M sand tr. silt and mica		wet	0	0	0	0
											0	0	0	0
		45				M. stiff	Gray	Clay tr. silt		3 inches of clay	0	0	0	0
					EOB 45' 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

Drilling Area Background (ppm): 0.0

Converted to Well: Yes ____ No X Well I.D. #: ____

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NWIRP Calverton
PROJECT NUMBER: 112G02750
DRILLING COMPANY: Zebra
DRILLING RIG: Geoprobe 7720 DT

BORING No.: SA-PZ-171I
DATE: 11-15-11
GEOLOGIST: J. Birkett
DRILLER:

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**
		0												
0829	S-1			2.5/5		loose	DK Brn	organic matter F-M sand some F. organics		moist	0	0	0	0
						m. dense	Brn	F-M sand some silt						
								tr. sm. pebbles		moist Gravel layered 3' bgs (1 inch thick)	0.1	0	0	0
						m. dense	org Brn	F-M sand tr. silt		moist				
		5									0.1	0	0	0
0833	S-2			4.75/5		m. dense	org Brn	F-M sand tr. silt		moist	0	0	0	0
						m. dense	light Brn	F-M sand tr. silt		moist				
						m. dense	Brn	F-C sand tr. to some silt		moist	0	0	0	0
						m. stiff	Brn olive	Silt some clay tr. F. sand		moist to wet				
		10				m. dense	Brn to org Brn	F-M sand tr. silt and C. sand		dark org Brn at 9' (iron staining)	0	0	0	0
0837	S-3			3/5		m. dense	Brn	F-M sand tr. silt and C. sand		moist	0	0	0	0
						m. dense	DK Brn	F-M sand some F. organics		moist				
						m. dense	org Brn	F-M sand tr. silt		moist	0	0	0	0
							↓							
		15			▽	m. dense	tan	↓		moist to wet	0	0	0	0
0845	S-4			3/5		m. dense	Brn	F-M sand tr. silt and C. sand (micaceous)		wet	0	0	0	0
										less mica as you deepen	0	0	0	0
							↓							
		20					light Brn			wet	0	0	0	0
0852	S-5			3/5		m. dense	light Brn	F-M sand tr. silt		wet	0	0	0	0
										some mica				
											0	0	0	0
		25									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: Continuous macrocores (in 2" x 5' sleeves) to 15 'bgs
Discrete macrocores from 15 'bgs to TD

Converted to Well: Yes X No ___ Well I.D. #: SA-PZ-171I

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NWIRP Calverton
PROJECT NUMBER: 112G02750
DRILLING COMPANY: Zebra
DRILLING RIG: Geoprobe 7720DT

BORING No.: SA-PZ-171I
DATE: 11-15-11
GEOLOGIST: J. Birkett
DRILLER:

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												
0900	S-6			2.25/5		m. dense	light Brn	F-M sand tr. silt		wet	0	0	0	0
							some gray			wet				
						m. dense	light Brn Gray	F-M sand some silt		Mica laminae (few mm thick)	0	0	0	0
						m. dense	light Brn	F-M sand tr. silt		wet				
		30					some gray				0	0	0	0
0912	S-7			2/5		m. dense	light Brn gray	F-M sand tr. silt (micaceous)		wet	0	0	0	0
										wet	0	0	0	0
		35								wet	0	0	0	0
0928	S-8			1.5/5		m. dense	light Brn gray	F-M sand tr. silt (micaceous)		wet	0	0	0	0
											0	0	0	0
										Mica content increase w/depth				
		40									0	0	0	0
0950	S-9			2.5/5		m. dense	Gray	F-M sand tr. silt (micaceous)		wet	0	0	0	0
											0	0	0	0
		45									0	0	0	0
1012	S-10			2.75/5		m. dense	Gray	F-M sand tr. silt (micaceous)		wet	0	0	0	0
						stiff	Gray	Clay tr. silt		wet	0	0	0	0
		50			EOB 50' bgs						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

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: SA-PZ-171I

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NWIRP Calverton
PROJECT NUMBER: 112G02750
DRILLING COMPANY: Zebra
DRILLING RIG: Geoprobe

BORING No.: SA-PZ-172-I
DATE: 11-14-11
GEOLOGIST: J. Birkett
DRILLER: L. Reiss

	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												
1240	S-1			3/5		loose	Dk Brn to Brn	F-M sand and some silt organics		moist	0	0	0	0
						m. dense	light Brn	F-M sand tr. silt and sm to med pebbles		moist				
											0	0	0	0
		5				m. dense	org Brn	F-M sand tr. silt		moist	0	0	0	0
1243	S-2			4/5		dense	Brn	Silty F. sand tr. M sand		moist	0	0	0	0
						m. dense	org Brn to Brn	F-M sand tr silt and pebbles		moist				
							tan				0	0	0	0
		10					org Brn				0	0	0	0
1247	S-3			3.5/5		m. dense	org Brn	F-M sand tr. silt and sm-med pebbles		moist	0	0	0	0
										Brn layer around 11.5' bgs (~1 inch thick)				
						m. dense	tan	F-M sand tr. silt			0	0	0	0
		15			▽	m. dense	light Brn	F-M sand tr. silt		moist to wet	0	0	0	0
1253	S-4			3/5		m. dense	light Brn	F-M sand tr. silt		wet	0	0	0	0
										iron staining band ~16.5' bgs				
											0	0	0	0
		20									0	0	0	0
1303	S-5			2.75/5		m. dense	light Brn	F-M sand tr. silt		wet	0	0	0	0
										Flecks of mica				
											0	0	0	0
		25									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: Continuous (2 inch by 5 foot) Macrocores in acetate sleeve to 15' bgs
Discret soil sampling below 15 to TD

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No ____ Well I.D. #: SA-PZ-172-I

Tetra Tech NUS, Inc.

BORING LOG

PROJECT NAME: NWIRP Calverton
PROJECT NUMBER: 112G02750
DRILLING COMPANY: Zebra
DRILLING RIG: Geoprobe

BORING No.: SA-PZ-172I
DATE: ~~10~~ 11-14-11
GEOLOGIST: J. Birkett
DRILLER: L. Reiss

	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												
1318	S-6			2.75/5		m. dense	light Brn	F sand some M. sand tr. silt		wet	0	0	0	0
						m. dense	light Brn	F-M sand tr. silt		wet	0	0	0	0
		30									0	0	0	0
1331	S-7			2/5		m. dense	light brn	F-M sand tr. silt		wet	0	0	0	0
											0	0	0	0
		35									0	0	0	0
1347	S-8			2.5/5		m. dense	Brn Gray	F-M sand tr. silt		wet Micaceous	0	0	0	0
											0	0	0	0
		40					Gray				0	0	0	0
1405	S-9			2.5/5		m. dense	Gray	F sand tr silt		wet	0	0	0	0
						m. dense	Gray	F-M sand tr. silt		wet Micaceous				
											0	0	0	0
		45									0	0	0	0
1425	S-10			2.5/5		m. dense	Gray	F-M sand tr. silt		wet	0	0	0	0
										1" dk gray layer above clay	0	0	0	0
						stiff		Clay some silt						
		50			EOB 50' bls						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

Drilling Area Background (ppm): 0.0

Converted to Well: Yes X No _____ Well I.D. #: SA-PZ-172I

Appendix B

Temporary Well Groundwater Sample Log Sheets

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW349-4145
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-16-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1017								
Method: Peristaltic pump	Tinted Brn	5.70	0.070	11.41	273		0.0	89

PURGE DATA: *(Gallons)*

Date: 12-16-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.40	0.099	10.95	1573	9.93	0.0	25
Monitor Reading (ppm): 0.0	2	5.84	0.082	10.88	316	9.03	0.0	34
Well Casing Diameter & Material	3.5	5.73	0.074	11.20	260	8.39	0.0	62
Type: 1" Stainless	5	5.70	0.070	11.41	273	7.91	0.0	89
Total Well Depth (TD): 45'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0957								
End Purge (hrs): 1017								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	YES

OBSERVATIONS / NOTES:

Temporary well point screen zone 41 ft to 45 ft.
- No odors or elevated PID readings observed.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW358-1115
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-14-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1302								
Method: Peristaltic pump	clear	6.21	0.114	13.61	20.4	8.38	0.0	47

PURGE DATA: *(Gallons)*

Date: 12-14-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.35	0.136	12.80	1244	8.28	0.0	3
Monitor Reading (ppm): 0.0	2	6.28	0.120	13.18	492	8.42	0.0	10
Well Casing Diameter & Material	3.5	6.22	0.114	13.46	89.2	8.49	0.0	38
Type: 1" Stainless	5	6.21	0.114	13.61	20.4	8.38	0.0	47
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1242								
End Purge (hrs): 1302								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes (9)

OBSERVATIONS / NOTES:

Temporary well point screen zone 11 ft to 15 ft.
- No odors or elevated PID readings observed.

Circle if Applicable:

MS/~~MSD~~ YES

Duplicate ID No.: —

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW358-2125
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-14-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1237								
Method: Peristaltic pump	Tinted Tan	6.03	0.293	14.13	240	7.80	0.0	42

PURGE DATA: *(Gallons)*

Date: 12-14-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.02	0.312	13.34	1126	8.41	0.0	-13
Monitor Reading (ppm): 0.0	2	6.04	0.291	13.82	220	8.08	0.0	20
Well Casing Diameter & Material	3.5	6.04	0.292	14.02	235	7.91	0.0	34
Type: 1" Stainless	5	6.03	0.293	14.13	240	7.80	0.0	42
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1218								
End Purge (hrs): 1237								
Total Purge Time (min): 19								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 21 ft to 25 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW358-3135
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-14-10								
Time: 1212								
Method: Peristaltic pump	cloudy Brown	6.32	0.099	13.01	706	7.91	0.0	25

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-14-10								
Method: Peristaltic pump	0.5	6.18	0.114	12.12	829	8.73	0.0	14
Monitor Reading (ppm): 0.0	2	6.26	0.108	12.58	798	8.20	0.0	20
Well Casing Diameter & Material	3.5	6.30	0.102	12.81	744	8.09	0.0	22
Type: 1" Stainless	5	6.32	0.099	13.01	706	7.91	0.0	25
Total Well Depth (TD): 35								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1153								
End Purge (hrs): 1212								
Total Purge Time (min): 19								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW359-1115
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-14-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1652								
Method: Peristaltic pump	clear	5.86	0.148	13.90	16.1	7.46	0.0	63

PURGE DATA: *(Gallons)*

Date: 12-14-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.92	0.161	13.26	1375	8.81	0.0	26
Monitor Reading (ppm): 0.0	2	5.90	0.150	13.91	97.4	8.22	0.0	48
Well Casing Diameter & Material	3.5	5.87	0.148	13.98	31.2	7.77	0.0	54
Type: 1" Stainless	5	5.86	0.148	13.90	16.1	7.46	0.0	63
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1632								
End Purge (hrs): 1652								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 11 ft to 15 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW359-2125
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-14-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1625								
Method: Peristaltic pump	Tinted Tan	6.24	0.072	14.16	140	7.96	0.0	57

PURGE DATA: *(Gallons)*

Date: 12-14-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.07	0.090	13.05	823	8.34	0.0	19
Monitor Reading (ppm): 0.0	2	6.18	0.081	13.70	166	8.39	0.0	38
Well Casing Diameter & Material	3.5	6.22	0.078	14.02	132	8.12	0.0	51
Type: 1" Stainless	5	6.24	0.072	14.16	140	7.96	0.0	57
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1606								
End Purge (hrs): 1625								
Total Purge Time (min): 19								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 21 ft to 25 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW359-3135
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-14-10								
Time: 1559								
Method: Peristaltic pump	Cloudy Brown	5.93	0.075	13.48	520	7.77	0.0	85

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-14-10								
Method: Peristaltic pump	0.5	6.14	0.093	12.21	1245	8.38	0.0	45
Monitor Reading (ppm): 0.0	2	6.06	0.080	13.13	847	7.96	0.0	64
Well Casing Diameter & Material	3.5	6.00	0.074	13.37	630	7.85	0.0	77
Type: 1" Stainless	5	5.93	0.075	13.48	520	7.77	0.0	85
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1540								
End Purge (hrs): 1559								
Total Purge Time (min): 19								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW360-1115
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-15-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1150								
Method: Peristaltic pump	Clear	5.95	0.131	13.81	27.0	8.36	0.0	95

PURGE DATA: *(Gallons)*

Date: 12-15-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.86	0.130	13.26	279	8.30	0.0	55
Monitor Reading (ppm): 0.0	2	5.91	0.130	13.67	60.9	8.12	0.0	73
Well Casing Diameter & Material	3.5	5.93	0.129	13.90	24.3	8.23	0.0	86
Type: 1" Stainless	5	5.95	0.131	13.81	27.0	8.36	0.0	95
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1130								
End Purge (hrs): 1150								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 11 ft to 15 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW360-2125
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-15-10								
Time: 1125								
Method: Peristaltic pump	Tinted Brn	6.08	0.073	13.46	211	5.79	0.0	85

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-15-10								
Method: Peristaltic pump	0.5	5.95	0.093	12.88	642	7.18	0.0	43
Monitor Reading (ppm): 0.0	2	6.05	0.082	13.28	386	6.15	0.0	59
Well Casing Diameter & Material	3.5	6.08	0.072	13.52	224	5.91	0.0	78
Type: 1" Stainless	5	6.08	0.073	13.46	211	5.79	0.0	85
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1105								
End Purge (hrs): 1125								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	Yes (6)

OBSERVATIONS / NOTES:

Temporary well point screen zone 21 ft to 25 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-DUP02-20101215

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW360-3135
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-15-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1101								
Method: Peristaltic pump	Cloudy Brown	5.73	0.140	13.32	587	7.86	0.0	111

PURGE DATA: *(Gallons)*

Date: 12-15-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.06	0.250	13.25	1265	9.46	0.0	80
Monitor Reading (ppm): 0.0	2	5.55	0.159	13.45	774	8.22	0.0	103
Well Casing Diameter & Material	3.5	5.68	0.143	13.30	660	7.73	0.0	108
Type: 1" Stainless	5	5.73	0.140	13.32	587	7.86	0.0	111
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1042								
End Purge (hrs): 1101								
Total Purge Time (min): 19								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW361-1115
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-15-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1539								
Method: Peristaltic pump	clear	5.28	0.054	13.67	19.6	7.60	0.0	139

PURGE DATA: *(Gallons)*

Date: 12-15-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.85	0.092	13.61	>2000	7.74	0.0	37
Monitor Reading (ppm): 0.0	2	5.54	0.062	13.80	273	7.41	0.0	87
Well Casing Diameter & Material	3.5	5.37	0.056	13.75	88.2	7.34	0.0	110
Type: 1" Stainless	5	5.28	0.054	13.67	19.6	7.60	0.0	139
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1520								
End Purge (hrs): 1539								
Total Purge Time (min): 19								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 11 ft to 15 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW361-2125
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-15-10								
Time: 1515								
Method: Peristaltic pump	Cloudy Brown	6.25	0.099	12.11	991	7.92	0.0	40

PURGE DATA:

	(Gallons) Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-15-10								
Method: Peristaltic pump	0.5	6.38	0.263	12.02	>2000	9.02	0.0	-101
Monitor Reading (ppm): 0.0	2	6.31	0.177	12.13	1906	8.86	0.0	-86
Well Casing Diameter & Material	3.5	6.33	0.104	12.08	1303	8.33	0.0	-18
Type: 1" Stainless	5	6.25	0.099	12.11	991	7.92	0.0	40
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1455								
End Purge (hrs): 1515								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 21 ft to 25 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW361-3135
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-15-10								
Time: 1451								
Method: Peristaltic pump	cloudy Brown	6.28	0.136	12.60	703	7.94	0.0	45

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-15-10								
Method: Peristaltic pump	0.5	6.46	0.152	12.30	1377	8.03	0.0	-30
Monitor Reading (ppm): 0.0	2	6.39	0.137	12.69	911	7.92	0.0	12
Well Casing Diameter & Material	3.5	6.33	0.136	12.64	877	7.86	0.0	47
Type: 1" Stainless	5	6.28	0.136	12.60	703	7.94	0.0	45
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1432								
End Purge (hrs): 1451								
Total Purge Time (min): 19								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW362-1115
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-16-10								
Time: 1305								
Method: Peristaltic pump	Tinted Brn	6.17	0.163	13.25	88.6	7.99	0.0	-44

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-16-10								
Method: Peristaltic pump	0.5	6.10	0.178	12.40	891	8.68	0.0	-10
Monitor Reading (ppm): 0.0	2	6.11	0.167	13.04	640	8.16	0.0	-33
Well Casing Diameter & Material	3.5	6.16	0.163	13.30	280	8.12	0.0	-39
Type: 1" Stainless	5	6.17	0.163	13.25	88.6	7.99	0.0	-44
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1245								
End Purge (hrs): 1305								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 11 ft to 15 ft.
- very slight fuel like odor - No elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW362-2125
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-16-10								
Time: 1227								
Method: Peristaltic pump	Tinted Tan	6.15	0.124	13.90	55.7	8.88	0.0	73

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-16-10								
Method: Peristaltic pump	0.5	6.05	0.126	13.50	730	9.50	0.0	30
Monitor Reading (ppm): 0.0	2	6.10	0.126	13.79	139	9.31	0.0	55
Well Casing Diameter & Material	3.5	6.12	0.125	13.92	99.0	9.09	0.0	64
Type: 1" Stainless	5	6.15	0.124	13.90	55.7	8.88	0.0	73
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1207								
End Purge (hrs): 1227								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 21 ft to 25 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW362-3135
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-16-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1153								
Method: Peristaltic pump	cloudy Tan	6.24	0.060	13.24	317	5.29	0.0	82

PURGE DATA: *(Gallons)*

Date: 12-16-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.18	0.080	12.63	1463	6.02	0.0	10
Monitor Reading (ppm): 0.0	2	6.28	0.069	13.17	359	5.73	0.0	38
Well Casing Diameter & Material	3.5	6.26	0.061	13.22	365	5.42	0.0	63
Type: 1" Stainless	5	6.24	0.060	13.24	317	5.29	0.0	82
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1133								
End Purge (hrs): 1153								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.
- No odors or elevated PID readings observed.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW363-1115
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-14-10								
Time: 1023								
Method: Peristaltic pump	Clear	6.11	0.099	11.81	3.7	8.13	0.0	-18

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-14-10								
Method: Peristaltic pump	0.5	6.15	0.112	10.73	209	8.75	0.0	11
Monitor Reading (ppm): 0.0	2	6.16	0.100	11.68	23.7	8.40	0.0	-10
Well Casing Diameter & Material	3.5	6.13	0.100	11.75	10.4	8.22	0.0	-14
Type: 1" Stainless	5	6.11	0.099	11.81	3.7	8.13	0.0	-18
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1003								
End Purge (hrs): 1023								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes (6)

OBSERVATIONS / NOTES:

Temporary well point screen zone 11 ft to 15 ft.
- No odors or PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-DUP01-20101214

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW363-2125
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-13-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1635								
Method: Peristaltic pump	Clear	5.98	0.185	12.51	9.0	7.96	0.0	74

PURGE DATA: *(Gallons)*

Date: 12-13-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.05	0.226	12.08	1439	8.28	0.0	-30
Monitor Reading (ppm): 0.0	2	6.09	0.190	12.37	72.1	8.07	0.0	10
Well Casing Diameter & Material	3.5	6.03	0.186	12.44	8.4	8.01	0.0	5.3
Type: 1" Stainless	5	5.98	0.185	12.51	9.0	7.96	0.0	74
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1615								
End Purge (hrs): 1635								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 21 ft to 25 ft.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW363-3135
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-13-10								
Time: 1605								
Method: Peristaltic pump	Cloudy Brown	6.03	0.156	11.79	886	8.34	0.0	42

PURGE DATA:

	(Gallons) Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-13-10								
Method: Peristaltic pump	0.5	5.93	0.429	11.72	1066	8.70	0.0	-3
Monitor Reading (ppm): 0.0	2	6.00	0.220	11.80	1044	8.62	0.0	37
Well Casing Diameter & Material	3.5	6.01	0.157	11.65	903	8.40	0.0	46
Type: 1" Stainless	5	6.03	0.156	11.79	886	8.34	0.0	42
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1545								
End Purge (hrs): 1605								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.

No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW363-4145
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-13-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1539								
Method: Peristaltic pump	Tinted Brn	5.76	0.070	12.21	217	8.66	0.0	137

PURGE DATA: *(Gallons)*

Date: 12-13-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.62	0.080	12.18	882	8.87	0.0	86
Monitor Reading (ppm): 0.0	2	5.77	0.071	12.26	309	8.60	0.0	119
Well Casing Diameter & Material	3.5	5.79	0.070	12.16	224	8.71	0.0	132
Type: 1" Stainless	5	5.76	0.070	12.21	217	8.66	0.0	137
Total Well Depth (TD): 45'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1520								
End Purge (hrs): 1539								
Total Purge Time (min): 19								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 41 ft to 45 ft. BGS
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW364-1115
Sample Location: Site 6A
Sampled By: Vince Shickora
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 (%)	ORP
Date: 12-13-10								
Time: 1250								
Method: Peristaltic pump	clear	5.09	0.052	11.96	0.5	8.33	0.0	182

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 12-13-10								
Method: Peristaltic pump	0.5	6.12	0.089	11.65	130	8.40	0.0	69
Monitor Reading (ppm): 0.0	2	5.75	0.083	11.83	12.5	8.31	0.0	145
Well Casing Diameter & Material	3.5	5.32	0.061	11.90	1.6	8.28	0.0	176
Type: 1" Stainless	5	5.09	0.052	11.96	0.5	8.33	0.0	182
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1230								
End Purge (hrs): 1250								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 11 ft to 15 ft. BGS
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW364-2125
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-13-10	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1219								
Method: Peristaltic pump	Tinted Tan	6.09	0.192	11.72	40	7.98	0.0	38

PURGE DATA: *(Gallons)*

Date: 12-13-10	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.24	0.260	11.00	681	6.48	0.0	-60
Monitor Reading (ppm): 0.0	2	6.22	0.197	11.50	105	7.13	0.0	10
Well Casing Diameter & Material	3.5	6.15	0.194	11.62	68	7.85	0.0	32
Type: 1" Stainless	5	6.09	0.192	11.72	40	7.98	0.0	38
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1159								
End Purge (hrs): 1219								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 21 ft to 25 ft. BGS.
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW364-3135
Sample Location: Site 6A
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 12-13-10
Time: 1137
Method: Peristaltic pump

Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
cloudy Brown	6.46	0.151	11.80	7.30	8.11	0.0	7

PURGE DATA:

Date: 12-13-10
Method: Peristaltic pump
Monitor Reading (ppm):
Well Casing Diameter & Material
Type: 1" Stainless
Total Well Depth (TD): 35'
Static Water Level (WL): NA
One Casing Volume(gal/L): ↓
Start Purge (hrs): 1117
End Purge (hrs): 1137
Total Purge Time (min): 20
Total Vol. Purged (gal/L): 5

(Gallons) Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
0.5	6.20	0.225	11.64	851	7.70	0.0	-20
2	6.52	0.157	11.83	702	7.93	0.0	1
3.5	6.46	0.152	11.86	716	8.02	0.0	5
5	6.46	0.151	11.80	730	8.11	0.0	7

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3 X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft. BGS
- No odors or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW401-1115
Sample Location: TW-401
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0940	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clear	5.35	0.056	11.97	26.0	3.83	0.0	88

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.68	0.067	12.95	343	4.12	0.0	53
Monitor Reading (ppm): 0.0	2	5.54	0.059	12.16	168	3.77	0.0	80
Well Casing Diameter & Material	3.5	5.45	0.059	12.15	140	3.81	0.0	77
Type: 1" Stainless	5	5.35	0.056	11.97	26.0	3.83	0.0	88
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0920								
End Purge (hrs): 0940								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 11 ft to 15 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.:

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

Sample ID No.: SA-TW401-2125
Sample Location: TW-401
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1005	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Brn Tint	6.31	0.133	12.13	50.2		0.0	

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.01	0.132	12.24	993	3.39	0.0	-72
Monitor Reading (ppm): 0.0	2	6.22	0.133	12.19	180	3.26	0.0	-87
Well Casing Diameter & Material	3.5	6.29	0.133	12.09	112	3.35	0.0	-91
Type: 1" Stainless	5	6.31	0.133	12.13	50.2		0.0	
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0945								
End Purge (hrs): 1005								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW401-2630
Sample Location: TW-401
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1030	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clear	5.90	0.126	12.91	10.9		0.0	

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.05	0.145	13.12	2730	4.12	0.0	-9
Monitor Reading (ppm): 0.0	2	5.98	0.127	12.94	43.8	4.09	0.0	30
Well Casing Diameter & Material	3.5	5.92	0.125	13.00	15.2	4.23	0.0	49
Type: 1" Stainless	5	5.90	0.126	12.91	10.9		0.0	53
Total Well Depth (TD): 30'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1010								
End Purge (hrs): 1030								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 26 ft to 30 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G0204.5

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

Sample ID No.: SA-TW401-3135
Sample Location: TW-401
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1055	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy. Gry	5.99	0.153	13.14	380	2.90	0.0	24

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.08	0.176	13.27	2429	3.16	0.0	-42
Monitor Reading (ppm): 0.0	2	6.00	0.155	13.14	440	2.97	0.0	8
Well Casing Diameter & Material	3.5	6.00	0.154	13.18	470	2.82	0.0	16
Type: 1" Stainless	5	5.99	0.153	13.14	380	2.90	0.0	24
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1035								
End Purge (hrs): 1055								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW402-1115
Sample Location: TW-402
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1455	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clear	4.72	0.044	13.81	4.0	7.35	0.0	188

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.08	0.057	15.41	303	6.90	0.0	80
Monitor Reading (ppm):	2	5.63	0.047	14.83	5.2	7.19	0.0	128
Well Casing Diameter & Material	3.5	5.00	0.045	13.90	3.6	7.26	0.0	170
Type: 1" Stainless	5	4.72	0.044	13.81	4.0	7.35	0.0	188
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1435								
End Purge (hrs): 1455								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 11 ft to 15 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW402-2125
Sample Location: TW-402
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1520	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	6m Tint	5.80	0.127	12.99	49.2	3.62	0.0	-61

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.41	0.128	13.63	740	3.46	0.0	-55
Monitor Reading (ppm):	2	5.64	0.128	13.16	129	3.49	0.0	-66
Well Casing Diameter & Material	3.5	5.76	0.127	12.97	70.5	3.54	0.0	-63
Type: 1" Stainless	5	5.80	0.127	12.99	49.2	3.62	0.0	-61
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1500								
End Purge (hrs): 1520								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
–	–

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-TW402-2630
Sample Location: TW-402
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1545	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Brn Tint	6.04	0.119	13.67	90.4	4.07	0.0	5

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.25	0.134	14.17	1773	3.60	0.0	-45
Monitor Reading (ppm): 0.0	2	6.17	0.126	13.60	811	3.87	0.0	-17
Well Casing Diameter & Material	3.5	6.06	0.120	13.62	180	4.01	0.0	-2
Type: 1" Stainless	5	6.04	0.119	13.67	90.4	4.07	0.0	5
Total Well Depth (TD): 30'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1525								
End Purge (hrs): 1545								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes (4)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 26 ft to 30 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-DUP01-20110602

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.:

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

Sample ID No.: SA-TW402-3135
Sample Location: TW-402
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1615	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Cldy-Gry	5.92	0.163	13.70	201	3.88	0.0	29

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.10	0.187	14.13	2247	2.94	0.0	-30
Monitor Reading (ppm): 0.0	2	6.04	0.165	13.89	2050	3.15	0.0	2
Well Casing Diameter & Material	3.5	5.94	0.166	13.65	1305	3.40	0.0	15
Type: 1" Stainless	5	5.92	0.163	13.70	201	3.88	0.0	29
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1555								
End Purge (hrs): 1615								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes (6)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-TW403-1115
Sample Location: TW-403
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-2-11								
Time: 1215								
Method: Peristaltic pump	clear	6.09	0.193	15.92	2.2		0.0	

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-2-11								
Method: Peristaltic pump	0.5	6.25	0.217	17.59	217	6.20	0.0	-11
Monitor Reading (ppm): 0.0	2	6.24	0.198	16.21	24.5	6.41	0.0	22
Well Casing Diameter & Material	3.5	6.13	0.194	16.14	3.7	6.17	0.0	31
Type: 1" Stainless	5	6.09	0.193	15.92	2.2		0.0	
Total Well Depth (TD): 15'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1155								
End Purge (hrs): 1215								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

-No odors, stains or elevated PID readings observed

Temporary well point screen zone 11 ft to 15 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW403-2125
Sample Location: TW-403
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1240	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clear	6.20	0.199	15.38	18.0	3.25	0.0	-54

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.45	0.224	16.09	1285	3.65	0.0	-84
Monitor Reading (ppm): 0.0	2	6.31	0.208	15.55	175	3.44	0.0	-65
Well Casing Diameter & Material	3.5	6.25	0.200	15.54	39.2	3.31	0.0	-60
Type: 1" Stainless	5	6.20	0.199	15.38	18.0	3.25	0.0	-54
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1220								
End Purge (hrs): 1240								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 11260 2045

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

Sample ID No.: SA-TW403-2630
Sample Location: TW-403
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1305	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Brn Tint	5.89	0.147	15.74	186	5.87	0.0	67

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.14	0.179	16.53	2071	3.63	0.0	-40
Monitor Reading (ppm): 0.0	2	6.07	0.157	15.98	871	4.89	0.0	22
Well Casing Diameter & Material	3.5	5.95	0.150	15.68	306	5.64	0.0	56
Type: 1" Stainless	5	5.89	0.147	15.74	186	5.87	0.0	67
Total Well Depth (TD): 30'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1245								
End Purge (hrs): 1305								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 26 ft to 30 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW403-3135
Sample Location: TW-403
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-2-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1330	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Brn Tint	5.85	0.154	15.92	52.0	3.80	0.0	58

PURGE DATA: *(Gallons)*

Date: 6-2-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.05	0.177	16.20	2053	3.09	0.0	-16
Monitor Reading (ppm): 0.0	2	6.00	0.161	16.10	209	3.35	0.0	28
Well Casing Diameter & Material	3.5	5.91	0.154	15.99	94.2	3.67	0.0	47
Type: 1" Stainless	5	5.85	0.154	15.92	52.0	3.80	0.0	58
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1310								
End Purge (hrs): 1330								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
–	–

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW404-2125
Sample Location: TW-404
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1210	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy Brn	6.19	0.213	12.43	202			

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.31	0.214	13.24	350	6.05	0.0	8
Monitor Reading (ppm):	2	6.35	0.215	12.52	235	6.18	0.0	16
Well Casing Diameter & Material	3.5	6.22	0.214	12.39	216	6.11	0.0	24
Type: 1" Stainless	5	6.19	0.213	12.43	202		0.0	28
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1150								
End Purge (hrs): 1210								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW404-3135
Sample Location: TW-404
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-3-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1235	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Cldy Gry	6.16	0.212	12.80	225	4.07	0.0	28

PURGE DATA: *(Gallons)*

Date: 6-3-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.25	0.235	13.10	1715	3.44	0.0	-56
Monitor Reading (ppm):	2	6.22	0.215	12.92	357	3.68	0.0	4
Well Casing Diameter & Material	3.5	6.18	0.214	12.72	296	3.90	0.0	22
Type: 1" Stainless	5	6.16	0.212	12.80	225	4.02	0.0	28
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1215								
End Purge (hrs): 1235								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW405-2125
Sample Location: TW-405
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1015	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Clear	6.26	0.206	12.29	6.1	7.39	0.0	48

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.40	0.221	12.76	398	5.49	0.0	-20
Monitor Reading (ppm):	2	6.28	0.208	12.31	12.9	6.97	0.0	24
Well Casing Diameter & Material	3.5	6.25	0.206	12.35	7.6	7.31	0.0	41
Type: 1" Stainless	5	6.26	0.206	12.29	6.1	7.39	0.0	48
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0955								
End Purge (hrs): 1015								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes (4)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-DUP02-20110606 (1800 hrs)

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW405-3135
Sample Location: TW-405
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-6-11								
Time: 0956								
Method: Peristaltic pump	Cldy-Gry	6.27	0.290	13.03	1450	3.02	0.0	-11.3

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-6-11								
Method: Peristaltic pump	0.5	6.35	0.377	13.89	2444	3.80	0.0	-90
Monitor Reading (ppm): 0.0	2	6.58	0.306	13.20	1971	3.39	0.0	-122
Well Casing Diameter & Material	3.5	6.45	0.295	13.01	1508	3.20	0.0	-109
Type: 1" Stainless	5	6.27	0.290	13.03	1450	3.02	0.0	-113
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0930								
End Purge (hrs): 0950								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-TW406-2125
Sample Location: TW-406
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-6-11								
Time: 1245								
Method: Peristaltic pump	Brn Tint	6.02	0.189	12.66	90.3	6.67	0.0	28

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-6-11								
Method: Peristaltic pump	0.5	6.49	0.203	14.55	1184	6.32	0.0	-38
Monitor Reading (ppm): 0.0	2	6.38	0.195	13.20	740	6.44	0.0	-6
Well Casing Diameter & Material	3.5	6.16	0.192	12.97	318	6.53	0.0	11
Type: 1" Stainless	5	6.02	0.189	12.66	90.3	6.67	0.0	28
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1225								
End Purge (hrs): 1245								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW406-31.35
Sample Location: TW-406
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1310	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Cldy-Gry	6.04	0.214	13.38	770	3.25	0.0	14

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.11	0.233	13.35	2471	3.00	0.0	-80
Monitor Reading (ppm):	2	6.03	0.224	13.31	1700	2.92	0.0	-29
Well Casing Diameter & Material	3.5	6.04	0.219	13.34	1151	3.19	0.0	-3
Type: 1" Stainless	5	6.04	0.214	13.38	770	3.25		14
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1250								
End Purge (hrs): 1310								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-TW407-2125
Sample Location: TW-407
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-6-11								
Time: 1135								
Method: Peristaltic pump	Brn Tint	6.33	0.176	12.69	42.0	7.12	0.0	27

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-6-11								
Method: Peristaltic pump	0.5	6.58	0.186	13.05	1563	6.17	0.0	-30
Monitor Reading (ppm): 0.0	2	6.52	0.181	12.59	290	6.75	0.0	6
Well Casing Diameter & Material	3.5	6.38	0.175	12.65	135	7.04	0.0	19
Type: 1" Stainless	5	6.33	0.176	12.69	42.0	7.12	0.0	27
Total Well Depth (TD): 25'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1115								
End Purge (hrs): 1135								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 21 ft to 25 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW407-31.35
Sample Location: TW-407
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11 Time: 1105	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Method: Peristaltic pump	clay Brn	6.56	0.281	13.31	814	2.73	0.0	-141

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.52	0.288	14.51	2563	3.60	0.0	-125
Monitor Reading (ppm): 0.0	2	6.57	0.282	13.68	1605	3.01	0.0	-134
Well Casing Diameter & Material	3.5	6.57	0.281	13.27	1316	2.90	0.0	-140
Type: 1" Stainless	5	6.56	0.281	13.31	814	2.73	0.0	-141
Total Well Depth (TD): 35'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1045								
End Purge (hrs): 1105								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 31 ft to 35 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW408-3337
Sample Location: TW-408
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-10-11								
Time: 0950								
Method: Peristaltic pump	Cly-Brn	5.75	0.157	13.63	874		0.0	15

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-10-11								
Method: Peristaltic pump	0.5	6.05	0.173	14.36	2692	3.70	0.0	-22
Monitor Reading (ppm): 0.0	2	5.94	0.160	13.54	1365	3.38	0.0	-9
Well Casing Diameter & Material	3.5	5.75	0.159	13.59	1160	3.20	0.0	8
Type: 1" Stainless	5	5.75	0.157	13.63	874		0.0	15
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0930								
End Purge (hrs): 0950								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW408-3842
Sample Location: TW-408
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-10-11								
Time: 1015								
Method: Peristaltic pump	Tint-Brn	5.87	0.171	13.91	247	2.99	0.0	29

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-10-11								
Method: Peristaltic pump	0.5	5.91	0.198	13.80	1763	3.17	0.0	-35
Monitor Reading (ppm): 0.0	2	5.90	0.173	13.84	461	3.06	0.0	3
Well Casing Diameter & Material	3.5	5.86	0.174	13.87	405	3.02	0.0	18
Type: 1" Stainless	5	5.87	0.171	13.91	247	2.99	0.0	29
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0955								
End Purge (hrs): 1015								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW408-4347
Sample Location: TW-408
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-10-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1040	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	clay-Brn	5.91	0.133	14.04	870	2.55	0.0	19

PURGE DATA: *(Gallons)*

Date: 6-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.15	0.164	14.28	2281	2.93	0.0	-4
Monitor Reading (ppm): 0.0	2	6.09	0.137	14.13	1708	2.60	0.0	-18
Well Casing Diameter & Material	3.5	5.92	0.133	14.10	1004	2.52	0.0	10
Type: 1" Stainless	5	5.91	0.133	14.04	870	2.55	0.0	19
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1020								
End Purge (hrs): 1040								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings.

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW409-3337
Sample Location: TW-409
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-9-11								
Time: 1340								
Method: Peristaltic pump	clay-Brn	5.32	0.131	14.18	916	2.89	0.0	30

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-9-11								
Method: Peristaltic pump	0.5	6.06	0.155	15.01	2895	3.31	0.0	-40
Monitor Reading (ppm): 0.0	2	5.80	0.135	14.62	1907	3.20	0.0	-8
Well Casing Diameter & Material	3.5	5.40	0.130	14.24	1261	2.98	0.0	24
Type: 1" Stainless	5	5.32	0.131	14.18	916	2.89	0.0	30
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1320								
End Purge (hrs): 1340								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW409-3842
Sample Location: TW-409
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1410	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Clear	5.22	0.122	14.09	40.0	4.55	0.0	108

PURGE DATA: *(Gallons)*

Date: 6-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.36	0.130	14.92	387	4.21	0.0	73
Monitor Reading (ppm): 0.0	2	5.29	0.124	14.47	66.1	4.43	0.0	87
Well Casing Diameter & Material	3.5	5.21	0.123	14.31	44.2	4.51	0.0	102
Type: 1" Stainless	5	5.22	0.122	14.09	40.0	4.55	0.0	108
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1350								
End Purge (hrs): 1410								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes (6)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD (Yes)

Duplicate ID No.: —

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW 409-4347
Sample Location: TW-409
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1440	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Gry	5.94	0.155	14.63	3062	2.50	0.0	-70

PURGE DATA: *(Gallons)*

Date: 6-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.29	0.171	15.21	3088	2.91	0.0	-81
Monitor Reading (ppm): 0.0	2	6.08	0.163	14.90	3130	2.79	0.0	-75
Well Casing Diameter & Material	3.5	5.99	0.158	14.78	3075	2.63	0.0	-72
Type: 1" Stainless	5	5.94	0.155	14.63	3062	2.50	0.0	-70
Total Well Depth (TD): 47'								
Static Water Level (WL): pA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1420								
End Purge (hrs): 1440								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Temporary well point screen zone 43 ft to 47 ft.

- water was very cloudy (Gray) with much silt particles

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW410-3337
Sample Location: TW-410
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1040	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Gy	5.42	0.119	14.20	844	2.49	0.0	22

PURGE DATA: *(Gallons)*

Date: 6-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.12	0.133	14.87	2078	3.37	0.0	-33
Monitor Reading (ppm): 0.0	2	5.99	0.121	14.60	1602	2.93	0.0	-18
Well Casing Diameter & Material	3.5	5.60	0.121	14.16	1670	2.74	0.0	9
Type: 1" Stainless	5	5.42	0.119	14.20	844	2.49	0.0	22
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1020								
End Purge (hrs): 1040								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW410-3842
Sample Location: TW-410
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-9-11								
Time: 1105								
Method: Peristaltic pump	Cldy-Brn	5.81	0.143	14.21	523	3.15	0.0	16

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-9-11								
Method: Peristaltic pump	0.5	5.74	0.161	14.81	1813	3.19	0.0	-12
Monitor Reading (ppm): 0.0	2	5.80	0.150	14.12	951	3.27	0.0	-1
Well Casing Diameter & Material	3.5	5.75	0.145	14.18	877	3.22	0.0	10
Type: 1" Stainless	5	5.81	0.143	14.21	523	3.15	0.0	16
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1045								
End Purge (hrs): 1105								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes (4)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings.

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:	
—	SA-DUP04-20110609	1800 hrs

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW410-4347
Sample Location: TW-410
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-9-11								
Time: 1130								
Method: Peristaltic pump	Tint Brn	5.75	0.135	14.31	93	3.60	0.0	58

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-9-11								
Method: Peristaltic pump	0.5	6.12	0.148	14.92	2215	3.41	0.0	-8
Monitor Reading (ppm): 0.0	2	5.99	0.139	14.48	296	3.53	0.0	14
Well Casing Diameter & Material	3.5	5.83	0.135	14.29	182	3.69	0.0	42
Type: 1" Stainless	5	5.75	0.135	14.31	93	3.60	0.0	58
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1110								
End Purge (hrs): 1130								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW411-3337
Sample Location: TW-411
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-8-11 Time: 1515 Method: Peristaltic pump	Cldy-Brn	5.94	0.114	14.23	1407	3.51	0.0	-14

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	6.17	0.173	14.60	2919	3.19	0.0	-64
Monitor Reading (ppm):	2	6.15	0.129	14.31	2229	3.24	0.0	-45
Well Casing Diameter & Material	3.5	5.97	0.115	14.20	2004	3.39	0.0	-23
Type: 1" Stainless	5	5.94	0.114	14.23	1407	3.51	0.0	-14
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1455								
End Purge (hrs): 1515								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW411-3842
Sample Location: TW-411
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-8-11								
Time: 1545								
Method: Peristaltic pump	Brn Tint	5.50	0.130	14.06	302	3.04	0.0	44

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	5.65	0.147	14.81	3003	3.53	0.0	-17
Monitor Reading (ppm): 0.0	2	5.69	0.132	14.40	330	3.40	0.0	4
Well Casing Diameter & Material	3.5	5.56	0.133	14.08	374	3.29	0.0	37
Type: 1" Stainless	5	5.50	0.130	14.06	302	3.04	0.0	44
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1525								
End Purge (hrs): 1545								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW411-4347
Sample Location: TW-411
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-8-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1610	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Cldy-Gry	6.43	0.164	14.53	1403	2.70	0.0	-103

PURGE DATA: *(Gallons)*

Date: 6-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.09	0.180	14.90	3378	3.52	0.0	-68
Monitor Reading (ppm):	2	6.31	0.183	14.73	3120	3.16	0.0	-91
Well Casing Diameter & Material	3.5	6.40	0.168	14.68	2870	2.92	0.0	-98
Type: 1" Stainless	5	6.43	0.164	14.53	1403	2.70	0.0	-103
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1550								
End Purge (hrs): 1610								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW412-3337
Sample Location: TW-412
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-8-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1245	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Tint-Brn	5.35	0.123	14.36	280		0.0	38

PURGE DATA: *(Gallons)*

Date: 6-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.35	0.132	15.30	1366	4.40	0.0	-34
Monitor Reading (ppm): 0.0	2	5.85	0.123	14.90	267	3.72	0.0	14
Well Casing Diameter & Material	3.5	5.44	0.123	14.59	304	3.40	0.0	37
Type: 1" Stainless	5	5.35	0.123	14.36	280		0.0	38
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1225								
End Purge (hrs): 1245								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW412-3842
Sample Location: TW-412
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-8-11								
Time: 1310								
Method: Peristaltic pump	Cldy-brn	5.73	0.151	14.18	960	2.90	0.0	12

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	5.82	0.179	14.91	1845	3.11	0.0	-50
Monitor Reading (ppm): 0.0	2	5.79	0.156	14.65	1630	3.23	0.0	-11
Well Casing Diameter & Material	3.5	5.71	0.154	14.26	1409	2.97	0.0	6
Type: 1" Stainless	5	5.73	0.151	14.18	960	2.90	0.0	12
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1250								
End Purge (hrs): 1310								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW412-4347
Sample Location: TW-412
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-8-11								
Time: 1335								
Method: Peristaltic pump	clear	5.74	0.129	14.21	30.3	3.90	0.0	68

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	6.12	0.148	14.92	2875	~~20.0~~	0.0	-12
Monitor Reading (ppm): 0.0	2	5.95	0.131	14.50	128	3.74	0.0	36
Well Casing Diameter & Material	3.5	5.76	0.129	14.29	68.2	3.85	0.0	59
Type: 1" Stainless	5	5.74	0.129	14.21	30.3	3.90	0.0	68
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1315								
End Purge (hrs): 1335								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW413-3337
Sample Location: TW-413
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-8-11								
Time: 0935								
Method: Peristaltic pump	cldy-Brn	5.35	0.181	13.89	488	2.98	0.0	39

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	6.07	0.212	15.30	538	4.21	0.0	-20
Monitor Reading (ppm): 0.0	2	5.71	0.184	14.05	437	3.49	0.0	14
Well Casing Diameter & Material	3.5	5.40	0.180	14.00	472	3.22	0.0	37
Type: 1" Stainless	5	5.35	0.181	13.89	488	2.98	0.0	39
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0915								
End Purge (hrs): 0935								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW413-3842
Sample Location: TW-413
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-8-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1000	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Brn	5.97	0.200	14.00	1540	2.19	0.0	-29

PURGE DATA: *(Gallons)*

Date: 6-8-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.88	0.277	14.58	2973	2.99	0.0	-81
Monitor Reading (ppm): 0.0	2	6.07	0.224	14.10	2788	2.36	0.0	-56
Well Casing Diameter & Material	3.5	5.98	0.207	13.97	2590	2.27	0.0	-36
Type: 1" Stainless	5	5.97	0.200	14.00	1540	2.19	0.0	-29
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0940								
End Purge (hrs): 1000								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes (4)

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-DUP03-20110608 1800 hrs

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW413-4347
Sample Location: TW-413
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-8-11								
Time: 1025								
Method: Peristaltic pump		6.31	0.305	14.09	190	2.80	0.0	-95

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-8-11								
Method: Peristaltic pump	0.5	6.51	0.360	14.61	2997	3.27	0.0	-119
Monitor Reading (ppm): 0.0	2	6.53	0.334	14.30	2861	2.84	0.0	-124
Well Casing Diameter & Material	3.5	6.37	0.315	14.05	1485	2.73	0.0	-109
Type: 1" Stainless	5	6.31	0.305	14.09	190	2.80	0.0	-95
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1005								
End Purge (hrs): 1025								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-TW414-3337
Sample Location: TW-414
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-7-11								
Time: 1340								
Method: Peristaltic pump	Oldy-Gry	5.41	0.192	14.02	1205	3.08	0.0	41

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.18	0.208	14.80	1560	3.41	0.0	-17
Monitor Reading (ppm):	2	5.96	0.196	14.42	1398	3.35	0.0	12
Well Casing Diameter & Material	3.5	5.50	0.192	14.13	1402	3.02	0.0	37
Type: 1" Stainless	5	5.41	0.192	14.02	1205	3.08	0.0	41
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): 4								
Start Purge (hrs): 1320								
End Purge (hrs): 1340								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 33ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-TW414-3842
Sample Location: TW-414
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-7-11								
Time: 1405								
Method: Peristaltic pump	cldy-Gry	5.56	0.142	13.86	1484	2.51	0.0	50

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-7-11								
Method: Peristaltic pump	0.5	5.92	0.187	14.69	2997	3.22	0.0	-80
Monitor Reading (ppm): 0.0	2	5.87	0.155	13.74	2750	2.90	0.0	-7
Well Casing Diameter & Material	3.5	5.60	0.146	13.80	2263	2.67	0.0	34
Type: 1" Stainless	5	5.56	0.142	13.86	1484	2.51	0.0	50
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1345								
End Purge (hrs): 1405								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-TW414-4347
Sample Location: TW-414
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1430	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Gry	6.05	0.161	14.50	1613	3.60	0.0	-10

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.46	0.221	15.03	3314	4.21	0.0	-110
Monitor Reading (ppm): 0.0	2	6.52	0.196	14.87	3117	4.06	0.0	-80
Well Casing Diameter & Material	3.5	6.24	0.168	14.61	2685	3.91	0.0	-22
Type: 1" Stainless	5	6.05	0.161	14.50	1613	3.60	0.0	-10
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1410								
End Purge (hrs): 1430								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings.

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW414-4852
Sample Location: TW-414
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time:								
Method: Peristaltic pump								

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5							
Monitor Reading (ppm):	2							
Well Casing Diameter & Material	3.5							
Type: 1" Stainless	5							
Total Well Depth (TD): 52								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	Yes

OBSERVATIONS / NOTES:

Temporary well point screen zone 48 ft to 52 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-TW415-3337
Sample Location: TW-415
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1050								
Method: Peristaltic pump	Tint Brn	5.59	0.208	13.45	255		0.0	47

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.01	0.226	14.92	1438	2.84	0.0	-4
Monitor Reading (ppm): 0.0	2	5.89	0.214	14.06	296	2.77	0.0	27
Well Casing Diameter & Material	3.5	5.68	0.209	13.65	307	2.81	0.0	43
Type: 1" Stainless	5	5.59	0.208	13.45	255	2.73	0.0	47
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1030								
End Purge (hrs): 1050								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-TW415-3842
Sample Location: TW-415
Sampled By: Vince Shickora
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 (%)	ORP
Date: 6-7-11								
Time: 1115								
Method: Peristaltic pump	cldy-Gry	5.77	0.138	13.40	1611		0.0	17

PURGE DATA: *(Gallons)*

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 6-7-11								
Method: Peristaltic pump	0.5	6.07	0.166	13.70	2384	2.39	0.0	-55
Monitor Reading (ppm): 0.0	2	5.98	0.145	13.26	1947	2.30	0.0	-10
Well Casing Diameter & Material	3.5	5.88	0.141	13.33	1796	2.41	0.0	8
Type: 1" Stainless	5	5.87	0.138	13.40	1611		0.0	17
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1055								
End Purge (hrs): 1115								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed.

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW415-4347
Sample Location: TW-415
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1140	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Clay-Gry	5.89	0.132	13.94	501	2.88	0.0	43

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.21	0.157	14.00	2936	2.40	0.0	-35
Monitor Reading (ppm): 0.0	2	6.05	0.135	13.87	2005	2.57	0.0	16
Well Casing Diameter & Material	3.5	5.92	0.134	13.90	805	2.80	0.0	34
Type: 1" Stainless	5	5.89	0.132	13.94	501	2.88	0.0	43
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1120								
End Purge (hrs): 1140								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW416-3337
Sample Location: TW-416
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP
Time: 1500								
Method: Peristaltic pump	cldy Brn	5.51	0.183	13.90	316		0.0	34

PURGE DATA:

Date: 6-6-11	(Gallons) Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.29	0.210	14.79	897	4.21	0.0	-50
Monitor Reading (ppm):	2	5.88	0.188	14.37	307	3.90	0.0	-1
Well Casing Diameter & Material	3.5	5.50	0.182	14.02	303	3.81	0.0	22
Type: 1" Stainless	5	5.51	0.183	13.90	316		0.0	34
Total Well Depth (TD): 37'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1440								
End Purge (hrs): 1500								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes (6)

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 33 ft to 37 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
Yes	—

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW416-3842
Sample Location: TW-416
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1525	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Brn	5.62	0.178	13.64	817	3.28	0.0	21

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.63	0.199	14.11	2475	4.20	0.0	-22
Monitor Reading (ppm): 0.0	2	5.62	0.187	13.66	2006	3.82	0.0	4
Well Casing Diameter & Material	3.5	5.61	0.178	13.70	1434	3.55	0.0	23
Type: 1" Stainless	5	5.62	0.178	13.64	817	3.28	0.0	21
Total Well Depth (TD): 42'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1505								
End Purge (hrs): 1525								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 38 ft to 42 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
–	–

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW416-4347
Sample Location: TW-416
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-6-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1550	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Tan Tint	6.11	0.155	13.49	87	4.09	0.0	-14

PURGE DATA: *(Gallons)*

Date: 6-6-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	6.31	0.178	14.60	1347	4.31	0.0	-63
Monitor Reading (ppm): 0.0	2	6.22	0.162	13.85	217	4.25	0.0	-38
Well Casing Diameter & Material	3.5	6.13	0.156	13.51	152	4.18	0.0	-19
Type: 1" Stainless	5	6.11	0.155	13.49	87	4.09	0.0	-14
Total Well Depth (TD): 47'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 1530								
End Purge (hrs): 1550								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	3X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings.

Temporary well point screen zone 43 ft to 47 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-TW416-4852
Sample Location: TW-416
Sampled By: Vince Shickora
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 6-7-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0942	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	cldy-Gry	5.44	0.132	13.23	247	3.08	0.0	70

PURGE DATA: *(Gallons)*

Date: 6-7-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic pump	0.5	5.86	0.148	15.75	1142	4.12	0.0	40
Monitor Reading (ppm): 0.0	2	5.80	0.133	13.92	362	3.23	0.0	57
Well Casing Diameter & Material	3.5	5.55	0.132	13.31	219	3.20	0.0	68
Type: 1" Stainless	5	5.44	0.132	13.23	247	3.08	0.0	70
Total Well Depth (TD): 52'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): ↓								
Start Purge (hrs): 0922								
End Purge (hrs): 0942								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCL	2X 40ML vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Temporary well point screen zone 48 ft to 52 ft.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

INW

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW417-2832
Sample Location: SA-TW417
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Time: 1605								
Method: Peristaltic Pump	clear	6.05	0.052	14.62	11.3	1.68	—	11

PURGE DATA:

Date: 10-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP (mV)
Method: Peristaltic Pump	0.5 gal	6.07	0.064	16.28	665 AU	2.01	—	6
Monitor Reading (ppm): 0.0	2	6.14	0.053	14.97	5.1 NTU	2.00	—	20
Well Casing Diameter & Material	3.5	6.06	0.052	14.83	0.00	1.76	—	13
Type: 1" Stainless Steel	5 gal	6.05	0.052	14.62	11.3	1.68	—	11
Total Well Depth (TD): 32' bgs								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1545								
End Purge (hrs): 1605								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	6 ~~2~~ - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point seen zone 28 ft to 32ft

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

1 NUII

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW417-3337
Sample Location: SA-TW417
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-10-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP (mV)
Time: 1540	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic Pump	tan color	5.83	0.111	14.61	955 AU	0.95	—	34

PURGE DATA:

Date: 10-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP (mV)
Method: Peristaltic Pump	0.5 gal	6.15	0.111	17.30	1031 AU	1.27	—	6
Monitor Reading (ppm): 0.0	2	6.11	0.109	15.25	1017 AU	1.55	—	18
Well Casing Diameter & Material	3.5	5.94	0.109	14.88	1214 AU	1.60	—	28
Type: 1" Stainless Steel	5 gal	5.83	0.111	14.61	955 AU	0.95	—	34
Total Well Depth (TD): 37								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1518								
End Purge (hrs): 1540								
Total Purge Time (min): 22								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 33 ft to 37 ft

Circle if Applicable:

MS/MSD —

Duplicate ID No.: (1200) SA-Dup01-20111010

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

INN PH

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW417-3842
Sample Location: SA-TW417
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-10-11	Color (Visual) silt	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Time: 1510								
Method: Peristaltic Pump	tan color/tint	5.67	0.116	15.01	1054 AU	1.62	—	23

PURGE DATA:

Date: 10-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP (mV)
Method: Peristaltic Pump	0.5 gal	6.24	0.125	18.76	77.1	1.94	—	-42
Monitor Reading (ppm): 0.0	2	6.24	0.115	16.60	664 AU	2.03	—	-10
Well Casing Diameter & Material	3.5	5.56	0.114	15.43	859 AU	2.68	—	21
Type: 1" Stainless Steel	5 gal	5.67	0.116	15.01	1054 AU	1.62	—	23
Total Well Depth (TD): 42								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1449								
End Purge (hrs): 1510								
Total Purge Time (min): 21								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point seen zone 38 ft to 42 ft

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW417-4347
Sample Location: SA-TW417
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-10-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1318	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP (mV)
Method: Peristaltic Pump	light brn-silt	5.87	0.095	15.05	1704 AU	2.81	—	-27

PURGE DATA:

Date: 10-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	~~Other~~ ORP
Method: Peristaltic Pump	0.5 gal	6.09	0.108	17.00	918 AU	3.24	—	-72
Monitor Reading (ppm): 0.0	2	6.30	0.094	16.04	904 AU	1.49	—	-52
Well Casing Diameter & Material	3.5	5.87	0.093	15.91	1744 AU	3.20	—	-32
Type: 1" Stainless Steel ID	5 gal	5.87	0.095	15.05	1704 AU	2.81	—	-27
Total Well Depth (TD): 47' bgs								
Static Water Level (WL): 4.5' bgs								
One Casing Volume(gal/L):								
Start Purge (hrs): 1257								
End Purge (hrs): 1318								
Total Purge Time (min): 21								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point seen zone 43 ft to 47 ft bgs

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

1 WUHN

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW417-4852
Sample Location: SA-TW417
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	~~Other~~ ORP (mV)
Time: 1245								
Method: Peristaltic Pump	tan w/silt	5.16	0.089	17.44	734 AU	0.99	—	98

PURGE DATA:

Date: 10-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	5.76	0.206	20.12	2754 AU	0.15	—	-59
Monitor Reading (ppm): 0.0	2 gal	6.25	0.103	17.63	1565 AU	1.77	—	16
Well Casing Diameter & Material	3.5 gal	5.34	0.092	17.51	773 AU	3.71	—	86
Type: 1" Stainless Steel	5 gal	5.16	0.089	17.44	734 AU	0.99	—	98
Total Well Depth (TD): 52' bgs								
Static Water Level (WL): 4.5' bgs								
One Casing Volume(gal/L):								
Start Purge (hrs): 1222								
End Purge (hrs): 1245								
Total Purge Time (min): 23								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

- No odors, stains or elevated PID readings

Temporary well point seen zone 48 ft to 52 ft bgs

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

1 NWI

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW418-2832
Sample Location: SA-TW418
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-11-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Time: 1142								
Method: Peristaltic Pump	tan w/silt	5.77	0.052	15.53	3816 AU	0.63	—	20

PURGE DATA:

Date: 10-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	6.25	0.099	15.06	overrange	2.19	—	-51
Monitor Reading (ppm):	2	6.19	0.056	15.22	3363 AU	1.39	—	-6
Well Casing Diameter & Material	3.5	5.92	0.050	15.54	3224 AU	0.74	—	.4
Type: 1" Stainless Steel	5 gal	5.77	0.052	15.53	3816 AU	0.63	—	20
Total Well Depth (TD): 32								
Static Water Level (WL): —								
One Casing Volume(gal/L):								
Start Purge (hrs): 1116								
End Purge (hrs): 1142								
Total Purge Time (min): 26								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point seen zone 28 ft to 32ft bgs

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

1 NN 11

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW418-3337
Sample Location: SA-TW418-
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-11-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1242	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP (mV)
Method: Peristaltic Pump	tan w/silt	5.46	0.062	14.79	3201 AU	1.63	—	32

PURGE DATA:

Date: 10-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	6.14	0.086	18.17	Overrange	3.29	—	-38
Monitor Reading (ppm): 0.0	2	6.13	0.067	15.99	" "	3.27	—	-31
Well Casing Diameter & Material	3.5	5.43	0.063	15.40	" "	2.08	—	30
Type: 1" Stainless Steel	5 gal	5.46	0.062	14.79	3201 AU	1.63	—	32
Total Well Depth (TD): 37								
Static Water Level (WL): —								
One Casing Volume(gal/L):								
Start Purge (hrs): 1220								
End Purge (hrs): 1242								
Total Purge Time (min): 22								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 33 ft to 37 ft bgs

pull tubing 1.5' off bottom
redrilled TW due to in new hole initial TW being filled w/ sand (rods detached in hole)

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

1 NL 111

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW418-3842
Sample Location: SA-TW418
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-11-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1110	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP (mV)
Method: Peristaltic Pump	light brn-silt	6.30	0.101	14.12	Out of range	1.36	—	-45

PURGE DATA:

Date: 10-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	6.38	0.100	16.00	1657 AU	3.12	—	-44
Monitor Reading (ppm): 0.0	2	6.38	0.100	14.92	3016 AU	3.29	—	-35
Well Casing Diameter & Material	3.5	6.29	0.103	14.43	overrange	2.84	—	-46
Type: 1" Stainless Steel	5 gal	6.30	0.101	14.12	" "	1.36	—	-45
Total Well Depth (TD): 42								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1046								
End Purge (hrs): 1110								
Total Purge Time (min): 24								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

Temporary well point seen zone 38 ft to 42 ft bgs

pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW418-4347
Sample Location: SA-TW418
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-11-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Time: 0905								
Method: Peristaltic Pump	light brown opaque	6.20	0.092	13.05	Out of range	1.63	—	-78

PURGE DATA:

Date: 10-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP (mV)
Method: Peristaltic Pump	0.5 gal	5.54	0.169	14.56	2297 AU	1.44	—	-14
Monitor Reading (ppm): 0.0	2	6.00	0.094	13.71	3810 AU	1.32	—	-65
Well Casing Diameter & Material	3.5	6.02	0.095	13.37	Overrange silty	4.96	—	-83
Type: 1" Stainless Steel	5 gal	6.20	0.092	13.05	" "	1.63	—	-78
Total Well Depth (TD): 47								
Static Water Level (WL): 6' bgs								
One Casing Volume(gal/L):								
Start Purge (hrs): 0840								
End Purge (hrs): 0905								
Total Purge Time (min): 25								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings

purge rate ~700mL/min

Temporary well point seen zone 43 ft to 47 ft bgs

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

1 INIT

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW418-4852
Sample Location: SA-TW418
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-11-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Time: 0930								
Method: Peristaltic Pump	tan color silty	6.21	0.093	12.94	3698 AU	1.84	—	-26

PURGE DATA:

Date: 10-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP (mV)
Method: Peristaltic Pump	0.5 gal	6.18	0.112	13.13	0 silty overrange	1.10	—	-83
Monitor Reading (ppm): 0.0	2	6.07	0.100	13.04	" "	0.98	—	-29
Well Casing Diameter & Material	3.5 6.23 → 6.23		0.098	13.12	3136 AU	1.37	—	-41
Type: 1" Stainless Steel	5 gal	6.21	0.093	12.94	3698 AU	1.84	—	-26
Total Well Depth (TD): 52								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 0907								
End Purge (hrs): 0930								
Total Purge Time (min): 23								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No odors, stains, or elevated PID readings, pull up tubing 1.5' from bottom

Temporary well point seen zone 48 ft to 52 ft bgs

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW419-2832
Sample Location: SA-TW419
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: ~~10-11-11~~ 10-12-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Time: 1005								
Method: Peristaltic Pump	tan w/silt	5.80	0.059	13.01	1764 AU	1.61	—	3

PURGE DATA:

Date: 10-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	6.01	0.088	13.30	3684 AU	1.19	—	-51
Monitor Reading (ppm): 0.0	2	5.95	0.067	13.17	3051 AU	0.62	—	-11
Well Casing Diameter & Material	3.5	5.81	0.060	13.05	2325 AU	1.54	—	3
Type: 1" Stainless Steel	5 gal	5.80	0.059	13.01	1764 AU	1.61	—	3
Total Well Depth (TD): 32								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 0942								
End Purge (hrs): 1005								
Total Purge Time (min): 23								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 28 ft to 32 ft

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW419-3337
Sample Location: SA-TW419
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-12-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP (mV)
Time: 0937	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic Pump	tan w/silt	6.05	0.091	13.20	3954 AU	1.08	—	-23

PURGE DATA:

Date: 10-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	6.27	0.108	13.44	Over range	1.46	—	-90
Monitor Reading (ppm): 0.0	2	6.00	0.099	13.39	" "	0.93	—	-45
Well Casing Diameter & Material	3.5	6.25	0.094	13.30	" "	0.61	—	-44
Type: 1" Stainless Steel	5 gal	6.05	0.091	13.20	3954 AU	1.08	—	-23
Total Well Depth (TD): 37								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 0911								
End Purge (hrs): 0937								
Total Purge Time (min): 26								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Initial 5 minutes pulled up lots of sand

Temporary well point seen zone 33 ft to 37 ft bgs

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW419-3842
Sample Location: SA-TW419-
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-12-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Time: 0906	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Peristaltic Pump	tan w/silt	6.02	0.098	13.01	Out of range	0.23	—	-58

PURGE DATA:

Date: 10-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	5.78	0.276	14.15	Over range	0.73	—	-17
Monitor Reading (ppm): 0.0	2	5.89	0.114	13.52	Over range	0.26	—	-85
Well Casing Diameter & Material	3.5	6.12	0.100	13.18	" "	1.46	—	-67
Type: 1" Stainless Steel	5 gal	6.02	0.098	13.01	" "	0.23	—	-58
Total Well Depth (TD): 42								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 0843								
End Purge (hrs): 0906								
Total Purge Time (min): 23								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 38 ft to 42 ft bgs

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

1 NN/111

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SATW419-4347
Sample Location: SA-TW419
Sampled By: Jacob Birkett
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: 10-11-11								
Time: 1425								
Method: Peristaltic Pump	tan-silty	5.30	0.083	15.26	Out of range	0.99	—	-20

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Date: 10-11-11								
Method: Peristaltic Pump	0.5 gal	6.58	0.103	19.18	Out of Range	0.49	—	-155
Monitor Reading (ppm):	2	6.46	0.090	16.64	" "	0.83	—	-112
Well Casing Diameter & Material	3.5	5.64	0.085	15.79	" "	0.99	—	-52
Type: 1" Stainless Steel	5 gal	5.30	0.083	15.26	" "	—	—	-20
Total Well Depth (TD):								
Static Water Level (WL): 47								
One Casing Volume(gal/L):								
Start Purge (hrs): 1401								
End Purge (hrs): 1425								
Total Purge Time (min): 24								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 43 ft to 47 ft bgs

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-Dup02-20111011 (1300)

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW419-4852
Sample Location: SA-TW419
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-11-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Time: 1450	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Peristaltic Pump	cloudy brown	6.54	0.118	19.79	—	2.59	—	-86

PURGE DATA:

Date: 10-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	—	—	—	—	—	—	—
Monitor Reading (ppm):	1 gal	6.54	0.118	19.79	—	2.59	—	-86
Well Casing Diameter & Material	3.5							
Type: 1" Stainless Steel	5 gal							
Total Well Depth (TD): 52								
Static Water Level (WL):								
One Casing Volume(gal/L): 10-11-11								
Start Purge (hrs): ~~1345~~ 1350								
End Purge (hrs): 1355								
Total Purge Time (min): 5								
Total Vol. Purged (gal/L): 1 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 48 ft to 52ft bgs

Pull tubing 1.5' off bottom

Note:
- Only purged ~1 gal
- TW not producing well, drawdown prevents full purged
- Use check valve initially
- Sample w/ peristaltic after recharge

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW420-2832
Sample Location: SA-TW420
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-12-11 Time: 1408	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Method: Peristaltic Pump	clear w/tan tint	6.00	0.062	13.18	102	1.82	—	12

PURGE DATA:

Date: 10-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	6.09	0.085	13.50	1470 AV	2.66	—	-16
Monitor Reading (ppm): 0.0	2	6.13	0.069	13.40	849 AV	2.33	—	-4
Well Casing Diameter & Material	3.5	6.03	0.064	13.23	110	1.82	—	8
Type: 1" Stainless Steel	5 gal	6.00	0.062	13.18	102	—	—	12
Total Well Depth (TD): 32								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1343								
End Purge (hrs): 1408								
Total Purge Time (min): 25								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 28 ft to 32 ft bgs

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~T12002045~~ 112G02750

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

Sample ID No.: SA-TW420-3337
Sample Location: SA-TW420
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-12-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Time: 1341								
Method: Peristaltic Pump	clear w/ fine tint	6.11	0.063	13.18	113	1.63	—	10

PURGE DATA:

Date: 10-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	6.39	0.079	13.56	1324 AU	3.80	—	-51
Monitor Reading (ppm): 0.0	2	6.38	0.068	13.43	135	2.19	—	-24
Well Casing Diameter & Material	3.5	6.29	0.064	13.32	106	1.83	—	-1
Type: 1" Stainless Steel	5 gal	6.11	0.063	13.18	113	1.63	—	10
Total Well Depth (TD): 37								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1317								
End Purge (hrs): 1341								
Total Purge Time (min): 24								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No, stains, odors, or PID readings

Temporary well point seen zone 33 ft to 37 ft bgs

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW420-3842
Sample Location: SA-TW420
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-12-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1314	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP (mV)
Method: Peristaltic Pump	tan w/silt	6.50	0.092	13.29	1154 AU	1.16	—	-69

PURGE DATA:

Date: 10-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	6.34	0.109	13.44	2618 AU	1.10	—	-117
Monitor Reading (ppm): 0.0	2	6.53	0.099	13.41	2046 AU	1.21	—	-97
Well Casing Diameter & Material	3.5	6.51	0.094	13.40	1332 AU	2.50	—	-80
Type: 1" Stainless Steel	5 gal	6.50	0.092	13.29	1154 AU	1.16	—	-69
Total Well Depth (TD):								
Static Water Level (WL): 42								
One Casing Volume(gal/L):								
Start Purge (hrs): 1249								
End Purge (hrs): 10-12-11 ~~1254~~ 1314								
Total Purge Time (min): 25								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	~~6~~ 2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 38 ft to 42 ft bgs

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD ~~YES~~ NO JB 10-12-11

Duplicate ID No.: —

Signature(s): Jacob Birkett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW420-4347
Sample Location: SA-TW420
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-12-11 Time: 1247 Method: Peristaltic Pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
	tan w/silt	6.40	0.087	13.17	Over Range	0.21	—	-77

PURGE DATA:

Date: 10-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	6.05	0.094	13.36	Over range	1.59	—	-111
Monitor Reading (ppm): 0.0	2	6.21	0.091	13.29	" "	0.67	—	-100
Well Casing Diameter & Material	3.5	6.53	0.090	13.29	" "	0.33	—	-108
Type: 1" Stainless Steel	5 gal	6.40	0.087	13.17	" "	0.21	—	-77
Total Well Depth (TD): 47								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1222								
End Purge (hrs): 1247								
Total Purge Time (min): 25								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 43 ft to 47ft bgs

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: ~~112G02045~~ 112G02750

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

Sample ID No.: SA-TW420-4852
Sample Location: SA-TW420
Sampled By: Jacob Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10-12-11 Time: 1220	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP (mV)
Method: Peristaltic Pump	tan-silty	6.08	0.118	13.05	Overrange	0.00	—	-25

PURGE DATA:

Date: 10-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic Pump	0.5 gal	5.97	0.128	13.95	Overrange	2.83	—	-48
Monitor Reading (ppm): 0.0	2	6.21	0.126	13.45	" "	0.00	—	-53
Well Casing Diameter & Material	3.5	6.14	0.122	13.29	" "	0.00	—	-42
Type: 1" Stainless Steel	5 gal	6.08	0.118	13.05	" "	0.00	—	-25
Total Well Depth (TD): 52								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1156								
End Purge (hrs): 1220								
Total Purge Time (min): 24								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Temporary well point seen zone 48 ft to 52 ft bgs

Pull tubing 1.5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW 365-1418
Sample Location: SA-TW 365
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[x] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-16-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1005								
Method: Peristaltic	tan tint	5.29	0.051	12.96	37.9	—	—	135

PURGE DATA:

Date: 11-16-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	5.52	0.058	12.79	685 AU	2.91	—	96
Monitor Reading (ppm): 0.0	2 gal	5.29	0.051	12.96	37.9 NTU	—	—	135
Well Casing Diameter & Material								
Type: 1" Stainless steel								
Total Well Depth (TD): 18								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 0955								
End Purge (hrs): 1005								
Total Purge Time (min): 10								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings
Tubing pulled 1.5 feet off bottom
Temporary well screened from 14 to 18 ft bgs
Purge rate: 600 mL/min

Split w/ SCDHS

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): J. Birkett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW 365-2024
Sample Location: SA-TW 365
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[x] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-16-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1115	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Peristaltic	tan tint	5.81	0.078	12.41	69.4	—	—	84

PURGE DATA:

Date: 11-16-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	5.83	0.078	12.41	656.40	2.26	—	70
Monitor Reading (ppm): 0.0	2 gal	5.81	0.078	12.41	69.4	—	—	84
Well Casing Diameter & Material								
Type: 1" Stainless steel								
Total Well Depth (TD): 24								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1105								
End Purge (hrs): 1115								
Total Purge Time (min): 10								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Split sample w/ SCDHS

Tubing pulled 1.5 feet off bottom
Temporary well screened from 20 to 24 ft bgs
Purge rate: 600 mL/min

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): J. Birkett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW365-3034
Sample Location: SA-TW 365
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[x] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-16-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1102	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Peristaltic	tan color	5.75	0.044	12.17	1809AU	—	—	49

PURGE DATA:

Date: 11-16-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	5.76	0.055	12.59	1535 AU	1.36	—	34
Monitor Reading (ppm): 0.0	2 gal	5.75	0.044	12.17	1809 AU	—	—	49
Well Casing Diameter & Material								
Type: 1" Stainless steel								
Total Well Depth (TD): 34								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1052								
End Purge (hrs): 1102								
Total Purge Time (min): 10								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Tubing pulled 1.5 feet off bottom
Temporary well screened from 30 to 34 ft bgs
Purge rate: 600 mL/min

Split sample w/ SCDHS

Circle If Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW365-4044
Sample Location: SA-TW365
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[x] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-18-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0950	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Peristaltic	tan/gray color	5.80	0.103	12.15	673 NU	—	—	55

PURGE DATA:

Date: 11-16-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	5.74	0.124	12.45	1286 NU	2.31	—	36
Monitor Reading (ppm): 0.0	2 gal	5.80	0.103	12.15	673	—	—	55
Well Casing Diameter & Material								
Type: 1" Stainless steel								
Total Well Depth (TD): 44								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 0940								
End Purge (hrs): 0950								
Total Purge Time (min): 10								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings

Tubing pulled 1.5 feet off bottom
Temporary well screened from 40 to 44 ft bgs
Purge rate: 600 mL/min

Split w/SCDHS

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
—	— SA-Dup02-20111116 0930	[signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW366-1519
Sample Location: SA-TW366
Sampled By: J. Birkett
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 (%)	ORP (mV)
Date: 11-15-11								
Time: 1446								
Method: Peristaltic	tan tint	5.50	0.055	13.54	109	—	—	114

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Date: 11-15-11								
Method: Peristaltic	0.5 gal	5.57	0.069	14.25	1401 AU	1.68	—	99
Monitor Reading (ppm):	2 gal	5.50	0.055	13.54	109	—	—	114
Well Casing Diameter & Material								
Type: 1" Stainless Steel								
Total Well Depth (TD): 19								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1436								
End Purge (hrs): 1446								
Total Purge Time (min): 10								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings
Tubing pulled 1.5 feet off bottom
Temporary well screened from 15 to 19 ft bgs
Purge rate: 600 mL/min

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW366-2529
Sample Location: SA-TW366
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-15-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1528								
Method: Peristaltic	tan color	6.12	0.070	12.58	1847 AU	—	—	-7

PURGE DATA:

Date: 11-15-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	6.51	0.080	12.92	1622 AU	1.32	—	-47
Monitor Reading (ppm): 0.0	2 gal	6.12	0.070	12.58	1847 AU	—	—	-7
Well Casing Diameter & Material								
Type: 1" Stainless Steel								
Total Well Depth (TD): 29								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1518								
End Purge (hrs): 1528								
Total Purge Time (min): 10								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	Yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings
Tubing pulled 1.5 feet off bottom
Temporary well screened from 25 to 29 ft bgs
Purge rate: 600 mL/min

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): J. Birkett

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW366-3539
Sample Location: SA-TW366
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-16-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0850	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Peristaltic	tan color	5.53	0.115	12.16	1996 AU	—	—	55

PURGE DATA:

Date: 11-16-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	5.25	0.269	12.67	1283 AU	1.44	—	88
Monitor Reading (ppm): 0.0	2 gal	5.53	0.115	12.16	1996 AU	—	—	55
Well Casing Diameter & Material								
Type: 1" Stainless Steel								
Total Well Depth (TD): 39								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 0840								
End Purge (hrs): 0850								
Total Purge Time (min): 10								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings
Tubing pulled 1.5 feet off bottom
Temporary well screened from 35 to 39 ft bgs
Purge rate: 600 mL/min

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW366-4246
Sample Location: SA-TW366
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-15-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1505								
Method: ~~Peristaltic~~ Check valve	gray (clay)	5.94	0.114	12.72	Over Range	1.60	—	-89

PURGE DATA:

Date: 11-15-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: ~~Peristaltic~~ Check valve	0.5 gal	5.94	0.114	12.72	Out of Range	1.60	—	-89
Monitor Reading (ppm): 0.0	2 gal					—	—	
Well Casing Diameter & Material								
Type: 1" Stainless Steel								
Total Well Depth (TD): 46								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1500								
End Purge (hrs): 1505								
Total Purge Time (min): 5								
Total Vol. Purged (gal/L): 0.75 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

Tubing pulled 1.5 feet off bottom
Temporary well screened from 42 to 46 ft bgs
~~Purge rate:~~ ____ mL/min

Could not pull w/ peristaltic
-Used check valve

very turbid gray (clay) water

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW367-1620
Sample Location: SA-TW367
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-15-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1213	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Peristaltic	tan/color	5.63	0.023	13.47	106.6	—	—	93

PURGE DATA:

Date: 11-15-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	5.78	0.051	13.72	622 NO	2.17	—	51
Monitor Reading (ppm): 0.0	2 gal	5.63	0.023	13.47	106.6	—	—	93
Well Casing Diameter & Material								
Type: 1" Stainless Steel								
Total Well Depth (TD): 20								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1200								
End Purge (hrs): 1213								
Total Purge Time (min): 13								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	6 ~~2~~ 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID reading
Tubing pulled 1.5 feet off bottom
Temporary well screened from 16 to 20 ft bgs
Purge rate: 600 mL/min

Split sample w SCDHS

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW367-2630
Sample Location: SA-TW367
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-15-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1335								
Method: Peristaltic	tan color	5.80	0.042	12.68	1086 AU	—	—	53

PURGE DATA:

Date: 11-15-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	6.05	0.089	13.02	3403AU	0.33	—	-30
Monitor Reading (ppm): 0.0	2 gal	5.80	0.042	12.68	1086AU	—	—	53
Well Casing Diameter & Material								
Type: 1" Stainless Steel								
Total Well Depth (TD): 30								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1322								
End Purge (hrs): 1335								
Total Purge Time (min): 13								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings
Tubing pulled 1.5 feet off bottom
Temporary well screened from 26 to 30 ft bgs
Purge rate: 600 mL/min

Split sample w/ SCDHS

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW367-3640
Sample Location: SA-TW367
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-15-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1314								
Method: Peristaltic	tan color	5.92	0.061	13.03	1104 AU	—	—	34

PURGE DATA:

Date: 11-15-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	5.76	0.070	13.80	1502 AU	3.66	—	35
Monitor Reading (ppm): 0.0	2 gal	5.92	0.061	13.03	1104 AU	—	—	34
Well Casing Diameter & Material								
Type: 1" Stainless Steel								
Total Well Depth (TD): 40								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1301								
End Purge (hrs): 1314								
Total Purge Time (min): 13								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings
Tubing pulled 1.5 feet off bottom
Temporary well screened from 36 to 40 ft bgs
Purge rate: 550 mL/min

Split sample w/ SCDHS

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02750

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

Sample ID No.: SA-TW367-4246
Sample Location: SA-TW367
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 11-15-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1155	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Peristaltic	light brn	5.90	0.128	13.42	1673 AU	—	—	12

PURGE DATA:

Date: 11-15-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Method: Peristaltic	0.5 gal	5.81	0.250	15.40	OverRange	1.34	—	-4
Monitor Reading (ppm): 0.0	2 gal	5.90	0.128	13.42	1673 AU	—	—	12
Well Casing Diameter & Material								
Type: 1" Stainless Steel								
Total Well Depth (TD): 46								
Static Water Level (WL): —								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1142								
End Purge (hrs): 1155								
Total Purge Time (min): 13								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

No stains, odors, or elevated PID readings
Tubing pulled 1.5 feet off bottom
Temporary well screened from 42 to 46 ft bgs
Purge rate: 556 mL/min

Split sample w/ SCDHS

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-Dup01-20111115 (1100)

Signature(s): J. Birkett

Appendix C

QA Sample Log Sheets

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: Site 6A
QA Sample Type:

Sample ID Number: SA-RB01-20101214
Sampled By: VAS
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 12-14-10
Time: 1330
Method: Direct Pour

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 Water
Supplier: Thermo Scientific
Manufacturer: ↓
Order Number:
Lot Number: 0911210
Expiration Date: 09-2011

RINSATE INFORMATION (If Applicable):

Media Type: Aqueous
Equipment Used: stainless well screen
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		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

- Sample collected by pouring water over cleaned stainless steel well screen directly into sample vials

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112602045
Sample Location: Field office
QA Sample Type:

Sample ID Number: SA-RB01-20110312
Sampled By: VAS / JB
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 3-12-11
Time: 1530
Method: Direct Pour

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Distilled Water
Supplier: Poland Spring
Manufacturer: Auburn ME - Municipal Supply
Order Number: —
Lot Number: 0306 11065 WF 193
Expiration Date: 09/04/12

RINSATE INFORMATION (If Applicable):

Media Type: Aqueous
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		YES / NO
Metals	Cool 4°C & HNO_3		YES / NO
Cyanide	Cool 4°C & NaOH		YES / NO

OBSERVATIONS / NOTES:

- Distilled water poured over clean Redi-Flow pump directly into sample vials

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Sample ID Number: SA-RB02-20110315
Project Number: 112G02045
Sampled By: J. Birkett
Sample Location:
C.O.C. Number:
QA Sample Type:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 3-15-11
Time: 0945
Method: Direct pour over Grundfos

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Poland Spring Distilled Water
Supplier: Munitor Water Supply, Auburn, ME
Manufacturer: Nestle Waters North America
Order Number: 03061105 5WF193
Lot Number: 2642B B
Expiration Date: 09/04/12

RINSATE INFORMATION (If Applicable):

Media Type: Water
Equipment Used: Grundfos Redi Flo
Equipment Type:
[] Dedicated
[X] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	3 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 NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: Field office
QA Sample Type:

[] Trip Blank
[X] Source Water Blank
[] Rinsate Blank
[] Other Blank

Sample ID Number: SA-SB01-20110314
Sampled By: VAS
C.O.C. Number:

SAMPLING DATA:

Date: 3-14-11
Time: 1030
Method: Direct Pour

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[] Other
[X] 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 X 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:

- water for decon
- obtained from Riverhead public water supply (Hotel Tap)

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location:
QA Sample Type:

Sample ID Number: SA-TB02-20110309
Sampled By: J. Birkett
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 3-9-11
Time: 0715
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	3 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 NUS, Inc.

QA SAMPLE LOG SHEET

Page 1 of 1

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location:
QA Sample Type:

Sample ID Number: SA-TB03-20110312
Sampled By: JBirkett
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 3-12-11
Time: 0840
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	3 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 NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location:
QA Sample Type:

Sample ID Number: SA-TB04-20110315
Sampled By: J. Birkett
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 3-15-11
Time: 0720
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	3 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 NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: Field Trailer
Sample ID Number: SA-SB01-20110608
Sampled By: VAS
C.O.C. Number:

QA Sample Type:

[] Trip Blank
[X] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 6-8-11
Time: 0816
Method: Grab

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[X] Other Drillers decon water
[] 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 x 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:

- Drillers decon water - Potable water from Zebra office

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112602045
Sample Location: Field Trailer
QA Sample Type:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

Sample ID Number: SA-RB01-20110607
Sampled By: VAS
C.O.C. Number:

SAMPLING DATA:

Date: 6-7-11
Time: 0640
Method: Direct pour

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: ~~Giant~~ Distilled H_2O
Supplier: Giant Markets
Manufacturer:
Order Number: —
Lot Number:
Expiration Date: 4-25-11

RINSATE INFORMATION (If Applicable):

Media Type: Temporary well point screen
Equipment Used: for Aqueous samples
Equipment Type:
[] Dedicated
[X] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 X 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:

- water poured over cleaned well point screen directly into sample vials

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Calverton
Project Number: 112602045
Sample Location: Field Trailer / Lab
QA Sample Type:

Sample ID Number: SA-TB03-20110606
Sampled By: Lab
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 6-6-11
Time: 0700
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 X 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 NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Sample ID Number: SA-TB04-20110609
Project Number: 112602045
Sampled By: Lab / VAS
Sample Location: Field Trailer
C.O.C. Number:
QA Sample Type:

[X] Trip Blank
[] Rinsate Blank
[] Source Water Blank
[] Other Blank

SAMPLING DATA:

Date: 6-9-11
Time: 0655
Method: Grab

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 x 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 NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: SA
QA Sample Type:

Sample ID Number: SA-FB01-20110921
Sampled By: J. Birkett + SK
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[X] Other Blank Field Blank

SAMPLING DATA:

Date: 9-21-11
Time: 1700
Method: Direct pour

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Poland Springs Distilled Water
Supplier: Municipal Water Supply Auburn ME
Manufacturer: Nestle Waters N. America
Order Number: 09081125IWF194
Lot Number: 0034BB
Expiration Date: 03-09-13

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

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: Site trailer
QA Sample Type:

Sample ID Number: SA-FB02-20110927
Sampled By: J. Birkett
C.O.C. Number:

[] Trip Blank
[X] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 9-27-11
Time: 0730
Method: Direct pour

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[] Other
[X] 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

OBSERVATIONS / NOTES:

well/Municipal water source from Hilton Garden Inn Riverhead bathroom
Water used for grundfos decon

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: SA
QA Sample Type:

Sample ID Number: SA-RB01-20110921
Sampled By: JB, SK
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 9-21-11
Time: 1710
Method: Direct pour over equipment into bottle

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Poland Springs Distilled Water
Supplier: Municipal Water Supply Auburn ME
Manufacturer: Neste Waters N. America
Order Number: 09081125IWF194
Lot Number: 0034BB
Expiration Date: 03-09-13

RINSATE INFORMATION (If Applicable):

Media Type: Water
Equipment Used: Grundfos RediFlow pump
Equipment Type:
[] Dedicated
[X] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location:
QA Sample Type:

Sample ID Number: SA-RB02-20110926
Sampled By: J. Birkett
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 9-26-11
Time: 0810
Method: Direct pour over equipment int bottle

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Poland Springs Distilled
Supplier: Municipal Water Supply Auburn ME
Manufacturer: Nestle Waters N. America
Order Number: 09081125 1WF199
Lot Number: 0634BB
Expiration Date: 03-09-13

RINSATE INFORMATION (If Applicable):

Media Type: Water
Equipment Used: Grundfos Redi flow (Deconed)
Equipment Type:
[] Dedicated
[X] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location:
QA Sample Type:

Sample ID Number: SA-TB01-20110914
Sampled By: J. Birkett / Lab
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 9-14-11
Time: 1430
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

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location:
QA Sample Type:

Sample ID Number: SA-TB02-20110914
Sampled By: JB / Lab
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: ~~9-26-11~~ JB 9-26-11 9-14-11
Time: ~~0300~~ JB 9-26-11 1430
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

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calv.
Project Number: 112G02750
Sample Location: Site Trailer
QA Sample Type:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

Sample ID Number: SA-TB01-20111010
Sampled By: Lab / JB
C.O.C. Number:

SAMPLING DATA:

Date: 10-10-11
Time: 0930
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 NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: SA-IW420
QA Sample Type:

Sample ID Number: SA-FB01-20111012
Sampled By: J. Birkett
C.O.C. Number:

[] Trip Blank
[X] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 10-12-11
Time: 0745
Method: Direct pour/dip

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[] Other
[X] 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

OBSERVATIONS / NOTES:

Drillers decon water in 55 gal drum w/ sump pump to run steam jenny

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02045
Sample Location: TW-419
QA Sample Type:

Sample ID Number: SA-RB01-20111012
Sampled By: J. Birkett
C.O.C. Number:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 10-12-11
Time: 1030
Method: Direct pour over screen into vial

WATER SOURCE:

[] Laboratory Prepared
[X] Purchased
[] Other
[] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Poland Springs Distilled Water
Supplier: Municipal Water Supply, Auburn ME
Manufacturer: Nestle Waters NA Inc
Order Number: 091811261WF194
Lot Number: 1840BB
Expiration Date: 03-19-13

RINSATE INFORMATION (If Applicable):

~~Media Type~~: decon'd 4" x 1" stainless steel screen
~~Equipment Used~~: Aqueous
Equipment Type:
[] Dedicated
[X] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

TP-16 decon'd screen and distilled water
taken after cleaned and used at TW419

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02750
Sample Location: Site trailer
QA Sample Type:

Sample ID Number: SA-TB01-20111114
Sampled By: J. Birkett / Lab
C.O.C. Number:

[X] Trip Blank
[] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-14-11
Time: 1130
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

OBSERVATIONS / NOTES:

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project Number: 112G02750
Sample Location: Suffolk County Property (S. of River Rd)
QA Sample Type:

Sample ID Number: SA-FB01-20111116
Sampled By: J. Birkett
C.O.C. Number:

[] Trip Blank
[X] Source Water Blank
[] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-16-11
Time: 0830
Method: Direct Dip

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[] Other
[X] 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

OBSERVATIONS / NOTES:

Driller decon water from Zebra shop in 5 gal jug

Signature(s):

Tetra Tech NUS, Inc.

QA SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Sample ID Number: SA-RB01-20111116
Project Number: 112G02750
Sampled By: J. Birkett
Sample Location: Suffolk County Property (S. of River Rd)
C.O.C. Number:
QA Sample Type:

[] Trip Blank
[] Source Water Blank
[X] Rinsate Blank
[] Other Blank

SAMPLING DATA:

Date: 11-16-11
Time: 0845
Method: direct pour over screen into vial

WATER SOURCE:

[] Laboratory Prepared
[] Purchased
[] Other
[X] Tap
[] Fire Hydrant

PURCHASED WATER INFORMATION (If Applicable as Source or Rinsate Water):

Product Name: Poland Springs Distilled Water
Supplier: Municipal Water Source Auburn ME
Manufacturer: Nestle Waters NA Inc
Order Number: 09211126440 F193
Lot Number: 0001BB
Expiration Date: 3-22-13

RINSATE INFORMATION (If Applicable):

Media Type: Aqueous
Equipment Used: Stainless Steel Temporary Well Screen
Equipment Type:

[] Dedicated
[X] Reusable

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Volatiles	Cool 4°C & HCl	2 40mL glass vials	yes

OBSERVATIONS / NOTES:

Deconed screen with soapy water and rinse water.
Pour distilled water over TW screen into vials.

Signature(s): J. Birkett

Appendix D

Chain of Custody Forms

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 27291 | PAGE 1 OF 2

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PROJECT NO: 112G02045	FACILITY: NWIRP Calverton	PROJECT MANAGER: Dave Brayack	PHONE NUMBER: (757) 461-3824
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER: Vince Shickora	PHONE NUMBER: (610) 909-1893
		CARRIER/WAYBILL NUMBER: FedEx 8741-9938-1482	

LABORATORY NAME AND CONTACT: Cathy Dover CompuChem
ADDRESS: 501 Madison Av.
CITY, STATE: Cary, NC 27513

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl
TYPE OF ANALYSIS: VOCs

DATE YEAR 2010	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							COMMENTS
12/13	0800	SA-TB01-20101213		—	—	QC	G	3	3					1012119-01		Lab prepared Trip Blank
12/13	1137	SA-TW364-3135		31	35	GW	G	3	3					-02		
12/13	1219	SA-TW364-2125		21	25	GW	G	3	3					-03		
12/13	1250	SA-TW364-1115		11	15	GW	G	3	3					-04		
12/13	1539	SA-TW363-4145		41	45	GW	G	3	3					-05		
12/13	1605	SA-TW363-3135		31	35	GW	G	3	3					-06		
12/13	1635	SA-TW363-2125		21	25	GW	G	3	3					-07		
12/14	1023	SA-TW363-1115		11	15	GW	G	3	3					-08		
12/14	1800	SA-DUP01-20101214		—	—	GW	G	3	3					-09		
12/14	1212	SA-TW358-3135		31	35	GW	G	3	3					-10		
12/14	1237	SA-TW358-2125		21	25	GW	G	3	3					-11		
12/14	1302	SA-TW358-1115		11	15	GW	G	9	9					-12		Do MS/MSD
12/14	1330	SA-RB01-20101214		—	—	QC	G	3	3					-13		Rinsate Blank

1. RELINQUISHED BY [signature]	DATE 12-15-10	TIME 1700	1. RECEIVED BY [signature]	DATE 12/16/10	TIME 1236
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS 1.8°C Rec'd in good condition

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 27292 | PAGE 2 OF 2

118

PROJECT NO: 112G02045	FACILITY: NWIRP Calverton	PROJECT MANAGER Dave Brayeck	PHONE NUMBER (757) 461-3824	LABORATORY NAME AND CONTACT: Cathy Dover CompuChem
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Vince Shickora	PHONE NUMBER (610) 909-1893	ADDRESS 501 Madison Av.
		CARRIER/WAYBILL NUMBER FedEx 8741-9938-1482		CITY, STATE Cary, NC 27513

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl
TYPE OF ANALYSIS: VOCs

DATE YEAR 2010	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							COMMENTS
12/14	1559	SA-TW359-3135		31	35	GW	G	3	3					1012119-14		
12/14	1625	SA-TW359-2125		21	25	GW	G	3	3					-15		
12/14	1652	SA-TW359-1115		11	15	GW	G	3	3					-16		
12/15	1101	SA-TW360-3135		31	35	GW	G	3	3					-17		
12/15	1125	SA-TW360-2125		21	25	GW	G	3	3					-18		
12/15	1800	SA-DUP02-20101215		—	-	GW	G	3	3					-19		
12/15	1150	SA-TW360-1115		11	15	GW	G	3	3					-20		

1. RELINQUISHED BY	DATE 12-15-10	TIME 1700	1. RECEIVED BY Matthew R Hawkes	DATE 12/16/10	TIME 1238
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: 1800 Rec'd in good condition

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

SN 4/15

4/02R
FORM NO. TINUS-001

CHAIN OF CUSTODY RECORD Tetra Tech NUS.

Project Manager: Dave Brayack (757) 461-3524
FOL: Vince Shickora (610) 909-1893
FedEx Airbill 8741 9938 1520 Lab. CompuChem Cathy Dover.

PROJECT NO.: 112G02045

SITE NAME: NWIRP Calverton

SAMPLERS (SIGNATURE):

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOCs						REMARKS
	12/15/10	1451		G	SA-TW361-3135	3	3						1012134-01
	12/15/10	1515		G	SA-TW361-2125	3	3						-02
	12/15/10	1539		G	SA-TW361-1115	3	3						-03
	12/15/10	1430 *		G	SA-TB02-20101215	3	3	container time 0800 *					1012134-04 Lab prepared Trip Blank
	12/16/10	1017		G	SA-TW349-4145	3	3						1012134-05
	12/16/10	1153		G	SA-TW362-3135	3	3						-06
	12/16/10	1227		G	SA-TW362-2125	3	3						-07
	12/16/10	1305		G	SA-TW362-1115	3	3						-08
	12/16/10	1340		G	FC-PZ-05I1-20101216	3	3						-09

RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
	12-16-10 1700				
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):	RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED BY (SIGNATURE):
RELINQUISHED BY (SIGNATURE):	DATE / TIME:	RECEIVED FOR LABORATORY BY (SIGNATURE):	DATE / TIME:	REMARKS:	
		Jennifer Dover	12/17/10 1020	rec'd @ 0.4°C SN0010	

(0498)

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. / QUOTE NO. C1497
COC Number 085516

CLIENT INFORMATION (REPORT TO BE SENT TO:)
COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION
PROJECT NAME: NWIRP Calverton
PROJECT NO.: LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail: Dave.Brayack@TetraTech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION
BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION
FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION
☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS: 1 VOC, 2 MEE, 3 TOC, 4 Metals, 5, 6, 7, 8, 9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1 (A)	2 (A)	3 (C)	4 (B)	5	6	7	8	9	COMMENTS (← Specify Preservatives: A–HCl, B–HNO3, C–H2SO4, D–NaOH, E–ICE, F–Other)
1.	SA-TB01-20110307	QC			3-7-11	1100	3	3									lab prepared
2.	SA-PZ-157I1-20110307	GW		X	3-7-11	~~1351~~ 1502	~~7~~ 27	3	2	1	1						
3.	SA-PZ-158I-20110307	GW		X	3-7-11	1350	3	3									
4.	SA-PZ-158I1-20110307	GW		X	3-7-11	1500	3	3									
5.	SA-PZ-157I-20110307	GW		X	3-7-11	~~1502~~ 1351	7	3	2	1	1						
6.	SA-PZ-159I-20110307	GW		X	3-7-11	1615	7	3	2	1	1						
7.	SA-PZ-155I-20110307	GW		X	3-7-11	1622	7	3	2	1	1						
8.	SA-PZ-151I1-20110308	GW		X	3-8-11	0835	7	3	2	1	1						
9, 22, 23	SA-PZ-159I1-20110308	GW		X	3-8-11	0840	19	9	6	2	2						
10.	SA-~~DX~~ JB 3-8-11 Dup01-20110308	GW		X	3-8-11	0900	7	3	2	1	1						

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. Jacob Birkell	3-8-11 1730	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FED-EX	DATE/TIME: 9:15 3/9/11	RECEIVED FOR LAB BY: 3. Rachel Moran

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
Cooler Temp. 3°C
MeOH extraction requires an additional 4 oz jar for percent solid.
Ice in Cooler?: YES
Comments: Original COCs Receive on 3/12/11

Page 1 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007 WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1497
QUOTE NO.
COC Number 085517

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail: Dave.Brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1 VOC, 2 MEE, 3 TOC, 4 Metals, 5, 6, 7, 8, 9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								A	A	C	B						← Specify Preservatives A–HCl B–HNO_3 C–H_2SO_4 D–NaOH E–ICE F–Other
11.	SA-PZ-138I-20110308	GW		X	3-8-11	0957	3	3									
12.	SA-PZ-160I-20110308	GW		X	3-8-11	1015	7	3	2	1	1						
13.	SA-PZ-138II-20110308	GW		X	3-8-11	1054	3	3									
14.	SA-PZ-160II-20110308	GW		X	3-8-11	1120	3	3									
15.	SA-PZ-149II-20110308	GW		X	3-8-11	1207	3	3									
16.	SA-PZ-136I-20110308	GW		X	3-8-11	1230	3	3									
17.	SA-PZ-139I-20110308	GW		X	3-8-11	1317	3	3									
18.	SA-PZ-135I-20110308	GW		X	3-8-11	1340	3	3									
19.	SA-PZ-161I-20110308	GW		X	3-8-11	1440	3	3									
20.	SA-PZ-133I-20110308	GW		X	3-8-11	1442	3	3									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. Jacob Birkey	3-8-11 1730	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FED-EX	DATE/TIME: 9:15 3/9/11	RECEIVED FOR LAB BY: 3. Rachel McLaughlin

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments: Original COC, Received on 3/12/11

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 2 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☑ YES ☐ NO

CHEMTECH

CHAIN OF CUSTODY RECORD

B1102090

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. C1497
COC Number 085501

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: 757-461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail: Dave.Brayack@tetratech.com
PHONE: 757-461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1 VOC, 2 MEE, 3 TOC, 4 Metals, 5, 6, 7, 8, 9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								A	A	C	B						← Specify Preservatives A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other
1.	SA-Dup02-20110308	GW		X	3-8-11	1600	3	3									
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. Jacob Birkett	3-8-11 1730	1.
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.
RELINQUISHED BY 3. FED-EX	DATE/TIME 3/9/11 9:15	RECEIVED FOR LAB BY 3. Sonchal Mouton

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 3 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☑ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1519
QUOTE NO.
COC Number 085519

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: TetraTech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@tetratech.com
PHONE: 757-466-4904 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

VOC MEE

PRESERVATIVES — ← Specify Preservatives: A – HCl, B – HNO_3, C – H_2SO_4, D – NaOH, E – ICE, F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (A)	2 (A)	3	4	5	6	7	8	9	COMMENTS
1.	SA-TB02-20110309	QC		X	3-9-11	0715	3	3									Lab prepared
2.	SA-MW-132S-20110309	GW		X	3-9-11	1157	3	3									
3.	SA-MW-131S-20110309	GW		X	3-9-11	1205	5	3	2								
4.	SA-MW-132I-20110309	GW		X	3-9-11	1250	3	3									
5.	SA-MW-131D-20110309	GW		X	3-9-11	1305	5	3	2								
6.	SA-MW-131I-20110309	GW		X	3-9-11	1400	5	3	2								
7.	SA-PZ-120S-20110309	GW		X	3-9-11	1407	3	3									
8.	SA-PZ-145I-20110309	GW		X	3-9-11	1615	5	3	2								
9.	SA-PZ-145D-20110309	GW		X	3-9-11	1615	5	3	2								
10.	SA-PZ-145S-20110309	GW		X	3-9-11	1710	5	3	2								

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jacob Birkett	3-11-11 1600	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FED-EX (Sgl. Dol.)	DATE/TIME: 10:25 3/12/11	RECEIVED FOR LAB BY: 3. Snehal Mehta

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 1 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT D-YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1519
QUOTE NO.
COC Number 085520

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@tetratech.com
PHONE: 757-~~814-0~~ 466-4904 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#.
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1	2	3	4	5	6	7	8	9
VOC	MEE							

PRESERVATIVES — ← Specify Preservatives: A – HCl, B – HNO_3, C – H_2SO_4, D – NaOH, E – ICE, F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
								A	A								
11.	SA-Dup03-20110309	GW		X	3-9-11	1500	3	3									
12.	SA-MW-126D-20110310	GW		X	3-10-11	0843	3	3									
13.	SA-MW-129D-20110310	GW		X	3-10-11	0845	3	3									
14.	SA-MW-126S-20110310	GW		X	3-10-11	0938	3	3									
15.	SA-MW-129I-20110310	GW		X	3-10-11	0950	3	3									
16.	SA-MW-126I-20110310	GW		X	3-10-11	1047	3	3									
17.	SA-MW-129S-20110310	GW		X	3-10-11	1055	3	3									
18.	SA-PZ-133I1-20110310	GW		X	3-10-11	1205	3	3									
19.	SA-MW-128D-20110310	GW		X	3-10-11	1220	3	3									
20.	SA-MW-127S-20110310	GW		X	3-10-11	1257	5	3	2								

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. Jacob Birkell	3-11-11 1600	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY (Sat Del)	DATE/TIME 10:25	RECEIVED FOR LAB BY
3. FED-EX	3/12/11	3. Sneha Mehta

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 2 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1520
QUOTE NO.
COC Number 085521

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@tetratech.com
PHONE: 757-466-4904 FAX.

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

1	2	3	4	5	6	7	8	9
VOC	MEE							

PRESERVATIVES — ← Specify Preservatives: A – HCl, B – HNO_3, C – H_2SO_4, D – NaOH, E – ICE, F – Other

CHEMTECH SAMPLE ID (KR 3/14/11)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (A)	2 (A)	3	4	5	6	7	8	9	COMMENTS
1.	SA-MW-128I-20110310	GW		X	3-10-11	1320	3	3									
2.	SA-MW-127I-20110310	GW		X	3-10-11	1356	5	3	2								
3.	SA-MW-128S-20110310	GW		X	3-10-11	1420	3	3									
4. ,5,6.	SA-MW-127D-20110310	GW		X	3-10-11	1500	11	9	2								Run MS/MSD
5. 7.	SA-PZ-118S-20110311	GW		X	3-11-11	1012	5	3	2								
6. 8.	SA-MW-130I-20110311	GW		X	3-11-11	1015	3	3									
7. 9.	SA-MW-130S-20110311	GW		X	3-11-11	1115	3	3									
8. 10.	SA-PZ-118I-20110311	GW		X	3-11-11	1117	5	3	2								
9. 11.	SA-PZ-144I-20110311	GW		X	3-11-11	1235	3	3									
10. 12,13,14.	SA-PZ-123I-20110311	GW		X	3-11-11	1240	11	9	2								Run MS/MSD

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. Jacob Sykes / [signature]	3-11-11 1600	1.
2. RELINQUISHED BY	DATE/TIME	2. RECEIVED BY
3. RELINQUISHED BY Fed-Ex	DATE/TIME 3/12/10 10:25	3. RECEIVED FOR LAB BY [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 3 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1520
QUOTE NO.
COC Number 085502

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@tetratech.com
PHONE: 757-466-4904 FAX.

CLIENT BILLING INFORMATION

BILL TO: PO#.
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1 VOC 2 MEE 3 4 5 6 7 8 9

PRESERVATIVES — 1: A, 2: A

COMMENTS — ← Specify Preservatives: A – HCl, B – HNO_3, C – H_2SO_4, D – NaOH, E – ICE, F – Other

CHEMTECH SAMPLE (KR 3/10/11)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1.15.	SA-PZ-144$-20110311	GW		X	3-11-11	1335	3	3									
2.16.	SA-PZ-123$-20110311	GW		X	3-11-11	1347	5	3	2								
3.17.	SA-Dup04-20110311	GW		X	3-11-11	0800	3	3									
4.18.	SA-Dup05-20110311	GW		X	3-11-11	1600	3	3									
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jacob Birkett	3-11-11 1600	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FED-EX (Sat. Del.)	DATE/TIME: 10:25 3/12/11	RECEIVED FOR LAB BY: 3. Snehal Mehta

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 4 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. / QUOTE NO. C1534
COC Number 085503

CLIENT INFORMATION (REPORT TO BE SENT TO:)
COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION
PROJECT NAME: ~~Jeff~~ NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@tetratech.com
PHONE: 757-466-4904 FAX:

CLIENT BILLING INFORMATION
BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION
FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION
☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 VOC	2 MEE	3	4	5	6	7	8	9	COMMENTS
							PRESERVATIVES	A	A								← Specify Preservatives A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other
1.	SA-TB03-20110312	QC			3-12-11	0840	3	3									Lab Prepared
2.	SA-PZ-143I-20110312 (JB 2-16-12)	GW		X	3-12-11	0955	3	3									
3.	SA-PZ-142I-20110312 (JB 2-16-12)	GW		X	3-12-11	0955	5	3	2								
4.	SA-PZ-140I-20110312 (JB 2-16-12)	GW		X	3-12-11	1102	3	3									
5.	SA-PZ-122D-20110312	GW		X	3-12-11	1115	3	3									
6.	SA-PZ-123I-20110312	GW		X	3-12-11	1205	5	3	2								
7.	SA-PZ-122I-20110312	GW		X	3-12-11	1215	3	3									
8.	SA-PZ-122S-20110312	GW		X	3-12-11	1320	3	3									
9.	ET-MW-03S-20110312	GW		X	3-12-11	1327	3	3									
10.	ET-MW-02S-20110312	GW		X	3-12-11	1427	3	3									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jacob Birkell	3-14-11 1700	1.
RELINQUISHED BY 2.	DATE/TIME.	RECEIVED BY: 2.
RELINQUISHED BY 3. Fed Ex	DATE/TIME 3/15/11 9:25	RECEIVED FOR LAB BY: 3. Jim Rivera

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:
Cooler Temp. 3°C
Ice in Cooler?: YES

Page 1 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

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CHEMTECH

CHAIN OF CUSTODY RECORD

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(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1534
QUOTE NO.
COC Number 085504

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@tetratech.com
PHONE: 757-466-4904 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#.
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS: VOC, MEE

PRESERVATIVES / **COMMENTS**

← Specify Preservatives: A – HCl, B – HNO_3, C – H_2SO_4, D – NaOH, E – ICE, F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (A)	2 (A)	3	4	5	6	7	8	9	COMMENTS
11.	ET-MW01$-20110312	GW		X	3-12-11	1435	3	3									
12.	SA-RB01-20110312	QC		X	3-12-11	1530	3	3									Rinsate Blank
13.	SA-Dup06-20110312	GW		X	3-12-11	0800	3	3									
14.	FC-MW-05$-20110313	GW		X	3-13-11	0924	5	3	2								
15.	FC-MW-01I-20110313	GW		X	3-13-11	0925	3	3									
16.	FC-MW-01$-20110313	GW		X	3-13-11	1020	3	3									
17.	FC-MW-05I-20110313	GW		X	3-13-11	1027	5	3	2								
18.	FC-MW-05II-20110313	GW		X	3-13-11	1122	3 JB	3 JB									
19., 20., 21.	FC-MW-04$-20110313	GW		X	3-13-11	1130	9 ~~3~~	9 ~~3~~									Run MSMSD
~~19.~~ 22.	FC-MW-04I-20110313	GW		X	3-13-11	1235	3	3									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jacob Birkett	3-14-11 1700	
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. Fed Ex	DATE/TIME: 3/15/11 9:25	RECEIVED FOR LAB BY: 3.

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: yes

Page 2 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

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CHAIN OF CUSTODY RECORD

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www.chemtech.net

CHEMTECH PROJECT NO. C1535
QUOTE NO.
COC Number 085505

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112602045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@tetratech.com
PHONE: 757-466-4904 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

	1	2	3	4	5	6	7	8	9
	VOC	MEE							

PRESERVATIVES

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
								A	A								← Specify Preservatives A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other
1.	FC-MW-07S-20110313	GW		X	3-13-11	1238	3	3									
2.	FC-MW-07I-20110313	GW		X	3-13-11	1332	3	3									
3.	FC-MW-08S-20110313	GW		X	3-13-11	1345	3	3									
4.	FC-MW-03SR1-20110313	GW		X	3-13-11	1445	5 ~~3~~	3	2								
5.	FC-MW-06S-20110313	GW		X	3-13-11	1450	3	3									
6.	FC-Dup07-20110313	GW		X	3-13-11	0900	3	3									
7.	FC-MW-02SR1-20110314	GW		X	3-14-11	0840	5	3	2								
8., 9., 10.	FT-MW-08S-20110314	GW		X	3-14-11	0845	11 ~~5~~	9 ~~3~~	2								Run MS/MSD
9. 11.	FC-MW-02IR1-20110314	GW		X	3-14-11	0945	5	3	2								
10. 12.	FT-MW-08I-20110314	GW		X	3-14-11	0945	5	3	2								

KR 3/17

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jacob Birkett	3-14-11 1700	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. Fed Ex	DATE/TIME 3/15/11 9:25	RECEIVED FOR LAB BY: 3.

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: yes

Page 3 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

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CHEMTECH
CHAIN OF CUSTODY RECORD

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www.chemtech.net

CHEMTECH PROJECT NO. C1535
QUOTE NO.
COC Number 085506

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@tetratech.com
PHONE: 757-466-4904 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#.
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

1 VOC, 2 MEE, 3, 4, 5, 6, 7, 8, 9

PRESERVATIVES

1: A, 2: A

COMMENTS

← Specify Preservatives
A - HCl B - HNO_3
C - H_2SO_4 D - NaOH
E - ICE F - Other

CHEMTECH SAMPLE ID (KR 3/15/11)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1. 13.	SA-SB01-20110314	QC		X	3-14-11	1030	3	3									Source Blank
2. 14.	FT-MW-05$-20110314	GW		X	3-14-11	1100	5	3	2								
3. 15.	FT-MW-03-20110314	GW		X	3-14-11	1150	3	3									
4. 16.	FT-MW-05I-20110314	GW		X	3-14-11	1205	5	3	2								
5. 17.	FT-MW-04-20110314	GW		X	3-14-11	1300	3	3									
6. 18.	FT-MW-06I-20110314	GW		X	3-14-11	1322	3	3									
7. 19.	FT-MW-01$-20110314	GW		X	3-14-11	1410	3	3									
8. 20.	FT-MW-06$-20110314	GW		X	3-14-11	1422	3	3									
9. 21.	FT-MW-01I-20110314	GW		X	3-14-11	1510	3	3									
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jacob Birkett	3-14-11 1700	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. Fed Ex	DATE/TIME: 3/15/11 9:25	RECEIVED FOR LAB BY: 3. Ken Rivers

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: yes

Page 4 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

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CHEMTECH

CHAIN OF CUSTODY RECORD

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www.chemtech.net

CHEMTECH PROJECT NO. C1548
QUOTE NO.
COC Number 085510

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@TetraTech.com
PHONE: 757-466-4904 FAX.

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

1 VOC (40 mL vial) 2 MEE (40 mL vial) 3 VOC (4 oz glass jar) 4 5 6 7 8 9

PRESERVATIVES

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (A)	2 (A)	3 (/)	4	5	6	7	8	9	COMMENTS
1.	SA-TB 04-20110315	QC			3-15-11	0720	3	3									Lab prepared
2.	FT-MW-07S-20110315	GW		X	3-15-11	0915	3	3									
3.	FT-MW-02S-20110315	GW		X	3-15-11	0935	5	3	2								
4.	SA-RB02-20110315	QC		X	3-15-11	0945	3	3									Rinsate
5.	FT-MW-02I-20110315	GW		X	3-15-11	1030	5	3	2								
6.	FT-Dup08-20110315	GW		X	3-15-11	1200	3	3									
7., 8., 9.	SA-SD-204-20110315	SD		X	3-15-11	1045	2			2							Run MS/MSD
8. 10., 11., 12.	SA-SW-204-20110315	SW		X	3-15-11	1055	9	9									Run MS/MSD
9. 13.	SA-PZ-125-20110315	GW		X	3-15-11	1130	3	3									
10. 14.	SA-SW-125-20110315	GW		X	3-15-11	1140	3	3									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jacob Burkett	3-15-11 1700	1.
RELINQUISHED BY: 2.	DATE/TIME	RECEIVED BY: 2.
RELINQUISHED BY: 3. Fed Ex	DATE/TIME 3/16/11 9:20	RECEIVED FOR LAB BY: 3. Jen Flowers

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: yes

Page 1 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☒ NO

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CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1548
QUOTE NO.
COC Number 085511

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 300
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sak
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sak
e-mail: Rob.Sak@tetratech.com
PHONE: 757-466-4904 FAX.

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

1 VOC (40mL glass vial) 2 MEE 3 VOC (4 oz jar) 4 5 6 7 8 9

PRESERVATIVES

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 (A)	2 (A)	3	4	5	6	7	8	9	COMMENTS
1. 15.	SA-SD-125-20110315	SD		X	3-15-11	1145	1			1							
2. 16.	SA-PZ-148-20110315	GW		X	3-15-11	1210	3	3									
3. 17.	SA-PZ-124-20110315	GW		X	3-15-11	1220	3	3									
4. 18.	SA-~~PZ~~SW-124-20110315	SW		X	3-15-11	1225	3	3									
5. 19.	SA-SD-124-20110315	SD		X	3-15-11	1230	1			1							
6. 20.	SA-PZ-147-20110315	GW		X	3-15-11	1300	3	3									
7. 21.	SA-SD-201-20110315	SD		X	3-15-11	1330	1			1							
8. 22.	SA-SW-201-20110315	SW		X	3-15-11	1345	3	3									
9. 23.	SA-SD-Dup01-20110315	SD		X	3-15-11	1200	1			1							
10. 24.	SA-SW-Dup01-20110315	SW		X	3-15-11	1201	3	3									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jason Bikell	3-15-11 1700	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY:
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY:
3. FedEx	3/16/11 9:20	3. Ken Lewis

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: yes

Page 2 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

Revision 8/2007

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CHEMTECH

CHAIN OF CUSTODY RECORD

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(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C1548
QUOTE NO.
COC Number 085512

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION:
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME:
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

See previous COCs

CLIENT BILLING INFORMATION

BILL TO: PO#
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

VOC (40mL vial)

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1 (A)	2	3	4	5	6	7	8	9	COMMENTS
25.	SA-PZ-Dup01-20110315	GW		X	3-15-11	1202	3	3									
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

← Specify Preservatives
A-HCl B-HNO_3
C-H_2SO_4 D-NaOH
E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. Jacob Birkett	3-15-11 1700	1.
RELINQUISHED BY	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY:
3. FedEx	3/16/11 9:20	3. Ky Rivera

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 3°C
Ice in Cooler?: YES

Page 3 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☒ NO

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Revision 8/2007

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CHEMTECH

CHAIN OF CUSTODY RECORD

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www.chemtech.net

CHEMTECH PROJECT NO. C1864
QUOTE NO.
COC Number 085930

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO. CTO-WE05 LOCATION: PRSC
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#.
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

VOLS

PRESERVATIVES

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	HCl 1	2	3	4	5	6	7	8	9	COMMENTS
1.	CA-PRSC-TB01-20110413	QC		X	4/13/11	0800	2	2									Lab prepared Trip Blank
2.	CA-PRSC-04-20110413	GW		X	4/13/11	0810	2	2									
3.	CA-PRSC-02-01-20110413	GW		X	4/13/11	0825	2	2									
4.	CA-PRSC-02-02-20110413	GW		X	4/13/11	0830	2	2									
5.	CA-PRSC-02-03-20110413	GW		X	4/13/11	0835	2	2									
6.	CA-PRSC-03-20110413	GW		X	4/13/11	0850	2	2									
7.	CA-PRSC-DUP01-20110413	GW		X	4/13/11	1200	2	2									
8. 9., 10.	CA-PRSC-01-20110413	GW		X	4/13/11	0900	6	6									Do MS/MSD
9.																	
10.																	

COMMENTS: ← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. [signature]	4-13-11 1230	1.
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY:	DATE/TIME	RECEIVED FOR LAB BY:
3. Fed Ex	4/14/11 9:15	3. Ken Pontre

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: YES

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

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CHEMTECH

CHAIN OF CUSTODY RECORD

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CHEMTECH PROJECT NO. C2506
QUOTE NO.
COC Number 085941

CLIENT INFORMATION (REPORT TO BE SENT TO.)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO. WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

VOCs

PRESERVATIVES

← Specify Preservatives
A - HCl B - HNO_3
C - H_2SO_4 D - NaOH
E - ICE F - Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1.	FD-TB02-20110602	QC		X	6/2/11	0700	2	2									Lab Supplied Trip blank
2.	FD-TW118-1620	Aq		X	6/2/11	0920	2	2									
3.	FD-TW118-2125	Aq		X	6/2/11	0950	2	2									
4.	FD-TW118-2630	Aq		X	6/2/11	1020	2	2									
5.	FC-~~MW~~ PZ 28 2-16-12 05I1-20110602	Aq		X	6/2/11	1140	2	2									
6.	SA-TW403-1115	Aq		X	6/2/11	1215	2	2									
7.	SA-TW403-2125	Aq		X	6/2/11	1240	2	2									
8.	SA-TW403-2630	Aq		X	6/2/11	1305	2	2									
9.	SA-TW403-3135	Aq		X	6/2/11	1330	2	2									
10.	SA-TW402-1115	Aq		X	6/2/11	1455	2	2									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER.	DATE/TIME:	RECEIVED BY:
1. [signature]	6-3-11 1500	1.
RELINQUISHED BY 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. Fed Ex	DATE/TIME: 6/04/11 10:15	RECEIVED FOR LAB BY: 3. Ken Rivera

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: YES

Page 1 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

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CHEMTECH

CHAIN OF CUSTODY RECORD

B1104018

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www.chemtech.net

CHEMTECH PROJECT NO. C2506
QUOTE NO.
COC Number 086026

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE: (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

VOCs

CHEMTECH SAMPLE ID (KR 6/06/11)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS (← Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other)
11.	SA-TW402-2125	Aq		X	6/2/11	1520	2	2									
12.	SA-TW402-2630	Aq		X	6/2/11	1545	2	2									
13., 14., 15.	SA-TW402-3135	Aq		X	6/2/11	1615	6	6									Do MS/MSD
16.	SA-DUP01-20110602	Aq		X	6/2/11	1800	2	2									
	~~SA-~~ VAS																
17.	FC-MW-05I-20110602	Aq		X	6/2/11	1720	2	2									
18.	SA-TW401-1115	Aq		X	6/3/11	0940	2	2									
19.	SA-TW401-2125	Aq		X	6/3/11	1005	2	2									
20.	SA-TW401-2630	Aq		X	6/3/11	1030	2	2									
21.	SA-TW401-3135	Aq		X	6/3/11	1055	2	2									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. [signature]	6-3-11 1500	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FedEx	DATE/TIME: ~~6/03~~ 6/04/11 10:15	RECEIVED FOR LAB BY: 3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 2 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

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CHEMTECH
CHAIN OF CUSTODY RECORD

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CHEMTECH PROJECT NO.
QUOTE NO.
COC Number 086028

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Breyack
PHONE: (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO. WE08 LOCATION:
PROJECT MANAGER: Dave Breyack
e-mail:
PHONE (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
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PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

VOCs

CHEMTECH SAMPLE ID (KR 6/06/11)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1. 22.	FC-MW-05$-20110603	Aq		X	6/3/11	0845	2	2									
2. 23.	SA-TW404-2125	Aq		X	6/3/11	1210	2	2									
3. 24.	SA-TW404-3135	Aq		X	6/3/11	1235	2	2									
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME	RECEIVED BY:
1. [signature]	6-3-11 1500	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. Fed Ex	DATE/TIME: 6/04/11 10:15	RECEIVED FOR LAB BY: 3. Jen Rivera

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 3 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
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CHEMTECH PROJECT NO. C2595
QUOTE NO.
COC Number 082919

CLIENT INFORMATION (REPORT TO BE SENT TO.)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

VOCs

PRESERVATIVES

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	HCl 1	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-TB03-20110606	QC		X	6/6/11	0700	2	2									Lab supplied Trip Blank
2.	SA-TW405-3135	Aq		X	6/6/11	0950	2	2									
3.	SA-TW405-2125	Aq		X	6/6/11	1015	2	2									
4.	SADUP02-20110606	Aq		X	6/6/11	1800	2	2									
5.	SA-TW407-3135	Aq		X	6/6/11	1105	2	2									
6.	SA-TW407-2125	Aq		X	6/6/11	1135	2	2									
7.	SA-TW406-2125	Aq		X	6/6/11	1245	2	2									
8.	SA-TW406-3135	Aq		X	6/6/11	1310	2	2									
9. 10. 11.	SA-TW416-3337	Aq		X	6/6/11	1500	6	6									Do MS/MSD
12.	SA-TW416-3842	Aq		X	6/6/11	1525	2	2									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6-8-11 1730	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3.	DATE/TIME: 9:45 6-9-11	RECEIVED FOR LAB BY: 3. [signature]

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 1 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☐ NO

1344

Revision 8/2007

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CHEMTECH

CHAIN OF CUSTODY RECORD

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www.chemtech.net

CHEMTECH PROJECT NO. C7595
QUOTE NO.
COC Number 082920

CLIENT INFORMATION (REPORT TO BE SENT TO.)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

VOCs

CHEMTECH SAMPLE ID (Lab use only)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1 (HCl)	2	3	4	5	6	7	8	9	COMMENTS
1. 13.	SA-TW416-4347	Aq		X	6/6/11	1550	2	2									
2. 14.	SA-RB01-20110607	QC		X	6/7/11	0640	2	2									Rinsate
3. 15.	SA-PZ136I-20110607	Aq		X	6/7/11	0750	2	2									
4. 16.	SA-TW416-4852	Aq		X	6/7/11	0942	2	2									
5. 17.	SA-TW415-3337	Aq		X	6/7/11	1050	2	2									
6. 18.	SA-TW415-3842	Aq		X	6/7/11	1115	2	2									
7. 19.	SA-TW415-4347	Aq		X	6/7/11	1140	2	2									
8. 20.	SA-TW414-3337	Aq		X	6/7/11	1340	2	2									
9. 21.	SA-TW414-3842	Aq		X	6/7/11	1405	2	2									
10. 22.	SA-TW414-4347	Aq		X	6/7/11	1430	2	2									

Specify Preservatives: A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. [signature]	6-8-11 1750	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3.	DATE/TIME: 9:45 6-9-11	RECEIVED FOR LAB BY: 3. [signature]

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 2 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☐ YES ☒ NO

1345

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH

CHAIN OF CUSTODY RECORD

B1105123

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2596
QUOTE NO.
COC Number 082918

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#.
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

VOCs

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1 (HCl)	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-PZ135I-20110607	Aq		X	6/7/11	1635	2	2									
2.	SA-PZ137I-20110608	Aq		X	6/8/11	0755	2	2									
3.	SA-SB01-20110608	Aq		X	6/8/11	0816	2	2									Source Blank
4.	SA-TW413-3337	Aq		X	6/8/11	0935	2	2									
5.	SA-TW413-3842	Aq		X	6/8/11	1000	2	2									
6.	SA-TW413-4347	Aq		X	6/8/11	1025	2	2									
7.	SA-DUP03-20110608	Aq		X	6/8/11	1800	2	2									
8.	SA-TW412-3337	Aq		X	6/8/11	1245	2	2									
9.	SA-TW412-3842	Aq		X	6/8/11	1310	2	2									
10.	SA-TW412-4347	Aq		X	6/8/11	1335	2	2									

← Specify Preservatives
A - HCl B - HNO_3
C - H_2SO_4 D - NaOH
E - ICE F - Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. [signature]	6-8-11 1730	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3.	DATE/TIME: 9:45 6-9-11	RECEIVED FOR LAB BY: 3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 3 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2596
QUOTE NO.
COC Number 082921

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: TetraTech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

VOCs

PRESERVATIVES

COMMENTS

← Specify Preservatives
A - HCl B - HNO_3
C - H_2SO_4 D - NaOH
E - ICE F - Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 HCl	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-TW411-3337	Aq		X	6/8/11	1515	2	2									
2.	SA-TW411-3842	Aq		X	6/8/11	1545	2	2									
3.	SA-TW411-4347	Aq		X	6/8/11	1610	2	2									
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6-8-11 1730	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.	6-8-11 8:45	3. [signature]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 4 of 4

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☒ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT D-25 YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2634
QUOTE NO.
COC Number 082922

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE: (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#.
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

VOCs

PRESERVATIVES

← Specify Preservatives
A - HCl B - HNO_3
C - H_2SO_4 D - NaOH
E - ICE F - Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	VOCs 1 (HCl)	2	3	4	5	6	7	8	9	COMMENTS
1.	SA-TB04-20110609	QC		X	6/9/11	0650	2	2									Lab Supplied Trip Blank
2.	SA-PZ133I-20110609	Aq		X	6/9/11	0755	2	2									
3.	SA-TW410-3337	Aq		X	6/9/11	1040	2	2									
4.	SA-TW410-3842	Aq		X	6/9/11	1105	2	2									
5.	SA-TW410-4347	Aq		X	6/9/11	1130	2	2									
6.	SA-DUP04-20110609	Aq		X	6/9/11	1800	2	2									
7.	SA-TW409-3337	Aq		X	6/9/11	1340	2	2									
8, 9, 10	SA-TW409-3842	Aq		X	6/9/11	1410	6	6									Do MS/MSD
11	SA-TW409-4347	Aq		X	6/9/11	1440	2	2									
12	SA-PZ133II-20110609	Aq		X	6/9/11	1645	2	2									

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	6-10-11 1500	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3. FedEx	6/11/11 10:20	3. Ken Kwan

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: yes

Page 1 of 2

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

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CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2634
QUOTE NO.
COC Number 082923

CLIENT INFORMATION (REPORT TO BE SENT TO)

COMPANY: Tetra Tech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack
PHONE (757) 461-3824 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Colverton
PROJECT NO. WE08 LOCATION:
PROJECT MANAGER: Dave Brayack
e-mail:
PHONE (757) 461-3824 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

VOCs

PRESERVATIVES

COMMENTS

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

	CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1 (HCl)	2	3	4	5	6	7	8	9	COMMENTS
1.	13	SA-PZ139I-20110610	Aq		X	6/10/11	0755	2	2									
2.	14	SA-TW408-3337	Aq		X	6/10/11	0950	2	2									
3.	15	SA-TW408-3842	Aq		X	6/10/11	1015	2	2									
4.	16	SA-TW408-4347	Aq		X	6/10/11	1040	2	2									
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY:
1. [signature]	6-10-11 1500	1.
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY:	DATE/TIME:	RECEIVED FOR LAB BY:
3. Fed Ex	6/11/11 10:20	3. Ken Rivers

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: YES

Page 2 of 2

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

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CHEMTECH

CHAIN OF CUSTODY RECORD

B1106120

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C2874
QUOTE NO.
COC Number 083678

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: TetraTech NUS
ADDRESS: 5700 Lake Wright Drive
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Dave Brayack or Rob Sok
PHONE: (757) 466-4904 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: NWIRP Calverton
PROJECT NO.: 112G02045 LOCATION: PRSC
PROJECT MANAGER: Dave Brayack
e-mail: dave.brayack@tetratech.com
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: See PO#:
ADDRESS: Scope of Work
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

VOC

PRESERVATIVES

A

COMMENTS

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1.	CA-PRSC-02-01-20110629	water		X	6/29/11	0715	2	X									
2.	CA-PRSC-02-02-20110629	↓		↓	↓	0720	2	X									
3.	CA-PRSC-02-03-20110629					0725	2	X									
4.	CA-PRSC-TB01						2	X									
5.	CA-PRSC-DUP01					1200	2	X									
6.	CA-PRSC-01-20110629					0800	2	X									
7.	CA-PRSC-03-20110629					0815	2	X									
8.	CA-PRSC-03 MS/MSD	↓		↓	↓	0815	4	X									
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME: 6/29/11 1600	RECEIVED BY: 1. FED-EX
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FED-EX	DATE/TIME: 9:40 6-30-11	RECEIVED FOR LAB BY: 3. [illegible]

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 4°C
Ice in Cooler?: YES

Page ____ of ____

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

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C3830

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 1 OF 4

PROJECT NO: 112G02045	SITE NAME: NWIRP Calverton	PROJECT MANAGER AND PHONE NUMBER: Rob Sok 757-466-4904	LABORATORY NAME AND CONTACT: Chemtech Kurt Hummler
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Jacob Birkett 757-814-9916	ADDRESS: 284 Sheffield St.
		CARRIER/WAYBILL NUMBER: FedEx 8686-9317-0619	CITY, STATE: Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl
TYPE OF ANALYSIS: VOCs

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs							COMMENTS
1.	9-14	1430	SA-TB01-20110914	QC	—	2	2							Lab prepared
2.	9-19	1435	SA-PZ-133I1-20110919	GW	G	2	2							
3.	9-19	1437	SA-PZ-135 CT JB 2-16-12 -20110919	GW	G	2	2							
4.	9-19	1535	SA-PZ-133I-20110919	GW	G	2	2							
5.	9-19	1540	SA-PZ-166I1-20110919	GW	G	2	2							
6.	9-19	1655	SA-PZ-136I-20110919	GW	G	2	2							
7.	9-19	1655	SA-PZ-137 CT JB 2-16-12 -20110919	GW	G	2	2							
8.	9-19	1300	SA-Dup01-20110919	GW	G	2	2							
9.	9-20	0930	SA-PZ-118I-20110920	GW	G	2	2							
10,11,12	9-20	0933	SA-PZ-118S-20110920	GW	G	6	6							Run MSMD
13.	9-20	1120	SA-PZ-123I-20110920	GW	G	2	2							
14.	9-20	1120	SA-PZ-122S-20110920	GW	G	2	2							
15.	9-20	1225	SA-PZ-123I1-20110920	GW	G	2	2							

1. RELINQUISHED BY: Jacob Birkett	DATE: 9-23-11	TIME: 1400	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY: Fed Ex	DATE: 9/24/11	TIME: 10:10	3. RECEIVED BY: [illegible]	DATE: 9/24/11	TIME: 10:10

COMMENTS: Temp: 4°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

FORM NO. TtNUS-001 3/99

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 2 OF 4 C3830

PROJECT NO: 112G02045	SITE NAME: NWIRP Calverton	PROJECT MANAGER AND PHONE NUMBER: Rob Sok 757-466-4904	LABORATORY NAME AND CONTACT: Chemtech Kurt Hummler
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER AND PHONE NUMBER: Jacob Birkett 757-814-9916	ADDRESS: 284 Sheffield St.
		CARRIER/WAYBILL NUMBER: FedEx 8686-9317-0619	CITY, STATE: Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl
TYPE OF ANALYSIS: VOCs

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs							COMMENTS
16.	9-20	1240	SA-PZ-122D-20110920	GW	G	2	2							
17.	9-20	1330	SA-PZ-123S-20110920	GW	G	2	2							
18.	9-20	1415	SA-PZ-120S-20110920	GW	G	2	2							
19.	9-20	1445	SA-PZ-138I1-20110920	GW	G	2	2							
20.	9-20	1538	SA-PZ-408-20110920	GW	G	2	2							
21.	9-20	1610	SA-MW-126S-20110920	GW	G	2	2							
22.	9-20	1200	SA-Dup02-20110920	GW	G	2	2							
23.	9-21	0925	SA-MW-126I-20110921	GW	G	2	2							
24.	9-21	0925	SA-PZ-157I1-20110921	GW	G	2	2							
25.	9-21	1150	SA-MW-126D-20110921	GW	G	2	2							
26.	9-21	1348	SA-PZ-143 CI JB 2-16-12 20110921	GW	G	2	2							
27.	9-21	1448	SA-PZ-142 CI JB 2-16-12 20110921	GW	G	2	2							
28.	9-21	1505	SA-PZ-140 CI JB 2-16-12 20110921	GW	G	2	2							Note: "Sample bottles have "MW", should be "PZ"

1. RELINQUISHED BY: Jacob Birkett [signature]	DATE: 9-23-11	TIME: 1400	1. RECEIVED BY:	DATE:	TIME:
2. RELINQUISHED BY:	DATE:	TIME:	2. RECEIVED BY:	DATE:	TIME:
3. RELINQUISHED BY: Fed Ex	DATE: 9/24/11	TIME: 10:10	3. RECEIVED BY: [signature]	DATE: 9/24/11	TIME: 10:10

COMMENTS: Temp: 4°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

FORM NO. TtNUS 002 3/99

1662

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 3 OF 4 C3831

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02045	NWIRP Calverton	Rob Sok ~~757-814-9~~ 757-466-4904	Chemtech Kurt Hummler
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Jacob Birkett 757-814-9916	ADDRESS: 284 Sheffield St.
		CARRIER/WAYBILL NUMBER: FedEx 8686-9317-0619	CITY, STATE: Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOC							COMMENTS
1.	9-21	1630	SA-PZ-141I-20110921 (JB 2-16-12)	GW	G	2	2							
2.	9-21	1700	SA-FB01-20110921	QC	–	2	2							Field Blank
3.	9-21	1710	SA-RB01-20110921	QC	–	2	2							Rinsate Blank
4.	9-21	1200	SA-Dup03-20110921	GW	G	2	2							
5,7.	9-22	0830	SA-MW-127S-20110922	GW	G	6	6							Run MS MSD
8.	9-22	0839	SA-MW-128S-20110922	GW	G	2	2							
9.	9-22	0935	SA-MW-127I-20110922	GW	G	2	2							
10.	9-22	0952	SA-MW-128D-20110922	GW	G	2	2							
11.	9-22	1040	SA-MW-127D-20110922	GW	G	2	2							
12.	9-22	1055	SA-MW-128I-20110922	GW	G	2	2							
13.	9-22	1224	SA-PZ-144S-20110922	GW	G	2	2							
14.	9-22	1232	SA-PZ-144I-20110922	GW	G	2	2							
15.	9-22	1407	SA-MW-129S-20110922	GW	G	2	2							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY: Jacob Birkett	9-23-11	1400	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY: Fed Ex	9/24/11	10:10	3. RECEIVED BY: Ken Rivers	9/24/11	10:15

COMMENTS: Temp: 4°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 4 OF 4 C3831

PROJECT NO: 112G02045	SITE NAME: NWIRP Calverton	PROJECT MANAGER AND PHONE NUMBER: Rob Sak 757-466-4904	LABORATORY NAME AND CONTACT: Chemtech Kurt Hummler
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER AND PHONE NUMBER: Jacob Birkett 757-814-9916	ADDRESS: 284 Sheffield St.
		CARRIER/WAYBILL NUMBER: FedEx 8686-9317-0619	CITY, STATE: Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOCs								COMMENTS
16.	9-22	1500	SA-MW-129I-20110922	GW	G	2	2								
17.	9-22	1605	SA-MW-129D-20110922	GW	G	2	2								
18.	9-22	0800	SA-Dup04-20110922	GW	G	2	2								
19.	9-23	0825	SA-PZ-122I-20110923	GW	G	2	2								
20.	9-23	0941	SA-MW-130S-20110923	GW	G	2	2								
21.	9-23	1052	SA-MW-130I-20110923 JB 9-23-11	GW	G	2	2								

1. RELINQUISHED BY: Jacob Birkett [signature]	DATE: 9-23-11	TIME: 1400	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY: Fed Ex	DATE: 9/24/11	TIME: 10:10	3. RECEIVED BY: Ken Rivera	DATE: 9/24/11	TIME: 10:10

COMMENTS: Temp: 4°C

D-32

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C3958
QUOTE NO.
COC Number 088448

CLIENT INFORMATION (REPORT TO BE SENT TO:)
COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr. Suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: Rob Sok
PHONE: 757-466-4904 FAX:

CLIENT PROJECT INFORMATION
PROJECT NAME: Calverton
PROJECT NO.: 112G02045 LOCATION:
PROJECT MANAGER: Rob Sok
e-mail: Rob.Sok@tetratech.com
PHONE: 757-466-4904 FAX:

CLIENT BILLING INFORMATION
BILL TO: See Contract PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION
FAX: DAYS *
HARD COPY: Standard DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION
☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1 VOCs (Aqueous) A	2 VOCs (Sediment) —	3	4	5	6	7	8	9	COMMENTS
1.	SA-PZ-125-20110928	GW		X	9-28-2011	0857	2	2									
2.	SA-SW-125-20110928	GW		X	9-28-11	0900	2	2									
3.	SA-SD-125-20110928	SD		X	9-28-11	0910	1		1								
4.	SA-PZ-148-20110928	GW		X	9-28-11	1040	2	2									
5.	SA-PZ-124-20110928	GW		X	9-28-11	1108	2	2									
6.	SA-SW-124-20110928	SW		X	9-28-11	1110	2	2									
7.	SA-SD-124-20110928	SD		X	9-28-11	1115	1		1								
8.	SA-PZ-147-20110928	GW		X	9-28-11	1142	2	2									
9.	SA-SW-201-20110928	SW		X	9-28-11	1150	2	2									
10.	SA-SD-201-20110928	SD		X	9-28-11	1205	1		1								

PRESERVATIVES: ← Specify Preservatives
A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. Jacob Birkett	9-30-11 1000	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. Fed-Ex	DATE/TIME: 10/1/11 10:30	RECEIVED FOR LAB BY: 3. Swetha Mehta

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:
Cooler Temp. 5°C
Ice in Cooler?: YES

Page 1 of 2

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C3958
QUOTE NO.
COC Number 088449

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY:
ADDRESS: See previous page
CITY: STATE: ZIP:
ATTENTION:
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME:
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: Standard DAYS *
EDD: DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☐ EDD FORMAT

ANALYSIS

1 VOCs (Aqueous) 2 VOCs (Sediment) 3 4 5 6 7 8 9

PRESERVATIVES

	1	2	3	4	5	6	7	8	9
	A	–							

COMMENTS ← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

CHEMTECH SAMPLE ID (Q1 01 04 11)	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
11., 12., 13.	SA-SW-204-20110928	SW		X	9-28-11	1220	6	6									Run MSMSD
14, 15, 16	SA-SD-204-20110928	SD		X	9-28-11	1230	3		3								Run MSMSD
17.	SA-PZ-Dup01-20110928	GW		X	9-28-11	1200	2	2									
18.	SA-SW-Dup01-20110928	SW		X	9-28-11	1400	2	2									
19	SA-SD-Dup01-20110928	SD		X	9-28-11	1300	1		1								
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. Jacob Birkett	9-30-11 1000	1.
RELINQUISHED BY: 2.	DATE/TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3. FED-EX	DATE/TIME: 10/1/11 10:30	RECEIVED FOR LAB BY: 3. Sneha Mehta

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:

Cooler Temp. 5°C
Ice in Cooler?: YES

Page 2 of 2

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 1 OF 4 C3960

PROJECT NO: 112G02045	SITE NAME: NWIRP Calverton	PROJECT MANAGER AND PHONE NUMBER: Rob Sok 757-466-4904	LABORATORY NAME AND CONTACT: Chemtech Kurt Hummler
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER AND PHONE NUMBER: Jacob Birkett 757-814-9916	ADDRESS: 284 Sheffield Street
		CARRIER/WAYBILL NUMBER: FedEx 8741-9938-1380	CITY, STATE: Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCL

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOC							COMMENTS
1.	9-26	0810	SA-RB02-20110926	QC	–	2	2							Rinsate on Grundfos
2.	9-14	1430	SA-TB02-20110914	QC	–	2	2							Lab prepared
3.	9-26	1011	ET-MW03S-20110926	GW	G	2	2							
4.	9-26	1110	ET-MW02S-20110926	GW	G	2	2							
5.	9-26	1206	ET-MW01S-20110926	GW	G	2	2							
6.	9-26	1429	FC-MW05I-20110926	GW	G	2	2							
7.	9-26	1430	FC-MW07S-20110926	GW	G	2	2							
8.	9-26	1523	FC-MW05S-20110926	GW	G	2	2							
9,10,11	9-26	1525	FC-MW07I-20110926	GW	G	6	6							Run MSMSD
12.	9-26	1623	FC-PZ05I1-20110926	GW	G	2	2							
13.	9-26	1630	FC-MW03SR1-20110926	GW	G	2	2							
14.	9-26	1000	ET-Dup05-20110926	GW	G	2	2							
15.	9-26	1500	FC-Dup06-20110926	GW	G	2	2							temp. 5°C

1. RELINQUISHED BY: Jacob Birkett [signature]	DATE: 9-30-11	TIME: 1000	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY: FED-EX	DATE: 10/1/11	TIME: 10:30	3. RECEIVED BY: Snehal Mehta	DATE: 10/1/11	TIME: 10:30

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 2 OF 4 C3960

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02045	NWIRP Calverton	Rob Sok 757-466-4904	Chemtech Kurt Hummler
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER	ADDRESS
[signature]		Jacob Birkett 757-814-9916	284 Sheffield St.
		CARRIER/WAYBILL NUMBER	CITY, STATE
			Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl
TYPE OF ANALYSIS: VOCS

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	VOCS							COMMENTS
16.	9-27	0730	SA-FB02-20110927	QC	—	2	2							Field blank decon water
17.	9-27	0839	SA-MW-132S-20110927	GW	G	2	2							
18.	9-27	0850	SA-MW-131D-20110927	GW	G	2	2							
19.	9-27	0927	SA-MW-132I-20110927	GW	G	2	2							
20.	9-27	0940	SA-MW-131I-20110927	GW	G	2	2							
21.	9-27	1020	SA-MW-131S-20110927	GW	G	2	2							
22.	9-27	1050	SA-PZ-145D-20110927	GW	G	2	2							
*	9-27	1115	SA-PZ-145S-20110927	GW	G	2	2							
	9-27	1143	SA-PZ-145I-20110927	GW	G	2	2							
	9-28	1432	FC-MW02SR1-20110928	GW	G	2	2							
	9-28	1440	FC-MW04I-20110928	GW	G	2	2							
	9-28	1514	FC-MW02IR1-20110928	GW	G	2	2							
	9-28	1532	FC-MW04S-20110928	GW	G	2	2							Temp. 5°C

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY Jacob Birkett [signature]	9-30-11	1000	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY FED-EX	10/1/11	10:30	3. RECEIVED BY SNEHAL MEHTA	10/1/11	10:30

COMMENTS *Samples are in C3961.

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

C3961

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 2 OF 4

PROJECT NO: 112G02045	SITE NAME: NWIRP Calverton	PROJECT MANAGER AND PHONE NUMBER: Rob Sok 757-466-4904	LABORATORY NAME AND CONTACT: Chemtech Kurt Hummler
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER AND PHONE NUMBER: Jacob Birkett 757-814-9916	ADDRESS: 284 Sheffield St.
		CARRIER/WAYBILL NUMBER	CITY, STATE: Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl
TYPE OF ANALYSIS: VOCs

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs								COMMENTS
*	9-27	0730	SA-FB02-20110927	QC	—	2	2								Field blank decon water
	9-27	0839	SA-MW-132S-20110927	GW	G	2	2								
	9-27	0850	SA-MW-131D-20110927	GW	G	2	2								
	9-27	0927	SA-MW-132I-20110927	GW	G	2	2								
	9-27	0940	SA-MW-131I-20110927	GW	G	2	2								
	9-27	1020	SA-MW-131S-20110927	GW	G	2	2								
	9-27	1050	SA-PZ-145D-20110927	GW	G	2	2								
1.	9-27	1115	SA-PZ-145S-20110927	GW	G	2	2								
2.	9-27	1143	SA-PZ-145I-20110927	GW	G	2	2								
3.	9-28	1432	FC-MW02SR1-20110928	GW	G	2	2								
4.	9-28	1440	FC-MW04I-20110928	GW	G	2	2								
5.	9-28	1514	FC-MW02IR1-20110928	GW	G	2	2								
6.	9-28	1532	FC-MW04S-20110928	GW	G	2	2								Temp. 5°C

C3960

Copy
Original Documents are in Notebook
Kurt
10/04/11

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
Jacob Birkett [signature]	9-30-11	1000			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY FED-EX	DATE 10/1/11	TIME 10:30	3. RECEIVED BY SNEHAL MEHTA	DATE 10/1/11	TIME 10:30

COMMENTS

1175

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 3/99

FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 3 OF 4 C3961

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02045	NWIRP Calverton	Rob Sok 757-466-4904	Chemtech Kurt Hummler
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Jacob Birkett 757-814-9916	ADDRESS: 284 Sheffield St
		CARRIER/WAYBILL NUMBER: Fed Ex	CITY, STATE: Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOC							COMMENTS
7.	9-28	1605	FC-MW06S-20110928	GW	G	2	2							
8.	9-28	1630	FC-MW08S-20110928	GW	G	2	2							
9.	9-29	0845	FC-MW01S-20110929	GW	G	2	2							
10.	9-29	0850	FT-MW08S-20110929	GW	G	2	2							
11.	9-29	0940	FC-MW01I-20110929	GW	G	2	2							
12.	9-29	0940	FT-MW08I-20110929	GW	G	2	2							
13.	9-29	1040	FT-MW05I-20110929	GW	G	2	2							
14, 15	9-29	1051	FT-MW06S-20110929	GW	G	6	6							Run MSMSD
17.	9-29	1135	FT-MW05S-20110929	GW	G	2	2							
18.	9-29	1149	FT-MW06I-20110929	GW	G	2	2							
19.	9-29	1305	FT-MW07S-20110929	GW	G	2	2							
20.	9-29	1350	FT-MW04-20110929	GW	G	2	2							temps °C
21.	9-29	1502	FT-MW02I-20110929	GW	G	2	2							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY: Jacob Birkett	9-30-11	1000	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY: FED-EX	10/1/11	10:30	3. RECEIVED BY: Sneha Mehta	10/1/11	10:30

COMMENTS

1176

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 4 OF 4 C3961

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02045	NWIRP Calverton	Rob Sok 757-~~BK~~ 466-4904	Chemtech Kurt Hummler
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Jacob Birkett 757-814-9916	ADDRESS: 284 Sheffield St.
		CARRIER/WAYBILL NUMBER: FedEx	CITY, STATE: Mountainside, NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOC								COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)						G								
PRESERVATIVE USED						HCl								
22. 9-29	1505	FT-MW02S-20110929	GW	G	2	2								
23. 9-29	1200	FT-Dup07-20110929	GW	G	2	2								
														Temp. 5°C

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
Jacob Birkett	9-30-11	1000			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY FED-EX	DATE 10/1/11	TIME 10:30	3. RECEIVED BY Sneha Mehta	DATE 10/1/11	TIME 1030

COMMENTS 1177

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 1 OF 2 4126

PROJECT NO: 112G02750	SITE NAME: NWIRP Calverton
PROJECT MANAGER AND PHONE NUMBER	Dave Brayack 757-461-3824
LABORATORY NAME AND CONTACT:	Chemtech Kurt Hummler 908-728-3143
SAMPLERS (SIGNATURE)	Jacob Birkett
FIELD OPERATIONS LEADER AND PHONE NUMBER	Jacob Birkett 757-814-9916
ADDRESS	284 Sheffield St.
CARRIER/WAYBILL NUMBER	FedEx 8741-9938-1346
CITY, STATE	Mountainside NJ 07092

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOCs							COMMENTS
1.	10-10	0930	SA-TB01-20111010	QC	—	2	2							Lab prepared
2.	10-10	1245	SA-TW417-4852	GW	G	2	2							
3.	10-10	1318	SA-TW417-4347	GW	G	2	2							
4.	10-10	1510	SA-TW417-3842	GW	G	2	2							
5.	10-10	1540	SA-TW417-3337	GW	G	2	2							
6,7,8.	10-10	1605	SA-TW417-2832	GW	G	6	6							Run MSMSD
9.	10-10	1200	SA-Dup01-20111010	GW	G	2	2							
10.	10-11	0930	SA-TW418-4852	GW	G	2	2							
11.	10-11	0905	SA-TW418-4347	GW	G	2	2							
12.	10-11	1110	SA-TW418-3842	GW	G	2	2							
13.	10-11	1142	SA-TW418-2832	GW	G	2	2							
14.	10-11	1242	SA-TW418-3337	GW	G	2	2							
15.	10-11	1425	SA-TW419-4347	GW	G	2	2							

1. RELINQUISHED BY Jacob Birkett	DATE 10-12-11	TIME 1615	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY FedEx	DATE 10-13-11	TIME 9:00	3. RECEIVED BY	DATE 10-13-11	TIME 9:00

COMMENTS: Temp: 5°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

1763 3/99
FORM NO. TINUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 2 OF 2 C4126

PROJECT NO: 112G02750	SITE NAME: NWIRP Calverton
PROJECT MANAGER AND PHONE NUMBER	Dave Brayack 757-461-3824 Chemtech
LABORATORY NAME AND CONTACT:	Kurt Hummler 908-728-3143
FIELD OPERATIONS LEADER AND PHONE NUMBER	Jacob Birkett 757-814-9916
ADDRESS	284 Sheffield St.
CARRIER/WAYBILL NUMBER	FedEx 8741-9938-1346
CITY, STATE	Mountainside, NJ 07092
SAMPLERS (SIGNATURE)	Jacob Birkett
STANDARD TAT ☒ RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day	

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs							COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)							G							
PRESERVATIVE USED							HCl							
16.	10-11	1450	SA-TW419-4852	GW	G	2	2							
17.	10-11	1300	SA-Dup02-20111011	GW	G	2	2							
18.	10-12	0745	SA-FB01-20111012	QC	—	2	2							Source blank of driller decon water
19.	10-12	0906	SA-TW~~420~~ 419-3842	GW	G	2	2							
20.	10-12	0937	SA-TW~~420~~ 419-3337	GW	G	2	2							
21.	10-12	1005	SA-TW419-2832	GW	G	2	2							
22.	10-12	1030	SA-RB01-20111012 QC	~~GW~~	G	2	2							Rinsate of TW screen
23.	10-12	1220	SA-TW420-4852	GW	G	2	2							
24.	10-12	1247	SA-TW420-4347	GW	G	2	2							
25.	10-12	1314	SA-TW420-3842	GW	G	2	2							
26.	10-12	1341	SA-TW420-3337	GW	G	2	2							
27.	10-12	1408	SA-TW420-2832	GW	G	2	2							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY Jacob Birkett	10-12-11	1615	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY FedEx	10-13-11	9:00	3. RECEIVED BY	10-13-11	9:00

COMMENTS Temp: 5°C

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

1764 3/99

FORM NO. TtNUS-001

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. C4269
QUOTE NO.
COC Number 020095

CLIENT INFORMATION (REPORT TO BE SENT TO:)

COMPANY: Tetra Tech
ADDRESS: 5700 Lake Wright Dr suite 309
CITY: Norfolk STATE: VA ZIP: 23502
ATTENTION: David Brayack
PHONE 757-441-3768 FAX: 757-441-4148

CLIENT PROJECT INFORMATION

PROJECT NAME: Site 2
PROJECT NO.: 112602750 LOCATION: Calverton, NY
PROJECT MANAGER: David Brayack
e-mail: David.Brayack@tetratech.com
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: See PO - PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: DAYS *
HARD COPY: DAYS *
EDD: Standard DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other
☒ EDD FORMAT

ANALYSIS: VOC

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES A 1	2	3	4	5	6	7	8	9	COMMENTS
1.	FT-TB02-20111007	TB		X	10/17/11	1130	2	X									La prepared
2.	FT-GW430-7175	GW		X	10/17/11	1149	2	X									
3.	FT-GW430-6165	GW		X	10/17/11	1212	2	X									
4.	FT-GW430-5155	GW		X	10/17/11	1326	2	X									
5.	FT-GW430-4145	GW		X	10/17/11	1508	2	X									
6.	FT-GW430-3135	GW		X	10/17/11	1540	2	X									
7.	FT-GW430-2125	GW		X	10/17/11	1608	2	X									
8.	FT-MW035-20111018	GW		X	10/18/11	1040	2	X									
9.	FT-MW015-20111018	GW		X	10/18/11	1300	2	X									
10.	FT-MW01I-20111018	GW		X	10/18/11	1350	2	X									

Specify Preservatives: A-HCl B-HNO_3 C-H_2SO_4 D-NaOH E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	10/19/11 1600	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3. FedEx	10/20/11 905	3.

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
Cooler Temp. 6°C
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:
Ice in Cooler?:

Page 1 of 3

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☒ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

755

Revision 8/2007

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 1 OF 2 C4662

PROJECT NO: 112G02750	SITE NAME: NWIRP Calverton
PROJECT MANAGER AND PHONE NUMBER	Dave Brayack 757-461-3824
FIELD OPERATIONS LEADER AND PHONE NUMBER	Jacob Birkett 757-814-9916
CARRIER/WAYBILL NUMBER	FedEx 8741-9938-1302
LABORATORY NAME AND CONTACT:	Chemtech Kurt Hummler
ADDRESS	284 Sheffield Street
CITY, STATE	Mountainside NJ 07092
SAMPLERS (SIGNATURE)	Jacob Birkett

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: HCl

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: VOCs							COMMENTS
1.	11-14	1130	SA-TB01-20111114	QA	—	2	2							Lab prepared
2.	11-15	1155	SA-TW367-4246	GW	G	2	2							
3,4,5	11-15	1213	SA-TW367-1620	GW	G	6	6							Run MSMSD
6.	11-15	1314	SA-TW367-3640	GW	G	2	2							
7.	11-15	1335	SA-TW367-2630	GW	G	2	2							
8.	11-15	1446	SA-TW366-1519	GW	G	2	2							
9.	11-15	1505	SA-TW366-4246	GW	G	2	2							
10.	11-15	1528	SA-TW366-2529	GW	G	2	2							
11.	11-15	1100	SA-Dup01-20111115	GW	G	2	2							
12.	11-16	0850	SA-TW366-3539	GW	G	2	2							
13.	11-16	0845	SA-RB01-20111116	QA	—	2	2							Rinsate TW screen
14.	11-16	0830	SA-FB01-20111116	QA	—	2	2							Field Blank decon water
15.	11-16	0950	SA-TW365-4044	GW	G	2	2							Temp. 4°C

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY Jacob Birkett	11-16-11	1700	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY FedEx	11/17/11	9:10	3. RECEIVED BY Ken Rivers	11/17/11	9:10

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

FORM NO. TtNUS-007 3/99

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER | PAGE 2 OF 2 C4662

PROJECT NO: 112G02750	SITE NAME: NWIRP Calverton
PROJECT MANAGER AND PHONE NUMBER	Dave Brayack 757-461-3824
FIELD OPERATIONS LEADER AND PHONE NUMBER	Jacob Birkett 757-814-9916
CARRIER/WAYBILL NUMBER	FedEx 8741-9938-1302
LABORATORY NAME AND CONTACT:	Clentech Kurt Hummler
ADDRESS	284 Sheffield Street
CITY, STATE	Mountainside, NJ 07092
SAMPLERS (SIGNATURE)	Jacob Birkett

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

	DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	VOCs								COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)							G								
PRESERVATIVE USED							HCl								
TYPE OF ANALYSIS															
16.	11-16	1005	SA-TW365-1418	GW	G	2	2								
17.	11-16	1102	SA-TW365-3034	GW	G	2	2								
18.	11-16	1115	SA-TW365-2024	GW	G	2	2								
19.	11-16	0930	SA-Dup02-20111116	GW	G	2	2								

Temp. 4°C

1. RELINQUISHED BY Jacob Birkett	DATE 11-16-11	TIME 1700	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY Fed Ex	DATE 11/17/11	TIME 9:10	3. RECEIVED BY	DATE 11/17/11	TIME 9:10

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

FORM NO. TtNUS-001 3/98

Appendix E

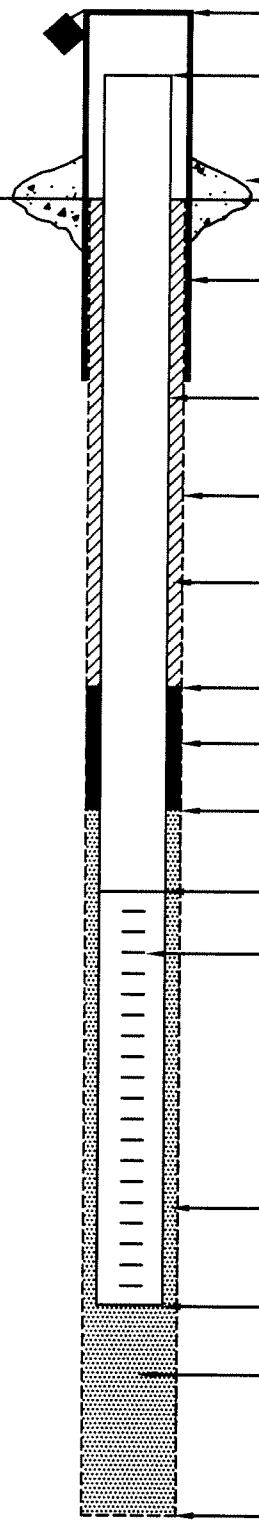
Monitoring Well Construction and Development Records

WELL NO.: FC-PZ-05I1

Tetra Tech NUS, Inc.

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT 112G02045	LOCATION NWIRP Calverton	DRILLER John Diamond
PROJECT NO. Site 6A	BORING FC-PZ-05I1	DRILLING METHOD DPT
DATE BEGUN 12-16-10	DATE COMPLETED 12-16-10	DEVELOPMENT METHOD
FIELD GEOLOGIST Vince Shickora		
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: 1

ELEVATION/HEIGHT OF TOP OF RISER PIPE: 1~2.5'

TYPE OF SURFACE SEAL: Concrete apron

I.D. OF SURFACE CASING: 3 inch
TYPE OF SURFACE CASING: Steel

RISER PIPE I.D.: 1 inch
TYPE OF RISER PIPE: schedule 40 PVC

BOREHOLE DIAMETER: 3 inch

TYPE OF BACKFILL: Cement/Bentonite Grout

ELEVATION/DEPTH TOP OF SEAL: 10'

TYPE OF SEAL: Granular Bentonite

DEPTH TOP OF SAND PACK: 19'

ELEVATION/DEPTH TOP OF SCREEN: 20'

TYPE OF SCREEN: 1" prepack well screen (PVC)
SLOT SIZE x LENGTH: 0.010" x 10'
I.D. OF SCREEN: 1 inch

TYPE OF SAND PACK: #1 Silica Quartz

ELEVATION/DEPTH BOTTOM OF SCREEN: 30'

ELEVATION/DEPTH BOTTOM OF SAND PACK: 30'
BACKFILL MATERIAL BELOW SAND: Natural Formation

ELEVATION/DEPTH OF HOLE: 30'

ACAD:FORM_MWSU.dwg 07/20/99 INL

Tetra Tech NUS, Inc.

MONITORING WELL DEVELOPMENT RECORD

Well: FC-PZ-05I1
Site: Site 6A
Date Installed: 12-16-10
Date Developed: 12-16-10
Dev. Method: Hand surge w/checkvalve
Pump Type: check valve

Depth to Bottom (ft.):
Static Water Level Before (ft.): 10.26
Static Water Level After (ft.): 10.27
Screen Length (ft.): 5
Specific Capacity:
Casing ID (in.): 1

Responsible Personnel: J. Birkett, S. Kinna
Drilling Co.: Zebra
Project Name: Calverton
Project Number: 112G02045

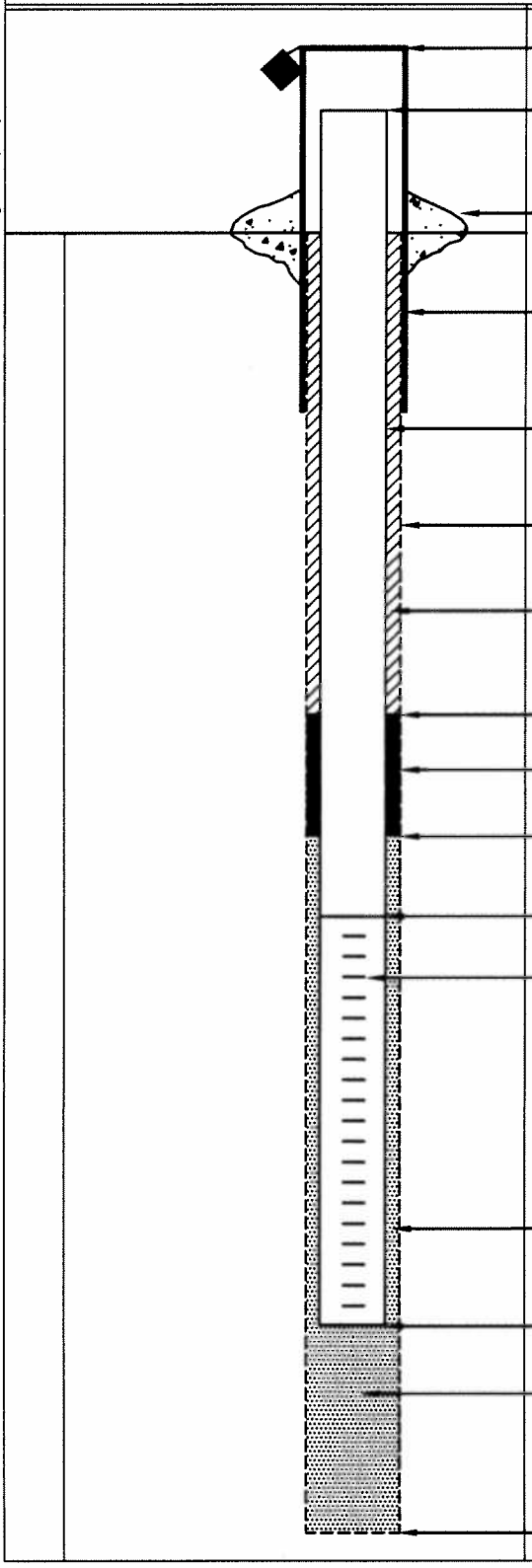
Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks ORP	(odor, color, etc.)
1202		5	10.26	12.26	6.14	0.239	7,154	-149	clear
1219		10		12.57	6.36	0.224	1,972	-111	" " slight solventodor
1226		15		12.47	6.30	0.210	724	-82	" "
1231		20		12.59	6.29	0.205	389	-74	" "
1245		25	10.27	12.02	6.33	0.200	203	-52	" "

WELL NO.: SA-PZ-408

Tetra Tech NUS, Inc.

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Calverton	LOCATION Southern Area	DRILLER Lucas Reiss
PROJECT NO. 112602045	BORING SA-PZ-408	DRILLING METHOD DPT
DATE BEGUN 6-10-11	DATE COMPLETED 6-10-11	
FIELD GEOLOGIST Vince Shickora		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: 1

ELEVATION/HEIGHT OF TOP OF RISER PIPE: 1 ~ 2.5'

TYPE OF SURFACE SEAL: Grout to surface

I.D. OF SURFACE CASING: NA

TYPE OF SURFACE CASING: ↓

RISER PIPE I.D.: 1 inch

TYPE OF RISER PIPE: schedule 40 PVC

BOREHOLE DIAMETER: 3.25 inch

TYPE OF BACKFILL: Cement / Bentonite Grout

ELEVATION/DEPTH TOP OF SEAL: 135'

TYPE OF SEAL: Bentonite Holeplug

DEPTH TOP OF SAND PACK: 37'

ELEVATION/DEPTH TOP OF SCREEN: 137'

TYPE OF SCREEN: Pre-pack well screen (1 inch PVC)

SLOT SIZE x LENGTH: 0.01" X 5'

I.D. OF SCREEN: 1 inch

TYPE OF SAND PACK: #1 Silica Quartz

ELEVATION/DEPTH BOTTOM OF SCREEN: ~~142~~ 142' VAS

ELEVATION/DEPTH BOTTOM OF SAND PACK: 142'

BACKFILL MATERIAL BELOW SAND: Natural formation

ELEVATION/DEPTH OF HOLE: 142'

ACAD:FORM_MWSU.dwg 07/20/99 INL

Tetra Tech NUS, Inc.

MONITORING WELL DEVELOPMENT RECORD

Well: SA-PZ-408
Site: Southern Area
Date Installed:
Date Developed: 6-14-11
Dev. Method: Waterra
Pump Type: NA

Depth to Bottom (ft.): 42'
Static Water Level Before (ft.):
Static Water Level After (ft.):
Screen Length (ft.): 5 Feet
Specific Capacity:
Casing ID (in.): 1 inch

Responsible Personnel: Vince Shickora
Drilling Co.: Zebra
Project Name: NWIRP Calverton
Project Number: 112G02045

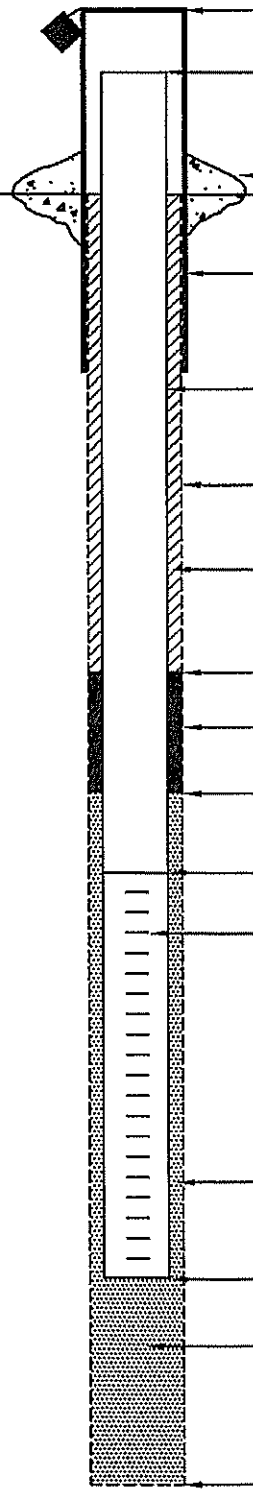
Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1505	–	1.0	8.02' (TOC)	13.65	6.66	0.302	3945	Very cloudy (Brown
1510	–	3.0	8.02'	12.75	6.62	0.233	3986	" " "
1515	–	5.0	8.02	12.35	6.25	0.211	3840	" " "
1518	–	7.5	8.02	12.26	5.94	0.197	3206	" " "
1522	–	10.0	8.02	12.30	5.92	0.191	2753	" " "
1526	–	12.5	8.02	12.35	5.79	0.189	2005	" " "
1530	–	15.0	8.02	12.41	5.76	0.186	1411	cloudy (Brown)
1535	–	17.5	8.02	12.43	5.78	0.186	736	" "
1539	–	20.0	8.02	12.39	5.80	0.184	522	" "
1543	–	22.5	8.02	12.40	5.78	0.180	504	" "
1547	–	25.0	8.02	12.41	5.79	0.179	496	" "
1551	–	28.0	8.02	12.42	5.79	0.178	513	" " End Development

WELL NO.: SA-PZ-171I

Tetra Tech NUS, Inc.

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Calverton	LOCATION Southern Area	DRILLER Lukas Reiss
PROJECT NO. 112G02750	BORING SA-PZ-171	DRILLING METHOD DPT
DATE BEGUN 11-17-11	DATE COMPLETED 11-17-11	
FIELD GEOLOGIST J. Birkett		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: 13.25

ELEVATION/HEIGHT OF TOP OF RISER PIPE: 13

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 4 inch
TYPE OF SURFACE CASING: Stainless Steel Casing (Round)

RISER PIPE I.D.: 1 inch
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 3 1/4 inch

TYPE OF BACKFILL: Bentonite cement grout

ELEVATION/DEPTH TOP OF SEAL: 131'

TYPE OF SEAL: Coated Bentonite Pellets (Hydrated)

DEPTH TOP OF SAND PACK: 35'

ELEVATION/DEPTH TOP OF SCREEN: 141.5'

TYPE OF SCREEN: Prepack Schedule 40 PVC Screen

SLOT SIZE x LENGTH: 0.010" x 5'

I.D. OF SCREEN: 1 inch

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: 146.5'

ELEVATION/DEPTH BOTTOM OF SAND PACK: 146.5'
BACKFILL MATERIAL BELOW SAND:

ELEVATION/DEPTH OF HOLE: 146.5'

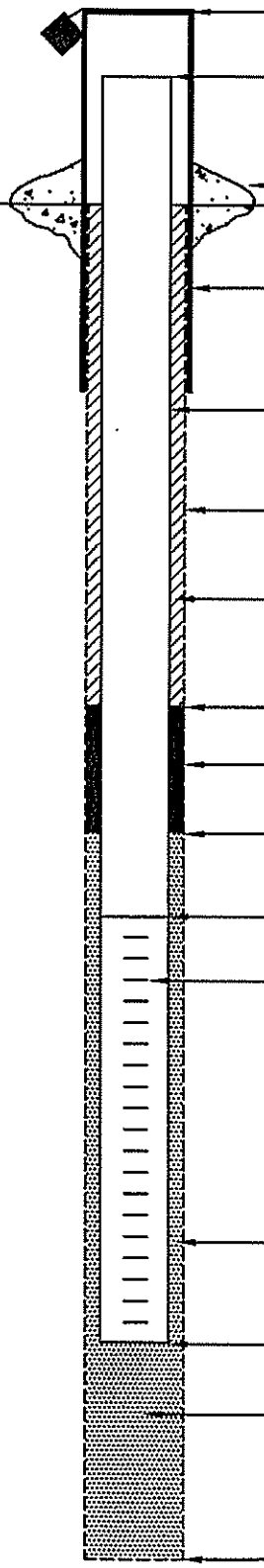
ACAD:FORM_MWSU.dwg 07/20/99 INL

WELL NO.: SA-PZ172 I

Tetra Tech NUS, Inc.

OVERBURDEN MONITORING WELL SHEET STICK-UP

PROJECT NWIRP Calverton	LOCATION Southern Area	DRILLER Lukas Reiss
PROJECT NO. 112G02750	BORING SA-PZ172	DRILLING METHOD DPT
DATE BEGUN 11-16-11	DATE COMPLETED 11-17-11	
FIELD GEOLOGIST J. Birkett		DEVELOPMENT METHOD
GROUND ELEVATION	DATUM	



ELEVATION/HEIGHT OF TOP OF SURFACE CASING: 12.75

ELEVATION/HEIGHT OF TOP OF RISER PIPE: 12.5

TYPE OF SURFACE SEAL: Concrete

I.D. OF SURFACE CASING: 4"
TYPE OF SURFACE CASING: Steel protective casing (round)

RISER PIPE I.D.: 1 inch
TYPE OF RISER PIPE: Schedule 40 PVC

BOREHOLE DIAMETER: 3 1/4 inch

TYPE OF BACKFILL: cement bentonite grout

ELEVATION/DEPTH TOP OF SEAL: 132'

TYPE OF SEAL: Coated Bentonite pellets (hydrated)

DEPTH TOP OF SAND PACK: 37'

ELEVATION/DEPTH TOP OF SCREEN: 143.5'

TYPE OF SCREEN: Prepacked screen Schedule 40 PVC

SLOT SIZE x LENGTH: 0.010" x 5'

I.D. OF SCREEN: 2 inch

TYPE OF SAND PACK: #1 Silica Sand

ELEVATION/DEPTH BOTTOM OF SCREEN: 148.5'

ELEVATION/DEPTH BOTTOM OF SAND PACK: 148.5'
BACKFILL MATERIAL BELOW SAND: NA

ELEVATION/DEPTH OF HOLE: 148.5'

ACAD:FORM_MWSU.dwg 07/20/99 INL

Tetra Tech NUS, Inc.

MONITORING WELL DEVELOPMENT RECORD

Site: NWIRP Calverton
Well: SA-P217I
Date Installed:
Date Developed: 12/14/11
Dev. Method: surge/check valve
Pump Type: check valve

Depth to Bottom (ft.):
Static Water Level Before (ft.): 14.87
Static Water Level After (ft.): 14.87
Screen Length (ft.): 5
Specific Capacity: -
Casing ID (in.): 1"

Project Name: NWIRP Calverton
Project Number: 112G02750
Site Geologist: E. Wu
Drilling Co.: —

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.)
		3					420	very cloudy / grey
		5					613	
		7					239	
		9					167	slightly cloudy

Tetra Tech NUS, Inc.

MONITORING WELL DEVELOPMENT RECORD

Site: Site 2
Well: SA- PZ172I
Date Installed: 4 Gn
Date Developed: 12-13-11
Dev. Method: Hand /check valve
Pump Type: Check valve

Depth to Bottom (ft.): ____
Static Water Level Before (ft.): 14.72
Static Water Level After (ft.): ____
Screen Length (ft.): 5'
Specific Capacity: ____
Casing ID (in.): ~~10~~ 1" JB 3-9-12

Project Name: NWIRP Calverton
Project Number: 112602750
Site Geologist: E. Walt
Drilling Co.: —

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.) No odor
1120		~5					1391	grey, cloudy, silty
1125		~10					462	colorless, sl. cloudy, trace silt
1148		~15					217	colorless, sl. cloudy, no silt

Appendix F

Monitoring Well Groundwater Sample Log Sheets and Low Flow Purge Data Sheets

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-PZ-05I1-20101216
Sample Location: FC-PZ-05I1
Sampled By: S. Kinna
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 ORP
Date: 12-16-10								
Time: 1340								
Method: Low Flow	clear	6.20	0.223	12.35	9.87	0.00	0.0	-97

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 12-16-10								
Method: Low Flow	See low flow purge sheet for details							
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 10.27								
One Casing Volume(gal/L):								
Start Purge (hrs): 1255								
End Purge (hrs): 1340								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: FC-PZ-05I I
DATE: 12-16-16

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
1255	10.27	300	6.16	0.202	192	0.00	11.93	-42	0.0	light brown
1300	10.27	300	6.23	0.222	93.3	0.00	12.13	-72	0.0	" "
1305	10.27	300	6.23	0.223	32.8	0.00	12.28	-81	0.0	clear, slight solvent odor
1310	10.28	300	6.23	0.224	35.7	0.00	12.34	-86	0.0	" "
1315	10.28	300	6.22	0.225	35.5	0.00	12.32	-88	0.0	" "
1320	10.28	300	6.23	0.226	35.2	0.00	12.29	-91	0.0	" "
1325	10.28	300	6.21	0.225	35.2	0.00	12.47	-94	0.0	" "
1330	10.28	300	6.21	0.227	28.1	0.00	12.41	-97	0.0	" "
1335	10.28	300	6.21	0.227	18.6	0.00	12.38	-98	0.0	" "
1340	10.28	300	6.20	0.223	9.87	0.00	12.35	-97	0.0	" "

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: ET-MW01B-20110312
Sample Location: ET-MW01B
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-12-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1435	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	6.44	0.065	9.50	7.92	10.91	0.0	143

PURGE DATA:

Date: 3-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 9.56'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1350								
End Purge (hrs): 1435								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 5 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: ET-MW01
DATE: 3-12-11

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
1345	9.56'	—	—	—	—	—	—	—	—	Initial
1350	9.56	390	6.05	0.064	46.70	11.79	10.55	138	0.0	Tinted (orange)
1355	9.57	375	6.16	0.065	29.62	11.31	10.23	134	0.0	very slight Tint (orange)
1400	9.57	375	6.22	0.066	20.01	11.02	9.84	137	0.0	clear
1405	9.57	375	6.28	0.066	15.20	10.91	9.73	138	0.0	clear
1410	9.57	375	6.33	0.066	10.09	10.92	9.70	138	0.0	clear
1415	9.57	375	6.38	0.066	8.87	10.94	9.64	139	0.0	clear
1420	9.57	375	6.41	0.066	7.68	10.89	9.59	140	0.0	clear
1425	9.57	375	6.43	0.065	8.03	10.92	9.56	141	0.0	clear
1430	9.57	375	6.43	0.065	8.10	10.92	9.52	142	0.0	clear
1435	9.57	375	6.44	0.065	7.92	10.91	9.50	143	0.0	clear-collect sample
										DO Field Kit
										reading → 5 ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: ET-MW-02$-20110310
Sample Location: ET-MW-02$
Sampled By: S. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-12-11	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	clear	5.97	0.229	4.98	1.72	16.29	0.0	50

PURGE DATA:

Date: 3-12-11	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 purge sheet for details						
Total Well Depth (TD):								
Static Water Level (WL): 9.07								
One Casing Volume(gal/L):								
Start Purge (hrs): 1340								
End Purge (hrs): 1427								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: ET-MW-02S
DATE: 3-12-11

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
1339	9.07									
1340	9.08	300	5.54	0.181	74.0	14.63	6.85	91	0.0	clear w/orange algae
1345	9.08	300	5.65	0.177	18.6	17.14	5.75	78	0.0	" "
1350	9.08	300	5.79	0.201	21.0	16.46	5.39	66	0.0	clear
1355	9.08	300	5.81	0.215	15.6	16.32	5.35	61	0.0	
1400	9.08	300	5.83	0.227	8.33	16.08	5.20	57	0.0	
1405	9.08	300	5.88	0.234	15.2	16.26	5.20	54	0.0	
1410	9.08	300	5.89	0.235	5.14	16.24	5.06	53	0.0	
1415	9.08	300	5.91	0.236	3.41	16.14	5.01	52	0.0	
1420	9.08	300	5.95	0.231	1.63	16.21	4.98	50	0.0	
1425	9.08	300	5.97	0.229	1.72	16.29	4.98	50	0.0	
1427	Collect Sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: ET-MW-03S-20110312
Sample Location: ET-MW-03S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-12-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1327	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	5.20	0.043	5.04	1.58	16.98	0.0	125

PURGE DATA:

Date: 3-12-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 9.92								
One Casing Volume(gal/L):								
Start Purge (hrs): 1240								
End Purge (hrs): 1327								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

~~Field Test Kit - D.O =~~

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: ET-MW-03S
DATE: 3-12-11

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
1238	9.92									
1240	9.94	300	5.64	0.035		12.94	12.44	86	0.0	clear
1245	9.94	300	5.36	0.043	1.71	17.76	5.86	100	0.0	
1250	9.94	300	5.28	0.043	1.47	17.50	5.44	108	0.0	
1255	9.94	300	5.26	0.042	2.89	17.38	5.39	112	0.0	
1300	9.94	300	5.24	0.043	2.62	17.33	5.28	115	0.0	
1305	9.94	300	5.22	0.044	3.32	17.31	5.19	118	0.0	
1310	9.94	300	5.22	0.043	4.46	17.38	5.12	120	0.0	
1315	9.94	300	5.20	0.043	2.97	17.09	5.05	123	0.0	
1320	9.94	300	5.21	0.043	1.64	17.16	5.10	124	0.0	
1325	9.94	300	5.20	0.043	1.58	16.98	5.04	125	0.0	
1327	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW01S-20110313
Sample Location: FC-MW01S
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1020	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	5.33	0.067	12.34	2.80	9.15	0.0	196

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 7.99								
One Casing Volume(gal/L):								
Start Purge (hrs): 0935								
End Purge (hrs): 1020								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains or elevated PID readings observed.
- DO Field Kit reading → 3 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW01$
DATE: 3-13-11

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
0930	7.99	—	—	—	—	—	—	—	—	Initial
0935	7.99	385	6.23	0.064	8.56	9.69	11.75	104	0.0	clear
0940	7.99	385	5.70	0.065	9.67	9.74	11.77	140	0.0	clear
0945	8.00	385	5.46	0.065	7.25	9.36	12.00	161	0.0	clear
0950	8.00	385	5.39	0.067	8.00	9.67	11.89	173	0.0	clear
0955	8.00	385	5.38	0.066	5.23	9.28	11.97	180	0.0	clear
1000	8.00	385	5.35	0.066	4.80	9.18	12.08	183	0.0	clear
1005	8.00	385	5.33	0.067	3.51	9.21	12.14	188	0.0	clear
1010	8.00	385	5.33	0.067	3.12	9.13	12.20	191	0.0	clear
1015	8.00	385	5.33	0.067	2.95	9.18	12.30	194	0.0	clear
1020	8.00	385	5.33	0.067	2.80	9.15	12.34	196	0.0	clear - collect sample
										DO Field Kit
										reading → 3 ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW01I-20110313
Sample Location: FC-MW01I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0925								
Method: Low Flow	clear	6.02	0.151	9.22	3.54	8.92	0.0	80

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 8.17'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0840								
End Purge (hrs): 0925								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO field kit reading → 0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW01I
DATE: 3-13-11

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
0835	8.17	–	–	–	–	–	–	–	–	Initial
0840	8.17	385	5.72	0.141	10.05	11.90	9.05	212	0.0	clear
0845	8.17	395	5.84	0.145	8.14	10.69	9.25	170	0.0	clear
0850	8.17	395	5.91	0.147	5.31	10.06	9.22	138	0.0	clear
0855	8.17	395	5.95	0.149	4.63	9.70	9.21	119	0.0	clear
0900	8.17	395	5.97	0.149	3.90	9.38	9.20	108	0.0	clear
0905	8.17	395	5.97	0.150	3.02	9.19	9.21	99	0.0	clear
0910	8.17	395	5.98	0.152	3.34	9.08	9.23	92	0.0	clear
0915	8.17	395	5.99	0.152	3.52	9.03	9.23	85	0.0	clear
0920	8.17	395	6.01	0.151	3.60	8.96	9.24	82	0.0	clear
0925	8.17	395	6.02	0.151	3.54	8.92	9.22	80	0.0	clear - collect sample
										DO Field Kit
										reading → 0.8 ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW02$RI-20110314
Sample Location: FC-MW02$RI
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0840	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	6.50	0.697	8.25	4.65	9.03	8.0	-45

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 7.28								
One Casing Volume(gal/L):								
Start Purge (hrs): 0755								
End Purge (hrs): 0840								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	Yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- very slight fuel like odor observed
- No stains or elevated PID readings observed
- DO field kit reading → 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW02S RI
DATE: 3-14-11

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	7.28									
0755	7.28	390	6.45	1.26	6.75	12.19	9.02	-1	0.1	clear
0800	7.28	390	6.58	1.05	6.20	10.67	8.42	-30	0.0	clear
0805	7.28	390	6.56	0.827	5.83	9.97	8.32	-35	0.0	clear
0810	7.28	390	6.54	0.802	5.29	9.84	8.30	-35	0.0	clear
0815	7.28	390	6.52	0.780	4.68	9.78	8.27	-34	0.0	clear
0820	7.28	390	6.52	0.738	4.71	9.36	8.26	-37	0.0	clear
0825	7.28	390	6.51	0.700	4.59	9.25	8.30	-39	0.0	clear
0830	7.28	390	6.50	0.701	4.66	9.16	8.31	-41	0.0	clear
0835	7.28	390	6.51	0.699	4.63	9.07	8.27	-43	0.0	clear
0840	7.28	390	6.50	0.697	4.65	9.03	8.25	-45	0.0	clear - collect sample
										DO field kit
										reading → 0.6 ppm

SIGNATURE(S): WAR

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW02IRI-20110314
Sample Location: FC-MW02IRI
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0945	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	5.63	0.083	12.85	2.70	8.72	0.0	106

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 0900								
End Purge (hrs): 0945								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	Yes

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed.

- DO Field Kit reading → 3 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW02IRI
DATE: 3-14-11

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	7.24	–	–	–	–	–	–	–	–	Initial
0900	7.24	395	7.10	0.076	5.77	9.44	11.64	-38	0.0	clear
0905	7.24	395	6.25	0.081	4.43	9.35	12.55	29	0.0	clear
0910	7.24	395	5.96	0.086	4.05	9.21	12.73	47	0.0	clear
0915	7.24	395	5.85	0.088	3.81	8.96	12.70	61	0.0	clear
0920	7.24	395	5.73	0.087	3.12	8.88	12.67	79	0.0	clear
0925	7.24	395	5.70	0.081	2.99	8.91	12.68	90	0.0	clear
0930	7.24	395	5.65	0.082	2.82	8.75	12.74	95	0.0	clear
0935	7.24	395	5.62	0.082	2.77	8.76	12.80	101	0.0	clear
0940	7.24	395	5.63	0.083	2.69	8.74	12.83	104	0.0	clear
0945	7.24	395	5.63	0.083	2.70	8.72	12.85	106	0.0	clear - collect sample
										DO Field Kit
										reading → 3 ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW-03SR1-20110313
Sample Location: FC-MW-03SR1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1445								
Method: Low Flow - Peristaltic	Clear	5.81	0.661	3.62	1.85	19.99*	0.0	-54

PURGE DATA:

Date: 3-13-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 8.83								
One Casing Volume(gal/L):								
Start Purge (hrs): 1357								
End Purge (hrs): 1445								
Total Purge Time (min): 48								
Total Vol. Purged (gal/L): 45 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

Field D.O. Test Kit = 0.05 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW-03$R1
DATE: 3-13-11

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
1355	8.83									
1357	8.84	300	5.55	0.713		15.61	6.40	26	0.0	Clear, slightly sudsy purge water
1402	8.84	300	5.64	0.812	21.8	16.22	4.42	-6	0.0	
1407	8.84	300	5.68	0.732	6.26	18.41	3.90	-19	0.0	
1412	8.84	300	5.71	0.696	7.71	19.10	3.75	-29	0.0	
1417	8.84	300	5.72	0.671	1.77	19.36	3.66	-35	0.0	
1422	8.84	300	5.75	0.658	1.76	19.99*	3.70	-40	0.0	*blinking
1427	8.84	300	5.77	0.663	2.06	19.99*	3.65	-46	0.0	
1432	8.84	300	5.79	0.657	5.60	19.99*	3.69	-48	0.0	
1437	8.84	300	5.80	0.658	2.36	19.99*	3.63	-52	0.0	
1442	8.84	300	5.81	0.661	1.85	19.99*	3.62	-54	0.0	
1445	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW04S-20110313
Sample Location: FC-MW04S
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1130	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	5.17	0.039	9.30	14.26	9.97	0.0	223

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC		see low flow purge sheet for details						
Total Well Depth (TD):								
Static Water Level (WL): 6.47								
One Casing Volume(gal/L):								
Start Purge (hrs): 1045								
End Purge (hrs): 1130								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO field kit reading → 3 ppm

Circle if Applicable:

MS/MSD YES

Duplicate ID No.: —

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW04S
DATE: 3-13-11

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
1040	6.47	—	—	—	—	—	—	—	—	Initial
1045	6.47	390	5.44	0.044	33.12	12.10	9.57	210	0.0	slight Tint (orange)
1050	6.47	390	5.23	0.041	30.09	11.00	9.18	220	0.0	" " "
1055	6.47	390	5.16	0.040	22.17	10.69	9.14	224	0.0	clear
1100	6.47	390	5.15	0.040	19.70	10.41	9.20	222	0.0	clear
1105	6.47	390	5.16	0.040	18.00	10.29	9.20	222	0.0	clear
1110	6.47	390	5.15	0.040	17.02	10.25	9.27	223	0.0	clear
1115	6.47	390	5.16	0.040	16.36	10.20	9.25	223	0.0	clear
1120	6.47	390	5.17	0.040	14.87	10.16	9.26	223	0.0	clear
1125	6.47	390	5.17	0.040	15.00	9.98	9.29	222	0.0	clear
1130	6.47	390	5.17	0.039	14.26	9.97	9.30	223	0.0	clear - collect sample
										DO Field Kit
										reading → 3 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW04I-20110313
Sample Location: FC-MW04I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1235	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	5.52	0.073	13.70	5.48	9.01	0.0	217

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 6.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 1150								
End Purge (hrs): 1235								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 5 ppm

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	
—	—	

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW04I
DATE: 3-13-11

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	6.40	—	—	—	—	—	—	—	—	Initial
1150	6.40	390	5.65	0.067	16.75	9.94	13.00	213	0.0	clear
1155	6.40	390	5.52	0.074	132.08	9.34	13.70	215	0.0	slightly cloudy (Gray)
1200	6.40	390	5.52	0.072	40.13	9.16	13.76	214	0.0	slight Tint (Gray)
1205	6.40	390	5.50	0.073	13.64	9.15	13.65	214	0.0	clear
1210	6.40	390	5.52	0.073	11.47	9.23	13.47	218	0.0	clear
1215	6.40	390	5.52	0.073	8.84	9.16	13.52	218	0.0	clear
1220	6.40	390	5.51	0.073	7.33	9.08	13.58	216	0.0	clear
1225	6.40	390	5.52	0.073	6.61	9.02	13.64	217	0.0	clear
1230	6.40	390	5.51	0.073	6.13	9.02	13.67	217	0.0	clear
1235	6.40	390	5.52	0.073	5.48	9.01	13.70	217	0.0	clear-collect sample
										DO Field Kit
										reading → 5 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW-05$-20110313
Sample Location: FC-MW-05$
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0924	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	5.20	0.040	4.02	1.68	13.00	0.0	217

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 4" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 9.50								
One Casing Volume(gal/L):								
Start Purge (hrs): 0837								
End Purge (hrs): 0924								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

D.O. Field Test Kit → 2.0 ppm

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW-05S
DATE: 3-13-11

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
0835	9.50									
0837	9.50	300	5.13	0.145		12.92	5.37	244	0.0	tan algae (thick)
0842	9.50	300	5.14	0.048	9.75	10.75	4.62	241	0.0	Some algae + F. Sand
0847	9.50	300	5.15	0.041	3.66	14.38	4.25	239	0.0	clear
0852	9.50	300	5.15	0.041	4.77	12.99	4.12	236	0.0	
0857	9.50	300	5.16	0.041	3.31	12.94	4.11	233	0.0	
0902	9.50	300	5.18	0.041	1.89	12.94	4.11	229	0.0	
0907	9.50	300	5.18	0.041	2.98	12.50	3.99	226	0.0	
0912	9.50	300	5.18	0.041	1.93	12.63	3.96	224	0.0	
0917	9.50	300	5.20	0.040	1.61	12.96	4.02	220	0.0	
0922	9.50	300	5.20	0.040	1.68	13.00	4.02	217	0.0	
0924	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC~~MW~~-05I1-20110313 (GPZ JB 2-16-12)
Sample Location: FC~~MW~~-05I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1122	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - peristaltic	clear	5.97	0.097	6.60	1.11	12.85	0.0	-34

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 9.45								
One Casing Volume(gal/L):								
Start Purge (hrs): 1035								
End Purge (hrs): 1122								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

Field Test Kit → D.O = 0.2 ppm
slight solvent odor

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	FCSA-Dup07-20110313 0900

Signature(s):

LOW FLOW PURGE DATA SHEET

PZ 2-16-12

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-~~MW~~-05I1
DATE: 3-13-11

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
1034	9.45									
1035	9.46	300	5.69	0.089		14.18	9.09	35	0.0	red algae and F. sand
1040	9.46	300	5.81	0.088	66.2	11.62	7.25	38	0.0	clear
1045	9.46	300	5.87	0.092	15.2	11.36	7.09	12	0.0	slight solvent odor
1050	9.46	300	5.89	0.093	5.62	11.56	7.05	-2	0.0	
1055	9.46	300	5.91	0.094	4.73	11.69	7.15	-13	0.0	
1100	9.46	300	5.94	0.095	2.60	12.15	7.12	-21	0.0	
1105	9.46	300	5.96	0.095	1.84	12.38	7.13	-26	0.0	
1110	9.46	300	5.95	0.096	1.67	12.81	6.64	-28	0.0	
1115	9.46	300	5.96	0.097	1.25	12.81	6.54	-31	0.0	
1120	9.46	300	5.97	0.097	1.11	12.85	6.60	-34	0.0	
1122	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW-05I-20110313
Sample Location: FC-MW-05I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1027	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow -grundfos	Clear	5.44	0.112	7.04	3.90	14.00	0.0	165

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 4" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 8.81								
One Casing Volume(gal/L):								
Start Purge (hrs): 0935								
End Purge (hrs): 1027								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 6.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	Yes

OBSERVATIONS / NOTES:

D.O. Field Test Kit → 1.0 ppm
Pull pump 2' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW-05I
DATE: 3-13-11

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
0933	8.81									
0935	8.85	350	5.49	0.110		13.36	6.07	192	0.0	clear
0940	8.85	350	5.50	0.110	5.20	10.02	6.47	189	0.0	clear
0945	8.85	350	5.51	0.110	6.75	10.44	7.43	182	0.0	
0950	8.85	350	5.51	0.112	8.77	10.00	6.95	177	0.0	
0955	8.85	350	5.49	0.110	9.50	10.11	7.50	174	0.0	
1000	8.85	350	Trouble shoot		Horiba	battery	wiring		0.0	
1005	8.85	350	5.48	0.107	6.86	10.43	8.52	167	0.0	
1010	8.85	350	5.47	0.111	5.57	10.94	7.55	166	0.0	
1015	8.85	350	5.46	0.112	5.81	13.70	7.31	165	0.0	
1020	8.85	350	5.45	0.111	4.83	14.26	6.99	165	0.0	
1025	8.85	350	5.44	0.112	3.90	14.00	7.04	165	0.0	
1027	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW06$-20110313
Sample Location: FC-MW06$
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1450	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	6.57	0.280	11.65	5.40	9.26	0.0	129

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 11.65								
One Casing Volume(gal/L):								
Start Purge (hrs): 1405								
End Purge (hrs): 1450								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW06$
DATE: 3-13-11

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
1400	—	—	—	—	—	—	—	—	—	Initial
1405	11.65	385	6.19	0.276	8.71	10.55	11.28	132	0.0	clear
1410	11.65	385	6.37	0.279	7.93	10.02	11.16	130	0.0	clear
1415	11.65	385	6.50	0.282	6.89	9.61	11.38	131	0.0	clear
1420	11.65	385	6.54	0.280	5.90	9.52	11.41	131	0.0	clear
1425	11.65	385	6.53	0.281	6.00	9.43	11.45	131	0.0	clear
1430	11.65	385	6.54	0.281	5.84	9.40	11.51	131	0.0	clear
1435	11.65	385	6.55	0.280	5.90	9.37	11.55	130	0.0	clear
1440	11.65	385	6.56	0.280	5.55	9.30	11.59	130	0.0	clear
1445	11.65	385	6.57	0.280	5.39	9.28	11.62	129	0.0	clear
1450	11.65	385	6.57	0.280	5.40	9.26	11.65	129	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW-07S-20110313
Sample Location: FC-MW-07S
Sampled By: J. Birkell
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11 / Time: 1238	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Method: Low Flow - peristaltic	clear	5.65	0.051	4.30	5.35	19.40	0.0	45

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 4" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 9.53								
One Casing Volume(gal/L):								
Start Purge (hrs): 1146								
End Purge (hrs): 1238								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

D.O Test Kit → 0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW-07S
DATE: 3-13-11

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	9.53									
1146	9.53	300	5.94	0.046	~~669AU~~	14.32	6.51	30	0.0	clear
1151	9.53	300	5.76	0.038	669AU	17.57	5.37	47	0.0	red algae thick
1156	9.53	300	5.70	0.038	149 NTU	18.56	4.97	54	0.0	clear w/ algae
1201	9.53	300	5.68	0.040	42.1	19.52	4.70	57	0.0	clear
1206	9.53	300	5.67	0.043	20.0	19.49	4.55	56	0.0	
1211	9.53	300	5.69	0.045	12.2	19.53	4.61	54	0.0	
1216	9.53	300	5.69	0.046	11.6	19.50	4.55	52	0.0	
1221	9.53	300	5.63	0.048	8.98	19.51	4.45	50	0.0	
1226	9.53	300	5.64	0.050	9.49	19.82	4.36	48	0.0	
1231	9.53	300	5.64	0.056	6.01	19.75	4.39	46	0.0	
1236	9.53	300	5.65	0.051	5.35	19.40	4.30	45	0.0	
1238	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW-07 I-20110313
Sample Location: FC-MW-07 I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1332	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	5.39	0.110	8.75	3.56	13.75	0.0	112

PURGE DATA:

Date: 3-13-11	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 purge sheet for details						
Total Well Depth (TD):								
Static Water Level (WL): 9.46								
One Casing Volume(gal/L):								
Start Purge (hrs): 1245								
End Purge (hrs): 1332								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 6 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

D.O Test Kit → 2.0ppm
Pump pulled up 2' from bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW-07 I
DATE: 3-13-11

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
1244	9.46									
1245	9.46	400	~~0.6~~ 570	0.081		16.24	6.70	52	0.0	
1250	9.46	400	5.59	0.099	90.9	13.40	7.76	70	0.0	cloudy (milky)
1255	9.46	400	5.53	0.103	66.1	13.51	8.15	83	0.0	slightly cloudy
1300	9.46	400	5.46	0.102	34.3	13.02	8.45	94	0.0	
1305	9.46	400	5.43	0.105	11.2	12.75	8.46	99	0.0	clear
1310	9.46	400	5.42	0.107	19.8	13.16	8.63	101	0.0	
1315	9.46	400	5.40	0.109	11.53	13.72	8.81	106	0.0	
1320	9.46	400	5.40	0.110	4.27	13.83	8.74	108	0.0	
1325	9.46	400	5.39	0.111	2.57	13.80	8.74	110	0.0	
1330	9.46	400	5.39	0.110	3.56	13.75	8.75	112	0.0	
1332	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW08$-20110313
Sample Location: FC-MW08$
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-13-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1345	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	5.63	0.066	7.94	7.89	10.46	0.0	130

PURGE DATA:

Date: 3-13-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 5.25'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1300								
End Purge (hrs): 1345								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → NA

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: FC-MW08
DATE: 3-13-11

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
1255	5.25	—	—	—	—	—	—	—	—	Initial
1300	5.25	380	5.65	0.047	13.60	12.63	8.21	220	0.0	clear
1305	5.25	375	5.55	0.049	16.81	11.66	8.14	213	0.0	clear
1310	5.25	375	5.52	0.053	11.09	11.08	8.11	195	0.0	clear
1315	5.25	375	5.54	0.055	10.23	10.89	8.08	177	0.0	clear
1320	5.25	375	5.58	0.059	9.22	10.70	8.05	162	0.0	clear
1325	5.25	375	5.60	0.062	8.74	10.52	8.03	151	0.0	clear
1330	5.25	375	5.61	0.064	8.20	10.50	7.97	142	0.0	clear
1335	5.25	375	5.62	0.065	7.95	10.47	7.93	135	0.0	clear
1340	5.25	375	5.62	0.066	7.77	10.45	7.95	132	0.0	clear
1345	5.25	375	5.63	0.066	7.89	10.46	7.94	130	0.0	clear - collect sample
										DO Field Kit
										reading → NA

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW01B-20110314
Sample Location: FT-MW01B
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1410	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	4.22	0.149	10.89	2.46	10.67	0.0	284

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 22.82								
One Casing Volume(gal/L):								
Start Purge (hrs): 1325								
End Purge (hrs): 1410								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: FT-MW01S
DATE: 3-14-11

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
1320	22.82	—	—	—	—	—	—	—	—	Initial
1325	22.82	385	4.26	0.151	5.76	11.19	10.82	271	0.0	clear
1330	22.82	385	4.22	0.149	3.64	10.71	10.90	273	0.0	clear
1335	22.82	385	4.22	0.149	3.21	10.75	10.87	275	0.0	clear
1340	22.82	385	4.21	0.149	3.14	10.76	10.86	278	0.0	clear
1345	22.82	385	4.22	0.149	2.82	10.73	10.91	277	0.0	clear
1350	22.82	385	4.22	0.149	2.70	10.71	10.88	279	0.0	clear
1355	22.82	385	4.22	0.149	2.56	10.69	10.92	280	0.0	clear
1400	22.82	385	4.22	0.149	2.44	10.72	10.89	282	0.0	clear
1405	22.82	385	4.22	0.149	2.53	10.69	10.91	283	0.0	clear
1410	22.82	385	4.22	0.149	2.46	10.67	10.89	284	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW01I-20110314
Sample Location: FT-MW01I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1510								
Method: Low Flow	Clear	5.69	0.037	11.48	9.50	10.74	0.0	233

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC		see low flow purge sheet for details						
Total Well Depth (TD):								
Static Water Level (WL): 22.52'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1425								
End Purge (hrs): 1510								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 11260 2045

WELL ID.: FT-MW01I
DATE: 3-14-11

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
1420	22.52	—	—	—	—	—	—	—	—	Initial
1425	22.52	385	5.54	0.038	10.46	11.36	10.72	245	0.0	clear
1430	22.52	385	5.63	0.037	10.00	10.92	11.13	241	0.0	clear
1435	22.52	385	5.63	0.038	11.15	10.72	11.44	240	0.0	clear
1440	22.52	385	5.64	0.037	8.86	10.80	11.47	238	0.0	clear
1445	22.52	385	5.65	0.037	8.20	10.76	11.50	235	0.0	clear
1450	22.52	385	5.67	0.037	8.13	10.75	11.44	233	0.0	clear
1455	22.52	385	5.68	0.037	11.46	10.77	11.47	233	0.0	clear
1500	22.52	385	5.69	0.037	12.40	10.74	11.51	232	0.0	clear
1505	22.52	385	5.69	0.037	9.57	10.70	11.57	232	0.0	clear
1510	22.52	385	5.69	0.037	9.50	10.74	11.48	233	0.0	clear

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW02S-20110315
Sample Location: FT-MW02S
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-15-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0935	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	6.68	0.639	8.66	6.82	9.25	0.0	-29.3

PURGE DATA:

Date: 3-15-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 32								
Well Casing Diameter & Material								
Type: 4 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 14.63								
One Casing Volume(gal/L):								
Start Purge (hrs): 0850								
End Purge (hrs): 0935								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- Strong fuel like odor with PID readings to 32 ppm from well
- Oily sheen observed on surface of purge water.

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
—	FT-DUP08-20110315 (1200hrs)	[signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW02$
DATE: 3-15-11

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
0835	14.63	—	—	—	—	—	—	—	—	Initial
0850	14.63	390	6.08	0.789	11.14	12.43	8.92	-35	0.0	clear
0855	14.63	390	6.34	0.732	9.11	11.23	9.02	-103	0.0	clear
0900	14.63	390	6.41	0.629	9.83	10.40	8.96	-128	0.0	clear
0905	14.63	390	6.43	0.620	9.16	9.87	8.89	-157	0.0	clear
0910	14.63	390	6.48	0.621	8.98	9.78	8.84	-194	0.0	clear
0915	14.63	390	6.56	0.620	9.02	9.62	8.79	-253	0.0	clear
0920	14.63	390	6.65	0.640	7.75	9.33	8.72	-286	0.0	clear
0925	14.63	390	6.68	0.638	7.13	9.29	8.69	-288	0.0	clear
0930	14.63	390	6.67	0.640	6.94	9.28	8.68	-291	0.0	clear
0935	14.63	390	6.68	0.639	6.82	9.25	8.66	-293	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW02I-20110315
Sample Location: FT-MW02I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-15-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1030	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	6.96	0.039	10.60	2.63	10.81	0.0	-75

PURGE DATA:

Date: 3-15-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 14.54'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0945								
End Purge (hrs): 1030								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	Yes

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW02I
DATE: 3-15-11

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
0940	14.54	—	—	—	—	—	—	—	—	Initial
0945	14.54	390	7.72	0.049	3.95	10.38	10.43	-213	0.0	clear
0950	14.54	390	7.66	0.044	2.70	10.50	10.54	-211	0.0	clear
0955	14.54	390	7.54	0.042	3.06	10.81	10.38	-200	0.0	clear
1000	14.54	390	7.45	0.040	3.09	10.73	10.46	-173	0.0	clear
1005	14.54	390	7.33	0.038	2.98	10.67	10.53	-149	0.0	clear
1010	14.54	390	7.24	0.039	2.90	10.70	10.55	-125	0.0	clear
1015	14.54	390	7.10	0.039	2.79	10.67	10.59	-103	0.0	clear
1020	14.54	390	7.00	0.039	2.81	10.73	10.65	-87	0.0	clear
1025	14.54	390	6.98	0.039	2.74	10.76	10.61	-79	0.0	clear
1030	14.54	390	6.96	0.039	2.63	10.81	10.60	-75	0.0	clear-collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW03-20110314
Sample Location: FT-MW03
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1150								
Method: Low Flow	clear	5.73	0.059	10.99	2.94	10.66	0.0	177

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 25.58								
One Casing Volume(gal/L):								
Start Purge (hrs): 1105								
End Purge (hrs): 1150								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed.

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW03
DATE: 3-14-11

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
1100	25.58	—	—	—	—	—	—	—	—	Initial
1105	25.59	385	6.04	0.057	6.23	11.63	10.97	134	0.0	clear
1110	25.59	390	5.85	0.058	5.43	10.85	10.97	149	0.0	clear
1115	25.59	390	5.78	0.058	2.76	10.81	11.01	155	0.0	clear
1120	25.59	390	5.77	0.059	2.94	10.75	10.99	160	0.0	clear
1125	25.59	390	5.76	0.059	3.01	10.70	11.02	165	0.0	clear
1130	25.59	390	5.76	0.059	2.89	10.74	10.97	168	0.0	clear
1135	25.59	390	5.75	0.059	3.04	10.75	10.99	171	0.0	clear
1140	25.59	390	5.74	0.059	2.97	10.71	10.98	173	0.0	clear
1145	25.59	390	5.74	0.059	2.91	10.68	10.96	175	0.0	clear
1150	25.59	390	5.73	0.059	2.94	10.66	10.99	177	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW04-20110314
Sample Location: FT-MW04
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1300								
Method: Low Flow	Clear	4.27	0.096	10.40	2.80	10.03	0.0	258

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 20.33								
One Casing Volume(gal/L):								
Start Purge (hrs): 1215								
End Purge (hrs): 1300								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Colverton
PROJECT NUMBER: 112602045

WELL ID.: FT-MW04
DATE: 3-14-11

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	20.33	–	–	–	–	–	–	–	–	Initial
1215	20.33	390	4.59	0.100	6.87	11.27	10.37	237	0.0	clear
1220	20.33	390	4.33	0.094	4.94	10.71	10.43	242	0.0	clear
1225	20.33	390	4.27	0.086	4.02	10.50	10.47	248	0.0	clear
1230	20.33	390	4.26	0.089	3.67	10.40	10.42	247	0.0	clear
1235	20.33	390	4.27	0.092	3.34	10.23	10.41	253	0.0	clear
1240	20.33	390	4.27	0.092	3.12	10.21	10.43	256	0.0	clear
1245	20.33	390	4.26	0.094	3.00	10.15	10.45	257	0.0	clear
1250	20.33	390	4.27	0.094	2.78	10.10	10.43	258	0.0	clear
1255	20.33	390	4.26	0.095	2.74	10.06	10.39	258	0.0	clear
1300	20.33	390	4.27	0.096	2.80	10.03	10.40	258	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW-05S-20110314
Sample Location: FT-MW-05S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11 Time: 1100	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Method: Low Flow - Grundfos	clear	4.94	0.089	5.19	88.9	13.50	0.0	203

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 4" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 11.20								
One Casing Volume(gal/L):								
Start Purge (hrs): 1008								
End Purge (hrs): 1100								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 6.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

Pull pump 2' off bottom
Fied Test Kit
D.O = <1 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW-05$
DATE: 3-14-11

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
1006	11.20									
1008	11.20	350	5.02	0.067		18.02	3.79	195	0.0	clear
1013	11.20	400	4.93	0.068	38.2	14.19	4.73	198	0.0	
1018	11.20	400	4.92	0.072	30.6	14.00	4.97	200	0.0	
1023	11.20	400	4.90	0.074	24.8	13.88	5.08	202	0.0	
1028	11.20	400	4.89	0.074	21.7	13.84	5.12	204	0.0	
1034	11.20	400	4.88	0.073	19.8	13.40	5.11	206	0.0	
1039	11.20	400	4.89	0.075	17.3	13.23	5.16	206	0.0	
1044	11.20	400	4.91	0.078	13.8	13.27	5.18	206	0.0	
1049	11.20	400	4.91	0.081	12.2	13.39	5.22	205	0.0	
1054	11.20	400	4.93	0.084	11.51	13.43	5.16	204	0.0	
1059	11.20	400	4.94	0.089	8.89	13.50	5.19	203		
1100	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW-05I-20110314
Sample Location: FT-MW-05I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1205								
Method: Low Flow - Peristaltic	Clear	5.66	0.038	5.12	0.96	18.49	0.0	162

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 4" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 11.62								
One Casing Volume(gal/L):								
Start Purge (hrs): 1112								
End Purge (hrs): 1205								
Total Purge Time (min): 53								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

Field Test Kit
D.O. = 4.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW-05I
DATE: 3-14-11

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
1110	11.62									
1112	11.62	300	5.48	0.037	2.51	19.36	4.78	181	0.0	clear
1117	11.62	300	5.68	0.039	1.45	18.19	5.25	158	0.0	
1122	11.62	300	5.72	0.040	1.14	18.34	5.33	156	0.0	
1127	11.62	300	5.73	0.040	1.08	18.26	5.26	155	0.0	
1133	11.62	300	5.71	0.039	0.95	18.52	5.28	157	0.0	
1138	11.62	300	5.71	0.038	0.73	18.59	5.30	158	0.0	
1143	11.62	300	5.69	0.038	0.96	18.97	5.26	159	0.0	
1148	11.62	300	5.67	0.038	1.28	18.64	5.24	160	0.0	
1153	11.62	300	5.67	0.038	0.92	19.40	5.15	160	0.0	
1158	11.62	300	5.66	0.038	0.62	18.92	5.12	162	0.0	
1203	11.62	300	5.66	0.038	0.96	18.49	5.12	162		
1205	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW-06S-20110314
Sample Location: FT-MW-06S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11 Time: 1422	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Method: Low Flow	clear	4.60	0.064	5.04	0.75	16.40	0.0	200

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 4" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 20.58								
One Casing Volume(gal/L):								
Start Purge (hrs): 1336								
End Purge (hrs): 1422								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

D.O Test Kit = 4.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW-06$
DATE: 3-14-11

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
1334	~~1334~~ 20.58									
1336	20.58	300	4.90	0.057	21.9	14.87	8.35	217	0.0	clear
1340	20.58	300	4.63	0.066	5.41	11.69	5.25	223	0.0	
1345	20.58	300	4.59	0.070	2.61	14.66	5.06	226	0.0	
1350	20.58	300	4.55	0.071	1.31	15.28	4.98	228	0.0	
1355	20.58	300	4.58	0.071	2.03	15.42	4.94	225	0.0	
1400	20.58	300	4.59	0.068	1.27	15.82	4.95	219	0.0	
1405	20.58	300	4.60	0.067	1.21	16.22	5.00	209	0.0	
1410	20.58	300	4.59	0.065	1.25	16.42	5.01	205	0.0	
1415	20.58	300	4.60	0.065	0.89	16.51	5.02	202	0.0	
1420	20.58	300	4.60	0.064	0.75	16.40	5.04	200	0.0	
1422	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW-06I-20110314
Sample Location: FT-MW-06J
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1322	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	Clear	5.88	0.048	5.75	2.08	19.19	0.0	139

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 4" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 21.60								
One Casing Volume(gal/L):								
Start Purge (hrs): 1235								
End Purge (hrs): 1322								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

Pump pulled 2' off bottom

D.O Test Kit → 5 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
—		[signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW-06I
DATE: 3-14-11

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
1233	21.60									
1235	21.62	300	5.88	0.057		15.26	8.64	148	0.0	clear
1240	21.62	300	5.93	0.061	9.55	17.75	5.79	140	0.0	
1245	21.62	300	5.86	0.054	6.36	18.48	5.86	137	0.0	
1250	21.62	300	5.90	0.051	4.50	18.76	5.84	138	0.0	
1255	21.62	300	5.90	0.049	8.40	18.89	5.77	139	0.0	
1300	21.62	300	5.89	0.048	3.55	19.15	5.73	139	0.0	
1305	21.62	300	5.87	0.048	3.21	19.14	5.79	139	0.0	
1310	21.62	300	5.88	0.048	2.47	19.10	5.79	138	0.0	
1315	21.62	300	5.88	0.048	1.82	19.11	5.76	138	0.0	
1320	21.62	300	5.88	0.048	2.08	19.19	5.75	139	0.0	
1322	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW-07S-20110315
Sample Location: FT-MW-07S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-15-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0915	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	4.69	0.033	8.22	1.17	13.49	0.0	261

PURGE DATA:

Date: 3-15-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 4" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 29.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 0828								
End Purge (hrs): 0915								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

Pull pump 2' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW-07S
DATE: 3-15-11

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
0826	29.30									
0828	29.32	400	4.88	0.055	2.33	9.17	8.50	250	0.0	clear
0833	29.32	400	4.75	0.041	1.85	10.82	7.55	256	0.0	
0838	29.32	300	4.76	0.038	1.65	11.78	7.67	256	0.0	
0843	29.32	300	4.75	0.037	1.31	12.18	7.95	257	0.0	
0848	29.32	300	4.74	0.036	1.30	12.55	8.03	257	0.0	
0853	29.32	300	4.72	0.035	1.17	12.58	8.23	258	0.0	
0858	29.32	300	4.71	0.034	2.12	12.85	8.18	259	0.0	
0903	29.32	300	4.70	0.033	1.45	13.06	8.21	260	0.0	
0908	29.32	300	4.71	0.033	0.94	13.35	8.23	259	0.0	
0913	29.32	300	4.69	0.033	1.17	13.49	8.22	261	0.0	
0915	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW-03$-20110314
Sample Location: FT-MW-03$
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0845	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	5.24	0.04	3.45	0.32	15.52	0.0	167

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 4" PVC		see low flow purge sheet for details						
Total Well Depth (TD):								
Static Water Level (WL): 7.68								
One Casing Volume(gal/L):								
Start Purge (hrs): 0752								
End Purge (hrs): 0845								
Total Purge Time (min): 53								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	9 ~~3~~ 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW-08S
DATE: 3-14-11

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	7.68									
0752	7.68	300	4.50	0.120	24.3	10.21	4.91	268	0.0	orange lint
0757	7.68	300	4.72	0.086	3.43	10.16	4.10	243	0.0	
0802	7.68	300	4.95	0.075	0.85	12.53	4.01	221	0.0	
0807	7.68	300	5.07	0.068	0.09	13.64	3.87	205	0.0	
0812	7.68	300	5.11	0.065	0.16	14.11	3.76	197	0.0	
0817	7.68	300	5.12	0.064	0.00	14.45	3.73	191	0.0	
0822	7.68	300	5.15	0.062	1.20	14.90	3.64	184	0.0	
0827	7.68	300	5.18	0.061	0.58	15.04	3.61	179	0.0	
0832	7.68	300	5.22	0.061	0.54	15.19	3.55	174	0.0	
0837	7.68	300	5.24	0.060	0.44	15.48	3.46	171	0.0	
0842	7.68	300	5.24	0.061	0.32	15.52	3.45	167	0.0	
0845	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW-03I-20110314
Sample Location: FT-MW-03I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-14-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0945								
Method: Low Flow	clear little algae	5.30	0.233	4.91	13.2	15.68	0.0	161

PURGE DATA:

Date: 3-14-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 4" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 7.76								
One Casing Volume(gal/L):								
Start Purge (hrs): 0903								
End Purge (hrs): 0945								
Total Purge Time (min): 42								
Total Vol. Purged (gal/L) 45 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

little algae flakes

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW-08I
DATE: 3-14-11

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
0902	7.76									
0903	7.76	300	5.30	0.193	X	1961	4.39	155	0.0	thick red algae
0908	7.76	300	5.27	0.228	130	14.34	4.93	156	0.0	some algae
0913	7.76	300	5.28	0.229	41.3	14.68	5.02	158	0.0	clear w/ little algae
0918	7.76	300	5.30	0.229	33.3	15.31	4.97	157	0.0	" " "
0923	7.76	300	5.29	0.230	17.2	15.36	4.94	158	0.0	clear
0928	7.76	300	5.29	0.230	8.65	15.63	4.83	159	0.0	
0933	7.76	300	5.30	0.231	6.41	15.72	4.88	159	0.0	
0938	7.76	300	5.30	0.233	4.38	15.66	4.93	160	0.0	
0943	7.76	300	5.30	0.233	13.2	15.68	4.91	161	0.0	
0945	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-118I-20110311
Sample Location: SA-PZ-118I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-11 / Time: 1117	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Method: Low Flow - grundfos	clear	6.13	0.070	6.85	12.9	11.39	0.0	43

PURGE DATA

Date: 3-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 5.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 1030								
End Purge (hrs): 1117								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES

Pull pump 2' off bottom
~~Fid~~ Field Test Kit
D.O. = 1.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-118I
DATE: 3-11-11

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
1028	5.42									
1030	5.42	350	6.19	0.066	3.50	14.24	5.62	-3	0.0	clear
1035	5.42	350	6.10	0.067	68.7	11.62	6.06	15	0.0	tan cloudy
1040	5.42	350	6.10	0.069	57.1	11.27	6.40	22	0.0	" "
1045	5.42	350	6.10	0.069	41.1	11.27	6.56	26	0.0	
1050	5.42	350	6.10	0.070	35.4	11.32	6.73	30	0.0	slight tan tint
1055	5.42	350	6.11	0.070	29.2	11.45	6.77	33	0.0	
1100	5.42	350	6.12	0.070	22.6	10.92	6.84	35	0.0	
1105	5.42	350	6.13	0.070	16.9	10.88	6.90	38	0.0	
1110	5.42	350	6.13	0.070	15.9	11.18	6.90	40	0.0	
1115	5.42	350	6.13	0.070	12.9	11.39	6.85	43	0.00	
1117	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-118$-20110311
Sample Location: SA-PZ-118$
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-11-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1012	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - peristaltic	clear	5.97	0.168	4.39	4.43	14.37	0.0	-8

PURGE DATA

Date: 3-11-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 4.91								
One Casing Volume(gal/L):								
Start Purge (hrs): 0920								
End Purge (hrs): 1012								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

Field Test kit
D.O. = 1.0 ppm

Circle if Applicable

MS/MSD	Duplicate ID No.:	Signature(s):
—	0800 SA-Dup04-20110311	[signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-118S
DATE: 3-11-11

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
0918	4.91									
0920	4.96	400	5.58	0.123	665 AU	8.79	11.44	132	0.0	orange algae
0925	4.96	400	5.29	0.126	122 NTU	14.71	5.79	79	0.0	some orange algae
0930	4.96	400	5.37	0.130	29.3	12.44	5.61	58	0.0	" "
0935	4.96	300	5.50	0.164	70.5	12.73	5.17	42	0.0	little algae
0940	4.96	300	5.67	0.170	11.94	13.49	4.88	25	0.0	clear
0945	4.96	300	5.75	0.168	4.07	13.84	4.80	15	0.0	
0950	4.96	300	5.83	0.167	3.94	13.94	4.75	7	0.0	
0955	4.96	300	5.89	0.167	2.12	14.03	4.67	0	0.0	
1000	4.96	300	5.93	0.167	3.12	14.15	4.58	-4	0.0	
1005	4.96	300	5.95	0.168	2.98	14.46	4.44	-6	0.0	
1010	4.96	300	5.97	0.168	4.43	14.37	4.39	-8	0.0	
1012	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-120$-20110309
Sample Location: SA-PZ-120$
Sampled By: J. Birkell
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-9-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1407								
Method: Low Flow - Peristaltic	clear	5.16	0.076	5.67	2.29	17.40	0.0	135

PURGE DATA

Date: 3-9-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 6.38 ft								
One Casing Volume(gal/L):								
Start Purge (hrs): 1320								
End Purge (hrs): 1407								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

Field Test Kit
D.O. = 1.0 ppm

During initial purge: Thick orange algae

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-120$
DATE: 3-9-11

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
1319	6.20									
1320	6.23	450	5.73	0.050	—	18.45	7.83	75	0.0	thick orange algae
1325	6.23	300	5.36	0.087	99.5	15.91	6.37	101	0.0	few slugs of algae
1330	6.23	300	5.22	0.085	65.9	17.55	5.75	114	0.0	some remnant algae
1335	6.23	300	5.16	0.081	9.01	17.88	5.69	122	0.0	clear
1340	6.23	300	5.14	0.080	6.89	17.62	5.71	126	0.0	"
1345	6.23	300	5.12	0.081	4.07	17.79	5.66	129	0.0	
1350	6.23	300	5.11	0.079	3.82	17.66	5.67	132	0.0	
1355	6.23	300	5.13	0.077	2.30	17.46	5.65	133	0.0	
1400	6.23	300	5.13	0.076	2.25	17.49	5.62	134	0.0	
1405	6.23	300	5.16	0.076	2.29	17.40	5.67	135	0.0	
1407	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-122D-20110312
Sample Location: PZ-122D
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-12-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1115								
Method: Low Flow	Clear	6.21	0.135	11.05	5.99	8.88	0.0	-7

PURGE DATA:

Date: 3-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 13.65								
One Casing Volume(gal/L):								
Start Purge (hrs): 1030								
End Purge (hrs): 1115								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed.
- DO field kit reading → 0.1 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-122D
DATE: 3-12-11

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
1025	13.65	—	—	—	—	—	—	—	—	Initial
1030	13.65	390	5.60	0.076	18.21	11.43	10.77	142	0.0	clear
1035	13.65	390	6.12	0.098	15.25	10.25	10.99	47	0.0	clear
1040	13.65	385	6.16	0.117	39.24	9.86	11.02	19	0.0	Tinted (Gray)
1045	13.65	385	6.18	0.130	64.35	9.65	11.06	8	0.0	Tinted (Gray)
1050	13.65	385	6.18	0.131	40.20	9.43	11.02	6	0.0	Tinted (Gray)
1055	13.65	385	6.19	0.133	27.17	9.19	11.04	3	0.0	very slight Tint (Gray)
1100	13.65	385	6.18	0.134	16.68	8.89	11.08	1	0.0	clear
1105	13.65	390	6.20	0.134	11.22	8.87	11.04	-3	0.0	clear
1110	13.65	390	6.21	0.135	7.57	8.90	11.03	-5	0.0	clear
1115	13.65	390	6.21	0.135	5.99	8.88	11.05	-7	0.0	clear - collect sample
										DO field kit
										reading → 0.1 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-122I-20110312
Sample Location: PZ-122I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-12-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1215	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	6.06	0.117	11.58	1.97	8.74	0.0	67

PURGE DATA:

Date: 3-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 14.33'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1130								
End Purge (hrs): 1215								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes / No
MEE	HCl	2 40-ml clear glass vials	

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 1.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-122I
DATE: 3-12-11

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	14.33	—	—	—	—	—	—	—	—	Initial
1130	14.33	390	6.16	0.111	6.68	10.70	11.16	38	0.0	clear
1135	14.33	390	6.12	0.113	2.32	9.90	11.28	45	0.0	clear
1140	14.33	395	6.09	0.114	1.96	9.39	11.37	50	0.0	clear
1145	14.33	395	6.08	0.114	1.80	9.21	11.40	53	0.0	clear
1150	14.33	390	6.07	0.116	1.91	9.00	11.50	56	0.0	clear
1155	14.33	390	6.06	0.117	2.01	8.97	11.53	60	0.0	clear
1200	14.33	390	6.06	0.117	1.96	8.84	11.55	63	0.0	clear
1205	14.33	390	6.06	0.118	2.02	8.85	11.57	65	0.0	clear
1210	14.33	390	6.06	0.117	1.95	8.79	11.56	66	0.0	clear
1215	14.33	390	6.06	0.117	1.97	8.74	11.58	67	0.0	clear-collect sample
										DO Field Kit
										reading → 1.0 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-122$-20110312
Sample Location: PZ-122$
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-12-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1320	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	Clear	5.13	0.177	9.99	5.66	9.25	0.0	157

PURGE DATA:

Date: 3-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 14.57								
One Casing Volume(gal/L):								
Start Purge (hrs): 1235								
End Purge (hrs): 1320								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes/No
MEE	HCl	2 40-ml clear glass vials	

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed.
- DO Field Kit reading → 3.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-122B
DATE: 3-12-11

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
1230	14.57	—	—	—	—	—	—	—	—	Initial
1235	14.57	~~5.48~~ 380	5.48	0.198	24.3	11.49	10.52	124	0.0	clear
1240	14.57	380	5.23	0.194	19.97	10.38	10.26	139	0.0	clear
1245	14.57	380	5.14	0.181	10.73	9.64	9.97	150	0.0	clear
1250	14.57	380	5.14	0.180	7.18	9.48	10.00	151	0.0	clear
1255	14.57	380	5.13	0.181	5.93	9.46	10.03	152	0.0	clear
1300	14.57	380	5.14	0.181	6.01	9.34	10.00	154	0.0	clear
1305	14.57	380	5.13	0.179	5.70	9.31	10.00	155	0.0	clear
1310	14.57	380	5.13	0.178	5.29	9.28	10.01	156	0.0	clear
1315	14.57	380	5.14	0.178	5.71	9.27	10.02	156	0.0	clear
1320	14.57	380	5.13	0.177	5.66	9.25	9.99	157	0.0	clear - collect sample
										DO field kit
										reading → 3.0 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-123-20110312
Sample Location: SA-PZ-123
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-12-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1205	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	5.69	0.123	5.83	4.39	10.76	0.0	19

PURGE DATA:

Date: 3-12-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 10.10								
One Casing Volume(gal/L):								
Start Purge (hrs): 1024								
End Purge (hrs): 1205								
Total Purge Time (min): 41								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

Field Test Kit → D.O = 0.85 ppm

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-123I
DATE: 3-12-11

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
1123	10.10									
1124	10.11	300	5.65	0.085	1.70	15.90	6.56	94	0.0	clear
1129	10.11	300	5.63	0.097	3.69	11.29	6.14	46	0.0	
1134	10.11	300	5.62	0.116	1.60	10.54	5.90	61	0.0	
1139	10.11	300	5.64	0.119	4.47	10.48	5.85	47	0.0	
1144	10.11	300	5.66	0.121	2.21	10.57	5.86	36	0.0	
1149	10.11	300	5.67	0.122	3.55	10.84	5.82	30	0.0	
1154	10.11	300	5.68	0.123	3.56	10.84	5.82	25	0.0	
1159	10.11	300	5.69	0.122	4.36	10.78	5.80	21	0.0	
1204	10.11	300	5.69	0.123	4.39	10.76	5.83	19	0.0	
1205	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-123I1-201103 011
Sample Location: SA-PZ-123I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-11-11 Time: 1240	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Method: Low Flow - peristaltic	clear	5.59	0.084	5.83	0.38	10.67	0.0	106

PURGE DATA:

Date: 3-11-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 9.43								
One Casing Volume(gal/L):								
Start Purge (hrs): ~~9.43~~ 1153								
End Purge (hrs): 1240								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	9 ~~8~~ 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

Field Test Kit
D.O. = 0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-123I J
DATE: 3-11-11

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
1151	9.43									
1153	9.46	300	5.90	0.056	2.61	10.05	8.39	89	0.0	clear
1158	9.46	300	5.73	0.066	1.86	8.52	6.35	95	0.0	
1203	9.46	300	5.68	0.070	1.56	8.56	6.02	97	0.0	
1208	9.46	300	5.64	0.077	0.94	8.69	5.92	100	0.0	
1213	9.46	300	5.62	0.081	0.80	9.44	5.89	101	0.0	
1218	9.46	300	5.62	0.082	0.62	9.98	5.84	103	0.0	
1223	9.46	300	5.61	0.083	0.41	10.22	5.90	104	0.0	
1228	9.46	300	5.59	0.083	0.66	10.43	5.96	105	0.0	
1233	9.46	300	5.60	0.083	0.42	10.50	5.86	106	0.0	
1238	9.46	300	5.59	0.084	0.38	10.67	5.83	106	0.0	
1240	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-1233-201103 11
Sample Location: SA-PZ-1233
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-11-11 / Time: 1347	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Method: Low Flow - peristaltic	clear	5.06	0.107	3.71	0.63	14.63	0.0	104

PURGE DATA:

Date: 3-11-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 8.91								
One Casing Volume(gal/L):								
Start Purge (hrs): 1300								
End Purge (hrs): 1347								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

Field Test Kit
D.O. = 1.5 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-123S
DATE: 3-11-11

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
1258	8.91									
1300	8.92	300	5.34	0.118	7.74	13.88	4.86	142	0.0	some red algae
1305	8.92	300	5.14	0.111	5.98	9.07	4.21	139	0.0	" "
1310	8.92	300	5.09	0.102	5.19	13.32	3.92	129	0.0	clear
1315	8.92	300	5.07	0.092	1.86	14.08	3.75	119	0.0	
1320	8.92	300	5.06	0.091	0.80	14.17	3.74	118	0.0	
1325	8.92	300	5.07	0.095	0.72	14.30	3.75	112	0.0	
1330	8.92	300	5.07	0.099	0.55	14.36	3.72	109	0.0	
1335	8.92	300	5.06	0.104	0.60	14.51	3.68	107	0.0	
1340	8.92	300	5.06	0.106	0.51	14.49	3.67	107	0.0	
1345	8.92	300	5.06	0.107	0.68	14.63	3.71	104	0.0	
1347	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-126S-20110310
Sample Location: SA-MW-126S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0938								
Method: Low Flow - Peristaltic	Clear	5.28	0.065	3.50	1.62	19.01	0.0	58

PURGE DATA:

Date: 3-10-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 4.70								
One Casing Volume(gal/L):								
Start Purge (hrs): 0849								
End Purge (hrs): 0938								
Total Purge Time (min): 49								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

D.O. Field Test kit

0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-126$
DATE: 3-10-11

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
0848	4.70									
0849	4.71	300	6.18	0.066	12.9	19.99*	5.01	18	0.0	clear *blinking
0854	4.71	300	5.50	0.069	5.51	15.13	3.74	61	0.0	
0859	4.71	300	5.26	0.068	3.31	15.57	3.62	70	0.0	
0904	4.71	300	5.25	0.068	2.73	15.61	3.60	67	0.0	
0909	4.71	300	5.19	0.067	2.63	16.24	3.61	69	0.0	
0914	4.71	300	5.20	0.066	2.02	16.48	3.59	67	0.0	
0921	4.71	300	5.21	0.066	1.75	17.36	3.49	64	0.0	
0926	4.71	300	5.22	0.065	1.59	17.91	3.50	63	0.0	
0931	4.71	300	5.25	0.065	1.64	18.38	3.49	61	0.0	
0936	4.71	300	5.28	0.065	1.62	19.01	3.50	58	0.0	
0938	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-126I-20110310
Sample Location: SA-MW-126I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1047	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	6.00	0.117	6.66	13.3	19.99+	0.0	3

PURGE DATA:

Date: 3-10-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 4.68								
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1047								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

Pulled pump 2' off bottom
D.O. Field Test Kit
=0.8 ppm

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-126I
DATE: 3-10-11

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
0958	4.68									
1000	4.69	350	5.75	0.120	231	19.99*	4.97	33	0.0	light brown color *blinking
1005	4.69	350	5.80	0.121	125	17.83	5.73	29	0.0	" "
1010	4.69	350	5.85	0.124	86.2	19.08	5.94	23	0.0	
1015	4.69	350	5.90	0.122	68.6	19.99*	6.27	17	0.0	*blinking
1020	4.69	350	5.92	0.120	49.1	19.99*	6.40	14	0.0	light brown tint
1025	4.69	350	5.94	0.118	35.3	19.99*	6.54	12	0.0	
1030	4.69	350	5.96	0.117	23.6	19.99*	6.57	9	0.0	clear
1035	4.69	350	5.99	0.117	23.4	19.99*	6.60	7	0.0	
1040	4.69	350	5.99	0.117	19.4	19.99*	6.64	5	0.0	
1045	4.69	350	6.00	0.117	18.3	19.99*	6.66	3	0.0	
1047	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-126D-20110310
Sample Location: SA-MW-126D
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0843								
Method: Low Flow - Grundfos	clear/tan	6.31	0.120	7.01	63.5	18.64	0.0	-22

PURGE DATA:

Date: 3-10-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 6.69								
One Casing Volume(gal/L):								
Start Purge (hrs): 0751								
End Purge (hrs): 0843								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 6.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

pump pulled 2' off bottom
D.O. Field Test Kit
= 0.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
–	–

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-MW-126D
DATE: 3-10-11

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	6.69									
0751	6.70	350	5.73	0.112	517	12.51	9.88	127	0.0	cloudy
0756	6.70	350	5.88	0.140	overrange	16.12	7.87	72	0.0	brown opaque
0801	6.70	350	6.00	0.137	" "	16.58	7.73	35	0.0	" "
0807	6.70	350	6.08	0.132	1761	15.00	8.03	8	0.0	brown color
0812	6.70	350	6.14	0.128	928	16.94	7.69	-2	0.0	" "
0817	6.70	300	6.21	0.125	162	17.65	7.34	-9	0.0	slight tan color
0822	6.70	300	6.23	0.123	137	18.19	7.16	-12	0.0	" "
0827	6.70	300	6.25	0.122	95.6	18.07	7.10	-15	0.0	" "
0832	6.70	300	6.28	0.121	83.4	18.06	7.06	-18	0.0	" "
0837	6.70	300	6.28	0.121	78.2	18.25	7.02	-19	0.0	" "
0842	6.70	300	6.31	0.120	63.5	18.64	7.01	-22	0.0	clearish (tan)
0843	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-127S-20110310
Sample Location: SA-MW-127S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1257	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	5.32	0.063	4.18	13.8	18.39	0.0	114

PURGE DATA:

Date: 3-10-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 6.37								
One Casing Volume(gal/L):								
Start Purge (hrs): 1210								
End Purge (hrs): 1257								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

D.O Field test kit
= 1.5 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-127S
DATE: 3-10-11

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
1208	6.37									
1210	6.37	300	5.97	0.087	overrange	19.32	9.07	43	0.0	orange red color (opaque)
1215	6.37	300	5.65	0.063	120	19.85	4.73	67	0.0	orange tint
1220	6.37	300	5.55	0.064	124	18.90	4.49	83	0.0	" "
1225	6.37	300	5.50	0.063	83.2	18.17	4.38	86	0.0	
1230	6.37	300	5.39	0.060	45.1	18.27	4.31	98	0.0	
1235	6.37	300	5.33	0.062	49.7	18.24	4.25	105	0.0	
1240	6.37	300	5.31	0.062	53.8	18.22	4.20	109	0.0	
1245	6.37	300	5.28	0.063	42.2	18.21	4.17	112	0.0	
1250	6.37	300	5.29	0.061	16.1	18.33	4.18	119	0.0	
1255	6.37	300	5.32	0.063	13.8	18.39	4.18	114	0.0	
1257	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-127I-20110310
Sample Location: SA-MW-127I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1356	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	5.79	0.096	6.09	1.44	19.76	0.0	79

PURGE DATA:

Date: 3-10-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL) 6.58								
One Casing Volume(gal/L):								
Start Purge (hrs): 1308								
End Purge (hrs): 1356								
Total Purge Time (min): 48								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

D.O. Field Test Kit
0.7 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-127I
DATE: 3-10-11

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
1307	6.58									
1308	6.59	400	5.32	0.058		16.86	9.12	87	0.0	clear
1315	6.59	300	5.67	0.096	3.63	16.41	6.47	85	0.0	
1320	6.59	300	5.69	0.095	3.14	19.03	6.18	83	0.0	
1325	6.59	300	5.75	0.096	2.11	19.35	6.15	79	0.0	
1330	6.59	300	5.76	0.088	1.93	16.52	6.13	80	0.0	
1335	6.59	300	5.77	0.095	1.13	18.68	6.28	79	0.0	
1340	6.59	300	5.78	0.095	1.48	18.88	6.22	79	0.0	
1345	6.59	300	5.79	0.095	1.19	18.99	6.17	79	0.0	
1350	6.59	300	5.79	0.096	1.84	19.25	6.12	79	0.0	
1355	6.59	300	5.79	0.096	1.44	19.76	6.09	79	0.0	
1356	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-127D-20110310
Sample Location: SA-MW-127D
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1500								
Method: Low Flow	clear						0.0	

PURGE DATA:

Date: 3-10-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 8.08								
One Casing Volume(gal/L):								
Start Purge (hrs): 1408								
End Purge (hrs): 1500								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 6 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	9 ~~8~~ 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

D.O. Field Test Kit

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-127D-20110310
DATE: 3-10-11

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
1406	8.08									
1408	8.10	350	6.05	0.114	2.60	12.65	7.19	62	0.0	clear
1413	8.10	350	6.14	0.125	4.92	12.66	6.68	50	0.0	
1418	8.10	350	6.24	0.125	5.36	11.61	6.50	36	0.0	
1423	8.10	350	6.30	0.125	7.63	12.26	6.42	27	0.0	
1428	8.10	350	6.36	0.124	3.09	12.60	6.38	19	0.0	
1433	8.10	350	6.40	0.123	2.48	12.78	6.31	13	0.0	
1438	8.10	350	6.41	0.123	2.91	12.88	6.28	8	0.0	
1443	8.10	350	6.45	0.122	1.92	12.93	6.32	2	0.0	
1448	8.10	350	6.45	0.121	2.43	12.88	6.34	1	0.0	
1453	8.10	350	6.47	0.121	1.49	13.52	6.33	-2	0.0	
1458	8.10	350	6.47	0.121	1.39	13.41	6.33	-4	0.0	
1500	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-128S-20110310
Sample Location: MW-128S
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1420	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow	clear	5.38	0.048	9.53	1.98	12.29	0.0	173

PURGE DATA:

Date: 3-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 8.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 1335								
End Purge (hrs): 1420								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO field kit reading → 1.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-128S
DATE: 3-10-11

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
1330	8.42	–	–	–	–	–	–	–	–	Initial
1335	8.42	390	5.33	0.042	29.6	14.07	9.75	181	0.0	slight Tint (Brown)
1340	8.42	380	5.29	0.042	30.2	13.29	9.56	183	0.0	" "
1345	8.42	380	5.28	0.045	15.81	12.80	9.58	179	0.0	clear
1350	8.42	380	5.29	0.046	10.44	12.67	9.57	177	0.0	clear
1355	8.42	380	5.31	0.046	8.72	12.51	9.54	176	0.0	clear
1400	8.42	380	5.34	0.047	5.33	12.39	9.54	175	0.0	clear
1405	8.42	380	5.36	0.047	3.09	12.25	9.57	175	0.0	clear
1410	8.42	380	5.37	0.047	2.18	12.26	9.55	174	0.0	clear
1415	8.42	380	5.37	0.048	2.01	12.24	9.54	174	0.0	clear
1420	8.42	380	5.38	0.048	1.98	12.29	9.53	173	0.0	clear-collect sample
										DO Field Kit
										reading → 1.0 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-128I-20110310
Sample Location: MW-128I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1320								
Method: Low Flow	clear	5.62	0.073	11.34	1.28	11.02	0.0	141

PURGE DATA:

Date: 3-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC		see low flow purge sheet for details						
Total Well Depth (TD):								
Static Water Level (WL): 8.92								
One Casing Volume(gal/L):								
Start Purge (hrs): 1235								
End Purge (hrs): 1320								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	YES
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Tubing set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-128I
DATE: 3-10-11

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
1230	8.92	—	—	—	—	—	—	—	—	Initial
1235	8.92	385	5.57	0.096	12.91	13.55	11.26	153	0.0	clear
1240	8.92	385	5.58	0.085	6.13	12.65	11.23	147	0.0	clear
1245	8.92	380	5.59	0.079	5.02	12.01	11.25	145	0.0	clear
1250	8.92	380	5.60	0.075	4.13	11.58	11.25	146	0.0	clear
1255	8.92	380	5.60	0.072	2.40	11.32	11.30	144	0.0	clear
1300	8.92	380	5.61	0.073	1.97	11.18	11.32	143	0.0	clear
1305	8.92	380	5.61	0.073	1.33	11.12	11.28	142	0.0	clear
1310	8.92	380	5.62	0.073	1.26	11.13	11.31	141	0.0	clear
1315	8.92	380	5.62	0.073	1.24	11.06	11.33	142	0.0	clear
1320	8.92	380	5.62	0.073	1.28	11.02	11.34	141	0.0	clear - collect sample
										DO field kit reading → 0.8 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-128D-20110310
Sample Location: MW-128D
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1220								
Method: Low Flow	clear	5.58	0.061	11.35	2.53	11.08	0.0	118

PURGE DATA:

Date: 3-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC		see low flow purge sheet for details						
Total Well Depth (TD):								
Static Water Level (WL): 9.21'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1135								
End Purge (hrs): 1220								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-128D
DATE: 3-10-11

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
1130	9.21	—	—	—	—	—	—	—	—	Initial
1135	9.22	385	5.58	0.068	24.40	13.98	11.29	186	0.0	slight Tint (Tan)
1140	9.22	375	5.62	0.063	18.65	12.84	11.34	159	0.0	clear
1145	9.22	375	5.57	0.061	13.04	12.13	11.34	147	0.0	clear
1150	9.22	380	5.57	0.061	7.29	11.62	11.35	138	0.0	clear
1155	9.22	380	5.57	0.061	5.82	11.47	11.34	133	0.0	clear
1200	9.22	380	5.58	0.061	3.99	11.31	11.36	130	0.0	clear
1205	9.22	380	5.58	0.061	2.84	11.15	11.35	124	0.0	clear
1210	9.22	380	5.58	0.061	2.67	11.19	11.36	122	0.0	clear
1215	9.22	380	5.58	0.061	2.49	11.11	11.36	120	0.0	clear
1220	9.22	380	5.58	0.061	2.53	11.08	11.35	118	0.0	clear - collect sample
										DO Field Kit
										reading → 0.8 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-1298-20110310
Sample Location: MW-1298
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1055								
Method: Low Flow	clear	4.92	0.048	11.69	0.42	11.59	0.0	224

PURGE DATA:

Date: 3-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 21.79								
One Casing Volume(gal/L):								
Start Purge (hrs): 1010								
End Purge (hrs): 1055								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO field kit reading → 1.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-129S
DATE: 3-10-11

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
1005	21.79	–	–	–	–	–	–	–	–	Initial
1010	21.80	385	5.51	0.053	3.78	13.40	11.31	210	0.0	clear
1015	21.80	385	5.26	0.051	2.04	12.55	11.50	219	0.0	clear
1020	21.80	380	5.06	0.049	1.00	12.19	11.61	222	0.0	clear
1025	21.80	380	4.97	0.049	0.64	11.81	11.69	222	0.0	clear
1030	21.80	380	4.95	0.049	0.53	11.74	11.69	223	0.0	clear
1035	21.80	380	4.93	0.048	0.41	11.57	11.70	223	0.0	clear
1040	21.80	380	4.94	0.048	0.38	11.59	11.75	224	0.0	clear
1045	21.80	380	4.93	0.048	0.35	11.50	11.75	224	0.0	clear
1050	21.80	380	4.93	0.048	0.40	11.54	11.74	224	0.0	clear
1055	21.80	380	4.92	0.048	0.42	11.59	11.69	224	0.0	clear - collect sample
										DO Field Kit
										reading → 1.0 ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-129I-20110310
Sample Location: MW-129I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0950								
Method: Low Flow	Clear	5.30	0.055	11.44	0.96	11.06	0.0	190

PURGE DATA:

Date: 3-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 22.07								
One Casing Volume(gal/L):								
Start Purge (hrs): 0905								
End Purge (hrs): 0950								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed.
- DO Field Kit reading → 0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-129I
DATE: 3-10-11

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	22.06	—	—	—	—	—	—	—	—	Initial
0905	22.07	390	5.85	0.063	13.14	13.79	11.00	191	0.0	clear
0910	22.07	380	5.64	0.066	5.73	13.19	11.29	179	0.0	clear
0915	22.07	380	5.43	0.060	4.77	12.39	11.33	185	0.0	clear
0920	22.07	380	5.37	0.057	2.01	11.86	11.35	188	0.0	clear
0925	22.07	380	5.38	0.056	1.42	11.59	11.32	187	0.0	clear
0930	22.07	380	5.34	0.056	1.16	11.40	11.36	188	0.0	clear
0935	22.07	380	5.30	0.055	1.10	11.28	11.37	192	0.0	clear
0940	22.07	380	5.31	0.055	1.02	11.21	11.41	190	0.0	clear
0945	22.07	380	5.30	0.055	0.98	11.12	11.48	189	0.0	clear
0950	22.07	380	5.30	0.055	0.96	11.06	11.44	190	0.0	clear - collect sample
										DO Field Kit
										reading → 0.8 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-129D-20110310
Sample Location: MW-129D
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0845								
Method: Low Flow	clear	6.02	0.107	11.14	2.17	11.17	0.0	182

PURGE DATA:

Date: 3-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 27.04'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0800								
End Purge (hrs): 0845								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO field kit reading → 0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-129D
DATE: 3-10-11

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	22.04	—	—	—	—	—	—	—	—	Initial
0800	22.04	375	5.85	0.118	14.14	15.00	10.87	228	0.0	clear
0805	22.05	375	5.93	0.108	13.68	14.01	11.02	226	0.0	clear
0810	22.05	375	5.94	0.107	7.86	12.82	11.04	224	0.0	clear
0815	22.05	375	5.96	0.106	5.83	12.30	11.10	222	0.0	clear
0820	22.05	375	5.98	0.105	4.58	11.98	11.12	217	0.0	clear
0825	22.05	375	5.98	0.106	3.96	11.62	11.07	208	0.0	clear
0830	22.05	375	6.00	0.106	3.01	11.50	11.08	197	0.0	clear
0835	22.05	375	6.02	0.107	3.05	11.28	11.11	188	0.0	clear
0840	22.05	375	6.02	0.107	2.88	11.24	11.12	184	0.0	clear
0840	22.05	375	6.02	0.107	2.17	11.17	11.14	182	0.0	clear - collect sample
										DO Field Kit reading → 0.8 ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-130B-20110311
Sample Location: MW-130B
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-11-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1115								
Method: Low Flow	clear	5.72	0.055	9.53	1.47	9.81	0.0	216

PURGE DATA:

Date: 3-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 12.72'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1030								
End Purge (hrs): 1115								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 5.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-130S
DATE: 3-11-11

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
1025	12.72	—	—	—	—	—	—	—	—	Initial
1030	12.72	380	5.93	0.065	8.07	10.74	9.38	282	0.0	clear
1035	12.72	380	5.87	0.063	6.91	10.60	9.31	282	0.0	clear
1040	12.72	380	5.82	0.058	4.54	10.48	9.31	273	0.0	clear
1045	12.72	380	5.78	0.058	2.99	10.43	9.33	260	0.0	clear
1050	12.72	380	5.76	0.057	2.12	10.20	9.40	238	0.0	clear
1055	12.72	380	5.72	0.056	2.00	10.09	9.47	231	0.0	clear
1100	12.72	380	5.73	0.056	1.75	10.04	9.45	225	0.0	clear
1105	12.72	380	5.73	0.056	1.81	9.97	9.50	220	0.0	clear
1110	12.72	380	5.72	0.056	1.64	9.85	9.52	218	0.0	clear
1115	12.72	380	5.72	0.055	1.47	9.81	9.53	216	0.0	clear - collect sample
										DO field kit
										reading → 5.0 ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-130I-20110311
Sample Location: MW-130I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-11-11	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	clear	5.44	0.105	11.54	1.37	9.15	0.0	283

PURGE DATA:

Date: 3-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 12.49								
One Casing Volume(gal/L):								
Start Purge (hrs): 0930								
End Purge (hrs): 1015								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	NO

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 3.0 ppm

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	
—	—	

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-130I
DATE: 3-11-11

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
0925	12.49	—	—	—	—	—	—	—	—	Initial
0930	12.50	385	5.44	0.143	41.20	10.52	11.32	278	0.0	Tinted (Tan)
0935	12.50	385	5.43	0.111	47.81	9.75	11.54	277	0.0	" "
0940	12.50	385	5.40	0.106	20.02	9.43	11.52	279	0.0	clear
0945	12.50	385	5.40	0.106	10.85	9.28	11.53	280	0.0	clear
0950	12.50	385	5.41	0.105	7.09	9.09	11.55	281	0.0	clear
0955	12.50	385	5.42	0.105	5.87	8.97	11.52	281	0.0	clear
1000	12.50	385	5.42	0.105	3.41	9.04	11.54	282	0.0	clear
1005	12.50	385	5.43	0.105	1.97	9.10	11.55	282	0.0	clear
1010	12.50	385	5.43	0.105	1.63	9.14	11.52	282	0.0	clear
1015	12.50	385	5.44	0.105	1.37	9.15	11.54	283	0.0	clear - collect sample
										DO Field Kit reading → 3.0 ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-131S-20110309
Sample Location: MW-131S
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-9-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1205								
Method: Low Flow	Clear	5.64	0.072	8.53	3.07	9.79	0.0	148

PURGE DATA:

Date: 3-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 8.08								
One Casing Volume(gal/L):								
Start Purge (hrs): 1120								
End Purge (hrs): 1205								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

- Tubing set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 1.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-131S
DATE: 3-9-11

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	8.08	—	—	—	—	—	—	—	—	Initial
1120	8.10	400	5.49	0.109	70.8	11.70	8.97	218	0.0	Tinted (Brown)
1125	8.09	375	5.60	0.093	67.8	11.41	8.78	187	0.0	" "
1130	8.09	375	5.59	0.082	47.7	10.89	8.76	177	0.0	" "
1135	8.09	375	5.64	0.083	32.1	10.68	8.71	166	0.0	slight TINT (Brown)
1140	8.09	375	5.68	0.079	10.23	10.51	8.65	159	0.0	clear
1145	8.09	375	5.68	0.077	9.70	10.32	8.59	157	0.0	clear
1150	8.09	375	5.67	0.075	7.31	10.14	8.54	155	0.0	clear
1155	8.09	375	5.66	0.074	5.98	10.00	8.53	152	0.0	clear
1200	8.09	375	5.64	0.072	4.16	9.88	8.55	149	0.0	clear
1205	8.09	375	5.64	0.072	3.07	9.79	8.53	148	0.0	clear - collect sample
										DO Field Kit
										reading → 1.0 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-131I-20110309
Sample Location: MW-131I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-9-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1400								
Method: Low Flow	Clear	5.53	0.084	11.21	0.92	8.67	0.0	111

PURGE DATA:

Date: 3-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1315								
End Purge (hrs): 1400								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	Yes

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 0.8 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): VAS

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-131I
DATE: 3-9-11

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
1310	7.76	–	–	–	–	–	–	–	–	Initial
1315	7.76	375	5.90	0.086	2.90	10.69	10.93	90	0.0	clear
1320	7.76	375	5.57	0.086	1.99	10.04	11.06	104	0.0	clear
1325	7.76	375	5.54	0.087	1.76	9.08	11.20	107	0.0	clear
1330	7.76	375	5.53	0.086	1.52	8.90	11.26	110	0.0	clear
1335	7.76	375	5.53	0.085	1.30	8.92	11.22	111	0.0	clear
1340	7.76	375	5.53	0.085	1.19	8.83	11.25	111	0.0	clear
1345	7.76	375	5.53	0.084	1.02	8.74	11.21	110	0.0	clear
1350	7.76	375	5.53	0.084	0.96	8.68	11.17	111	0.0	clear
1355	7.76	375	5.53	0.084	0.91	8.65	11.19	110	0.0	clear
1400	7.76	375	5.53	0.084	0.92	8.67	11.21	111	0.0	clear - collect sample
										DO Field Kit
										reading → 0.8 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-131D-20110309
Sample Location: MW-131D
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-9-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1305								
Method: Low Flow	clear	6.25	0.122	11.04	0.81	8.64	0.0	44

PURGE DATA:

Date: 3-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 7.32								
One Casing Volume(gal/L):								
Start Purge (hrs): 1220								
End Purge (hrs): 1305								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES:

- Pump set in screened interval of well
- No odors, stains, or elevated PID readings observed.
- DO field kit reading → 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-131D
DATE: 3-9-11

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
1215	7.32	—	—	—	—	—	—	—	—	Initial
1220	7.32	375	5.96	0.112	4.73	11.02	10.84	143	0.0	clear
1225	7.32	375	6.04	0.115	3.26	10.61	10.91	122	0.0	clear
1230	7.32	375	6.11	0.119	2.37	10.05	10.96	100	0.0	clear
1235	7.32	375	6.19	0.121	1.90	9.28	11.02	78	0.0	clear
1240	7.32	375	6.20	0.121	1.34	9.21	10.93	69	0.0	clear
1245	7.32	375	6.21	0.121	1.06	9.15	10.88	62	0.0	clear
1250	7.32	375	6.23	0.122	0.94	8.77	10.93	54	0.0	clear
1255	7.32	375	6.24	0.122	0.87	8.74	10.98	50	0.0	clear
1300	7.32	375	6.25	0.122	0.83	8.67	11.02	46	0.0	clear
1305	7.32	375	6.25	0.122	0.81	8.64	11.04	44	0.0	clear - collect sample
										DO Field Kit
										reading → 0.6 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-132S-20110309
Sample Location: SA-MW-132S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1157	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	5.28	0.087	5.03	1.30	16.18	0.0	85

PURGE DATA:

Date: 3-9-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 5.38								
One Casing Volume(gal/L):								
Start Purge (hrs): 1105								
End Purge (hrs): 1157								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

D.O. Field Test kit
= 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-MW-132S
DATE: 3-9-11

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
1103	5.38									
1105	5.38	300	5.14	0.172	6.38	14.54	5.80	151	0.0	clear swampy odor
1110	5.38	300	5.31	0.143	5.13	8.80	5.79	99	0.0	few small brown algae clumps
1115	5.38	300	5.40	0.134	5.68	10.16	5.67	81	0.0	
1120	5.38	300	5.41	0.127	4.21	10.82	5.62	77	0.0	
1125	5.38	300	5.39	0.114	2.89	12.28	5.47	78	0.0	
1130	5.38	300	5.37	0.108	2.89	13.51	5.46	79	0.0	
1135	5.38	300	5.34	0.101	2.09	14.51	5.24	82	0.0	
1140	5.38	300	5.32	0.094	1.96	15.11	5.19	83	0.0	
1145	5.38	300	5.31	0.095	1.47	14.90	5.04	83	0.0	
1150	5.38	300	5.29	0.087	1.65	15.71	5.00	85	0.0	
1155	5.38	300	5.28	0.087	1.30	16.18	5.03	85	0.0	
1157	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-132I-20110309
Sample Location: SA-MW-132I
Sampled By: J. Birkeet
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-9-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1250	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - GrundFos	Clear	5.71	0.108	7.36	14.3	13.48	0.0	45

PURGE DATA:

Date: 3-9-11	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 purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 5.39								
One Casing Volume(gal/L):								
Start Purge (hrs): 1204								
End Purge (hrs): 1250								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	Yes

OBSERVATIONS / NOTES:

D.O. Field Testkit
= 1.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-132I
DATE: 3-9-11

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
1203	5.39									
1204	5.41	300	5.53	0.095	114	18.91	5.25	69	0.0	cloudy (tan)
1209	5.41	300	5.67	0.120	73.3	12.52	6.56	38	0.0	" "
1214	5.41	300	5.66	0.110	45.2	12.33	6.83	42	0.0	" "
1219	5.41	300	5.63	0.108	38.3	12.36	7.10	47	0.0	clearish
1224	5.41	300	5.64	0.108	22.8	12.41	7.34	48	0.0	
1229	5.41	300	5.63	0.107	19.8	12.76	7.28	48	0.0	clear
1234	5.41	300	5.65	0.108	15.9	13.12	7.39	48	0.0	
1239	5.41	300	5.68	0.107	15.3	13.35	7.31	46	0.0	
1244	5.41	300	5.70	0.108	14.2	13.46	7.25	45	0.0	
1249	5.41	300	5.71	0.108	14.3	13.48	7.36	45	0.0	
1250	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-133I1-20110310
Sample Location: SA-PZ-133I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-10-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1205								
Method: Low Flow	clear	5.83	0.094	6.70	1.98	19.99	0.0	55

PURGE DATA

Date: 3-10-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 7.38								
One Casing Volume(gal/L):								
Start Purge (hrs): 1118								
End Purge (hrs): 1205								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES:

D.O. Field Test Kit
0.4ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-133I)
DATE: 3-10-11

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
1117	7.38									
1118	7.39	300	5.98	0.094	113	18.15	9.88	23	0.0	clear
1123	7.39	300	5.94	0.101	53.3	17.09	7.08	28	0.0	
1127	7.39	300	5.91	0.098	24.9	17.73	7.04	34	0.0	
1133	7.39	300	5.86	0.095	10.01	19.07	7.00	43	0.0	
1138	7.39	300	5.85	0.096	5.78	19.63	6.76	46	0.0	
1143	7.39	300	5.85	0.095	2.02	19.85	6.73	48	0.0	* blinking
1148	7.39	300	5.84	0.095	1.98	19.99*	6.66	50	0.0	
1153	7.39	300	5.83	0.095	1.39	19.99*	6.71	53	0.0	
1158	7.39	300	5.83	0.094	1.23	19.99*	6.70	54	0.0	
1203	7.39	300	5.83	0.094	1.98	19.99*	6.70	55	0.0	
1205	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-140I-20110312 JB 2-16-12
Sample Location: SA-PZ-140I JB 2-16-12
Sampled By: J. Birkoff
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-12-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1102								
Method: Low Flow - Peristaltic	clear	5.49	0.098	6.35	0.41	18.38	0.0	94

PURGE DATA

Date: 3-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 13.35								
One Casing Volume(gal/L):								
Start Purge (hrs): 1015								
End Purge (hrs): 1102								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	no

OBSERVATIONS / NOTES

Field Test Kit → D.O. = 0.5 ppm

Circle if Applicable

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

JB 2-16-12

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-140I
DATE: 3-12-11

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
1014	13.35									
1015	13.39	300	5.67	0.106	19.0	14.35	8.12	90	0.0	clear
1020	13.39	300	5.56	0.104	4.64	14.27	6.52	97	0.0	
1025	13.39	300	5.52	0.101	2.73	15.32	6.48	99	0.0	
1030	13.39	300	5.50	0.100	1.52	15.91	6.44	99	0.0	
1035	13.39	300	5.49	0.099	1.00	16.43	6.46	98	0.0	
1040	13.39	300	5.49	0.099	1.08	16.77	6.50	97	0.0	
1045	13.39	300	5.49	0.099	0.51	17.20	6.43	96	0.0	
1050	13.39	300	5.51	0.099	0.46	17.76	6.42	95	0.0	
1055	13.39	300	5.50	0.098	0.44	18.21	6.35	94	0.0	
1100	13.39	300	5.49	0.098	0.41	18.38	6.35	94	0.0	
1102	Collect Sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-142I-20110312 JB 2-16-12
Sample Location: SA-PZ-142I JB 2-16-12
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-12-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0955								
Method: Low Flow – peristaltic	clear	5.59	0.139	6.38	0.35	15.72	0.0	96

PURGE DATA

Date: 3-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 14.72								
One Casing Volume(gal/L):								
Start Purge (hrs): 0908								
End Purge (hrs): 0955								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES

D.O Field Test Kit → 0.5 ppm

Circle if Applicable

MS/MSD	Duplicate ID No.:
—	SA-Dup06-20110312 0800

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-142 I JB 2-16-12
DATE: 3-12-11

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	14.72									
0908	14.73	300	5.42	0.157	5.32	7.90	11.41	179	0.0	clear
0913	14.73	300	5.54	0.162	2.10	7.34	7.93	145	0.0	
0918	14.73	300	5.57	0.157	2.32	10.00	7.24	126	0.0	
0923	14.73	300	5.58	0.149	0.74	11.77	6.96	115	0.0	
0928	14.73	300	5.59	0.145	0.98	12.36	6.77	109	0.0	
0933	14.73	300	5.58	0.141	1.10	13.64	6.54	101	0.0	
0938	14.73	300	5.59	0.140	0.47	14.03	6.52	99	0.0	
0943	14.73	300	5.59	0.139	0.69	14.54	6.40	95	0.0	
0948	14.73	300	5.59	0.139	0.50	15.15	6.48	92	0.0	
0953	~~Collect Sample~~ 14.73	300	5.59	0.139	0.35	15.72	6.38	90	0.0	
0955	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

JB 2-16-12

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-143I-20110312
Sample Location: PZ-143I JB 2-16-12
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-12-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0955								
Method: Low Flow	Clear	5.97	0.135	11.06	1.30	8.78	0.0	87

PURGE DATA:

Date: 3-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 14.32								
One Casing Volume(gal/L):								
Start Purge (hrs): 0910								
End Purge (hrs): 0955								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO field kit reading → 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
—	—	[signature]

LOW FLOW PURGE DATA SHEET

JB 2-16-12

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-143I
DATE: 3-12-11

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
0905	14.31	—	—	—	—	—	—	—	—	Initial
0910	14.32	355	5.74	0.178	17.9	11.11	10.70	146	0.0	clear
0915	14.32	375	5.92	0.156	3.94	10.73	10.88	127	0.0	clear
0920	14.32	375	5.94	0.150	2.08	10.13	10.95	116	0.0	clear
0925	14.32	375	5.95	0.143	1.53	9.44	11.00	105	0.0	clear
0930	14.32	375	5.96	0.140	1.60	9.16	11.08	100	0.0	clear
0935	14.32	375	5.97	0.137	1.35	9.00	11.03	95	0.0	clear
0940	14.32	375	5.97	0.137	1.41	9.04	11.02	93	0.0	clear
0945	14.32	375	5.97	0.136	1.37	8.90	10.97	90	0.0	clear
0950	14.32	375	5.97	0.135	1.32	8.81	11.03	88	0.0	clear
0955	14.32	375	5.97	0.135	1.30	8.78	11.06	87	0.0	clear - collect sample
										DO field kit
										reading → 0.6 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-144I-20110311
Sample Location: PZ-144I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-11-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1235								
Method: Low Flow	Clear	6.23	0.158	11.81	1.30	7.60	0.0	26

PURGE DATA

Date: 3-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 8.69'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1150								
End Purge (hrs): 1235								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES

- Tubing intake set in screened interval of well
- No odors, stains or elevated PID readings observed
- DO field kit reading → 0.7ppm

Circle if Applicable

MS/MSD	Duplicate ID No.:	Signature(s):
—	SA-DUP05-20110311 (1600hrs)	[signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-144I
DATE: 3-11-11

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	8.69	—	—	—	—	—	—	—	—	Initial
1150	8.69	375	6.12	0.166	8.80	9.77	11.89	82	0.0	clear
1155	8.69	375	6.12	0.159	3.92	9.18	11.91	68	0.0	clear
1200	8.69	375	6.15	0.159	2.77	8.67	11.90	57	0.0	clear
1205	8.69	375	6.19	0.159	2.68	8.21	11.88	48	0.0	clear
1210	8.69	375	6.19	0.159	2.49	8.03	11.89	40	0.0	clear
1215	8.69	375	6.21	0.158	1.90	7.86	11.86	36	0.0	clear
1220	8.69	375	6.22	0.158	1.50	7.65	11.85	32	0.0	clear
1225	8.69	375	6.22	0.158	1.41	7.66	11.83	29	0.0	clear
1230	8.69	375	6.22	0.158	1.36	7.56	11.80	27	0.0	clear
1235	8.69	375	6.23	0.158	1.30	7.60	11.81	26	0.0	clear-collect sample
~~12~~ (1115)										
										DO Field Kit
										reading → 0.7ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-144S-20110311
Sample Location: PZ-144S
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-11-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1335								
Method: Low Flow	Clear	5.71	0.103	10.13	1.25	8.05	0.0	71

PURGE DATA:

Date: 3-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 8.78'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1250								
End Purge (hrs): 1335								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	Yes
MEE	HCl	2 40-ml clear glass vials	No

OBSERVATIONS / NOTES:

- Tubing intake set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 1.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-144S
DATE: 3-11-11

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
1245	8.78	—	—	—	—	—	—	—	—	Initial
1250	8.78	380	6.21	0.120	10.15	9.60	11.09	72	0.0	clear
1255	8.78	380	5.99	0.111	8.79	9.58	10.32	75	0.0	clear
1300	8.78	380	5.83	0.105	6.67	9.00	10.21	78	0.0	clear
1305	8.78	380	5.74	0.105	3.04	8.59	10.25	77	0.0	clear
1310	8.78	380	5.72	0.106	1.86	8.32	10.23	76	0.0	clear
1315	8.78	380	5.72	0.104	1.26	8.21	10.26	75	0.0	clear
1320	8.78	380	5.71	0.103	1.37	8.24	10.22	74	0.0	clear
1325	8.78	380	5.71	0.103	1.40	8.19	10.14	73	0.0	clear
1330	8.78	380	5.71	0.103	1.29	8.11	10.11	72	0.0	clear
1335	8.78	380	5.71	0.103	1.25	8.05	10.13	71	0.0	clear-collect sample
										DO field kit reading → 1.0 ppm

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-145I-20110309
Sample Location: PZ-145I
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-9-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1615								
Method: Low Flow	clear	5.71	0.117	11.07	0.70	8.49	0.0	144

PURGE DATA

Date: 3-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 9.27								
One Casing Volume(gal/L):								
Start Purge (hrs): 1530								
End Purge (hrs): 1615								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES

- Tubing set in screened interval of well
- No odors, stains, or elevated PID readings observed
- DO Field Kit reading → 0.8 ppm

Circle if Applicable

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: 5A-PZ-145I
DATE: 3-9-11

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
1520	9.27	—	—	—	—	—	—	—	—	Initial
1530	9.28	375	5.82	0.113	6.68	11.54	10.64	182	0.0	clear
1535	9.28	375	5.73	0.116	5.13	10.61	11.03	170	0.0	clear
1540	9.28	375	5.72	0.116	4.93	10.17	11.03	166	0.0	clear
1545	9.28	375	5.71	0.116	4.08	9.71	10.98	161	0.0	clear
1550	9.28	375	5.70	0.116	2.94	9.30	11.04	157	0.0	clear
1555	9.28	375	5.71	0.117	1.45	9.02	11.03	153	0.0	clear
1600	9.28	375	5.71	0.117	1.02	8.81	11.03	149	0.0	clear
1605	9.28	375	5.71	0.116	0.95	8.67	11.05	147	0.0	clear
1610	9.28	375	5.71	0.117	0.88	8.54	11.08	145	0.0	clear
1615	9.28	375	5.71	0.117	0.70	8.49	11.07	144	0.0	clear - collect sample
										DO field kit
										reading → 0.8 ppm

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-1453-20110309
Sample Location: SA-PZ-1453
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-9-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1710								
Method: Low Flow	clear	4.59	0.114	4.24	1.94	14.28	0.0	159

PURGE DATA

Date: 3-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 9.05								
One Casing Volume(gal/L):								
Start Purge (hrs): 1622								
End Purge (hrs): 1710								
Total Purge Time (min): 48								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES

Field Test Kit D.O
=1.5 ppm

Circle if Applicable

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-145S
DATE: 3-9-11

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
1620	9.05									
1622	9.07	300	5.35	0.091	11.51	18.64	4.64	78	0.0	clear
1627	9.07	300	4.84	0.096	8.03	13.74	4.30	116	0.0	
1632	9.07	300	4.73	0.106	3.68	13.13	4.24	130	0.0	
1637	9.07	300	4.68	0.110	2.58	12.93	4.25	136	0.0	
1642	9.07	300	4.60	0.110	2.20	12.84	4.30	144	0.0	
1647	9.07	300	4.61	0.111	1.55	12.42	4.20	147	0.0	
1652	9.07	300	4.59	0.111	0.93	12.55	4.19	152	0.0	
1657	9.07	300	4.58	0.114	0.63	14.17	4.23	155	0.0	
1702	9.07	300	4.57	0.113	2.01	14.20	4.24	158	0.0	
1707	9.07	300	4.59	0.114	1.94	14.28	4.24	159	0.0	
1710	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-145D-20110309
Sample Location: SA-PZ-146D
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA

Date: 3-9-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1615								
Method: Low Flow	clear	5.88	0.018	6.39	1.96	9.48	0.0	9

PURGE DATA

Date: 3-9-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 1" PVC	see low flow purge sheet for details							
Total Well Depth (TD):								
Static Water Level (WL): 9.52								
One Casing Volume(gal/L):								
Start Purge (hrs): 1528								
End Purge (hrs): 1615								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40-ml clear glass vials	yes
MEE	HCl	2 40-ml clear glass vials	yes

OBSERVATIONS / NOTES

D.O. Field Test Kit
= 0.3 ppm

Circle if Applicable

MS/MSD	Duplicate ID No.:	Signature(s):
—	(1500) SA-Dup03-20110309	

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-145D
DATE: 3-9-11

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
1526	9.52									
1528	9.55	350	5.77	0.089	1.59	15.99	7.15	96	0.0	clear
1533	9.55	300	5.84	0.095	1.14	9.26	6.69	62	0.0	
1538	9.55	300	5.88	0.100	4.14	9.91	6.37	35	0.0	
1543	9.55	300	5.89	0.100	4.31	10.44	6.33	27	0.0	
1548	9.55	300	5.87	0.096	4.48	10.40	6.46	22	0.0	
1553	9.55	300	5.89	0.098	4.20	10.06	6.69	17	0.0	
1558	9.55	300	5.89	0.099	2.71	9.54	6.55	14	0.0	
1603	9.55	300	5.89	0.101	3.21	9.37	6.47	11	0.0	
1608	9.55	300	5.89	0.100	2.18	9.40	6.46	10	0.0	
1613	9.55	300	5.88	0.098	1.96	9.48	6.39	9	0.0	
1615	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW-05S-20110603
Sample Location: MW-05S
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[] 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 ORP
Date: 6-3-11								
Time: 0845								
Method: peristaltic pump								

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-3-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC								
Total Well Depth (TD): 17.5'			(See	Low	Flow	Purge	Logs)	
Static Water Level (WL): 10.02'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0750								
End Purge (hrs): 0845								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 6.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: FC-MW05S
DATE: 6-3-11

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
0745	10.02	—	—	—	—	—	—	—	—	Initial
0750	10.02	480	5.29	0.072	2.4	10.45	10.63	142	0.0	clear
0755	10.02	480	4.84	0.075	2.2	9.02	10.49	178	0.0	clear
0800	10.02	480	4.68	0.071	2.0	8.21	10.55	192	0.0	clear
0805	10.02	480	4.66	0.070	1.7	7.48	10.60	194	0.0	clear
0810	10.02	480	4.67	0.068	1.3	6.80	10.67	194	0.0	clear
0815	10.02	480	4.71	0.065	0.8	6.10	10.72	190	0.0	clear
0820	10.02	480	4.75	0.064	1.1	5.79	10.76	189	0.0	clear
0825	10.02	480	4.79	0.063	0.7	5.56	10.80	186	0.0	clear
0830	10.02	480	4.80	0.063	1.0	5.37	10.82	183	0.0	clear
0835	10.02	480	4.81	0.062	0.8	5.28	10.83	182	0.0	clear
0840	10.02	480	4.81	0.062	0.9	5.20	10.80	181	0.0	clear
0845	10.02	480	4.82	0.062	0.8	5.11	10.84	179	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-~~MW~~ PZ 05I1-20110607 JB 2-16-12
Sample Location: PZ ~~MW~~-05I1
Sampled By: VAS JB 2-16-12
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: 6-2-11								
Time: 1140								
Method: peristaltic pump	Clear							

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-2-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD): 30'			(see	Low	Flow	purge	sheets)	
Static Water Level (WL): 9.94								
One Casing Volume(gal/L):								
Start Purge (hrs): 10.55								
End Purge (hrs): 1140								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 x 40 ml VOAs	yes

OBSERVATIONS / NOTES:

- No odors, stains or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

JB 2-16-12

PROJECT SITE NAME: NWTRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: VAS ~~SK~~ PZ FC-MW05I1
DATE: 6-2-11

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
	9.94									
1055	9.94	450	6.23	0.158	7.0	4.20	12.27	-74	0.0	clear
1100	9.94	450	5.89	0.154	5.8	2.29	11.42	-52	0.0	clear
1105	9.94	450	5.67	0.155	6.9	1.92	11.27	-44	0.0	clear
1110	9.94	450	5.67	0.153	4.7	1.80	11.30	-44	0.0	clear
1115	9.94	450	5.69	0.152	6.5	1.73	11.33	-45	0.0	clear
1120	9.94	450	5.73	0.152	4.3	1.71	11.32	-46	0.0	clear
1125	9.94	450	5.79	0.152	3.9	1.73	11.29	-49	0.0	clear
1130	9.94	450	5.90	0.152	3.5	1.69	11.28	-56	0.0	clear
1135	9.94	450	5.92	0.152	3.3	1.68	11.30	-58	0.0	clear
1140	9.94	450	5.93	0.151	3.5	1.67	11.28	-61	0.0	clear - collect Sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Colverton
Project No.: 112602045

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

Sample ID No.: FC-MW-05I-20110602
Sample Location: FC-MW-05I
Sampled By: VAS
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 ORP
Date: 6-2-11								
Time: 1720								
Method: Peristaltic pump	Clear	5.43	0.121	12.42	1.4	2.79	0.0	175

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-2-11								
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 4 inch PVC			(see	Low	flow	purge	logs)	
Total Well Depth (TD): 58'								
Static Water Level (WL): 9.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 1630								
End Purge (hrs): 1720								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 4.75								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: FC-MW-05I
DATE: 6-2-11

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
1625	9.42	–	–	–	–	–	–	–	–	Initial
1630	9.42	450	5.97	0.125	8.4	6.30	12.73	167	0.0	clear
1635	9.42	450	5.41	0.122	5.7	4.37	12.61	167	0.0	clear
1640	9.42	450	5.31	0.123	4.3	3.98	12.62	173	0.0	clear
1645	9.42	450	5.31	0.122	3.0	3.64	12.60	175	0.0	clear
1650	9.42	450	5.34	0.122	2.1	3.33	12.59	173	0.0	clear
1655	9.42	450	5.39	0.122	2.4	3.11	12.58	172	0.0	clear
1700	9.42	450	5.41	0.122	2.0	2.99	12.52	173	0.0	clear
1705	9.42	450	5.42	0.122	1.9	2.91	12.44	176	0.0	clear
1710	9.42	450	5.42	0.121	1.7	2.86	12.45	175	0.0	clear
1715	9.42	450	5.43	0.121	1.6	2.82	12.44	176	0.0	clear
1720	9.42	450	5.43	0.121	1.4	2.79	12.42	175	0.0	clear - collect sample

SIGNATURE(S): WAR

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NW IRP Colverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ133I1-20110609
Sample Location: PZ-133I1
Sampled By: VAS
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
Date: 6-9-11								
Time: 1645								
Method: peristaltic pump	Clear	5.92	0.107	12.44	0.5	1.40	0.0	70

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-9-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD): 40'			(see	Low	Flow	purge	logs)	
Static Water Level (WL): 8.07'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1555								
End Purge (hrs): 1645								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ133I1
DATE: 6-9-11

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
1550	8.06	–	–	–	–	–	–	–	–	Initial
1555	8.07	450	5.90	0.114	2.3	2.87	12.44	40.0	0.0	clear
1600	8.07	450	5.89	0.109	1.1	1.64	12.22	73	0.0	clear
1605	8.07	450	5.87	0.108	1.0	1.51	12.29	79	0.0	clear
1610	8.07	450	5.88	0.107	1.3	1.49	12.39	77	0.0	clear
1615	8.07	450	5.90	0.107	1.1	1.50	12.34	76	0.0	clear
1620	8.07	450	5.90	0.106	0.9	1.46	12.38	74	0.0	clear
1625	8.07	450	5.91	0.106	0.8	1.42	12.42	73	0.0	clear
1630	8.07	450	5.92	0.107	0.7	1.43	12.41	72	0.0	clear
1635	8.07	450	5.92	0.107	0.5	1.42	12.40	71	0.0	clear
1640	8.07	450	5.92	0.107	0.6	1.41	12.42	71	0.0	
1645	8.07	450	5.92	0.107	0.5	1.40	12.44	70	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 1126-02045

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

Sample ID No.: SA-PZ133I-20110609
Sample Location: PZ-133I
Sampled By: VAS
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
Date: 6-9-11 Time: 0755 Method: peristaltic pump	clear	5.68	0.119	12.16	1.4	1.49	0.0	116

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-9-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD): 47'			(see	Low	Flow	purge	logs)	
Static Water Level (WL): 8.02'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0705								
End Purge (hrs): 0755								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ133I
DATE: 6-9-11

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
0700	8.02	–	–	–	–	–	–	–	–	Initial
0705	8.03	450	5.77	0.177	8.4	4.10	12.52	69	0.0	clear
0710	8.03	450	5.47	0.132	3.1	2.73	12.08	118	0.0	clear
0715	8.03	450	5.15	0.126	2.3	2.09	12.00	148	0.0	clear
0720	8.03	450	5.13	0.121	1.4	1.85	12.03	152	0.0	clear
0725	8.03	450	5.17	0.121	2.0	1.76	12.04	149	0.0	clear
0730	8.03	450	5.26	0.121	2.2	1.67	12.09	144	0.0	clear
0735	8.03	450	5.45	0.121	1.8	1.59	12.13	132	0.0	clear
0740	8.03	450	5.56	0.121	1.6	1.56	12.16	126	0.0	clear
0745	8.03	450	5.63	0.120	1.4	1.53	12.15	124	0.0	clear
0750	8.03	450	5.66	0.120	1.5	1.51	12.14	120	0.0	clear
0755	8.03	450	5.68	0.119	1.4	1.49	12.16	116	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-135I-20110607
Sample Location: PZ-135I
Sampled By: VAS
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
Date: 6-7-11								
Time: 1635								
Method: Peristaltic pump	Clear	4.99	0.122	13.01	0.5	1.56	0.0	160

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-7-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC			(See	Low	Flow	Purge	Logs)	
Total Well Depth (TD): 46.5								
Static Water Level (WL): 4.90'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1545								
End Purge (hrs): 1635								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 X 40 ml Vials	Yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): VAR

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-135I
DATE: 6-7-11

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
1540	4.90	—	—	—	—	—	—	—	—	Initial
~~1545~~	~~4.90~~	~~5.57~~	~~6.126~~	VAS						
1545	4.90	450	5.57	0.126	35.2	3.01	13.18	146	0.0	clear
1550	4.90	450	5.18	0.124	2.5	2.37	13.02	159	0.0	clear
1555	4.90	450	5.03	0.123	1.2	2.12	12.98	162	0.0	clear
1600	4.90	450	4.97	0.122	0.8	1.82	13.02	163	0.0	clear
1605	4.90	450	4.96	0.122	0.6	1.80	12.96	163	0.0	clear
1610	4.90	450	4.96	0.122	0.5	1.73	12.91	163	0.0	clear
1615	4.90	450	4.96	0.122	0.5	1.64	12.94	162	0.0	clear
1620	4.90	450	4.98	0.122	0.6	1.63	12.96	161	0.0	clear
1625	4.90	450	5.00	0.122	0.5	1.60	12.98	161	0.0	clear
1630	4.90	450	4.99	0.122	0.4	1.58	13.00	160	0.0	clear
1635	4.90	450	4.99	0.122	0.5	1.56	13.01	160	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-PZ136I-20110607
Sample Location: PZ-136I
Sampled By: VAS
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 ORP
Date: 6-7-11								
Time: 0750								
Method: Peristaltic pump	Tint-Brn	5.60	0.130	11.56	38.5	1.41	0.0	65

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-7-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 1 inch PVC								
Total Well Depth (TD): 49'			(See	Low	Flow	Purge	Logs)	
Static Water Level (WL): 5.45'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0700								
End Purge (hrs): 0750								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, elevated PID readings

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Colverton
PROJECT NUMBER: 112602045

WELL ID.: SA-PZ136I
DATE: 6-7-11

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
0655	5.45	—	—	—	—	—	—	—	—	Initial
0700	5.45	450	5.93	0.169	202	4.17	11.50	-7	0.0	cloudy - Brown
0705	5.46	450	5.41	0.135	130	1.98	11.41	58	0.0	Brown Tint
0710	5.46	450	5.32	0.133	112	1.80	11.42	65	0.0	" "
0715	5.46	450	5.37	0.132	124	1.68	11.43	65	0.0	" "
0720	5.46	450	5.46	0.131	110	1.55	11.47	64	0.0	" "
0725	5.46	450	5.52	0.131	95.3	1.50	11.48	64	0.0	" "
0730	5.46	450	5.54	0.131	85.2	1.48	11.48	64	0.0	Slight Tint - Brown
0735	5.46	450	5.57	0.130	60.9	1.45	11.50	65	0.0	" " "
0740	5.46	450	5.58	0.130	63.1	1.42	11.54	65	0.0	" " "
0745	5.46	450	5.60	0.130	40.9	1.41	11.57	65	0.0	" " "
0750	5.46	450	5.60	0.130	38.5	1.41	11.56	65	0.0	collect sample

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ137I-20110608
Sample Location: PZ-137I
Sampled By: VAS
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
Date: 6-8-11								
Time: 0755								
Method: peristaltic pump	Clear	5.78	0.134	11.39	2.1	1.64	0.0	47

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-8-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 1 inch PVC								
Total Well Depth (TD): 54'			(see	Low	Flow	Purge	logs)	
Static Water Level (WL): 7.53								
One Casing Volume(gal/L):								
Start Purge (hrs): 0655								
End Purge (hrs): 0755								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 5.25								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2x 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings observed

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-137I
DATE: 6-8-11

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
0650	7.53	—	—	—	—	—	—	—	—	Initial
0655	7.54	450	5.65	0.163	3.4	4.81	11.42	180	0.0	clear
0700	7.54	450	5.34	0.158	2.2	2.63	11.35	108	0.0	clear
0705	7.54	450	5.25	0.144	2.7	2.18	11.37	95	0.0	clear
0710	7.54	450	5.32	0.140	2.0	1.91	11.36	84	0.0	clear
0715	7.54	450	5.41	0.138	1.8	1.98	11.37	77	0.0	clear
0720	7.54	450	5.53	0.137	2.1	1.92	11.38	69	0.0	clear
0725	7.54	450	5.62	0.136	2.4	1.85	11.40	62	0.0	clear
0730	7.54	450	5.68	0.136	2.6	1.78	11.40	58	0.0	clear
0735	7.54	450	5.73	0.135	2.5	1.74	11.38	53	0.0	clear
0740	7.54	450	5.77	0.134	2.8	1.70	11.37	52	0.0	clear
0745	7.54	450	5.77	0.134	2.3	1.66	11.40	50	0.0	clear
0750	7.54	450	5.78	0.134	2.4	1.65	11.38	48	0.0	clear
0755	7.54	450	5.78	0.134	2.1	1.64	11.39	47	0.0	clear - collect sample

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ139I-20110610
Sample Location: PZ-139I
Sampled By: VAS
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
Date: 6-10-11								
Time: 0755								
Method: peristaltic pump	clear	5.58	0.126	12.26	0.5	1.52	0.0	144

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 6-10-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD): 47.5'								
Static Water Level (WL): 8.19'								
One Casing Volume(gal/L):								
Start Purge (hrs): 0700								
End Purge (hrs): 0755								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 X 40 ml vials	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: [redacted] NWIRP Calverton
PROJECT NUMBER: [redacted] 112602045

WELL ID.: SA-PZ-139I
DATE: 6-10-11

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
0655	8.19	—	—	—	—	—	—	—	—	Initial
0700	8.19	450	5.66	0.172	4.2	4.04	12.10	111	0.0	clear
0705	8.20	450	5.20	0.143	1.3	2.45	12.05	153	0.0	clear
0710	8.20	450	5.12	0.138	0.7	2.13	12.08	167	0.0	clear
0715	8.20	450	5.18	0.132	0.4	1.89	12.05	165	0.0	clear
0720	8.20	450	5.26	0.129	0.2	1.78	12.07	161	0.0	clear
0725	8.20	450	5.35	0.125	0.5	1.69	12.10	157	0.0	clear
0730	8.20	450	5.42	0.128	0.7	1.66	12.10	154	0.0	clear
0735	8.20	450	5.50	0.125	0.8	1.58	12.13	150	0.0	clear
0740	8.20	450	5.54	0.126	0.6	1.57	12.16	148	0.0	clear
0745	8.20	450	5.56	0.127	0.5	1.54	12.20	146	0.0	clear
0750	8.20	450	5.57	0.126	0.6	1.53	12.23	145	0.0	clear
0755	8.20	450	5.58	0.126	0.5	1.52	12.26	144	0.0	clear - collect sample

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G0204.5

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

Sample ID No.: SA-PZ-157I-20110411
Sample Location: PZ-157I
Sampled By: VAS
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
Date: 4-11-11								
Time: 1140								
Method: Peristaltic pump	clear	6.12	0.107	11.25	0.35	4.77	0.0	38

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-11-11								
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL):			(See	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1125								
End Purge (hrs): 1140								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 x 500 ml poly	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings
- DO Field Kit reading → 0.3 ppm
- Fe Field Kit reading → 2.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [illegible]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045

WELL ID.: PZ-157I
DATE: 4-11-11

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	4.71	–	–	–	–	–	–	–	–	Initial
1125	4.71	410	6.62	0.137	5.97	7.08	10.77	-13	0.0	clear
1130	4.71	400	6.33	0.120	1.59	5.01	10.99	18	0.0	clear
1135	4.71	400	6.16	0.112	0.46	4.73	11.10	34	0.0	clear
1140	4.71	400	6.12	0.107	0.35	4.77	11.25	38	0.0	clear - collect sample
										DO Field Kit
										reading → 0.3 ppm
										Fe Field Kit
										reading → 2.8 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: DWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-157I1-20110411
Sample Location: PZ-157I1
Sampled By: VAS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-11-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1110								
Method: Peristaltic pump	Clear	6.36	0.143	11.34	0.85	4.88	0.0	20

PURGE DATA:

Date: 4-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL):			(See	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1055								
End Purge (hrs): 1110								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings
- DO field kit reading → 0.2 ppm
- Fe field kit reading → 1.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-157I1
DATE: 4-11-11

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	5.09	—	—	—	—	—	—	—	—	Initial
1055	5.09	400	6.50	0.158	6.77	6.43	10.73	-8	0.0	clear
1100	5.09	400	6.37	0.152	2.04	4.85	11.25	9	0.0	clear
1105	5.09	400	6.36	0.146	0.94	4.90	11.32	15	0.0	clear
1110	5.09	400	6.36	0.143	0.85	4.88	11.34	20	0.0	clear-collect sample
										DO Field Kit
										reading → 0.2 ppm
										Fe Field Kit
										reading → 1.8 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-158I-20110411
Sample Location: PZ-158I
Sampled By: VAS
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
Date: 4-11-11								
Time: 1040								
Method: Peristaltic pump	clear	6.48	0.140	11.28	0.54	4.43	0.1	-51

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-11-11								
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(see	Low	Flow	Logs)		
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1025								
End Purge (hrs): 1040								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No stains, odors, or elevated PID readings
- DO Field Kit reading → 0.2 ppm
- Fe Field Kit reading → 1.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-158I
DATE: 4-11-11

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	5.10	—	—	—	—	—	—	—	—	Initial
1025	5.10	415	6.55	0.150	4.42	7.19	10.80	-25	0.0	clear
1030	5.10	400	6.49	0.146	1.12	4.77	11.15	-40	0.0	clear
1035	5.10	400	6.48	0.143	0.66	4.48	11.24	-46	0.1	clear
1040	5.10	400	6.48	0.140	0.54	4.43	11.28	-51	0.1	clear - collect sample
										DO Field Kit
										reading → 0.2 ppm
										Fe Field Kit
										reading → 1.8 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-PZ-158I1-20110411
Sample Location: PZ-158I1
Sampled By: VAS
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
Date: 4-11-11								
Time: 1015								
Method: Peristaltic pump	clear	6.25	0.151	11.35	0.57	4.76	0.1	0

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-11-11								
Method: Low flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL):			(see	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1015								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No odors, stains, or elevated PID readings
- DO field kit reading → 0.4 ppm
- Fe field kit reading → 2.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Colverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-158I1
DATE: 4-11-11

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	4.73	–	–	–	–	–	–	–	–	Initial
1000	4.73	425	6.40	0.150	7.80	6.55	11.07	-13	0.0	clear
1005	4.73	400	6.28	0.150	2.41	5.46	11.27	-4	0.1	clear
1010	4.73	400	6.26	0.151	0.64	4.80	11.34	0	0.1	clear
1015	4.73	400	6.25	0.151	0.57	4.76	11.35	0	0.1	clear - collect sample.
										DO Field Kit reading → 0.4 ppm
										Fe Field Kit reading → 2.8 mg/L

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-159I-20110411
Sample Location: PZ-159I
Sampled By: VAS
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: 4-11-11								
Time: 0945								ORP
Method: Peristaltic pump	Clear	6.53	0.130	11.34	0.75	4.40	0.2	-54

PURGE DATA:

Date: 4-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):								
Static Water Level (WL):			(See	Low	Flow	Logs)		
One Casing Volume(gal/L):								
Start Purge (hrs): 0930								
End Purge (hrs): 0945								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No stains, odors, or elevated PID readings
- DO Field Kit reading → 0.0 ppm
- Fe Field Kit reading → 2.6 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-159I
DATE: 4-11-11

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
0925	4.52	—	—	—	—	—	—	—	—	Initial
0930	4.52	415	6.64	0.122	8.70	6.96	10.90	-36	0.0	clear
0935	4.52	400	6.57	0.125	3.05	5.14	11.20	-45	0.0	clear
0940	4.52	400	6.54	0.128	1.23	4.77	11.28	-50	0.1	clear
0945	4.52	400	6.53	0.130	0.75	4.40	11.34	-54	0.2	clear-collect sample
										DO Field Kit
										reading → 0.0 ppm
										Fe Field Kit
										reading → 2.6 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112602045

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

Sample ID No.: SA-PZ-159I1-20110411
Sample Location: PZ-159I1
Sampled By: VAS
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: 4-11-11								
Time: 0920								ORP
Method: Peristaltic pump	clear	6.30	0.143	11.34	0.55	4.90	0.2	33

PURGE DATA:

Date: 4-11-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): 0.8								
Well Casing Diameter & Material								
Type: 1 inch PVC								
Total Well Depth (TD):			(see	Low	Flow	logs)		
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 0905								
End Purge (hrs): 0920								
Total Purge Time (min): 15								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TOC	H_2SO_4	1 X 500 ml poly	yes

OBSERVATIONS / NOTES:

- No stains, odors, or elevated PID readings
- DO Field Kit reading → 0.4 ppm
- Fe Field Kit reading → 2.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: PZ-159I1
DATE: 4-11-11

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	4.65	–	–	–	–	–	–	–	–	Initial
0905	4.65	425	6.43	0.182	9.75	8.31	10.86	112	0.1	clear
0910	4.65	400	6.38	0.168	2.42	5.49	11.17	60	0.1	clear
0915	4.65	400	6.31	0.150	0.93	4.88	11.26	43	0.2	clear
0920	4.65	400	6.30	0.143	0.55	4.90	11.34	33	0.2	clear - collect sample
										DO Field Kit
										reading → 0.4 ppm
										Fe Field Kit
										reading → 2.0 mg/L

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: ET-MW01S-20110926
Sample Location: ET-MW01S
Sampled By: S. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-26-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1206	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	6.57	0.073	18.26	2.49	6.96	0.0	166

PURGE DATA:

Date: 9-26-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 10.03								
One Casing Volume(gal/L):								
Start Purge (hrs): 1122								
End Purge (hrs): 1206								
Total Purge Time (min): 44								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 8.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.: (Time 1000)	Signature(s):
—	ET-Dup05-20110926	[signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: ET-MW01S
DATE: 9-26-11

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
1122	10.03	Start	purge							
1124	10.03	300	6.98	0.085	9.80	8.09	18.30	-19	0.0	clear
1129	10.03	300	6.73	0.086	6.48	8.37	18.09	-7	0.0	clear
1134	10.03	300	6.61	0.085	5.32	7.07	18.00	152	0.0	clear
1139	10.03	300	6.52	0.082	3.01	6.91	18.06	158	0.0	clear
1144	10.03	300	6.59	0.079	1.29	6.94	18.06	156	0.0	clear
1149	10.03	300	6.58	0.077	2.22	6.91	18.09	160	0.0	clear
1154	10.03	300	6.59	0.075	3.18	6.86	18.13	161	0.0	clear
1159	10.03	300	6.58	0.074	3.85	6.76	18.21	168	0.0	clear
1204	10.03	300	6.57	0.073	2.49	6.96	18.26	166	0.0	clear
1206	Collect sample and duplicate									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: ET-MW02S-20110926
Sample Location: ET-MW02S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-26-11	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 - Peristaltic	clear	6.81	0.247	18.40	3.29	1.46	0.1	-2

PURGE DATA:

Date: 9-26-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.58								
One Casing Volume(gal/L):								
Start Purge (hrs): 1025								
End Purge (hrs): 1110								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ~~ID No.:~~
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: ET-MW-02S
DATE: 9-26-11

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
1025	9.58	Start	purge							
1027	9.58	300	6.47	0.270	8.33	2.48	18.40	95	0.0	clear w/ red particulate
1032	9.58	300	6.76	0.273	19.9	2.74	18.19	29	0.0	" "
1037	9.58	300	6.80	0.265	9.43	2.34	18.24	19	0.0	" "
1042	9.58	300	6.81	0.252	6.34	2.11	18.27	10	0.1	clear
1047	9.58	300	6.82	0.250	3.97	2.06	18.26	6	0.1	clear
1052	9.58	300	6.81	0.248	3.51	1.88	18.36	0	0.1	clear
1057	9.58	300	6.81	0.247	3.20	1.79	18.46	-1	0.1	clear
1102	9.58	300	6.81	0.247	3.70	1.57	18.39	-3	0.1	clear
1107	9.58	300	6.81	0.247	3.29	1.46	18.40	-2	0.1	clear
1110	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: ET-MW03S-20110926
Sample Location: ET-MW03S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-26-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1011	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	Clear	5.28	0.043	16.82	0.48	3.96	0.0	265

PURGE DATA:

Date: 9-26-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 10.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 0923								
End Purge (hrs): 1011								
Total Purge Time (min): 48								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 3.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: ET-MW03S
DATE: 9-26-11

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
0923	10.42	Start	purge							
0925	10.42	300	5.08	0.086	8.63	5.63	17.45	220	0.0	clear
0930	10.42	300	5.23	0.045	1.24	3.55	16.83	224	0.0	clear
0935	10.42	300	5.21	0.045	1.08	3.48	16.82	239	0.0	clear
0940	10.42	300	5.19	0.045	0.75	3.60	16.85	248	0.0	clear
0945	10.42	300	5.17	0.045	1.18	3.76	16.81	254	0.0	clear
0950	10.42	300	5.26	0.045	0.46	3.77	16.81	251	0.0	clear
0955	10.42	300	5.26	0.043	0.55	3.91	16.84	260	0.0	clear
1000	10.42	300	5.24	0.043	0.61	3.91	16.82	263	0.0	clear
1005	10.42	300	5.29	0.043	0.75	3.94	16.79	264	0.0	clear
1010	10.42	300	5.28	0.043	0.48	3.96	16.82	265	0.0	clear
1011	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW01S-20110929
Sample Location: FC-MW01S
Sampled By: J. Birkett
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 (%)	ORP (mV)
Date: 9-29-11								
Time: 0845								
Method: Low Flow - Peristaltic	clear	5.99	0.188	17.55	2.12	0.65	0.1	-15

PURGE DATA:

Date: 9-29-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 4" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 8.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 0800								
End Purge (hrs): 0845								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.05 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW01S
DATE: 9-29-11

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
0800	8.40									
0803	8.41	300	5.33	0.261	—	6.95	18.50	44	0.1	
0808	8.41	300	5.61	0.199	13.3	3.62	17.91	13	0.1	tan tint
0813	8.41	300	5.88	0.185	5.09	0.89	17.84	2	0.1	clear
0818	8.41	300	5.89	0.182	4.46	0.85	17.90	0	0.1	clear
0823	8.41	300	5.90	0.184	3.41	0.93	17.89	-1	0.1	clear
0828	8.41	300	5.95	0.186	3.18	1.19	17.60	-6	0.1	clear
0833	8.41	300	6.00	0.186	2.69	0.86	17.58	-9	0.1	clear
0838	8.41	300	5.98	0.187	2.26	0.80	17.58	-12	0.1	clear
0843	8.41	300	5.99	0.188	2.12	0.65	17.55	-15	0.1	clear
0845	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW01I-20110929
Sample Location: FC-MW01I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-29-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0940								
Method: Low Flow - Peristaltic	clear	5.46	0.068	14.42	2.63	4.47	0.0	226

PURGE DATA:

Date: 9-29-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 4" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 8.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 0850								
End Purge (hrs): 0940								
Total Purge Time (min): 49								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 4 ppm

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW01 I
DATE: 9-29-11

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
0851	8.20	Start purge								
0853	8.22	300	6.05	0.128	—	3.62	17.96	0	0.1	clear
0858	8.22	300	5.91	0.081	10.07	4.46	17.01	54	0.0	clear
0903	8.22	300	5.62	0.069	9.43	4.58	16.39	129	0.0	clear
0908	8.22	300	5.47	0.068	6.38	4.62	14.77	168	0.0	clear
0913	8.22	300	5.46	0.069	4.09	4.29	14.61	191	0.0	clear
0918	8.22	300	5.46	0.069	3.85	4.23	14.61	200	0.0	clear
0923	8.22	300	5.46	0.068	3.66	4.27	14.55	210	0.0	clear
0928	8.22	300	5.45	0.069	3.11	4.34	14.50	217	0.0	clear
0933	8.22	300	5.46	0.069	2.87	4.41	14.51	222	0.0	clear
0938	8.22	300	5.46	0.068	2.63	4.47	14.42	226	0.0	Clear
0940	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW02SR1-20110928
Sample Location: FC-MW02SR1
Sampled By: KE
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 (%)	ORP (mV)
Date: 9/28/11 Time: 1432 Method: Low Flow -	Clear	6.16	.512	21.35	1.51	0.85	0.2	-119

PURGE DATA:

Date: 9/28/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.67								
One Casing Volume(gal/L):								
Start Purge (hrs): 1340								
End Purge (hrs): 1432								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): ~4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW025R1
DATE: 9/28/11

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
1342	~~350~~ 7.72	350	6.04	0.797	7.70	3.08	21.56	-11	0.4	
1347	~~350~~ 7.72	350	6.35	0.706	3.33	1.29	21.10	-104	0.3	
1352	7.72	350	6.31	0.656	2.24	1.12	21.02	-104	0.3	clear
1357	7.72	350	6.28	0.598	1.37	1.05	21.11	-109	0.3	
1402	7.72	350	6.23	0.563	1.26	1.04	21.18	-113	0.3	
1407	7.72	350	6.20	0.540	1.57	0.94	21.30	-115	0.3	
1412	7.72	350	6.37	0.531	1.65	1.14	21.34	-116	0.3	slight sheen on water
1417	7.72	350	6.17	0.334	1.61	0.93	21.32	-119	0.3	
1422	7.72	350	6.17	0.516	1.36	0.89	21.34	-120	0.2	
1427	7.72	350	6.16	0.513	1.24	0.88	21.35	-121	0.2	
1432	7.72	350	6.16	0.512	1.51	0.85	21.35	-119	0.2	

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW02ZR1-20110928
Sample Location: FC-MW02ZR1
Sampled By: KF
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 (%)	ORP (mV)
Date: 9/28/11 Time: 1514 Method: Low Flow -	clear	5.65	0.115	17.25	0.61	3.99	0.1	161

PURGE DATA:

Date: 9/28/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.61								
One Casing Volume(gal/L):								
Start Purge (hrs): 1439								
End Purge (hrs): 1514								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): ~3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	4

OBSERVATIONS / NOTES:

D.O. Test Kit = 2.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FL-MW 02IR1
DATE: 9/28/11

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
1439	~~350~~ 7.64	350	6.69	0.107	1.81	5.12	21.15	-28	0.0	
1444	7.64	350	5.70	0.110	1.93	4.07	18.67	106	0.1	
1449	7.64	350	5.59	0.111	1.87	3.99	18.21	122	0.1	
1454	7.64	350	5.72	0.115	0.77	3.92	17.93	126	0.1	
1459	7.64	350	5.61	0.114	0.58	3.95	17.98	145	0.1	
1504	7.64	350	5.67	0.115	0.70	4.00	17.74	150	0.1	
1509	7.64	350	5.66	0.115	0.74	3.98	17.64	157	0.1	
1514	7.64	350	5.65	0.115	0.61	3.99	17.25	161	0.1	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW03SR1-20110926 ~~FC-MW03SR20110926~~ KF
Sample Location: FC-MW03SR1
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/26/11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1630	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow -	clear	6.28	0.432	21.69	1.38	1.30	0.2	791

PURGE DATA:

Date: 9/26/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.22								
One Casing Volume(gal/L):								
Start Purge (hrs): 1538								
End Purge (hrs): 1630								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): ~3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	2

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW03SR1
DATE: 9/26/11

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
1540	7.21	300	6.33	0.651	6.76	2.00	20.80	-132	0.3	clear
1545	7.21	300	6.31	0.569	6.32	1.41	21.13	-140	0.3	
1550	7.21	325	6.30	0.518	6.64	1.06	21.74	-145	0.2	
1555	7.26	350	6.28	0.488	6.56	1.36	21.99	-149	0.2	
1600	7.26	350	6.28	0.469	6.23	1.38	21.98	-151	0.2	slight sheen in bucket
1605	7.26	350	6.28	0.464	6.28	1.50	21.89	-154	0.2	
1610	7.26	350	6.23	0.449	6.27	2.77	21.79	-175	0.2	
1615	7.26	350	6.27	0.443	6.28	1.37	21.68	-176	0.2	
1620	7.26	350	6.28	0.436	6.35	1.30	21.65	-181	0.2	
1625	7.26	350	6.27	0.434	6.32	1.29	21.71	-188	0.2	
1630	7.26	350	6.28	0.432	6.38	1.30	21.69	-191	0.2	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW04S-20110928
Sample Location: FC-MW04S
Sampled By: J. Birkett
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 (%)	ORP (mV)
Date: 9-28-11								
Time: 1532								
Method: Low Flow - Peristaltic	clear	5.33	0.037	17.93	8.19	2.63	0.0	288

PURGE DATA:

Date: 9-28-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 4" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 6.93								
One Casing Volume(gal/L):								
Start Purge (hrs): 1447								
End Purge (hrs): 1532								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 2.0

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW04S
DATE: 9-28-11

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
1447	6.93									
1449	6.95	300	5.33	0.041	241	6.05	17.90	229	0.0	tan color
1454	6.95	300	5.33	0.039	267	5.98	17.73	245	0.0	tan color
1459	6.95	300	5.33	0.039	278	5.72	17.74	252	0.0	" "
1504	6.95	300	5.35	0.038	29.5	5.39	17.82	264	0.0	tan tint
1509	6.95	300	5.37	0.038	12.3	2.82	17.90	272	0.0	clear
1514	6.95	300	5.35	0.038	10.86	2.80	17.93	277	0.0	clear
1519	6.95	300	5.34	0.037	9.48	2.73	17.94	281	0.0	
1524	6.95	300	5.33	0.037	8.31	2.70	17.94	286	0.0	
1529	6.95	300	5.33	0.037	8.19	2.63	17.93	288	0.0	
1532	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW04I-20110928
Sample Location: FC-MW04I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-28-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1440	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear/tint	5.59	0.080	15.05	10.91	3.97	0.0	265

PURGE DATA:

Date: 9-28-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 4" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 6.88								
One Casing Volume(gal/L):								
Start Purge (hrs): 1346								
End Purge (hrs): 1440								
Total Purge Time (min): 54								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 2.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW04I
DATE: 6-28-11

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
1346	6.88	Start p								
1348	6.88	300	5.64	0.079	2186 NU	6.64	19.79	195	0.0	clear then tan color
1353	6.88	300	5.61	0.068	767 NU	5.73	17.83	215	0.0	tan color
1358	6.88	300	5.59	0.068	246	5.20	17.18	231	0.0	tan color
1403 1405 ~~1403~~	6.88	300	5.56	0.072	22.1	5.22	15.11	244	0.0	tan tint
1408 1408	6.88	300	5.54	0.073	14.8	4.99	15.15	250	0.0	clear
1413 1413	6.88	300	5.51	0.074	11.87	4.76	15.05	257	0.0	clear
1418 1418	6.88	300	5.47	0.075	8.25	4.58	15.04	263	0.0	clear
1423 1423	6.88	300	5.55	0.077	17.9	4.37	15.00	262	0.0	clear
1428 1428	6.88	300	5.57	0.078	256	4.19	15.03	263	0.0	clear/tan tint
1433	6.88	300	5.56	0.078	299	4.13	15.16	264	0.0	tan color
1438	6.88	300	5.59	0.080	10.91	3.97	15.05	265	0.0	clear
1440	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW05S-20110926
Sample Location: FC-MW05S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-26-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1523	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	5.17	0.054	17.12	6.31	0.67	0.0	175

PURGE DATA:

Date: 9-26-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.95								
One Casing Volume(gal/L):								
Start Purge (hrs): 1433								
End Purge (hrs): 1523								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.6 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW05 S
DATE: 9-26-11

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
1433	9.95	Start purge	~~5.76~~							
1435	9.96	300	5.76	0.063	83.4	3.42	18.79	72	0.0	tan tint
1440	9.96	300	5.44	0.049	11.2	3.19	17.11	97	0.0	clear
1445	9.96	300	5.38	0.050	12.1	2.55	17.23	117	0.0	clear
1450	9.96	300	5.19	0.052	8.70	0.95	17.03	143	0.0	clear
1455	9.96	300	5.16	0.053	7.68	0.88	17.04	152	0.0	clear
1500	9.96	300	5.18	0.054	7.81	0.70	17.05	160	0.0	clear
1505	9.96	300	5.11	0.055	7.27	0.52	16.99	167	0.0	clear
1510	9.96	300	5.15	0.054	7.01	0.67	17.05	173	0.0	clear
1515	9.96	300	5.16	0.054	6.99	0.55	17.09	173	0.0	clear
1520	9.96	300	5.17	0.054	6.31	0.67	17.12	175	0.0	clear
1523	Collect sample									

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW05I-20110926
Sample Location: FC-MW05I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-26-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1429	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	5.57	0.098	16.62	8.36	1.82	0.0	269

PURGE DATA:

Date: 9-26-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.28								
One Casing Volume(gal/L):								
Start Purge (hrs): 1339								
End Purge (hrs): 1429								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 2.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW05I
DATE: 9-26-11

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
1339	9.28	Start purge								
1341	9.31	300	6.07	0.100	14.3	3.22	21.05	242	0.0	clear
1346	9.32	300	5.76	0.096	6.94	2.66	18.23	251	0.0	clear
1351	9.32	300	5.64	0.097	4.37	2.43	17.45	256	0.0	clear
1356	9.32	300	5.55	0.097	5.96	2.33	17.25	263	0.0	clear
1401	9.32	300	5.51	0.097	7.19	2.24	17.08	263	0.0	clear
1406	9.32	300	5.54	0.097	7.84	2.24	17.03	266	0.0	clear
1411	9.32	300	5.52	0.097	8.26	2.30	16.79	267	0.0	clear
1416	9.32	300	5.56	0.098	8.59	2.02	16.69	267	0.0	clear
1421	9.32	300	5.58	0.098	9.05	1.99	16.66	267	0.0	clear
1426	9.32	300	5.57	0.098	8.36	1.82	16.62	269	0.0	clear
1429	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-PZ05I1-20110926
Sample Location: FC-PZ05I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-26-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1623	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	6.44	0.197	14.95	4.41	0.37	0.1	-78

PURGE DATA:

Date: 9-26-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 1538								
End Purge (hrs): 1623								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.0 ppm
Sheen on purgewater
solvent odor

Circle if Applicable:

MS/MSD —

Duplicate ID No.: FC-Dup06-20110926 1500

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-PZ05I1 ~~20110~~
DATE: 9-26-11

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	9.90									
1540	9.92	300	6.22	0.190	2.41	1.02	17.07	-40	0.1	clear, solvent odor
1545	9.92	300	6.41	0.202	1.36	0.50	15.79	-65	0.1	" "
1550	9.92	300	6.42	0.201	2.47	0.45	15.61	-68	0.1	" "
1555	9.92	300	6.44	0.200	3.39	0.41	15.64	-71	0.1	" "
1600	9.92	300	6.45	0.199	4.06	0.40	15.37	-75	0.1	" "
1605	9.92	300	6.45	0.198	4.61	0.39	15.23	-75	0.1	" "
1610	9.92	300	6.45	0.197	4.69	0.38	15.13	-76	0.1	" "
1615	9.92	300	6.44	0.198	4.53	0.38	15.03	-75	0.1	" "
1620	9.92	300	6.44	0.197	4.41	0.37	14.95	-78	0.1	" "
1623	Collect sample									sheen on ~~purge~~ purgewater JB 9-26-11

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW06S-20110928
Sample Location: FC-MW06S
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/28/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1605								
Method: Low Flow -	Clear	6.60	1276	17.81	0.31	4.00	0.1	138

PURGE DATA:

Date: 9/28/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 12.08								
One Casing Volume(gal/L):								
Start Purge (hrs): 1525								
End Purge (hrs): 1605								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): ~3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	✓

OBSERVATIONS / NOTES:

D.O. Test Kit = 4.00 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW06S
DATE: 9/28/11

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
1525	12.13	300	6.27	0.169	1.10	7.26	18.98	95	0.1	
1530	12.13	300	6.33	0.183	0.98	7.20	18.02	115	0.1	
1535	12.13	300	6.32	0.195	0.45	6.97	17.95	128	0.1	
1540	12.13	300	6.32	0.222	0.62	7.25	17.80	140	0.1	
1545	12.13	300	6.29	0.239	0.45	7.23	17.62	149	0.1	
1550	12.13	300	6.56	0.269	0.23	6.96	17.42	141	0.1	
1555	12.13	300	6.59	0.277	0.34	6.89	17.43	141	0.1	
1600	12.13	300	6.60	0.279	0.42	6.90	17.34	139	0.1	
1605	12.13	300	6.60	0.276	0.31	6.90	17.31	138	0.1	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW075-20110926
Sample Location: FC-MW075
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/26/11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1430	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow -	clear	4.00	.043	20.39	7.21	0.40	0	-111

PURGE DATA:

Date: 9/26/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.98								
One Casing Volume(gal/L):								
Start Purge (hrs): 1339								
End Purge (hrs): 1430								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): ~4.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.04 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW07S - 20110926
DATE: 9/26/11

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	10.01	350	5.76	0.080	8.83	7.93	21.40	-1	0	clear
1345	10.01	350	5.97	0.057	9.32	2.52	20.91	-34	0	
1350	10.01	350	5.99	0.051	6.30	1.93	20.77	-58	0	
1355	10.01	350	5.99	0.048	5.39	1.55	20.52	-74	0	
1400	10.01	350	5.98	0.047	4.58	1.47	20.52	-76	0	
1405	10.01	350	5.96	0.046	6.97	1.32	20.53	-81	0	
1410	10.01	350	6.02	0.044	7.05	1.43	20.28	-93	0	
1415	10.01	350	6.01	0.044	7.17	1.07	20.41	-100	0	
1420	10.01	350	6.01	0.044	6.94	1.01	20.48	-105	0	
1425	10.01	350	6.01	0.043	7.23	0.98	20.35	-110	0	
1430	10.01	350	6.00	0.043	7.21	0.97	20.39	-111	0	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW07I-20119261
Sample Location: FC-MW07I
Sampled By: KE
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/26/11 Time: 1525	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Method: Low Flow -	clear	5.58	0.099	16.01	23.2	5.26	0	199

PURGE DATA:

Date: 9/26/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 8.99								
One Casing Volume(gal/L):								
Start Purge (hrs): 1435								
End Purge (hrs): 1525								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): ~4.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	6

OBSERVATIONS / NOTES:

D.O. Test Kit = 1.0 mg/L

Circle if Applicable:

MS/MSD (Y)

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW07I
DATE: 9/26/11

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	10.10	400	5.71	0.088	4014	6.11	16.60	153	0	cloudy/grey
1440	10.10	400	5.56	0.090	258	5.73	16.35	164	0	
1445	10.10	400	5.51	0.091	280	5.64	16.84	179	0	clearing
1450	10.10	400	5.50	0.092	313	5.37	16.76	184	0	
1455	10.10	400	5.49	0.095	159	5.00	16.71	189	0	
1500	10.10	400	5.47	0.096	820	4.61	16.66	194	0	clear
1505	10.10	400	5.56	0.096	43.1	4.48	16.51	194	0	
1510	10.10	400	5.58	0.096	22.8	5.31	15.99	196	0	
1515	10.10	400	5.59	0.098	25.3	5.28	15.69	197	0	
1520	10.10	400	5.58	0.098	20.8	5.27	15.83	198	0	
1525	10.10	400	5.58	0.099	23.2	5.26	16.01	199	0	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FC-MW08S-20110928
Sample Location: FC-MW08S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-28-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1630	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	5.90	0.122	17.31	5.51	0.30	0.1	106

PURGE DATA:

Date: 9-28-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 4" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 5.72								
One Casing Volume(gal/L):								
Start Purge (hrs): 1542								
End Purge (hrs): 1630								
Total Purge Time (min): 48								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.05 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): J. Birkett

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FC-MW03S
DATE: 9-28-11

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	5.72	Start	purge							
1544	5.72	300	5.94	0.110	—	0.60	17.67	212	0.1	tan tint
1549	5.72	300	5.95	0.110	7.95	0.52	17.58	134	0.1	clear
1554	5.72	300	5.95	0.112	6.25	0.46	17.47	142	0.1	
1559	5.72	300	5.94	0.113	9.98	0.40	17.45	133	0.1	
1604	5.72	300	5.94	0.115	8.34	0.38	17.39	126	0.1	
1609	5.72	300	5.92	0.119	7.66	0.34	17.36	113	0.1	
1614	5.72	300	5.91	0.121	8.41	0.36	17.36	110	0.1	
1619	5.72	300	5.90	0.122	6.93	0.31	17.33	108	0.1	
1624	5.72	300	5.90	0.122	5.51	0.30	17.31	106	0.1	
1630	Collect sample									

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW015-20111018
Sample Location: FT-MW015
Sampled By: KE
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10/18/11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1300	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow -	Clear	4.24	0.153	14.64	2.41	10.41	0.0	300

PURGE DATA:

Date: 10/18/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 22.85								
One Casing Volume(gal/L):								
Start Purge (hrs): 1215								
End Purge (hrs): 1300								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 8.00 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW01S
DATE: 10/18/11

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
1215	22.90	300	4.27	0.168	1.86	10.33	14.55	263	0.0	
1220	22.90	300	4.21	0.167	1.72	10.06	13.81	281	0.0	
1225	22.90	300	4.24	0.165	1.95	9.93	13.90	288	0.0	
1230	22.90	300	4.24	0.163	1.39	9.88	14.48	295	0.0	
1235	22.90	300	4.25	0.161	1.73	10.42	13.41	294	0.0	
1240	22.90	300	4.27	0.156	1.40	10.63	13.29	296	0.0	
1245	22.90	300	4.27	0.152	2.49	10.48	13.51	297	0.0	
1250	22.90	300	4.24	0.154	2.42	10.42	14.08	300	0.0	
1255	22.90	300	4.24	0.152	2.86	10.40	14.52	299	0.0	
1300	22.90	300	4.24	0.153	2.41	10.41	14.64	300	0.0	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112C02045

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

Sample ID No.: FT-MW01I-20111018
Sample Location: FT-MW01I
Sampled By: KF
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: 10/18/11								
Time: 1350								
Method: low flow	Clear	5.47	0.005	13.74	1.35	9.96	0.0	ORP 199

PURGE DATA:

Date: 10/18/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: low flow								
Monitor Reading (ppm):								
Well Casing Diameter & Material		See Purge log						
Type:								
Total Well Depth (TD):								
Static Water Level (WL): 22.51								
One Casing Volume(gal/L):								
Start Purge (hrs): 1305								
End Purge (hrs): 1350								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~4.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	2- 40 mL VOA	Y

OBSERVATIONS / NOTES:

DO → 4.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FL MW01I
DATE: 10/18/11

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	22.58	300	5.36	0.006	1.38	10.14	13.64	240	0.0	
1310	22.58	300	5.59	0.004	1.24	9.74	13.17	229	0.0	
1315	22.58	300	5.66	0.003	1.38	10.04	12.84	218	0.0	
1320	22.58	300	5.64	0.003	1.25	10.15	12.46	211	0.0	
1325	22.58	300	5.58	0.003	1.44	9.83	13.06	210	0.0	
1330	22.58	300	5.64	0.004	1.50	10.02	13.15	205	0.0	
1335	22.58	300	5.62	0.005	1.61	9.98	13.17	208	0.0	
1340	22.58	300	5.46	0.005	1.84	9.98	13.13	206	0.0	
1345	22.58	300	5.46	0.005	1.21	9.96	13.45	202	0.0	
1350	22.58	300	5.47	0.005	1.35	9.96	13.74	199	0.0	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW025-20110929
Sample Location: FT-MW025
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/29/11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1505	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow -	clear	6.42	0.320	16.85	4.90	0.32	0.2	-137

PURGE DATA:

Date: 9/29/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 14.76								
One Casing Volume(gal/L):								
Start Purge (hrs): 1420								
End Purge (hrs): 1505								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~4.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.2 mg/L

Product at 14.76

Circle if Applicable:

MS/MSD

Duplicate ID No.: FT-DUP07-20110929 @ 1200

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW025
DATE: 9/29/11

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
1420	~~400~~ 14.78	400	6.46	0.489	10.03	1.16	17.80	-138	0.2	strong smell
1425	14.79	400	6.39	0.370	8.63	0.86	16.82	-131	0.2	black "flecks" in
1430	14.79	400	6.35	0.351	6.43	0.70	16.77	-130	0.2	water
1435	14.79	400	6.37	0.333	~~6.3.86~~	0.57	16.73	-131	0.2	
1440	14.79	400	6.40	0.318	3.28	0.47	16.66	-131	0.2	
1445	14.79	400	6.68	0.318	2.82	0.47	16.27	-131	0.2	
1450	14.79	400	6.45	0.319	2.92	0.38	16.77	-132	0.2	
1455	14.79	400	6.41	0.319	3.24	0.34	16.74	-132	0.2	
1500	14.79	400	6.42	0.320	3.79	0.32	16.79	-135	0.2	clear
1505	14.79	400	6.42	0.320	4.90	0.32	16.85	-137	0.2	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW02I-20110929
Sample Location: FT-MW02I
Sampled By: J. Birkett
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 (%)	ORP (mV)
Date: 9-29-11								
Time: 1502								
Method: Low Flow - Peristaltic	clear	5.79	0.041	14.49	0.74	7.89	0.0	270

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-29-11								
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 4" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 14.59								
One Casing Volume(gal/L):								
Start Purge (hrs): 1417								
End Purge (hrs): 1502								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 6 mg/L

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW02I
DATE: 9-29-11

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
1417	14.59									
1420	14.62	300	5.32	0.041	1.13	11.74	19.08	277	0.0	clear
1425	14.62	300	5.77	0.042	0.91	9.50	15.81	274	0.0	clear
1430	14.62	300	5.81	0.042	1.38	8.72	15.09	272	0.0	clear
1435	14.62	300	5.81	0.042	1.16	8.41	14.68	271	0.0	clear
1440	14.62	300	5.81	0.042	0.83	8.22	14.47	270	0.0	clear
1445	14.62	300	5.82	0.042	1.45	8.09	14.37	269	0.0	clear
1450	14.62	300	5.80	0.041	1.07	8.01	14.63	270	0.0	clear
1455	14.62	300	5.80	0.041	0.89	7.83	14.51	268	0.0	clear
1500	14.62	300	5.79	0.041	0.74	7.89	14.49	270	0.0	
1502	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW035-20111018
Sample Location: FT-MW035
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 10/18/11 Time: 1040	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Method: Low Flow -	Clear	6.14	0.074	14.39	2.11	10.82	0.0	149

PURGE DATA:

Date: 10/18/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 25.60								
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1040								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): ~4.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 5.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): KZ

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW035-20111008
DATE: 10/18/11

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
1000	25.64	375	5.20	0.061	18.2	10.40	12.01	192	0.0	
1005	25.62	375	5.77	0.073	10.71	10.21	12.35	180	0.0	
1010	25.62	375	5.82	0.076	3.51	10.15	12.50	177	0.0	clear
1015	25.62	375	5.95	0.077	2.81	10.18	13.29	167	0.0	
1020	25.62	375	6.02	0.073	2.64	10.50	13.63	162	0.0	
1025	25.62	375	6.11	0.076	2.28	10.77	13.89	155	0.0	
1030	25.62	375	6.14	0.074	2.02	10.84	14.17	153	0.0	
1035	25.62	375	6.14	0.075	2.13	10.80	14.61	149	0.0	
1040	25.62	375	6.14	0.074	2.11	10.82	14.39	149	0.0	

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW04-20110929
Sample Location: FT-MW04
Sampled By: J. Birkett
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 (%)	ORP (mV)
Date: 9-29-11								
Time: 1350								
Method: Low Flow - Grundfos	clear	4.22	0.96	16.54	1.03	3.58	0.0	372

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-29-11								
Method: Low Flow - Grundfos								
Monitor Reading (ppm): --								
Well Casing Diameter & Material Type: 4" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 20.37								
One Casing Volume(gal/L):								
Start Purge (hrs): 1258								
End Purge (hrs): 1350								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 4.0ppm
Pulled pump 3' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
—	—	J. Birkett

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW04
DATE: 9-29-11

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
1258	20.37									
1303	20.40	500	4.50	0.103	—	16.10	16.91	335	0.0	clear
1308	20.40	350	4.49	0.095	14.3	6.06	15.85	350	0.0	clear
1313	20.40	350	4.47	0.093	10.2	5.29	16.27	354	0.0	clear
1318	20.40	350	4.40	0.100	6.31	4.87	16.22	361	0.0	clear
1323	20.40	350	4.32	0.096	4.96	4.43	16.14	368	0.0	clear
1328	20.40	350	4.28	0.095	3.48	4.13	16.08	371	0.0	clear
1333	20.40	350	4.22	0.095	1.44	3.96	16.08	374	0.0	clear
1338	20.40	350	4.17	0.096	1.35	3.87	16.23	377	0.0	clear
1342	20.40	350	4.16	0.095	1.19	3.72	16.43	376	0.0	clear
1347	20.40	350	4.22	0.096	1.03	3.58	16.54	372	0.0	
1350	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW05S-20110929
Sample Location: FT-MW05S
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/29/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1135								
Method: Low Flow -	Clear	5.23	.071	16.78	3.41	0.27	0.0	92

PURGE DATA:

Date: 9/29/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 11.33								
One Casing Volume(gal/L):								
Start Purge (hrs): 1050								
End Purge (hrs): 1135								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~4.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.6 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
		[signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW05S
DATE: 9/29/11

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	11.35	350	5.64	.081	333	1.04	16.29	109	0.0	
1055	11.35	350	5.53	.068	329	0.61	15.89	87	0.0	
1100	11.35	400	5.41	.043	140	0.39	15.92	92	0.0	clear
1105	11.35	400	5.36	.042	63	0.41	16.08	96	0.0	
1110	11.35	400	5.31	.065	7.72	0.35	16.31	97	0.0	
1115	11.35	400	5.28	.043	6.11	0.32	16.15	96	0.0	
1120	11.35	400	5.25	.044	3.28	0.30	16.33	96	0.0	
1125	11.35	400	5.23	.069	3.21	0.29	16.43	94	0.0	
1130	11.35	400	5.24	.070	1.14	0.28	16.52	92	0.0	
1135	11.35	400	5.23	.071	3.41	0.27	16.78	92	0.0	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW05I-20110929
Sample Location: FT-MW05I
Sampled By: KF
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 (%)	ORP (mV)
Date: 9/29/11 Time: 1040								
Method: Low Flow -	Clear	5.98	0.043	14.37	3.41	8.27	0.0	211

PURGE DATA:

Date: 9/29/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 11.76								
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1040								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): ~3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 6.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW05I
DATE: 9/29/11

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
1000	11.74	400	6.10	0.062	341	8.08	17.39	145	0.0	
1005	11.74	400	6.11	0.044	7.33	9.18	14.45	164	0.0	
1010	11.74	400	6.10	0.044	6.14	9.00	14.27	185	0.0	
1015	11.74	400	5.98	0.043	6.12	8.88	14.22	193	0.0	
1020	11.74	400	6.00	0.043	7.55	8.62	14.24	199	0.0	
1025	11.74	400	5.99	0.043	4.31	8.30	14.16	203	0.0	
1030	11.74	400	5.99	0.043	5.27	8.28	14.32	206	0.0	
1035	11.74	400	5.98	0.043	2.10	8.26	14.36	209	0.0	
1040	11.74	400	5.98	0.043	3.41	8.27	14.37	211	0.0	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW06S-20110929
Sample Location: FT-MW06S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-29-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1051	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	4.43	0.086	13.51	4.31	4.61	0.1	386

PURGE DATA:

Date: 9-29-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 4" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 0958								
End Purge (hrs): 1051								
Total Purge Time (min): 53								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	6 - 40mL glass vials	yes
		6	

OBSERVATIONS / NOTES:

D.O. Test Kit = 4 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s): J. Birkett

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW06S
DATE: 9-29-11

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
0958	20.72									
1000	20.72	300	4.59	0.111	—	4.55	17.11	285	0.1	brown red color
1005	20.72	300	4.24	0.127	6.16	0.83	14.72	389	0.1	clear
1010	20.72	300	4.25	0.126	5.28	0.85	14.76	396	0.1	clear
1015	20.72	300	4.27	0.121	4.39	1.10	14.74	399	0.1	clear
1020	20.72	300	4.29	0.117	3.63	0.93	14.73	402	0.1	clear
1025	20.72	300	4.30	0.112	4.12	2.43	13.53	406	0.1	clear
1030	20.72	300	4.35	0.107	4.07	2.69	13.26	403	0.1	clear
1035	20.72	300	4.36	0.101	4.01	3.32	13.36	401	0.1	clear
1040	20.72	300	4.40	0.093	3.92	4.04	13.32	398	0.1	clear
1045	20.72	300	4.42	0.088	4.57	4.16	13.60	390	0.1	clear
1050	20.72	300	4.43	0.086	4.31	4.61	13.51	386	0.1	clear
1051	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT.MW06I-20110929
Sample Location: FT-MW06I
Sampled By: J. Birkoff
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-29-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1149	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Grundfos	clear	6.16	0.045	14.54	9.41	7.04	0.0	183

PURGE DATA:

Date: 9-29-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 4" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 21.72								
One Casing Volume(gal/L):								
Start Purge (hrs): 1059								
End Purge (hrs): 1149								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit =
Pull pump 3' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW06I
DATE: 9-29-11

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
1059	21.72									
1102	21.74	350	5.52	0.053	—	7.21	14.92	270	0.0	clear
1107	21.74	350	5.98	0.045	7.96	7.14	13.74	204	0.0	clear
1112	21.74	350	6.01	0.044	8.31	6.96	14.05	195	0.0	clear
1117	21.74	350	6.02	0.044	8.73	6.91	14.18	193	0.0	clear
1122	21.74	350	6.07	0.044	8.51	6.92	14.31	189	0.0	clear
1127	21.74	350	6.11	0.045	8.28	6.99	13.76	187	0.0	clear
1132	21.74	350	5.99	0.045	8.14	7.02	14.24	192	0.0	clear
1137	21.74	350	6.13	0.045	9.02	7.13	14.13	184	0.0	clear
1142	21.74	350	6.13	0.045	9.36	7.05	14.51	184	0.0	clear
1147	21.74	350	6.16	0.045	9.41	7.04	14.54	183	0.0	clear
1149	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW075-20110929
Sample Location: FT-MW075
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/29/11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1305	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow -	clear	4.44	0.038	14.61	3.41	7.06	0.0	292

PURGE DATA:

Date: 9/29/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 29.44								
One Casing Volume(gal/L):								
Start Purge (hrs): 1220								
End Purge (hrs): 1305								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~4.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 1.00 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW07S
DATE: 9/29/11

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	29.45	400	4.78	.043	3.95	6.45	13.47	248	0.0	
1225	29.45	400	4.78	.038	2.41	6.42	14.14	252	0.0	
1230	29.45	400	4.75	.038	1.49	6.40	15.53	258	0.0	
1235	29.45	400	4.72	.037	0.65	6.46	15.84	265	0.0	
1240	29.45	400	4.64	.037	1.20	6.83	14.82	272	0.0	
1245	29.45	400	4.59	.038	2.35	7.02	14.81	280	0.0	
1250	29.45	400	4.52	.038	3.71	7.00	14.67	287	0.0	
1255	29.45	400	4.44	.038	2.15	7.05	14.69	288	0.0	
1300	29.45	400	4.43	.038	1.30	7.04	14.68	295	0.0	
1305	29.45	400	4.44	.038	3.41	7.06	14.61	292	0.0	

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW08S-20110929
Sample Location: FT-MW08S
Sampled By: KLF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/29/11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0850	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow -	clear	5.77	0.090	16.49	1.42	0.82	0.0	6

PURGE DATA:

Date: 9/29/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.79								
One Casing Volume(gal/L): /								
Start Purge (hrs): 0807								
End Purge (hrs): 0850								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): ~3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: ST-MW085
DATE: 9/29/11

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
0810	7.79	350	5.46	0.097	8.96	1.46	16.08	45	0.0	
0815	7.79	350	5.74	0.095	3.78	1.16	16.10	9	0.0	
0820	7.79	350	5.77	0.095	4.29	1.06	15.89	6	0.0	
0825	7.79	350	5.76	0.093	5.24	0.97	15.82	6	0.0	
0830	7.79	350	5.75	0.094	4.18	0.89	16.16	9	0.0	
0835	7.79	350	5.75	0.094	3.27	0.83	16.11	7	0.0	
0840	7.79	350	5.76	0.091	3.41	0.82	16.35	7	0.0	
0845	7.79	350	5.76	0.091	2.58	0.81	16.30	9	0.0	
0850	7.79	350	5.77	0.090	1.42	0.82	16.49	6	0.0	

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: FT-MW08I-20110929
Sample Location: FT-MW08I
Sampled By: KR
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/29/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0940								
Method: Low Flow -	clear	5.47	0.197	17.60	3.14	0.40	0.1	136

PURGE DATA:

Date: 9/29/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.89								
One Casing Volume(gal/L):								
Start Purge (hrs): 0900								
End Purge (hrs): 0940								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): ~4.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	✓

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.5 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: FT-MW08I
DATE: 9/29/11

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	7.98	350	5.97	0.239	9.25	1.45	15.47	20	0.1	
0905	7.98	400	5.73	0.215	6.11	1.23	14.87	85	0.1	
0910	7.98	400	5.53	0.190	3.38	0.68	14.45	116	0.1	
0915	7.98	400	5.49	0.188	3.91	0.51	14.56	127	0.1	
0920	7.98	400	5.50	0.188	3.40	0.49	14.48	129	0.1	
0925	7.98	400	5.50	0.190	3.25	0.44	14.77	131	0.1	
0930	7.98	400	5.49	0.190	4.14	0.42	14.63	134	0.1	
0935	7.98	400	5.48	0.191	3.53	0.41	14.36	136	0.1	
0940	7.98	400	5.47	0.191	3.14	0.40	14.60	136	0.1	

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW126S-20110920
Sample Location: SA-MW126S
Sampled By: JB, SK
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
Date: 9-20-2011								
Time: 1610								
Method: Low Flow - peristaltic	clear	5.71	0.045	16.32	0.61	1.21	0.0	-156

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-20-2011								
Method: Low Flow - peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 5.09								
One Casing Volume(gal/L):								
Start Purge (hrs): 1525								
End Purge (hrs): 1610								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 2.0 mg/L

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Sarah Kirne

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW126S
DATE: 9-20-2011

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
1525	5.09	300	5.77	0.047	0.51	3.70	16.64	-118	0.0	Clear, two tubing sets in well
1530	5.09	300	5.76	0.047	0.58	3.51	16.63	-122	0.0	
1535	5.09	300	5.70	0.047	0.70	2.84	16.58	-138	0.0	
1540	5.09	300	5.69	0.047	0.62	2.67	16.54	-141	0.0	
1545	5.10	300	5.68	0.046	0.43	2.07	16.45	-150	0.0	
1550	5.10	300	5.66	0.046	0.41	1.59	16.38	-153	0.0	
1555	5.10	300	5.80	0.045	0.39	1.55	16.34	-153	0.0	
1600	5.10	300	5.74	0.045	0.37	1.43	16.33	-155	0.0	
1605	5.10	300	5.73	0.045	0.25	1.38	16.33	-154	0.0	
1610	5.10	300	5.71	0.045	0.61	1.21	16.32	-156	0.0	take sample

PAGE 2 OF 2

SIGNATURE(S): Sarah Finna

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW126I-20110921
Sample Location: SA-MW126I
Sampled By: SK, JB
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
Date: 9-21-2011 Time: 0925 Method: Low Flow - peristaltic	cloudy	6.41	0.106	14.49	8.38	1.19	0.0	17

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-21-2011								
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 5.22								
One Casing Volume(gal/L):								
Start Purge (hrs): 0840								
End Purge (hrs): 0925								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah Kirna

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW126I
DATE: 9-21-2011

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	5.22	300	6.22	0.127	224	3.73	14.58	27	0.0	sand/sediment in water
08:45	5.22	300	6.23	0.126	228	3.32	14.57	28	0.1	"
08:50	5.22	300	6.28	0.120	59.2	2.48	14.60	30	0.1	salinity off?
08:55	5.22	300	6.32	0.116	42.8	2.01	14.74	27	0.1	
09:00	5.22	300	6.34	0.114	43.0	1.87	14.57	24	0.1	
09:05	5.22	300	6.36	0.112	33.8	1.67	14.53	20	0.1	more clear
09:10	5.22	300	6.37	0.110	21.1	1.45	14.43	19	0.1	
09:15	5.23	300	6.40	0.108	14.9	1.42	14.46	20	0.1	
09:20	5.23	300	6.40	0.107	10.37	1.25	14.47	17	0.0	
09:25	5.23	300	6.41	0.106	8.38	1.19	14.49	17	0.0	take sample

SIGNATURE(S): Sarah Kirna

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW1216D-20110921
Sample Location: SA-MW1216D
Sampled By: SK, JB
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 ORP
Date: 9-21-2011 Time: 1150 Method: Low Flow - grunphos	cloudy	7.40	0.108	13.89	58.7	0.81	0.0	-130

PURGE DATA:

Date: 9-21-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - grunphos								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.65								
One Casing Volume(gal/L):								
Start Purge (hrs): 1045								
End Purge (hrs): 1150								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 0.80 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah Kind

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW126D
DATE: 9-21-2011

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	7.65	300	7.36	0.122	876 AU	12.78	15.26	-101	0.1	slightly cloudy
1050	7.65	300	7.66	0.126	805 AU	9.50	15.39	-113	0.1	
1055	7.65	400	7.58	0.123	1590 AU	1.60	13.85	-130	0.1	re-did setup
1100	7.65	400	7.57	0.121	1595 AU	1.48	13.87	-133	0.1	
1105	7.67	400	7.54	0.119	1451 AU	1.35	13.84	-135	0.1	
1110	7.67	400	7.52	0.116	1363 AU	1.15	13.72	-138	0.1	
1115	7.67	400	7.51	0.115	1215 AU	1.08	13.73	-139	0.1	generator stalled
~~1120~~	~~7.67~~	~~400~~	~~7.53~~							and was
~~1125~~										re-started
1130	7.67	400	7.47	0.112	223	1.66	14.00	-101	0.1	cloudy
1135	7.67	400	7.46	0.110	223	1.32	14.14	-110	0.1	
1140	7.67	400	7.44	0.110	228	1.04	13.99	-120	0.1	
1145	7.67	400	7.42	0.109	73.9	0.90	13.96	-126	0.1	
1150	7.67	400	7.40	0.108	58.7	0.81	13.99	-130	0.0	

SIGNATURE(S): Sarah Finn

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW127S-20110922
Sample Location: SA-MW127S
Sampled By: SK, JB
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: 9-22-2011								
Time: 0830								
Method: Low Flow - peristaltic	clear	5.53	0.050	15.82	0.55	3.03	0.0	ORP

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-22-2011								
Method: Low Flow - peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 6.91								
One Casing Volume(gal/L):								
Start Purge (hrs): 0745								
End Purge (hrs): 0830								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 3.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
YES	

Signature(s): Sarah Kirino

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW 127S
DATE: 9-22-2011

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
0745	6.91	300	5.83	0.059	4.2	4.88	15.90	133	0.0	clear
0750	6.91	300	5.76	0.049	3.83	5.02	15.90	147	0.0	"
0755	6.91	300	5.54	0.047	1.83	4.00	15.83	185	0.0	"
0800	6.91	300	5.52	0.047	1.60	3.91	15.82	189	0.0	"
0805	6.91	300	5.51	0.048	1.73	3.54	15.82	200	0.0	"
0810	6.91	300	5.51	0.049	0.58	3.30	15.84	208	0.0	
0815	6.91	300	5.51	0.050	0.50	3.50	15.89	212	0.0	
0820	6.91	300	5.50	0.050	1.54	3.44	15.85	206	-0.0	
0825	6.91	300	5.52	0.050	0.63	3.15	15.86	191	0.0	
0830	6.91	300	5.53	0.050	0.55	3.03	15.82	168	0.0	take sample

SIGNATURE(S): Sarah Kirna

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run VOCs (2) MS MSD

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW127I - 20110922
Sample Location: SA-MW127I
Sampled By: SKJB
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 ORP
Date: 9-22-2011								
Time: 0935								
Method: Low Flow - peristaltic	clear	6.06	0.098	13.85	0.0	0.61	0.0	60

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-22-2011								
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.09								
One Casing Volume(gal/L):								
Start Purge (hrs): 0850								
End Purge (hrs): 0935								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 0.60 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah Kring

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW127I
DATE: 9-22-2011

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
0850	7.09	300	6.05	0.097	1.93	1.63	14.37	30	0.0	clear
0855	7.09	300	6.05	0.099	1.02	0.89	14.42	41	0.0	"
0900	7.09	300	6.05	0.098	0.45	0.71	14.08	52	0.0	"
0905	7.09	300	6.05	0.098	0.08	0.69	13.96	54	0.0	"
0910	7.10	300	6.05	0.097	0.14	0.65	13.97	54	0.0	"
0915	7.10	300	6.05	0.097	0.28	0.63	13.72	55	0.0	"
0920	7.10	300	6.05	0.097	0.09	0.88	13.95	64	0.0	"
0925	7.10	300	6.06	0.097	0.09	0.67	13.72	58	0.0	"
0930	7.10	300	6.06	0.097	0.00	0.64	13.65	59	0.0	"
0935	7.10	300	6.06	0.098	0.00	0.61	13.85	60	0.0	take sample

SIGNATURE(S): Sarah M Kinnes

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW127D-20110922
Sample Location: SA-MW127D
Sampled By: SK, JB
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-22-2011	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1040								
Method: Low Flow - peristaltic	clear	7.38	0.103	13.14	0.68	0.57	0.0	-119

PURGE DATA:

Date: 9-22-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 8.89								
One Casing Volume(gal/L):								
Start Purge (hrs): 0955								
End Purge (hrs): 1040								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 0.40 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah Kirna

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW127D
DATE: 9-22-2011

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	8.89	300	6.9 ~~13.69~~	0.108	3.98	7.87	13.65	69	0.0	clear
~~09~~ 1000	8.89	300	7.07 ~~13.32~~	0.111	3.05	1.43	13.32	-79	0.0	"
1005	8.89	300	7.22	0.107	2.57	1.04	13.20	-90	0.0	"
1010	8.89	300	7.27	0.105	1.19	0.80	13.11	-93	0.0	"
1015	8.89	300	7.33	0.105	1.10	0.69	13.07	-102	0.0	"
1020	8.90	300	7.34	0.104	0.66	0.67	12.92	-104	0.0	"
1025	8.90	300	7.36	0.105	0.84	0.64	12.97	-110	0.0	"
1030	8.90	300	7.37	0.105	0.75	0.59	13.02	-116	0.0	"
1035	8.90	300	7.39	0.104	0.52	0.58	13.07	-118	0.0	
1040	8.90	300	7.38	0.103	0.68	0.57	13.14	-119	0.0	take sample

SIGNATURE(S): Sarah Keirna

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW-128S-20110922
Sample Location: SA-MW-128S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-22-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0839	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	5.43	0.052	16.98	4.57	1.09	0.0	190

PURGE DATA:

Date: 9-22-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.10								
One Casing Volume(gal/L):								
Start Purge (hrs): 0752								
End Purge (hrs): 0839								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit 0.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: 5A-MW-128S
DATE: 9-22-11

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
0752	9.10									
0756	9.11	300	4.85	0.049	38.6	1.46	20.37	233	0.0	clear red (iron) particulate
0801	9.11	300	5.24	0.048	26.7	1.16	18.00	201	0.0	" "
0806	9.11	300	5.30	0.049	18.7	1.11	17.72	201	0.0	clear
0811	9.11	300	5.34	0.051	16.4	1.05	17.34	203	0.0	" "
0816	9.11	300	5.39	0.051	13.6	1.07	17.23	202	0.0	" "
0821	9.11	300	5.40	0.051	12.4	1.06	17.32	203	0.0	" "
0826	9.11	300	5.43	0.051	10.31	1.26	17.08	201	0.0	" "
0831	9.11	300	5.42	0.052	7.23	1.07	17.01	201	0.0	" "
0836	9.11	300	5.43	0.052	4.57	1.09	16.98	190	0.0	" "
0839	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW-128I-20110922
Sample Location: SA-MW-128I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-22-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1055	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	Clear	5.76	0.083	14.44	4.75	0.31	0.0	84

PURGE DATA:

Date: 9-22-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.57								
One Casing Volume(gal/L):								
Start Purge (hrs): 1006								
End Purge (hrs): 1055								
Total Purge Time (min): 49								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.4mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW128 I
DATE: 9-22-11

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
1006	9.57									
1008	9.59	350	5.77	0.090	12.0	1.74	15.04	46	0.0	clear
1013	9.59	300	5.72	0.101	10.31	0.66	14.85	67	0.0	clear
1018	9.59	300	5.76	0.096	5.53	0.53	14.55	76	0.0	clear
1023	9.59	300	5.77	0.091	4.49	0.48	14.50	79	0.0	clear
1028	9.59	300	5.77	0.089	3.51	0.40	14.41	80	0.0	clear
1033	9.59	300	5.76	0.088	2.30	0.38	14.45	81	0.0	clear
1038	9.59	300	5.77	0.086	3.95	0.34	14.51	82	0.0	clear
1043	9.59	300	5.77	0.084	2.66	0.33	14.27	83	0.0	clear
1048	9.59	300	5.76	0.084	4.14	0.32	14.39	83	0.0	clear
1053	9.59	300	5.76	0.083	4.75	0.31	14.44	84	0.0	clear
1055	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW-128D-20110922
Sample Location: SA-MW-128D
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-22-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 0952								ORP
Method: Low Flow - Grundfos	~~Clear~~ tint	5.80	0.064	14.32	87.4	0.43	0.0	3

PURGE DATA:

Date: 9-22-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.93								
One Casing Volume(gal/L):								
Start Purge (hrs): 0850								
End Purge (hrs): 0952								
Total Purge Time (min): 62								
Total Vol. Purged (gal/L): 7 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Field Test Kit = 0.05 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-Dup04-20110922 0800

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-128D
DATE: 9-22-11

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
0850	9.93									
0855	9.95	300	5.86	0.070	—	9.90	13.96	30	0.0	tan color
0900	9.95	300	5.86	0.069	1378	0.86	14.01	21	0.0	tan color
0905	9.95	300	5.82	0.066	1131	0.64	14.22	17	0.0	" "
0910	9.96	400	5.79	0.065	865	0.56	14.32	14	0.0	" "
0915	9.96	400	5.77	0.065	690	0.53	14.21	13	0.0	" "
0920	9.96	400	5.78	0.064	145	0.59	14.46	10	0.0	" "
0925	9.95	300	5.78	0.064	119	0.62	14.52	9	0.0	" "
0930	9.95	300	5.81	0.065	102	0.54	14.36	7	0.0	" "
0935	9.95	300	5.80	0.064	127	0.52	14.30	6	0.0	" "
0940	9.95	300	5.81	0.065	105	0.47	14.30	5	0.0	" "
0945	9.95	300	5.81	0.064	116	0.45	14.34	4	0.0	tan tint
0950	9.95	300	5.80	0.064	87.4	0.43	14.32	3	0.0	" "
0952	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW-129S-20110922
Sample Location: SA-MW-129S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-22-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1407	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	5.10	0.056	13.14	0.71	1.96	0.0	172

PURGE DATA:

Date: 9-22-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 22.26								
One Casing Volume(gal/L):								
Start Purge (hrs): 1322								
End Purge (hrs): 1407								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Test Kit 2.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-129,S
DATE: 9-22-11

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
1322	22.26									
1324	22.27	300	5.89	0.067	8.63	2.06	23.17	76	0.0	clear
1329	22.27	300	5.65	0.054	2.54	1.32	18.23	108	0.0	clear
1334	22.27	300	5.37	0.050	1.82	2.09	17.44	134	0.0	clear
1339	22.27	300	5.22	0.059	1.03	2.72	13.16	153	0.0	clear
1344	22.27	300	5.15	0.060	0.57	2.52	13.09	165	0.0	clear
1349	22.27	300	5.07	0.059	0.53	2.34	13.09	174	0.0	clear
1354	22.27	300	5.05	0.058	0.59	2.14	13.15	178	0.0	clear
1359	22.27	300	5.09	0.057	0.65	2.03	13.20	175	0.0	clear
1404	22.27	300	5.10	0.056	0.71	1.96	13.14	172	0.0	clear
1407	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW-129I-201109 22
Sample Location: SA-MW-129 I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-22-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1500	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	5.56	0.053	14.68	1.61	0.38	0.0	87

PURGE DATA:

Date: 9-22-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 22.53								
One Casing Volume(gal/L):								
Start Purge (hrs): 1415								
End Purge (hrs): 1500								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test kit = 0.2 mg/L

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-129I
DATE: 9-22-11

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
1415	22.53									
1418	22.56	300	5.64	0.058	14.8	2.50	15.88	138	0.0	clear
1423	22.56	300	5.89	0.065	56.1	0.63	14.95	46	0.0	clear w/VF sand
1428	22.56	300	5.65	0.054	14.2	0.52	14.74	71	0.0	clear
1433	22.56	300	5.62	0.053	7.65	0.52	14.64	77	0.0	clear
1438	22.56	300	5.59	0.053	6.54	0.48	14.60	82	0.0	clear
1443	22.56	300	5.58	0.053	3.21	0.46	14.58	85	0.0	clear
1448	22.56	300	5.57	0.053	1.59	0.43	14.64	86	0.0	clear
1453	22.56	300	5.56	0.053	1.03	0.41	14.67	87	0.0	clear
1458	22.56	300	5.56	0.053	1.61	0.38	14.68	87	0.0	clear
1500	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW-129D-20110922
Sample Location: SA-MW-129D
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-22-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1605	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Grundfos	clear	6.80	0.158	14.04	62.3	0.54	0.1	-117

PURGE DATA:

Date: 9-22-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 22.50								
One Casing Volume(gal/L):								
Start Purge (hrs): 1515								
End Purge (hrs): 1605								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 6 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Test Kit = 0.05 mg/L
Pull Grundfos 5' off bottom

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-129D
DATE: 9-22-11

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
1515	22.50									
1518	22.55	400	6.27	0.134	8.36	4.67	14.19	-4	0.1	clear
1523	22.55	400	6.63	0.154	2593AU	1.11	13.75	-100	0.1	tan color
1528	22.55	400	6.67	0.155	1818AU	0.81	13.80	-107	0.1	" "
1533	22.55	350	6.71	0.157	1316 AU	0.67	13.94	-113	0.1	" "
1538	22.55	350	6.72	0.157	895AU	0.75	14.10	-112	0.1	" "
1543	22.55	350	6.75	0.157	636AU	0.70	14.01	-114	0.1	" "
1548	22.55	350	6.75	0.158	130	0.65	13.99	-112	0.1	" "
1553	22.55	350	6.81	0.158	120	0.62	14.14	-118	0.1	" "
1558	22.55	350	6.79	0.158	71.4	0.58	14.18	-117	0.1	" "
1603	22.55	350	6.80	0.158	62.3	0.54	14.04	-117	0.1	" "
1605	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW-130S-20110923
Sample Location: SA-MW-130S
Sampled By: S. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-23-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0941	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	5.81	0.053	15.96	1.05	3.83	0.0	113

PURGE DATA:

Date: 9-23-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 13.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 0856								
End Purge (hrs): 0941								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	Yes

OBSERVATIONS / NOTES:

D.O Test Kit = 3.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-130S
DATE: 9-23-11

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
0856	13.30									
0859	13.31	300	6.17	0.076	93	3.91	16.18	17	0.0	tan w/ VF sand
0904	13.31	300	5.82	0.053	23.6	3.90	15.78	111	0.0	tan w/ VF sand
0909	13.31	300	5.78	0.052	8.74	3.81	16.01	174	0.0	clear
0914	13.31	300	5.77	0.052	7.63	3.83	15.87	125	0.0	clear
0919	13.31	300	5.79	0.052	4.25	3.87	15.84	124	0.0	clear
0924	13.31	300	5.79	0.053	1.24	3.93	16.00	121	0.0	
0929	13.31	300	5.79	0.053	1.07	3.77	15.99	118	0.0	
0934	13.31	300	5.81	0.053	1.08	3.72	15.92	114	0.0	
0939	13.31	300	5.81	0.053	1.05	3.83	15.96	113	0.0	4 gal
0941	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW-130I-20110923
Sample Location: SA-MW-130I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-23-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1052	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Grundfos	Clear	5.51	0.093	14.83	2.66	1.01	0.0	212

PURGE DATA:

Date: 9-23-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 13.09								
One Casing Volume(gal/L):								
Start Purge (hrs): 1006								
End Purge (hrs): 1052								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

Pull pump 3 feet off bottom
D.O Test Kit = 0.6 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-130I
DATE: 9-23-11

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
1006	13.09									
1011	13.10	400	5.59	0.095	356	4.12	14.85	186	0.0	tan color
1016	13.11	400	5.53	0.092	102	1.39	14.02	193	0.0	tan tint
1021	13.11	400	5.45	0.094	24.9	1.07	14.23	202	0.0	clear Moderat rain
1026	13.11	400	5.45	0.093	10.43	1.08	14.24	205	0.0	clear
1031	13.10	300	5.50	0.093	6.17	1.03	14.56	205	0.0	Clear
1036	13.10	300	5.50	0.093	5.36	1.02	14.77	207	0.0	clear
1041	13.10	300	5.51	0.093	5.14	0.98	14.83	209	0.0	clear
1046	13.10	300	5.51	0.094	3.82	1.02	14.82	211	0.0	clear
1051	13.10	300	5.51	0.093	2.66	1.01	14.83	212	0.0	clear
1052	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-1315-20110927
Sample Location: SA-1315
Sampled By: KE
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/27/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1020								
Method: Low Flow -	Clear	5.50	0.174	16.48	5.96	0.49	0.1	-10

PURGE DATA:

Date: 9/27/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 8.56								
One Casing Volume(gal/L):								
Start Purge (hrs): 0945								
End Purge (hrs): 1020								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): ~3.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	✓

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-1315
DATE: 9/27/14

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
0945	8.59	300	5.67	0.144	10.01	1.61	15.16	19	0.1	Clear
0950	8.59	300	5.52	0.148	11.91	0.65	16.18	-2	0.1	
0955	8.59	300	5.54	0.153	10.40	0.58	16.35	-5	0.1	
1000	8.59	300	5.51	0.164	7.55	0.57	16.41	-6	0.1	
1005	8.59	300	5.52	0.170	297	0.53	16.46	-10	0.1	Yellow tint
1010	8.59	300	5.51	0.172	8.78	0.52	16.50	-10	0.1	Light yellow/clearing
1015	8.59	300	5.50	0.174	6.24	0.51	16.51	-10	0.1	
1020	8.59	300	5.50	0.174	5.96	0.49	16.48	-10	0.1	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-131I-20110927
Sample Location: SA-131I
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/27/11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0940	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow -	clear	5.69	0.097	13.19	3.39	0.63	0.0	108

PURGE DATA:

Date: 9-27-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 8.22								
One Casing Volume(gal/L):								
Start Purge (hrs): 0855								
End Purge (hrs): 0940								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): ~3.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): KZ

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-131I
DATE: 9/27/11

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	8.24	300	5.86	0.099	3.74	1.16	13.87	13	0.0	
~~0850~~ 0900	8.24	300	5.72	0.097	2.06	0.88	13.85	41	0.0	
0905	8.24	300	5.69	0.097	2.98	0.77	13.68	70	0.0	
0910	8.24	300	5.67	0.097	4.01	0.74	13.57	80	0.0	
0915	8.24	300	5.67	0.097	2.43	0.70	13.49	90	0.0	
0920	8.24	300	5.66	0.097	3.48	0.66	13.43	97	0.0	
0925	8.24	300	5.68	0.098	2.11	1.04	13.26	109	0.0	
0930	8.24	300	5.68	0.098	3.12	0.64	13.23	105	0.0	
0935	8.24	300	5.69	0.098	3.05	0.63	13.14	106	0.0	
0940	8.24	300	5.69	0.097	3.39	0.63	13.19	108	0.0	

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-1310-20110927 ~~SA-1310-KF~~
Sample Location: SA-1310
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/27/11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 08:50	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow -	Clear	5.85	0.124	13.72	2.34	0.94	0.1	-88

PURGE DATA:

Date: 9/27/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.87								
One Casing Volume(gal/L):								
Start Purge (hrs): 0754								
End Purge (hrs): 0850								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): ~3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: KE ~~SA-MW3-1D~~ SA-MW-13LD
DATE: 9/27/11

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
0765	8.12	350	5.85	0.114	3.82	7.06	15.64	-27	0.1	
0800	8.01	350	6.25	0.120	1.97	2.54	14.16	-75	0.1	
0805	7.98	350	6.21	0.121	1.31	1.92	14.15	-76	0.1	
0810	7.98	350	6.20	0.122	1.03	1.50	13.91	-77	0.1	Clear
0815	7.98	350	6.19	0.122	1.57	1.43	13.86	-78	0.1	
0820	7.98	350	6.20	0.123	1.24	1.31	13.82	-78	0.1	
0825	7.98	350	6.24	0.123	2.63	1.25	13.70	-79	0.1	
0830	7.98	350	6.23	0.123	3.09	1.12	13.74	-81	0.1	
0835	7.98	350	6.25	0.123	3.66	1.02	13.76	-83	0.1	
0840	7.98	350	6.28	0.123	2.16	0.95	13.70	-85	0.1	
0845	7.98	350	6.29	0.124	2.22	0.93	13.72	-87	0.1	
0850	7.98	350	6.28	0.124	2.34	0.94	13.72	-88	0.1	

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-132S-20110927
Sample Location: SA-MW-132S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-27-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 0839	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic	clear	5.46	0.087	16.04	0.83	0.63	0.0	17

PURGE DATA:

Date: 9-27-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 5.86								
One Casing Volume(gal/L):								
Start Purge (hrs): 0749								
End Purge (hrs): 0839								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.1 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-132S
DATE: 9-27-11

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
0749	5.86	Start	purge							
0751	5.88	300	5.27	0.165	5.04	5.02	18.31	23	0.1	clear, swampy odor
0756	5.88	300	5.49	0.153	2.98	3.80	17.02	7	0.1	" "
0801	5.88	300	5.65	0.137	1.83	1.15	16.10	-4	0.1	" "
0806	5.88	300	5.59	0.119	1.64	1.02	16.10	3	0.1	" "
0811	5.88	300	5.54	0.106	1.67	0.90	16.09	10	0.0	" "
0816	5.88	300	5.53	0.100	1.42	0.83	16.04	11	0.0	" "
0821	5.88	300	5.53	0.094	1.11	0.81	16.06	15	0.0	" "
0826	5.88	300	5.48	0.091	0.98	0.74	15.98	17	0.0	" "
0831	5.88	300	5.47	0.090	0.91	0.69	15.98	16	0.0	" "
0836	5.88	300	5.46	0.087	0.83	0.63	16.04	17	0.0	" "
0839	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-MW-132I-20110927
Sample Location: SA-MW-132I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-27-11 / Time: 0927	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Method: Low Flow - Peristaltic	clear	6.00	0.111	13.91	1.03	0.38	0.1	-20

PURGE DATA:

Date: 9-27-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 5.88								
One Casing Volume(gal/L):								
Start Purge (hrs): 0842								
End Purge (hrs): 0927								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.05 ppm

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW-132I
DATE: 9-27-11

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
0842	5.88	Start	purge							
0844	5.90	300	5.93	0.113	18.9	1.41	15.70	-52	0.1	clear
0849	5.90	300	6.22	0.139	15.0	0.62	14.23	-70	0.1	clear
0854	5.90	300	6.12	0.127	9.06	0.50	13.99	-38	0.1	clear
0859	5.90	300	6.07	0.122	2.65	0.48	13.97	-31	0.1	clear
0904	5.90	300	6.04	0.117	1.84	0.45	13.91	-24	0.1	clear
0909	5.90	300	6.02	0.114	1.35	0.43	13.81	-22	0.1	clear
0914	5.90	300	6.00	0.112	1.23	0.41	13.93	-22	0.1	clear
0919	5.90	300	6.00	0.112	1.19	0.40	13.95	-21	0.1	clear
0924	5.90	300	6.00	0.111	1.03	0.38	13.91	-20	0.1	clear
0927	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-118S-20110920
Sample Location: SA-PZ-118S
Sampled By: J. Birkett
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 ORP
Date: 9-20-11								
Time: 0933								
Method: Low Flow - Peristaltic	clear	6.48	0.129	16.73	0.95	0.73	0.0	-71

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-20-11								
Method: Low Flow - Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 5.28								
One Casing Volume(gal/L):								
Start Purge (hrs): 0848								
End Purge (hrs): 0933								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	6 40 mL glass vials	yes

OBSERVATIONS / NOTES:

Pull tubing 1' off bottom
D.O. Test Kit = 0.05

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-118S
DATE: 9-20-11

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
0848	5.28									
0850	5.29	300	5.82	0.134	11.34	5.54	16.14	61	0.1	clear w/some particulate
0855	5.29	300	6.34	0.108	9.61	2.04	15.97	-45	0.0	" "
0900	5.29	300	6.46	0.114	2.58	1.44	16.36	-62	0.0	" "
0905	5.29	300	6.49	0.119	2.11	1.21	16.46	-67	0.0	clear
0910	5.29	300	6.50	0.121	1.60	1.05	16.59	-70	0.0	Clear
0915	5.29	300	6.50	0.123	1.77	0.94	16.61	-71	0.0	clear
0920	5.29	300	6.50	0.124	0.42	0.88	16.67	-71	0.0	clear
0925	5.29	300	6.49	0.127	0.42	0.78	16.72	-72	0.0	clear
0930	5.29	300	6.48	0.129	0.95	0.73	16.73	-71	0.0	clear
0933	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ118I-20110920
Sample Location: SA-PZ118I
Sampled By: SK, IB
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
Date: 9-20-2011								
Time: 09:30								
Method: Low Flow - grunphos	slightly cloudy	6.58	0.075	14.48	4.51	5.24	0.0	185

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-20-2011								
Method: Low Flow - grunphos								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 5.86								
One Casing Volume(gal/L):								
Start Purge (hrs): 08:45								
End Purge (hrs): 09:30								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah M Keirad

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ118I
DATE: 9-20-2011

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
08:45 ~~08:30~~	5.86	300	6.48	0.078	21.4	26.30	13.36	198	0.0	air removed in tubing prior cloudy, fine silts
08:50	5.87	300	6.53	0.077	20.7	4.97	13.97	202	0.0	
08:55	5.87	300	6.54	0.077	17.1	9.74	14.20	197	0.0	
09:00	5.87	300	6.54	0.075	15.7	9.15	14.27	186	0.0	
09:05	5.88	300	6.55	0.075	14.3	8.17	14.34	178	0.0	
09:10	5.88	300	6.55	0.075	9.67	7.60	14.37	182	0.0	
09:15	5.88	300	6.57	0.075	8.08	6.76	14.42	185	0.0	
09:20	5.88	300	6.57	0.075	6.70	6.73	14.45	184	0.0	
09:25	5.88	300	6.57	0.075	5.87	5.76	14.46	185	0.0	
09:30	5.88	300	6.58	0.075	4.51	5.24	14.48	185	0.0	take sample

SIGNATURE(S): Sarah Kinna

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-120S-20110920
Sample Location: SA-PZ-120S
Sampled By: J. Birkeet
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1415	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	5.63	0.143	14.75	2.75	4.01	0.1	183

PURGE DATA:

Date: 9-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 6.50								
One Casing Volume(gal/L):								
Start Purge (hrs): 1330								
End Purge (hrs): 1415								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 3.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-1205
DATE: 9-20-11

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
1330	6.50									
1333	6.52	320	5.81	0.167	81.7	4.25	15.40	94	0.0	orange algae
1338	6.52	320	5.60	0.173	15.8	3.47	14.68	134	0.0	clear w/some algae
1343	6.52	320	5.58	0.169	13.6	3.61	14.65	148	0.0	" "
1348	6.52	320	5.57	0.164	7.94	3.20	14.67	161	0.0	clear
1353	6.52	320	5.55	0.160	5.39	4.61	14.62	170	0.0	clear
1358	6.52	320	5.61	0.151	3.94	4.13	14.71	170	0.1	clear
1403	6.52	320	5.62	0.148	2.67	4.07	14.76	176	0.1	clear
1408	6.52	320	5.62	0.144	8.63	4.02	14.76	182	0.1	clear
1413	6.52	320	5.63	0.143	2.75	4.01	14.75	183	0.1	clear
1415	Collect	sample								

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-1225-2011092 D
Sample Location: SA-PZ-1225
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1120	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	5.39	0.109	15.15	0.02	1.77	0.0	91

PURGE DATA:

Date: 9-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 14.97								
One Casing Volume(gal/L):								
Start Purge (hrs): 1031								
End Purge (hrs): 1120								
Total Purge Time (min): 49								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Test Kit 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-1225
DATE: 9-20-11

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
1031	14.97									
1034	14.98	300	5.70	0.087	4.15	4.82	15.00	170	0.0	clear
1039	14.98	300	5.36	0.105	0.98	3.09	14.79	135	0.0	clear
1044	14.98	300	5.34	0.109	0.51	2.67	14.93	112	0.0	clear
1049	14.98	300	5.32	0.114	0.39	2.07	15.06	86	0.0	clear
1054	14.98	300	5.35	0.107	0.21	2.03	15.03	83	0.0	clear
1059	14.98	300	5.35	0.107	0.08	1.82	15.06	99	0.0	clear
1104	14.98	300	5.35	0.109	0.32	2.09	15.08	97	0.0	clear
1109	14.98	300	5.37	0.109	0.14	1.87	15.12	94	0.0	clear
1114	14.98	300	5.38	0.110	0.07	1.80	15.14	91	0.0	clear
1119	14.98	300	5.39	0.109	0.02	1.77	15.15	91	0.0	clear
1120	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-122I-20110923
Sample Location: SA-PZ-122I
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-23-11.	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0825	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	6.08	0.111	13.78	0.51	2.29	0.1	189

PURGE DATA:

Date: 9-23-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 14.78								
One Casing Volume(gal/L):								
Start Purge (hrs): 0740								
End Purge (hrs): 0825								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3.5gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Test Kit = 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-122I
DATE: 9-23-11

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
0740	14.78									
0743	14.79	300	5.51	0.187	26.5	4.67	17.01	164	0.1	clear
0748	14.79	300	5.99	0.125	7.85	3.09	14.52	158	0.1	clear
0753	14.79	300	6.02	0.113	6.31	2.97	14.04	167	0.1	clear
0758	14.79	300	6.07	0.110	9.64	2.86	14.13	171	0.1	clear
0803	14.79	300	6.06	0.111	3.84	2.61	13.91	176	0.1	clear
0808	14.79	300	6.07	0.111	2.07	2.42	13.64	180	0.1	clear
0813	14.79	300	6.08	0.111	1.14	2.40	13.70	183	0.1	clear
0818	14.79	300	6.08	0.111	0.73	2.71	13.80	187	0.1	clear
0823	14.79	300	6.08	0.111	0.51	2.29	13.78	189	0.1	clear
0825	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-122D-20110920
Sample Location: SA-PZ-122D
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1240	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Grundfos	Clear	6.45	0.125	15.55	11.9	0.63	0.0	-79

PURGE DATA:

Date: 9-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Grundfos								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 14.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 1145								
End Purge (hrs): 1240								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

Pump pulled 6' off bottom
D.O. Test Kit = 0.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-Dup02-20110920 1200

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-122D
DATE: 9-20-11

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	14.30									
1147	14.34	320	5.70	0.075	9.90	7.04	17.82	162	0.0	clear
1152	14.34	320	6.39	0.100	8.21	2.04	16.62	-37	0.0	clear
1157	14.34	320	6.46	0.103	8.23	1.46	16.14	-56	0.0	clear
1202	14.34	320	6.52	0.105	8.83	0.98	15.77	-73	0.0	clear
1207	14.34	320	6.51	0.109	9.02	0.85	15.61	-79	0.0	clear
1212	14.34	320	6.49	0.113	8.66	0.79	15.60	-82	0.0	clear
1217	14.34	320	6.49	0.116	7.76	0.78	15.66	-83	0.0	clear
1222	14.34	320	6.44	0.119	9.52	0.71	15.61	-82	0.0	clear
1227	14.34	320	6.41	0.121	8.31	0.68	15.56	-80	0.0	clear
1232	14.34	320	6.43	0.123	10.34	0.65	15.56	-79	0.0	clear
1237	14.34	320	6.45	0.125	11.9	0.63	15.55	-79	0.0	clear
1240	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ123S-20110920
Sample Location: SA-PZ123S
Sampled By: SK, JB
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-20-2011 Time: 1330	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Method: Low Flow - peristaltic	clear	5.27	0.083	16.81	0.05	0.98	0.0	-98

PURGE DATA:

Date: 9-20-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.27								
One Casing Volume(gal/L):								
Start Purge (hrs): 12:45								
End Purge (hrs): 1330								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 2.0 mg/L

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Sarah Kinna

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ123S
DATE: 9-20-2011

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
1245	9.27	300	5.33	0.069	4.65	1.67	16.37	2	0.0	clear
1250	9.27		5.30	0.072	4.23	0.90	16.41	-3		"
1255	9.27		5.24	0.075	1.82	0.71	16.53	-56		
1300	9.27		5.25	0.075	1.77	0.73	16.59	-93		
1305	9.28		5.26	0.077	0.78	0.67	16.65	-105		
1310	9.28		5.26	0.079	0.46	0.82	16.71	-102		
1315	9.28		5.26	0.079	0.38	0.79	16.68	-102		
1320	9.28		5.28	0.082	0.36	2.06	16.74	-97		
1325	9.28		5.28	0.082	0.17	1.17	16.75	-98		
1330	9.28		5.27	0.083	0.05	0.98	16.81	-98		take sample

SIGNATURE(S): Sarah Kiand

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ123I1-20110920
Sample Location: SA-PZ123I1
Sampled By: SKJB
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-20-2011	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 12:25	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - peristaltic	slight cloudy	5.80	0.074	14.61	0.03	0.68	0.0	123

PURGE DATA:

Date: 9-20-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.77								
One Casing Volume(gal/L):								
Start Purge (hrs): 11:40								
End Purge (hrs): 12:25								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. chemets = 2.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah Kinna

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ123I1
DATE: 9-20-2011

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
1140	9.77	30	5.76	0.076	11.3	18.80	15.10	41	0.0	slightly cloudy
1145	9.77		5.82	0.081	9.14	6.01	15.04	42		" "
1150	9.77		5.79	0.078	3.12	1.30	14.80	70		
1155	9.78		5.82	0.075	6.51	4.18	15.27	88		clear
1200	9.78		5.80	0.079	5.21	3.66	15.35	94		
1205	9.78		5.80	0.074	1.37	2.88	14.81	105		
1210	9.78		5.80	0.074	0.57	2.10	14.60	113		
1215	9.78		5.80	0.074	0.43	2.83	14.55	120		
1220	9.78		5.78	0.074	0.18	0.70	14.59	123		
1225	9.78		5.78	0.074	0.03	0.68	14.61	123		take sample

SIGNATURE(S): Sarah Kinna

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ123I-20110920
Sample Location: SA-PZ123I
Sampled By: SK, JB
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-20-2011	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 11:20	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - peristaltic	clear	6.28	0.126	12.90	2.62	1.49	0.0	29

PURGE DATA:

Date: 9-20-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 10.39								
One Casing Volume(gal/L):								
Start Purge (hrs): 10:35								
End Purge (hrs): 11:20								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 2.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah Kinna

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ123I
DATE: 9-20-2011

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	10.39	300	6.37	0.102	2.82	15.00	13.79	269	0.0	clear
10:40	10.39	300	6.28	0.111	3.00	6.16	13.37	115	0.0	
10:45	10.40	300	6.27	0.125	3.01	2.96	13.00	45	0.0	
10:50	10.40	300	6.28	0.125	3.10	2.77	13.10	43	0.0	
10:55	10.40	300	6.28	0.125	3.06	2.12	12.97	40	0.0	
11:00	10.40	300	6.27	0.125	2.93	1.92	12.91	38	0.0	
11:05	10.41	300	6.27	0.125	2.81	1.81	12.93	37	0.0	
11:10	10.41	300	6.29	0.126	2.71	2.06	12.90	36	0.0	
11:15	10.41	300	6.29	0.126	2.65	1.61	12.87	26	0.0	
11:20	10.41	300	6.28	0.126	2.62	1.49	12.90	29	0.0	take sample

SIGNATURE(S): Sarah Kirina

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ133I1-20110919
Sample Location: SA-PZ133I1
Sampled By: SK, JB
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-19-2011	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 14:35	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - peristaltic	clear	6.41	0.093	13.73	0.43	1.13	0.0	62

PURGE DATA:

Date: 9-19-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 13:50								
End Purge (hrs): 14:35								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

Chemets D.O. = 0.6 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah M Kimo

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-133I1
DATE: 09/19/2011

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
13:50	~~8.7~~ 7.90	300	6.30	0.108	0.89	2.39	16.25	-47	0.0	
13:55	7.90	300	6.39	0.107	0.69	1.86	14.60	-13	0.0	
14:00	7.90	300	6.40	0.100	0.38	1.76	13.99	37	0.0	
14:05	7.90	300	6.40	0.099	0.70	1.56	13.93	43	0.0	
14:10	7.91	300	6.40	0.097	0.47	1.45	13.90	46	0.0	
14:15	7.91	300	6.40	0.096	0.36	1.33	14.05	48	0.0	
14:20	7.91	300	6.42	0.094	0.39	1.46	13.98	59	0.0	
14:25	7.91	300	6.41	0.096	0.31	1.25	13.86	59	0.0	
14:30	7.92	300	6.41	0.093	0.42	1.18	13.60	62	0.0	
14:35	7.92	300	6.41	0.093	0.43	1.13	13.73	62	0.0	

SIGNATURE(S): Sarah M Kinna

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ133I-20110919
Sample Location: SA-PZ133I
Sampled By: SK, JB
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-19-2011 Time: 15:35	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Method: Low Flow - peristaltic	clear	6.24	0.101	12.58	0.91	~~0.80~~ 0.74	0.0	172

PURGE DATA:

Date: 9-19-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.84								
One Casing Volume(gal/L):								
Start Purge (hrs): 14:50								
End Purge (hrs): 15:35								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets : 0.80 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah M Kane

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ133I
DATE: 9-19-2011

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
14:50	7.84	300	6.31	0.101	0.26	2.20	13.13	198	0.0	clear
14:55	7.84	300	6.26	0.103	0.29	1.08	13.00	193	0.0	
15:00	7.84	300	6.25	0.102	0.39	0.99	12.91	189	0.0	
15:05	7.84	300	6.20	0.101	0.35	0.89	12.70	185	0.0	
15:10	7.85	300	6.23	0.101	0.30	0.86	12.66	181	0.0	
15:15	7.85	300	6.18	0.101	0.63	0.80	12.60	179	0.0	
15:20	7.85	300	6.25	0.101	0.38	0.80	12.58	174	0.0	
15:25	7.86	300	6.22	0.101	0.51	0.79	12.59	174	0.0	
15:30	7.86	300	6.24	0.101	0.44	0.76	12.56	172	0.0	
15:35	7.86	300	6.24	0.101	0.91	0.74	12.58	172	0.0	take sample

SIGNATURE(S): Sarah M Kirner

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-135-20110919 I JB 2-16-12
Sample Location: SA-PZ-135I JB 2-16-12
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-19-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1437								
Method: Low Flow - Peristaltic	clear	5.82	0.101	13.83	0.01	0.58	0.0	116

PURGE DATA:

Date: 9-19-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 4.76								
One Casing Volume(gal/L):								
Start Purge (hrs): 1347								
End Purge (hrs): 1437								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit 0.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
✓	—

Signature(s):

LOW FLOW PURGE DATA SHEET

SB 2-16-12

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-135I
DATE: 9-19-11

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
1347	4.76									
1350	4.76	300	3.98	0.143	50.6	3.35	18.46	99	0.1	Clear
1355	4.76	300	5.02	0.103	9.03	1.57	15.40	79	0.0	clear
1400	4.76	300	5.63	0.101	1.82	1.17	14.64	67	0.0	clear
1405	4.76	300	5.75	0.101	0.69	0.97	14.25	81	0.0	clear
1410	4.76	300	5.79	0.101	0.26	0.84	14.21	89	0.0	clear
1415	4.76	300	5.81	0.101	0.21	0.75	14.12	97	0.0	clear
1420	4.76	300	5.82	0.101	0.08	0.77	13.97	106	0.0	clear
1425	4.76	300	5.82	0.101	0.07	0.70	13.90	108	0.0	clear
1430	4.76	300	5.82	0.101	0.07	0.62	13.84	112	0.0	clear
1435	4.76	300	5.82	0.101	0.01	0.58	13.83	116	0.0	clear 4 gal
1437	Collect Sample									

SIGNATURE(S): [illegible]

PAGE___OF___

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ136I-20110919
Sample Location: SA-PZ136I-
Sampled By: SK, JB
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-19-2011 Time: 1655	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Method: Low Flow - peristaltic	clear	6.15	0.112	13.51	1.06	0.75	0.0	94

PURGE DATA:

Date: 9-19-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 5.31								
One Casing Volume(gal/L):								
Start Purge (hrs): 16:10								
End Purge (hrs): 16:55								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets: 0.6 mg/L

Circle If Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Sarah M Kinnard

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ136
DATE: 9-19-2011

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
16:10	5.91	300	6.44	0.125	5.85	3.95	14.89	48	0.0	
16:15	5.91	300	6.28	0.177	3.28	2.10	14.51	54	0.0	
16:20	5.91	300	6.27	0.116	2.34	1.93	14.39	59	0.0	
16:25	5.93	300	6.14	0.114	3.65	1.38	14.02	71	0.0	
16:30	5.93	300	6.17	0.114	1.12	1.24	13.94	74	0.0	
16:35	5.93	300	6.16	0.113	1.37	1.03	13.79	83	0.0	
16:40	5.93	300	6.15	0.113	1.26	0.94	13.71	88	0.0	
16:45	5.93	300	6.17	0.113	1.85	1.04	13.62	93	0.0	
16:50	5.93	300	6.16	0.112	~~92~~ 1.04	0.81	13.56	93	0.0	
16:55	5.93	300	6.15	0.112	1.06	0.75	13.51	94	0.0	

SIGNATURE(S): Sarah M Kimmel

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-137I-20110919 JB 2-16-12
Sample Location: SA-PZ-137I JB 2-16-12
Sampled By: J. Birkel
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-19-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1655	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	6.51	0.106	13.91	0.46	0.36	0.0	88

PURGE DATA:

Date: 9-19-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 7.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 1605								
End Purge (hrs): 1655								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2-40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	

Signature(s):

LOW FLOW PURGE DATA SHEET

JB 2-16-12

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-137I
DATE: 9-19-11

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
1605	7.42									
1607	7.44	300	6.51	0.104	2.53	2.12	17.27	43	0.0	clear
1612	7.44	300	6.11	0.103	2.16	0.79	15.31	90	0.0	clear
1617	7.44	300	6.10	0.104	1.09	0.71	14.79	90	0.0	clear
1622	7.44	300	6.10	0.105	0.83	0.53	14.50	91	0.0	clear
1627	7.44	300	6.09	0.105	0.45	0.48	14.35	90	0.0	clear
1632	7.44	306	6.09	0.105	0.29	0.42	14.15	90	0.0	clear
1637	7.44	300	6.09	0.105	0.00	0.45	14.06	90	0.0	clear
1642	7.44	300	6.10	0.105	0.03	0.38	13.92	89	0.0	clear
1647	7.44	300	6.11	0.105	0.16	0.37	13.88	89	0.0	clear
1652	7.44	300	6.12	0.106	0.46	0.36	13.91	88	0.0	clear
1655	Collect	sample								

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ138I1-20110920
Sample Location: SA-PZ138I1
Sampled By: SK JB
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
Date: 9-20-2011 Time: 1445 Method: Low Flow - peristaltic	clear	6.15	0.153	13.96	0.10	5.84	0.0	50

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-20-2011								
Method: Low Flow - peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD): 5.21			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): ~~14.00~~								
One Casing Volume(gal/L):								
Start Purge (hrs): 1400								
End Purge (hrs): 1445								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Sarah M Kirk

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ138I1
DATE: 9-20-2011

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
1400	5.21	300	6.00	0.112	0.21	16.19	13.81	23	0.0	Clear
1405	5.21	↓	6.01	0.112	0.19	14.50	13.90	25	↓	
1410	5.21		6.01	0.112	0.06	13.07	13.97	26		
1415	5.22		6.00	0.111	0.04	2.58	14.22	31		
1420	5.22		6.00	0.111	0.00	2.02	14.14	35		
1425	5.23		6.13	0.144	0.00	9.00	14.44	40		
1430	5.23		6.15	0.151	0.00	7.12	14.29	41		
1435	5.23		6.15	0.152	0.00	6.22	14.23	43		
1440	5.23		6.16	0.152	0.00	5.76	14.16	44		
1445	5.23		6.15	0.153	0.00	5.84	13.96	50		

SIGNATURE(S): Sarah Keina

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-MW140I-201092 1 JB 2-16-12 JB 2-16-12
Sample Location: SA-MW140I
Sampled By: SK, JB
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: 9-21-2011 Time: 1505 Method: Low Flow - peristaltic	clear	5.90	0.105	14.32	0.64	1.35	0.0	ORP 44

PURGE DATA:

Date: 9-21-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 13.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 1420								
End Purge (hrs): 1505								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 1.0 mg/L

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s): Sarah Kenna

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-MW140I JB 2-16-12
DATE: 9-21-2011

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
1420	13.90	300	6.28	0.122	7.38	9.22	14.80	6	0.1	
1425	13.95	300	5.98	0.126	3.19	3.54	13.94	32	0.1	
1430	13.95	300	5.90	0.107	2.58	2.49	13.60	37	0.0	
1435	13.95	300	5.89	0.104	4.07	2.10	14.30	39	0.0	
1440	13.95	300	5.89	0.107	3.95	1.93	14.22	40	0.0	
1445	13.95	300	5.87	0.105	3.72	1.88	14.22	42	0.0	
1450	13.95	300	5.89	0.106	1.16	1.81	14.21	44	0.0	
1455	13.95	300	5.87	0.104	0.88	1.75	14.34	45	0.0	
1500	13.95	300	5.89	0.104	0.55	1.61	14.31	44	0.0	
1505	13.95	300	5.90	0.105	0.64	1.35	14.32	44	0.0	

SIGNATURE(S): Sarah Kinno

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-141-20110921 JB 2-16-12
Sample Location: SA-PZ-141I JB 2-16-12
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-21-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1630	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	6.83	0.143	15.31	15.4	1.88	0.1	-118

PURGE DATA:

Date: 9-21-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 14.12								
One Casing Volume(gal/L):								
Start Purge (hrs): 1456								
End Purge (hrs): 1630								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Test Kit 0.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-141I JB 2-16-12
DATE: 9-21-11

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
1456	14.12									
1501	21.63	300	6.62	0.136	92.7	8.06	14.96	-48	0.1	tan color
1506	29.05	300	6.65	0.140	74.3	6.53	15.04	-60	0.1	" "
1511	30.94	300	6.67	0.144	57.7	3.83	15.42	-72	0.1	" " lots of air
gal 1.5 gal 1516	31.60	300	6.72	0.148	47.3	2.99	15.92	-84	0.0	in tubing due to WL drop
	Shut	off pump let recharge, peristaltic at limits of pumping								
Roshit 1545	20.85	300	6.67	0.143	50.5	3.51	17.34	-82	0.1	tan tint
1550	28.73	300	6.82	0.143	19.3	1.64	15.28	-119	0.1	" " lots of air
1555	30.76	300	6.83	0.143	15.4	1.88	15.31	-118	0.1	" "
	Shut	off pump let recharge 2gal purged								
1630	19.83	Collect sample								

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-142I-201109 21
Sample Location: SA-PZ-142I
Sampled By: J. Birkett
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: 9-21-11								
Time: 1448								
Method: Low Flow - Peristaltic	clear	5.99	0.126	12.99	0.14	0.47	0.1	ORP 42

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-21-11								
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 15.21								
One Casing Volume(gal/L):								
Start Purge (hrs): 1403								
End Purge (hrs): 1448								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Test Kit = 0.1 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

JB 2-16-12

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-142I
DATE: 9-21-11

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
1403	15.21									
1405	15.22	300	6.09	0.122	1.30	1.56	16.55	40	0.1	clear
1410	15.22	300	6.03	0.130	3.21	4.40	13.97	39	0.1	clear
1415	15.22	300	6.00	0.137	7.55	6.72	13.32	37	0.1	clear
1420	15.22	300	5.97	0.126	0.99	3.21	13.07	49	0.1	clear
1425	15.22	300	5.99	0.126	0.37	0.62	13.16	48	0.1	clear
1430	15.22	300	5.99	0.126	0.23	0.60	13.10	46	0.1	clear
1435	15.22	300	5.99	0.126	0.19	0.52	13.08	45	0.1	clear
1440	15.22	300	5.99	0.127	0.20	0.48	12.94	43	0.1	clear
1445	15.22	300	5.99	0.126	0.14	0.47	12.99	42	0.1	clear
1448	collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-143I-20110921 JB 2-16-12
Sample Location: SA-PZ-143I JB 2-16-12
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-21-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1348	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	5.98	0.142	12.62	0.00	0.61	0.1	21

PURGE DATA:

Date: 9-12-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 14.72								
One Casing Volume(gal/L):								
Start Purge (hrs): 1303								
End Purge (hrs): 1348								
Total Purge ~~Time~~ Volume (min): 4 gal								
Total ~~Vol. Purged (gal/L)~~ Purge Time: 45 min	n							

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Test Kit 0.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-Dup03-20110921 1200

Signature(s):

LOW FLOW PURGE DATA SHEET

JB 2-16-12

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-143I
DATE: 9-21-11

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
1303	14.72									
1305	14.75	300	6.27	0.150	8.92	3.13	19.26	46	0.1	clear
1310	14.75	300	5.94	0.142	2.88	1.70	13.36	47	0.1	clear
1315	14.75	300	5.95	0.142	1.43	1.28	12.92	40	0.1	clear
1320	14.75	300	5.95	0.142	0.15	1.01	12.79	35	0.1	clear
1325	14.75	300	5.96	0.142	0.26	0.90	12.63	31	0.1	clear
1330	14.75	300	5.97	0.142	0.20	0.82	12.64	28	0.1	clear
1335	14.75	300	5.99	0.142	0.67	0.76	12.61	25	0.1	clear
1340	14.75	300	5.98	0.142	0.65	0.63	12.66	22	0.1	clear
1345	14.75	300	5.98	0.142	0.00	0.61	12.62	21	0.1	clear
1348	Collect sample									

SIGNATURE(S):

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-144S-20110922
Sample Location: SA-PZ-144S
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-22-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1224	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear w/ brown tint	5.69	0.351	16.56	0.64	0.78	0.2	11

PURGE DATA:

Date: 9-22-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.06								
One Casing Volume(gal/L):								
Start Purge (hrs): 1136								
End Purge (hrs): 1224								
Total Purge Time (min): 48								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Field Test Kit = 0.8 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112G02045
WELL ID.: SA-PZ-1445
DATE: 9-22-11

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
1136	9.06						16			
1138	9.09	300	5.74	0.371	10.36	1.49	16.70	52	0.2	clear w brown tint
1143	9.09	300	5.72	0.360	2.49	0.98	16.54	36	0.2	clear w/ brown tint
1148	9.09	300	5.70	0.352	1.93	1.00	16.42	29	0.2	clear w/ brn tint
1153	9.09	300	5.70	0.350	1.67	0.91	16.54	21	0.2	clear w/ brn tint
1158	9.09	300	5.69	0.352	1.08	0.86	16.61	18	0.2	clear w/ brn tint
1203	9.09	300	5.69	0.354	1.08	0.77	16.67	15	0.2	" "
1208	9.09	300	5.69	0.351	0.80	0.79	16.52	14	0.2	" "
1213	9.09	300	5.69	0.352	0.78	0.97	16.54	12	0.2	" "
1218	9.09	300	5.69	0.351	0.68	0.79	16.62	12	0.2	" "
1223	9.09	300	5.69	0.351	0.64	0.78	16.56	11	0.2	" "
1224	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ144I-20110922
Sample Location: SA-PZ144I
Sampled By: SK, JB
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-22-2011	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1232	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - peristaltic	clear	6.36	0.146	17.20	6.43	0.67	0.1	-86

PURGE DATA:

Date: 9-22-2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 8.97								
One Casing Volume(gal/L):								
Start Purge (hrs): 1147								
End Purge (hrs): 1232								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	YES

OBSERVATIONS / NOTES:

D.O. Chemets = 0.40 mg/L

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Sarah Kinna

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ144I
DATE: 9-22-2011

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
1147	8.97	300	6.65	0.144	2.15	16.83	18.69	-61	0.1	clear
1152	8.97	300	6.43	0.146	1.79	2.44	18.21	-64	0.1	"
1157	8.97	300	6.39	0.147	2.43	1.75	18.00	-69	0.1	"
1202	8.97	300	6.37	0.147	0.50	1.43	17.70	-73	0.1	"
1207	8.97	300	6.38	0.148	0.95	1.20	17.35	-75	0.1	"
1212	8.97	300	6.37	0.147	0.51	1.06	17.16	-77	0.1	"
1217	8.97	300	6.38	0.147	1.76	0.96	17.01	-78	0.1	"
1222	8.97	300	6.37	0.148	9.29	0.84	16.99	-82	0.1	"
1227	8.97	300	6.36	0.147	6.41	0.75	17.04	-84	0.1	"
1232	8.97	300	6.36	0.146	6.43	0.67	17.20	-86	0.1	collect sample

SIGNATURE(S): Sarah Kinno

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-1465-20110927
Sample Location: SA-PZ-1465
Sampled By: KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/27/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1115								
Method: Low Flow -	clear	4.71	0.121	15.62	3.12	2.17	0.1	295

PURGE DATA:

Date: 9/27/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow -								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.69								
One Casing Volume(gal/L):								
Start Purge (hrs): 1035								
End Purge (hrs): 1115								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): ~3.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = 1.0 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-145S
DATE: 9/27/11

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	9.76	350	4.73	0.081	6.02	4.32	16.77	117	0.0	clear
1040	9.69	350	4.67	0.104	4.85	2.89	15.90	189	0.0	
1045	9.69	350	4.69	0.115	3.58	2.48	15.62	221	0.1	
1050	9.69	350	4.70	0.118	3.55	2.24	15.67	225	0.1	
1055	9.69	350	4.70	0.119	3.94	2.20	15.57	261	0.1	
1100	9.69	350	4.71	0.120	2.12	2.11	15.57	274	0.1	
1105	9.69	350	4.71	0.120	3.21	2.20	15.70	285	0.1	
1110	9.69	350	4.71	0.121	2.98	2.18	15.73	291	0.1	
1115	9.69	350	4.71	0.121	3.12	2.17	15.62	295	0.1	

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-145I-20110927
Sample Location: SA-PZ-145I
Sampled By: J. Birkett
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 (%)	ORP (mV)
Date: 9-27-11								
Time: 1143								
Method: Low Flow - Peristaltic	Clear	5.76	0.113	13.24	0.35	0.25	0.0	64

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 9-27-11								
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 9.85								
One Casing Volume(gal/L):								
Start Purge (hrs): 1059								
End Purge (hrs): 1143								
Total Purge Time (min): 44								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.0

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP Calverton
PROJECT NUMBER: 112602045
WELL ID.: SA-PZ-145I
DATE: 9-27-11

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
1059	9.85	Start	purge							
1101	9.89	300	5.78	0.113	13.6	0.54	14.04	49	0.0	clear
1106	9.89	300	5.75	0.114	1.77	0.39	13.48	58	0.0	clear
1111	9.89	300	5.79	0.113	1.03	0.40	13.17	63	0.0	clear
1116	9.89	300	5.75	0.113	0.98	0.31	13.25	64	0.0	clear
1121	9.89	300	5.75	0.113	1.16	0.28	13.16	64	0.0	clear
1126	9.89	300	5.76	0.113	0.65	0.28	13.22	64	0.0	clear
1131	9.89	300	5.76	0.113	0.47	0.26	13.22	65	0.0	↓
1136	9.89	300	5.76	0.113	0.46	0.25	13.14	65	0.0	↓
1141	9.89	300	5.76	0.113	0.35	0.25	13.24	64	0.0	↓
1143	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-145D-201109 27
Sample Location: SA-PZ-145D
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-27-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: ~~1005~~ 1050								
Method: Low Flow - Peristaltic	clear	6.19	0.096	13.30	0.57	0.34	0.0	-49

PURGE DATA:

Date: 9-27-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): --								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 10.20								
One Casing Volume(gal/L):								
Start Purge (hrs): 1005								
End Purge (hrs): 1050								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.0 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-145D
DATE: 9-27-11

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
1005	10.20	Start	purge							
1007	10.23	300	6.27	0.105	13.4	1.25	14.33	-41	0.0	clear
1014	10.23	300	6.28	0.102	1.15	0.65	13.43	-43	0.0	clear
1019	10.23	300	6.23	0.100	0.93	0.53	13.29	-41	0.0	clear
1024	10.23	300	6.22	0.099	0.93	0.48	13.27	-41	0.0	clear
1029	10.23	300	6.20	0.098	0.97	0.42	13.16	-42	0.0	clear
1034	10.23	300	6.19	0.097	0.82	0.38	13.07	-44	0.0	clear
1039	10.23	300	6.24	0.097	0.56	0.43	13.20	-45	0.0	clear
1044	10.23	300	6.20	0.096	0.68	0.34	13.24	-48	0.0	clear
1049	10.23	300	6.19	0.096	0.57	0.34	13.30	-49	0.0	clear
1050	Collect sample									

SIGNATURE(S): [illegible]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-157I1-20110921
Sample Location: SA-PZ-157I1
Sampled By: J. Birketh
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-21-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0925	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	Clear	5.86	0.145	13.66	0.16	0.63	0.1	51

PURGE DATA:

Date: 9-21-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 5.25								
One Casing Volume(gal/L):								
Start Purge (hrs): 0835								
End Purge (hrs): 0925								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.05 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-157I1
DATE: 9-21-11

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
0835	5.25									
0838	5.29	300	5.78	0.149	1.13	2.23	14.65	46	0.1	clear
0843	5.30	300	5.87	0.148	0.40	1.84	14.27	36	0.1	clear
0848	5.30	300	5.87	0.146	0.36	1.44	13.85	44	0.1	clear
0853	5.30	300	5.86	0.146	0.09	1.14	13.69	48	0.1	clear
0858	5.30	300	5.86	0.146	0.19	0.93	13.66	50	0.1	clear
0903	5.30	300	5.84	0.145	0.09	0.82	13.53	52	0.1	clear
0908	5.30	300	5.84	0.145	0.07	0.76	13.68	53	0.1	clear
0913	5.30	300	5.84	0.144	0.17	0.68	13.74	53	0.1	clear
0918	5.30	300	5.85	0.145	0.05	0.66	13.59	52	0.1	clear
0923	5.30	300	5.86	0.145	0.16	0.63	13.66	51	0.1	clear
0925	collect sample									

SIGNATURE(S): [illegible]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-166I1-20110919
Sample Location: SA-PZ-166I1
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-19-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1540	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	6.49	0.296	14.75	1.84	0.75	0.1	-61

PURGE DATA:

Date: 9-19-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm): —								
Well Casing Diameter & Material								
Type: 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 6.50								
One Casing Volume(gal/L):								
Start Purge (hrs): 1450								
End Purge (hrs): 1540								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O. Test Kit = 0.0

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-Dup01-20110919 1300

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-161J
DATE: 9-19-11

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
1450	6.50									
1453	6.52	300	6.45	0.294	4.27	1.50	17.08	-23	0.1	clear
1458	6.52	300	6.47	0.299	3.14	1.21	16.21	-53	0.1	clear
1503	6.52	300	6.46	0.300	2.49	0.95	15.45	-64	0.1	clear
1508	6.52	300	6.46	0.299	2.28	0.90	15.26	-64	0.1	clear
1513	6.52	300	6.48	0.298	2.09	0.84	15.00	-64	0.1	clear
1518	6.52	300	6.48	0.298	1.93	0.81	14.93	-64	0.1	clear
1523	6.52	300	6.49	0.297	2.17	0.78	14.81	-64	0.1	clear
1528	6.52	300	6.49	0.297	2.11	0.76	14.76	-63	0.1	clear
1533	6.52	300	6.49	0.296	1.96	0.75	14.73	-63	0.1	clear
1538	6.52	300	6.49	0.296	1.84	0.75	14.75	-61	0.1	clear sheen on purge water
1540	Collect sample									

SIGNATURE(S): [signature]

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Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP CALVERTON
Project No.: 112G02045

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

Sample ID No.: SA-PZ-408-20110920
Sample Location: SA-PZ-408
Sampled By: J. Birkett
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9-20-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1538	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow - Peristaltic	clear	6.17	0.140	13.38	0.10	0.41	0.0	135

PURGE DATA:

Date: 9-20-11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow - Peristaltic								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Type: 2 1" PVC								
Total Well Depth (TD):			SEE LOW FLOW PURGE SHEET FOR DETAILS					
Static Water Level (WL): 6.95								
One Casing Volume(gal/L):								
Start Purge (hrs): 1449								
End Purge (hrs): 1538								
Total Purge Time (min): 49								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 40 mL glass vials	yes

OBSERVATIONS / NOTES:

D.O Test Kit = 0.2 mg/L

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: NWIRP CALVERTON
PROJECT NUMBER: 112G02045

WELL ID.: SA-PZ-408
DATE: 9-20-11

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
1449	6.95									
1451	6.99	400	6.07	0.138	8.31	2.10	15.63	135	0.0	clear
1456	6.99	400	6.14	0.137	1.64	1.37	14.41	134	0.1	clear
1501	6.98	350	6.15	0.138	0.49	0.85	14.03	136	0.0	clear
1506	6.98	300	6.15	0.139	0.38	0.71	13.96	136	0.0	clear
1511	6.98	300	6.16	0.139	0.46	0.62	14.03	137	0.0	clear
1516	6.98	300	6.17	0.139	0.23	0.52	13.95	137	0.0	clear
1521	6.98	300	6.16	0.140	0.42	0.52	13.88	137	0.0	clear
1526	6.98	300	6.17	0.140	0.62	0.46	13.85	136	0.0	clear
1531	6.98	300	6.18	0.140	0.10	0.43	13.83	135	0.0	clear
1536	6.98	300	6.17	0.140	0.10	0.41	13.88	135	0.0	clear
1538	Collect sample									

SIGNATURE(S): [illegible]

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Appendix G

Groundwater Level Measurement Sheets

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: NWIRP CALVERTON
Project No.: 112G02045
Location: Calverton, NY (Southern Area)
Personnel: SK, JB
Weather Conditions: cold, clear, windy
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
SA-PZ-120S	12/16/10	07:20			6.52			
SA-PZ-118I	12-16-10	07:23			5.70			
SA-PZ-118S	12-16-10	07:24			5.13			
SA-PZ-166I	12-16-10	07:28			6.43			
SA-PZ-2	12-16-10	07:29			6.60			
SA-PZ-169I	12-16-10	07:31			7.45			
SA-PZ-168I	12-16-10	07:32			7.67			
SA-PZ-168S	12-16-10	07:34			7.22			
SA-PZ-164I	12-16-10	07:36			8.93			
SA-PZ-164S	12-16-10	07:37			8.21			
SA-PZ-123S	12-16-10	07:39			9.18			
A-PZ-123I SA-PZ-123I	12-16-10	07:40			9.71			
SA-PZ-123I	12-16-10	07:42			10.34			
SA-PZ-122S	12-16-10	07:45			15.02			
SA-PZ-122I	12-16-10	07:46			14.78			
SA-PZ-122D	12-16-10	07:48			13.92			
SA-PZ-145 (D)	12-16-10	07:56			9.93			
SA-PZ-145I	12-16-10	07:58			9.95			
SA-PZ-145S	12-16-10	08:01			9.77			
SA-PZ-143	12-16-10	08:15			14.81			
SA-PZ-142	12-16-10	08:18			15.32			
SA-PZ-141	12-16-10	08:24			13.99			
SA-PZ-140	12-16-10	08:25			14.00			
PZ-146 steel drive point	12-16-10	08:33			3.83			North-South portion river road, western side
SA-PZ-144S	12-16-10	08:39			8.99			

top hinge busted (OK)

ed issues w/ reader, be not giving consistent results

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: NWIRP CALVERTON
Project No.: 112G02045
Location: Calverton, NY (Southern Area)
Personnel: SK, JB
Weather Conditions: cold, clear, windy
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
SA-PZ-144I	12-16-10	08:41			8.91			
SA-MW-129S	12-16-10	08:46			22.44			
SA-MW-129I	12-16-10	08:48			22.70			
SA-MW-129D	12-16-10	08:50			22.63			
SA-MW-128D	12-16-10	08:55			9.68			
SA-MW-128I	12-16-10	08:56			9.63			
SA-MW-128S	12-16-10	08:58			9.18			
SA-PZ-134I	12-16-10	09:03			6.39			
SA-PZ-163I	12-16-10	09:04			6.71			
SA-PTWI	12-16-10	09:06			7.32			
SA-MW-127D	12-16-10	09:07			8.51			
no lock SA-MW-127I	12-16-10	09:08			7.12			
SA-MW-127S	12-16-10	09:08			6.91			
SA-PZ-161I	12-16-10	09:10			6.43			
SA-MW-132I	12-16-10	09:31			5.88			
SA-MW-132S	12-16-10	09:32			5.87			
Staff guage SG-west	12-16-10	09:30			1.71			
Staff guage SG-East	12-16-10	09:35			1.58			ice around Staff guage
SA-MW-131D	12-16-10	09:38			7.73			
SA-MW-131I	12-16-10	09:40			8.29			
SA-MW-131S	12-16-10	09:41			8.59			
SA-PZ-137	12-16-10	09:46			7.37			
SA-PZ-136	12-16-10	09:47			5.34			
SA-PZ-135	12-16-10	09:48			4.73			
SA-PZ-138I	12-16-10	09:51			8.16			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: NWIRP CALVERTON
Project No.: 112G02045
Location: Calverton, NY (SA, 10B, 6A)
Personnel: JB, SK
Weather Conditions: Cold, Clear, Windy
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
SA-PZ-149I1	12-16-10	09:53			9.86			
SA-PZ-138I	12-16-10	09:55			5.27			
SA-PZ-138I1	12-16-10	09:55			5.14			
SA-PZ-159I1	12-16-10	09:58			4.97			
SA-PZ-159I	12-16-10	09:58			4.77			
SA-MW-130I	12-16-10	10:03			13.52			
SA-MW-130S	12-16-10	10:05			13.78			
ET-MW-03S	12-16-10	10:11			10.81			
ET-MW-02S	12-16-10	10:13			9.90			
ET-MW-01S	12-16-10	10:15			10.38			
F FC-MW-05I	12-16-10	10:16			9.65			
F FC-MW-05S	12-16-10	10:17			10.33			
FC-MW-07S	12-16-10	10:21			10.36			
FC-MW-07I	12-16-10	10:20			10.29			
FC-MW-04S	12-16-10	10:24			7.25			
FC-MW-04I	12-16-10	10:25			7.16			
FC-MW-08S	12-16-10	10:28			6.01			
FC-MW-01I	12-16-10	10:31			8.65			
FC-MW-01S	12-16-10	10:33			8.81			
FC-MW-02S R1	12-16-10	10:36			7.98			
FC-MW-02I R1	12-16-10	10:38			7.97			
FC-MW-03S R1	12-16-10	10:38			7.54			
FC-MW-06S	12-16-10	10:41			12.40			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: NWIRP CALVERTON
Project No.: 112G02045
Location: site 2
Personnel: JB, SK
Weather Conditions: cold, windy, clear
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
FT-MW-08I	12-16-10	10:48			8.21			
FT-MW-08S	12-16-10	10:49			8.13			
FT-MW-05I	12-16-10	10:51			12.13			
FT-MW-05S	12-16-10	10:52			11.72			
FT-MW-06I	12-16-10	10:54			22.30			
FT-MW-06S	12-16-10	10:55			21.31			
FT-MW-07S	12-16-10	10:58			30.10			
FT-MW-03S	12-16-10	~~11:~~ 11:01			26.15			
FT-MW-01I	12-16-10	11:04			23.07			
FT-MW-01S	12-16-10	11:05			23.34			
FT-MW-04S	12-16-10	11:09			20.89			
FT-MW-02I	12-16-10	11:12			15.13			
FT-MW-02S	12-16-10	11:14			15.26	NONE		free product found on probe

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 2, 6A, 10 B and Southern Area
Project No.: ~~112G01655, CTO-160~~ 112G02045
Location: NWIRP Calverton, NY
Personnel: V. Shickora, J. Birkett
Weather Conditions: clear calm 30°F
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
FC-MW03S RI		0930			6.84			
ET-MW01S	3-9-11	0940	47.53	19.12	9.54			
ET-MW02S		0939	46.95	19.00	9.08			
ET-MW03S		0938	47.81	19.48	9.94			
FC-MW01S		0920	47.5	16.74	8.17			
FC-MW01I		0921	47.35	57.51	7.99			
FC-MW04S		0927	45.4	15.10	~~8.17~~ 6.45			
FC-MW04I		0926	45.32	51.38	6.36			
FC-MW05S		0933	48.03	17.74	9.50			
FC-MW05I		0932	47.35	59.37	8.81			
FC-MW06S		0917	50.66	20.98	11.63			
FC-MW07S		0928	48.34	17.01	9.54			
FC-MW07I		0929	48.25	60.07	9.47			
FC-MW08S		0924	45.18	14.49	5.24			
SA-MW-126S		0913	39.79	17.57	4.71			
SA-MW-126I		0914	39.97	52.18	4.84			
SA-MW-126D		0915	40.04	86.87	6.68			
SA-MW-127S		0857	40.57	17.15	6.35			
SA-MW-127I		0858	40.79	48.20	6.55			
SA-MW-127D			40.57	77.14	8.10			
SA-MW-128S		0850	40.54	18.81	8.44			
SA-MW-128I		0851	40.96	42.20	8.90			
SA-MW-128D		0852	40.64	70.24	9.23			
SA-MW-129S	0824	0846	51.92	31.32	21.79			
SA-MW-129I		0847	52.16	62.42	22.06			
SA-MW-129D		0848	52.19	92.01	22.02			
FC-MW02S RI		0919			7.25			
FC-MW02I RI					[illegible]			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 2, 6A, 10 B and Southern Area
Project No.: ~~112G01655; CTO-160~~ 112G02045
Location: NWIRP Calverton, NY
Personnel: V. Shickora
Weather Conditions: clear calm 30°F
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
SA-MW-130S	3-9-11	0935	48.6	21.64	12.72			
SA-MW-130I		0934	38.84	48.16	12.50			
SA-MW-131S		0749	31.44	16.31	8.07			
SA-MW-131I		0748	31.43	41.55	7.73			
SA-MW-131D		0747	32.26	71.85	7.31			
SA-MW-132S		0743	32.7	16.90	5.38			
SA-MW-132I		0742	32.67	40.08	5.40			
SA-PZ-118S		0757	27.25	18.48	4.97			
SA-PZ-118I		0758	27.48	61.24	5.47			
SA-PZ-120S		0751	27.53	21.11	6.21			
SA-PZ-122S		0810	30.55	24.68	14.56			
SA-PZ-122I		0809	30.62	51.22	14.33			
SA-PZ-122D		0808	32.22	134.49	13.67			
SA-PZ-123S		0806	28.76	19.07	8.94			
SA-PZ-123I1		0805	28.8	44.40	9.46			
SA-PZ-123I		0805	28.64	83.66	10.11			
Staff Gauge and River Monitoring Point								
				Top of Gauge				
Staff Gauge #1 WS PRSC		0746	32.38	3.33	1.95			
Staff Gauge #2 ES PRSC		0744	32.41	3.33	1.78			
BM ES Conn Ave HDWL	✓	0756	30.44	Concrete=	4.92			
PZ-166					6.29			
PZ-169I					7.32			
PZ-168I					7.55			
PZ-168S					7.02			
PZ-164I		0803			8.79			
PZ-164S		0804			7.99			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 2, 6A, 10 B and Southern Area **Project No.:** ~~112G01655; CTO-160~~ 112G02045
Location: NWIRP Calverton, NY **Personnel:**
Weather Conditions: **Measuring Device:**
Tidally Influenced: Yes ____ No ____ **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
PZ-145D	3-9-11				9.55			
PZ-145I					9.25			
PZ-145S					9.07			
PZ-143		0823			14.26			
PZ-142		0825			14.68			
PZ-141		0827			13.44			
PZ-140		0829			13.35			
PZ-144S		0837			8.78			
PZ-144I		0836			8.70			
PZ-146		0833			3.83			Metal Drive Pt
PZ-134I		0854			5.78			
PZ-163I		0856			6.14			
PZ-161I		0900			5.94			
PZ-131I		0901			7.57			
PZ-149I		0903			9.25			
PZ-138I		0906			4.73			
PZ-138II		0907			4.58			
PZ-136I		0909			4.91			
PZ-137		0911			6.99			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 2, 6A, 10 B and Southern Area
Project No.: ~~112G01655; CTO-160~~ 112G02045
Location: NWIRP Calverton, NY
Personnel: ~~E. Wu,~~ V. Shikora, J. Birkett
Weather Conditions: ~~80 F sunny moderate wind~~
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
FT-MW01S	3-9-11	0949	18.51	30.10	22.93			
FT-MW01I		0950	18.21	79.70	22.64			
FT-MW02S		1011	10.9	NA	14.71	0.06		product on probe
FT-MW02I		1008	10.78	70.47	14.60			
FT-MW03S		0947	20.84	32.54	25.75			
FT-MW04S		0953	16.77	27.90	20.31			
FT-MW05S		1002	8.52	19.71	11.23			
FT-MW05I		1003	8.92	59.90	11.65			
FT-MW06S			16.91	28.83	20.71			
FT-MW06I			17.97	75.71	21.71			
FT-MW07S		0956	24.74	36.44	29.56			
FT-MW08S		1000	5.29	16.08	7.68			
FT-MW08I		0959	5.4	35.61	7.78			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 2, 6A, 10 B and Southern Area
Project No.: 112G02045
Location: NWIRP Calverton, NY
Personnel: J. Birkett, K. Francisco
Weather Conditions: 70° cloudy humid
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
ET-MW01S	9-27-11	1524	47.53	19.12	10.06			
ET-MW02S		1521	46.95	19.00	9.60			
ET-MW03S		1518	47.81	19.48	10.45			
FC-MW01S		1544	47.5	16.74	8.55			
FC-MW01I		1543	47.35	57.51	8.35			
FC-MW02SR1		1537		16.80	7.62			
FC-~~MW01R1~~ MW02IR1		1539		54.0	7.59			
FC-MW03SR1		1534			7.25			
FC-MW04S		1550	45.4	15.10	6.91			
FC-MW04I		1552	45.32	51.38	6.82			
FC-MW05S		1528	48.03	17.74	9.97			
FC-MW05I		1527	47.35	59.37	9.32			
FC-MW06S		1558	50.66	20.98	12.04			
FC-MW07S		1533	48.34	17.01	10.00			
FC-MW07I		1532	48.25	60.07	9.93			
FC-MW08S		1548	45.18	14.49	5.68			
SA-MW-126S		1503	39.79	17.57	5.07			
SA-MW-126I		1501	39.97	52.18	5.20			
SA-MW-126D		1502	40.04	86.87	7.36			
SA-MW-127S		1420	40.57	17.15	6.90			
SA-MW-127I		1422	40.79	48.20	7.09			
SA-MW-127D		1423	40.57	77.14	8.80			
SA-MW-128S		1408	40.54	18.81	9.08			
SA-PZ-168S		1251		7 kr	7.29			
SA-PZ-168I		1252			7.74			
SA-PZ-169I		1253			7.52			
FC-PZ-001-1		1529			9.94			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 2, 6A, 10 B and Southern Area
Project No.: 112G02045
Location: NWIRP Calverton, NY
Personnel: J. Birkett, K. Francisco
Weather Conditions: 70° cloudy humid
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
SA-MW-128I	9-27-11	1410	40.96	42.20	9.54			
SA-MW-128D		1411	40.64	70.24	9.85			
SA-MW-129S		1400	51.92	31.32	22.23			
SA-MW-129I		1402	52.16	62.42	22.50			
SA-MW-129D		1403	52.19	92.01	22.45			
SA-MW-130S		1512	48.6	21.64	13.33			
SA-MW-130I		1513	38.84	48.16	13.10			
SA-MW-131S		0749	31.44	16.31	8.56			
SA-MW-131I		0747	31.43	41.55	8.22			
SA-MW-131D		0745	32.26	71.85	7.87			
SA-MW-132S		0920	32.7	16.90	5.87			
SA-MW-132I		0842	32.67	40.08	5.88			
SA-PZ-118S		1242	27.25	18.48	5.20			
SA-PZ-118I		1243	27.48	61.24	5.81			
SA-PZ-120S		1303	27.53	21.11	6.47			
SA-PZ-122S		1301	30.55	24.68	14.96			
SA-PZ-122I		1300	30.62	51.22	14.72			
SA-PZ-122D		1259	32.22	134.49	14.24			
SA-PZ-123S		1248	28.76	19.07	9.22			
SA-PZ-123I1		1247	28.8	44.40	9.74			
SA-PZ-123I		1246	28.64	83.66	10.37			
Staff Gauge and River Monitoring Point				**Top of Gauge**				
Staff Gauge #1 WS PRSC	9-27-11		32.38	3.33	1.48			
Staff Gauge #2 ES PRSC		0922	32.41	3.33	1.66			
BM ES Conn Ave HDWL		1240	30.44	Concrete=	5.33			

* All measurements to the nearest 0.01 foot

6.68

SA PTW-2 1254

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 2, 6A, 10 B and Southern Area
Project No.: 112G02045
Location: NWIRP Calverton, NY
Personnel: J. Birkett, K. Francisco
Weather Conditions: 70° cloudy humid
Measuring Device:
Tidally Influenced: Yes X No ___
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
SA-PZ-133I1	9-27-11	1424	41.43	42.52	7.91			
SA-PZ-133I		1425	41.545	49.25	7.87			
SA-PZ-134 I		1417	39.62	46.75	6.35			
SA-PZ-135		1443	38.747	48.14	4.74			
SA-PZ-136		1445	39.552	50.59	5.45			
SA-PZ-137		1448	41.666	56.22	7.40			
SA-PZ-138I1		1437	39.799	42.00	5.10			
SA-PZ-138I		1438	40.03	56.30	5.24			
SA-PZ-139 I		1431	42.277	49.42	8.13			
SA-PZ-140		1332	46.4		13.92			
SA-PZ-141		1329	46.083		14.29			
SA-PZ-142		1326	47.262		15.21			
SA-PZ-143		1321	46.394		14.74			
SA-PZ-144S		1342	41.503		9.05			
SA-PZ-144I		1341	41.761		8.95			
SA-PZ-145S		1030	40.956		9.69			
SA-PZ-145I		1039	41.109		9.85			
SA-PZ-145D		1005	40.984		10.20			
SA-PZ-146		1347	38.697	8.55	3.92			
SA-PZ-149I		1434			9.79			
SA-PZ-161I		1428			6.44			
SA-PZ-163I		1418			6.68			
SA-PZ-164S		1249			8.26			
SA-PZ-164I		1250			8.99			
SA-PZ-166I	↓	1255			6.51			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Site 2, 6A, 10 B and Southern Area
Project No.: 112G02045
Location: NWIRP Calverton, NY
Personnel: J. Birkett, K. Francisco
Weather Conditions: 70° cloudy humid
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
FT-MW01S	9/27/11	1624	18.51	30.10	22.84			
FT-MW01I		1625	18.21	79.70	22.52			
FT-MW02S		1637	10.9	NA	14.76	14.72 ~~0.06~~ .04		
FT-MW02I		1635	10.78	70.47	14.61			
FT-MW03S	~~1619~~ 14	1619	20.84	32.54	25.55			
FT-MW04S		1632	16.77	27.90	20.39			
FT-MW05S		1652	8.52	19.71	11.36			
FT-MW05I		1653	8.92	59.90	11.77			
FT-MW06S		1657	16.91	28.83	20.74			
FT-MW06I		1656	17.97	75.71	21.75			
FT-MW07S		1703	24.74	36.44	29.43			
FT-MW08S		1649	5.29	16.08	7.82			
FT-MW08I		1650	5.4	35.61	7.91			

* All measurements to the nearest 0.01 foot

Appendix H

Survey Data

Well	Final TOC (ft MSL)	Screened Interval (feet bgs)	Final Ground Surface Elevation (ft MSL)	Easting	Northing	Survey Date	Type
Sites 6A, 10B, and Southern Area Wells							
ET-MW01S	47.53	7 - 17	45.17	1319219.53	272723.40	2/27/2008	MW
ET-MW02S	46.95	7 - 17	44.52	1319326.64	272738.48	2/27/2008	MW
ET-MW03S	47.81	7 - 17	45.24	1319402.28	272861.96	2/27/2008	MW
FC-MW01S	47.50	5 - 15	46.56	1318444.64	273844.47	3/1/2006	MW
FC-MW01I	47.35	48 - 58	46.41	1318441.99	273854.48	3/1/2006	MW
FC-MW02SR1	46.33	NA	44.27	1318384.30	273393.05	12/14/2010	MW
FC-MW02IR1	46.40	NA	44.40	1318372.56	273393.92	12/14/2010	MW
FC-MW03SR1	45.83	NA	43.72	1318566.27	273393.77	12/14/2010	MW
FC-MW04S	45.40	3 - 13	44.46	1318715.85	273411.44	3/1/2006	MW
FC-MW04I	45.32	40 - 50	44.37	1318714.01	273427.03	3/1/2006	MW
FC-MW05S	48.03	6 - 16	45.50	1318872.45	272990.18	3/1/2006	MW
FC-MW05I	47.35	48 - 58	45.43	1318882.80	272994.87	3/1/2006	MW
FC-PZ05I1	NA	20 - 30	NA	1318861.00	273016.00	NA	MW
FC-MW06S	50.66	9 - 19	48.48	1318373.52	273038.08	3/1/2006	MW
FC-MW07S	48.34	5 - 15	45.89	1318793.87	273262.56	3/1/2006	MW
FC-MW07I	48.25	48 - 58	46.13	1318800.45	273255.82	9/11/2009	MW
FC-MW08S	45.18	2 - 12	***43.22***	1318774.00	273591.00	3/1/2006	MW
SA-MW-126S	39.79	5 - 15	37.40	1319724.78	271462.44	2/27/2008	MW
SA-MW-126I	39.97	40 - 50	37.54	1319714.76	271464.64	1/30/2008	MW
SA-MW-126D	40.04	74 - 84	37.54	1319704.63	271465.64	1/30/2008	MW
SA-MW-127S	40.57	5 - 15	38.38	1320603.69	271425.76	1/30/2008	MW
SA-MW-127I	40.79	36 - 46	38.51	1320597.04	271425.64	1/30/2008	MW
SA-MW-127D	40.57	68 - 78	38.51	1320587.30	271424.73	2/27/2008	MW
SA-MW-128S	40.54	7 - 17	38.26	1322008.46	271421.75	1/30/2008	MW
SA-MW-128I	40.96	30 - 40	38.59	1321999.32	271415.81	2/27/2008	MW
SA-MW-128D	40.64	58 - 68	38.59	1321990.43	271412.20	2/27/2008	MW
SA-MW-129S	51.99	19.5 - 20.5	49.75	1322926.20	271403.54	9/24/2008	MW
SA-MW-129I	52.23	50 - 60	49.92	1322934.81	271402.88	9/24/2008	MW
SA-MW-129D	52.26	80 - 90	49.92	1322941.91	271402.34	2/27/2008	MW
SA-MW-130S	48.60	9 - 19	45.83	1320364.01	272483.42	9/11/2009	MW
SA-MW-130I	48.33	36 - 46	45.91	1320364.53	272488.57	9/11/2009	MW
SA-MW-131S	38.59	4 - 14	36.20	1322258.41	270695.05	9/11/2009	MW
SA-MW-131I	38.24	30 - 40	36.03	1322255.02	270697.54	9/11/2009	MW
SA-MW-131D	37.82	60 - 70	35.83	1322251.32	270700.55	9/11/2009	MW
SA-MW-132S	36.75	4 - 14	34.09	1321516.74	269955.75	9/11/2009	MW
SA-MW-132I	36.76	27 - 37	34.02	1321512.22	269953.37	9/11/2009	MW
SA-PZ-118S	31.13	6 - 16	29.23	1323191.47	269855.83	3/1/2006	MW
SA-PZ-118I	31.68	50 - 60	29.22	1323195.34	269844.39	3/1/2006	MW
SA-PZ-120S	32.48	8 - 18	***29.92***	1324447.92	271009.28	12/15/2010	MW
SA-PZ-122S	43.75	12 - 22	41.16	1322942.98	270909.60	9/24/2008	MW
SA-PZ-122I	43.57	39 - 49	41.25	1322940.79	270916.49	9/24/2008	MW
SA-PZ-122D	43.47	122 - 132	41.25	1322938.83	270922.33	3/1/2006	MW
SA-PZ-123S	36.96	7 - 17	34.50	1323051.08	270447.24	9/24/2008	MW
SA-PZ-123I1	37.51	32 - 42	34.50	1323048.10	270456.37	3/1/2006	MW
SA-PZ-123I	38.02	70 - 80	35.26	1323045.42	270467.03	9/24/2008	MW
SA-PZ-124	NA	3 - 6	NA	1323822.00	270307.00	NA	MW
SA-PZ-125	NA	3 - 6	NA	1324508.00	270734.00	NA	MW
2010 PZ's			**2010 SURVEY**				
SA-PZ-133I	41.55	42 - 47	39.51	1320548.85	271427.21	4/1/2010	PT
SA-PZ-133I1	41.43	35 - 40	39.32	1320544.25	271428.15	4/1/2010	PT
SA-PZ-134I	39.62	39 - 44	36.96	1320818.62	271418.32	4/1/2010	WL
SA-PZ-135I	38.75	41.5 - 46.5	36.69	1320285.02	271429.91	4/1/2010	WL
SA-PZ-136I	39.55	44 - 49	37.42	1320121.13	271428.04	4/1/2010	WL
SA-PZ-137I	41.67	49 - 54	39.25	1319979.88	271433.69	4/1/2010	WL
SA-PZ-138I	40.03	48.5 - 53.5	36.94	1320058.12	271670.24	4/1/2010	WL
SA-PZ-138I1	39.80	37 - 42	37.20	1320061.15	271670.28	7/26/2010	WL
SA-PZ-139I	42.28	42.5 - 47.5	39.95	1320288.42	271658.48	4/1/2010	WL
SA-PZ-140I	46.40	44.5 - 49.5	43.32	1321100.68	271135.59	7/26/2010	WL
SA-PZ-141I	46.08	50.5 - 55.5	43.79	1321124.11	270989.35	7/26/2010	WL
SA-PZ-142I	47.26	40.5 - 45.5	44.47	1321148.26	270753.40	7/26/2010	WL
SA-PZ-143I	46.39	41 - 46	43.95	1321167.01	270500.14	7/26/2010	WL
SA-PZ-144S	41.50	5 - 15	38.82	1320454.98	270676.12	7/26/2010	WL
SA-PZ-144I	41.76	45 - 50	38.93	1320452.81	270675.88	7/26/2010	WL
SA-PZ-145S	40.96	5 - 15	37.95	1321862.68	271029.35	7/26/2010	WL
SA-PZ-145I	41.11	30 - 35	38.11	1321863.72	271020.90	7/26/2010	WL
SA-PZ-145D	40.98	50 - 55	37.84	1321864.40	271011.35	7/26/2010	WL
SA-PZ-146	38.70	3 - 6	33.17	1320328.50	270599.80	4/1/2010	WL
SA-PZ-147	NA	3 - 6	NA	1323493.00	270030.00	NA	MW
SA-PZ-148	NA	3 - 6	NA	1324077.00	270509.00	NA	MW
SA-PZ-149I1	44.73	32 - 37	42.24	1320018.20	271825.51	12/14/2010	BS
SA-PZ-150I1	NA	35 - 40	37.19	1320105.89	271659.89	7/26/2010	IW
SA-PZ-151I1	NA	35 - 40	37.51	1320130.55	271672.36	7/26/2010	IW
SA-PZ-152I1	39.70	35 - 40	37.95	1320151.69	271684.71	7/26/2010	IW
SA-PZ-153I1	NA	35 - 40	39.70	1320176.16	271699.25	7/26/2010	IW
SA-PZ-154I	37.14	41 - 46	36.79	1320134.62	271646.77	12/14/2010	IW
SA-PZ-155I	40.24	41 - 46	37.36	1320156.77	271659.83	12/14/2010	IW
SA-PZ-156I	NA	41 - 46	38.40	1320179.51	271673.21	7/26/2010	IW
SA-PZ-157I	39.51	41 - 46	37.30	1320169.65	271641.09	7/26/2010	BS
SA-PZ-157I1	39.76	33 - 38	37.31	1320169.89	271643.51	7/26/2010	BS
SA-PZ-158I	39.73	41 - 46	37.05	1320187.37	271622.66	7/26/2010	BS
SA-PZ-158I1	39.37	33 - 38	37.36	1320190.44	271622.75	7/26/2010	BS
SA-PZ-159I	39.17	40 - 46	37.06	1320199.95	271601.54	7/26/2010	BS
SA-PZ-159I1	39.37	33 - 38	37.14	1320201.47	271602.72	7/26/2010	BS
SA-PZ-160I	39.29	41 - 46	37.19	1320248.15	271546.99	7/26/2010	BS
SA-PZ-160I1	38.95	33 - 38	37.02	1320250.43	271548.89	7/26/2010	BS
SA-PZ-161I	40.59	41 - 46	38.21	1320355.53	271429.25	7/26/2010	BS
SA-PZ-162I	41.80	42 - 47	38.67	1320586.47	271461.05	7/26/2010	PT

SA-PZ-163I	40.17	32 - 42	37.63	1320710.34	271418.75	7/26/2010	PT
SA-PZ-164S	35.75	5 - 15	32.82	1323068.78	270376.23	7/26/2010	PT
SA-PZ-164I	35.64	60 - 80	32.78	1323068.90	270373.03	7/26/2010	PT
SA-PZ-165S	30.73	NA	NA	1323047.86	270259.64	7/26/2010	PT
SA-PZ-166I	33.03	60 - 80	30.16	1323100.39	270231.55	7/26/2010	PT
SA-PZ-167S	30.35	NA	26.66	1323193.08	270279.81	7/26/2010	PT
SA-PZ-168S	34.72	5 - 15	31.87	1323079.61	270327.49	7/26/2010	PT
SA-PZ-168I	34.40	60 - 80	31.56	1323080.41	270324.20	7/26/2010	PT
SA-PZ-169I	34.07	60 - 80	31.22	1323087.20	270294.71	7/26/2010	PT
SA-PZ-170I	40.38	32 - 42	37.64	1320636.57	271422.21	7/26/2010	PT
SA-PZ-171I	NA	41.5 - 46.5	NA	1321247.00	270317.00	NA	MW
SA-PZ-172I	NA	43.5 - 48.5	NA	1321575.00	270624.00	NA	MW
SA-PZ-408	NA	37 - 42	NA	1320100.00	271715.00	NA	MW
SAPTW-1	40.95	27 - 47	38.28	1320592.11	271417.31	7/26/2010	PT
SAPTW-2	33.57	50 - 90	31.05	1323090.31	270278.29	7/26/2010	PT
Staff Gauge and River Monitoring Point							
Staff Gauge #1 WS PRS	32.37	NA	NA	1321370.57	269847.36	11/1/2009	SG
Staff Gauge #2 ES PRS	32.41	NA	NA	1322534.70	269926.97	11/1/2009	SG
BM ES Conn Ave HDWL	30.44	NA	30.44	1323249.60	269793.26	11/1/2009	SG
Southern Area Surface Water and Sediment Samples							
SA-SD/SW-124	NA	NA	NA	1323833.00	270301.00	NA	SD/SW
SA-SD/SW-125	NA	NA	NA	1324504.00	270691.00	NA	SD/SW
SA-SD/SW-201	NA	NA	NA	1323256.00	269787.00	NA	SD/SW
SA-SD/SW-204	NA	NA	NA	1325699.00	270897.00	NA	SD/SW
Southern Area Temporary Wells							
SA-TW-301	NA	11 - 15	NA	1319097.00	272344.00	GPS	TW
		26 - 30					
		46 - 50					
SA-TW-302	NA	11 - 15	NA	1319507.00	272804.00	GPS	TW
		26 - 30					
		50 - 54					
SA-TW-303	NA	11 - 15	NA	1319490.00	273041.00	GPS	TW
		26 - 30					
		50 - 54					
SA-TW-304	NA	11 - 15	NA	1319332.00	271873.00	GPS	TW
		26 - 30					
		46 - 50					
SA-TW-305	NA	11 - 15	NA	1319672.00	272202.00	GPS	TW
		26 - 30					
		51 - 55					
SA-TW-306	NA	11 - 15	NA	1319872.00	272523.00	GPS	TW
		26 - 30					
		47 - 51					
SA-TW-307	NA	11 - 15	NA	1320218.00	271991.00	GPS	TW
		26 - 30					
		45 - 49					
SA-TW-308	NA	11 - 15	NA	1320413.00	272201.00	GPS	TW
		26 - 30					
		45 - 49					
SA-TW-309	NA	11 - 15	NA	1318484.00	272743.00	GPS	TW
		26 - 30					
		50 - 54					
SA-TW-310	NA	10 - 15	NA	1319570.00	271794.00	GPS	TW
		24 - 29					
		48 - 53					
SA-TW-311	NA	10 - 15	NA	1319998.00	271827.00	GPS	TW
		23 - 28					
		46 - 51					
SA-TW312	NA	7 - 12	NA	1320339.00	271435.00	GPS	TW
		20 - 25					
		41 - 46					
SA-TW313	NA	9 - 14	NA	1320938.00	271868.00	GPS	TW
		20 - 25					
		42 - 47					
SA-TW314	NA	7 - 12	NA	1321202.00	271408.00	GPS	TW
		20 - 25					
		39 - 44					
SA-TW315	NA	8 - 13	NA	1321747.00	271415.00	GPS	TW
		20 - 25					
		40 - 45					
SA-TW316	NA	7 - 12	NA	1322246.00	271393.00	GPS	TW
		20 - 25					
		32 - 37					
SA-TW317	NA	10 - 15	NA	1321521.00	271774.00	GPS	TW
		20 - 25					
		39.5 - 44.5					
SA-TW318	NA	46 - 50	37.76	1319839.87	271659.70	4/1/2010	TW
SA-TW319	NA	38 - 42	41.30	1320418.31	271661.24	4/1/2010	TW
		45 - 49					
SA-TW320	NA	11 - 15	43.01	1319758.88	272025.16	4/1/2010	TW
		30 - 34					
		51 - 55					
SA-TW321	NA	11 - 15	44.77	1319966.63	272056.82	4/1/2010	TW
		30 - 34					
		49 - 53					
SA-TW322	NA	11 - 15	37.94	1320185.92	271666.77	4/1/2010	TW
		26 - 30					
		38 - 42					
		45 - 49					
SA-TW323	NA	14 - 18	55.23	1319666.55	273234.18	4/1/2010	TW
		30 - 34					

		52 - 56					
SA-TW324	NA	12 - 16	45.74	1319341.42	273345.58	4/1/2010	TW
		30 - 34					
		45 - 49					
SA-TW325	NA	18 - 22	53.54	1321136.00	270985.00	4/1/2010	TW
		32 - 36					
		50 - 54					
SA-TW326	NA	18 - 22	NA	1321154.00	270751.00	NA	TW
		32 - 36					
		42 - 46					
SA-TW327	NA	10 - 14	36.14	1320778.57	271146.99	12/14/2010	TW
		26 - 30					
		41 - 45					
SA-TW328	NA	8 - 12	37.13	1320897.49	270968.88	7/26/2010	TW
		23 - 27					
		36 - 40					
SA-TW329	NA	10 - 14	37.37	1320919.00	270488.60	7/26/2010	TW
		26 - 30					
		40 - 44					
SA-TW330	NA	18 - 22	53.43	1319605.91	273176.55	4/1/2010	TW
		30 - 34					
		50 - 54					
SA-TW331	NA	11 - 15	46.55	1319063.37	272462.91	GPS	TW
		21 - 25					
		31 - 35					
SA-TW332	NA	11 - 15	44.45	1319128.34	272529.71	GPS	TW
		21 - 25					
		31 - 35					
SA-TW333	NA	11 - 15	44.18	1319193.72	272604.98	7/26/2010	TW
		21 - 25					
		31 - 35					
SA-TW334	NA	11 - 15	41.17	1319322.71	272280.29	12/14/2010	TW
		21 - 25					
		31 - 35					
SA-TW335	NA	11 - 15	41.89	1319390.50	272340.38	12/14/2010	TW
		21 - 25					
		31 - 35					
		41 - 45					
SA-TW336	NA	11 - 15	43.33	1319464.36	272402.60	12/14/2010	TW
		21 - 25					
		31 - 35					
SA-TW337	NA	11 - 15	43.40	1319517.54	272073.64	12/14/2010	TW
		21 - 25					
		31 - 35					
SA-TW338	NA	11 - 15	43.72	1319587.50	272154.58	12/14/2010	TW
		21 - 25					
		31 - 35					
SA-TW339	NA	11 - 15	44.80	1319651.31	272235.35	12/14/2010	TW
		21 - 25					
		31 - 35					
SA-TW340	NA	21 - 25	44.48	1319265.93	272688.77	7/26/2010	TW
		31 - 35					
		41 - 45					
SA-TW341	NA	11 - 15	46.11	1318930.09	272702.50	7/26/2010	TW
		21 - 25					
		31 - 35					
		41 - 45					
SA-TW342	NA	11 - 15	45.68	1318979.01	272786.40	7/26/2010	TW
		21 - 25					
		31 - 35					
		41 - 45					
SA-TW343	NA	11 - 15	45.47	1319039.08	272874.94	7/26/2010	TW
		21 - 25					
		31 - 35					
		41 - 45					
SA-TW344	NA	11 - 15	45.13	1319085.47	272952.72	7/26/2010	TW
		21 - 25					
		31 - 35					
		41 - 45					
SA-TW345	NA	41 - 45	NA	1321865.00	271021.00	12/14/2010	TW
SA-TW346	NA	11-15	45.78	1318923.19	273097.25	12/14/2010	TW
		21-25					
		31-35					
		41-45					
SA-TW347	NA	11-15	45.88	1318971.39	273182.58	12/14/2010	TW
		21-25					
		31-35					
SA-TW348	NA	11-15	45.55	1318864.80	273019.67	12/14/2010	TW
		21-25					
		31-35					
SA-TW349	NA	11-15	45.53	1318665.98	273192.80	12/14/2010	TW
		21-25					
		31-35					
		41-45					
SA-TW350	NA	11-15	45.31	1318726.76	273261.55	12/14/2010	TW
		21-25					
		31-35					
SA-TW351	NA	11-15	41.60	1318760.35	273320.37	12/14/2010	TW
		21-25					
		31-35					
		41-45					
SA-TW352	NA	16-20	43.86	1321606.53	271552.59	12/14/2010	TW

		26-30					
		36-40					
SA-TW353	NA	16-20	43.56	1321735.37	271531.78	12/14/2010	TW
		26-30					
		36-40					
SA-TW354	NA	16-20	39.76	1321869.47	271556.03	12/14/2010	TW
		26-30					
		36-40					
SA-TW355	NA	16-20	38.26	1322076.82	271571.08	12/14/2010	TW
		26-30					
		36-40					
SA-TW356	NA	16-20	34.59	1322177.59	271533.48	12/14/2010	TW
		26-30					
		36-40					
SA-TW357	NA	16-20	36.24	1322269.35	271544.84	12/14/2010	TW
		26-30					
		36-40					
SA-TW-358	NA	11-15	45.10	1318321.13	273309.55	12/14/2010	TW
		21-25					
		31-35					
SA-TW-359	NA	11-15	45.05	1318314.61	273401.80	12/14/2010	TW
		21-25					
		31-35					
SA-TW-360	NA	11-15	45.79	1318366.13	273477.32	12/14/2010	TW
		21-25					
		31-35					
SA-TW-361	NA	11-15	46.16	1318430.40	273557.22	12/14/2010	TW
		21-25					
		31-35					
SA-TW-362	NA	11-15	43.69	1318504.82	273323.33	12/14/2010	TW
		21-25					
		31-35					
SA-TW-363	NA	11-15	47.27	1318635.92	273122.33	12/14/2010	TW
		21-25					
		31-35					
SA-TW-364	NA	11-15	47.75	1318823.31	272899.01	12/14/2010	TW
		21-25					
		31-35					
SA-TW365	NA	14 - 18	NA	1321560.00	271147.00	NA	TW
		20 - 24					
		30 - 34					
		40 - 44					
SA-TW366	NA	15 - 19	NA	1321560.00	270891.00	NA	TW
		25 - 29					
		35 - 39					
		42 - 46					
SA-TW367	NA	16 - 20	NA	1321578.00	270343.00	NA	TW
		26 - 30					
		36 - 40					
		42 - 46					
SA-TW401	NA	11 - 15	NA	1318728.00	272986.00	NA	TW
		21 - 25					
		26 - 30					
		31 - 35					
SA-TW402	NA	11 - 15	NA	1318858.00	273029.00	NA	TW
		21 - 25					
		26 - 30					
		31 - 35					
SA-TW403	NA	11 - 15	NA	1318897.00	273124.00	NA	TW
		21 - 25					
		26 - 30					
		31 - 35					
SA-TW404	NA	21 - 25	NA	1318922.00	272716.00	NA	TW
		31 - 35					
SA-TW405	NA	21 - 25	NA	1318867.00	272642.00	NA	TW
		31 - 35					
SA-TW406	NA	21 - 25	NA	1319063.00	272467.00	NA	TW
		31 - 35					
SA-TW407	NA	21 - 25	NA	1318981.00	272389.00	NA	TW
		31 - 35					
SA-TW408	NA	33 - 37	NA	1320100.00	271715.00	NA	TW
		38 - 42					
		43 - 47					
SA-TW409	NA	33 - 37	NA	1320345.00	271717.00	NA	TW
		38 - 42					
		43 - 47					
SA-TW410	NA	33 - 37	NA	1320345.00	271626.00	NA	TW
		38 - 42					
		43 - 47					
SA-TW411	NA	33 - 37	NA	1320343.00	271563.00	NA	TW
		38 - 42					
		43 - 47					
SA-TW412	NA	33 - 37	NA	1320338.00	271486.00	NA	TW
		38 - 42					
		43 - 47					
SA-TW413	NA	33 - 37	NA	1320331.00	271424.00	NA	TW
		38 - 42					
		43 - 47					
SA-TW414	NA	33 - 37	NA	1320277.00	271423.00	NA	TW
		38 - 42					
		43 - 47					
SA-TW415	NA	33 - 37	NA	1320200.00	271421.00	NA	TW

		38 - 42					
		43 - 47					
SA-TW416	NA	33 - 37	NA	1320128.00	271423.00	NA	TW
		38 - 42					
		43 - 47					
		48 - 52					
SA-TW417	NA	28 - 32	NA	1320039.00	271416.00	NA	TW
		33 - 37					
		38 - 42					
		43 - 47					
		48 - 52					
SA-TW418	NA	28 - 32	NA	1319962.00	271420.00	NA	TW
		33 - 37					
		38 - 42					
		43 - 47					
		48 - 52					
SA-TW419	NA	28 - 32	NA	1319884.00	271423.00	NA	TW
		33 - 37					
		38 - 42					
		43 - 47					
		48 - 52					
SA-TW420	NA	28 - 32	NA	1319804.00	271434.00	NA	TW
		33 - 37					
		38 - 42					
		43 - 47					
		48 - 52					
Peconic River Sportsmans Club							
CAPRSC01	NA	NA	NA	1322159.00	269753.00	NA	SPW
CAPRSC02	NA	NA	NA	1322388.00	270007.00	NA	SPW
CAPRSC03	NA	NA	NA	1322097.00	269995.00	NA	SPW
CAPRSC04	NA	NA	NA	1322402.00	270094.00	NA	SPW
Site 2 - Fire Training Area							
FT-MW01I	64.16	68 - 78	62.11	1315387.56	272335.89	NA	MW
FT-MW01S	63.88	18.5 - 28.5	62.12	1315398.63	272337.22	NA	MW
FT-MW02I	55.57	70 - 80	53.26	1315648.19	271973.04	NA	MW
FT-MW02S	55.47	10.5 - 20.5	53.34	1315638.35	271969.42	NA	MW
FT-MW03S	66.87	21.5 - 31.5	64.38	1315114.71	272069.30	NA	MW
FT-MW04S	61.33	17 - 27	59.95	1315757.06	272117.63	NA	MW
FT-MW05I	51.92	48 - 58	49.87	1316019.35	271581.47	NA	MW
FT-MW05S	51.48	7.5 - 17.5	49.37	1316028.85	271584.08	NA	MW
FT-MW06I	61.99	65 - 75	60.38	1315627.81	271533.18	NA	MW
FT-MW06S	61.28	17 - 27	59.44	1315613.67	271535.25	NA	MW
FT-MW07S	70.30	25 - 35	68.33	1315127.39	271464.99	NA	MW
FT-MW08I	48.01	23 - 33	NA	1316151.44	271612.48	NA	MW
FT-MW08S	47.92	3 - 13	NA	1316147.19	271617.66	NA	MW
Site 2 - Temporary Wells							
FT-TW421	NA	21 - 25	NA	1315456.00	271825.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
FT-TW422	NA	21 - 25	NA	1315542.00	271830.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
FT-TW423	NA	21 - 25	NA	1315647.00	271843.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
FT-TW424	NA	21 - 25	NA	1315737.00	271868.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
FT-TW425	NA	21 - 25	NA	1315804.00	271925.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
FT-TW426	NA	21 - 25	NA	1315808.00	272015.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
FT-TW427	NA	21 - 25	NA	1315825.00	272113.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
FT-TW428	NA	21 - 25	NA	1315857.00	271556.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
		71 - 75					
FT-TW429	NA	21 - 25	NA	1315762.00	271543.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					

		71 - 75					
FT-TW430	NA	21 - 25	NA	1315640.00	271529.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
		71 - 75					
FT-TW431	NA	21 - 25	NA	1315519.00	271515.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
		71 - 75					
FT-TW432	NA	26 - 30	NA	1315430.00	271504.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
		71 - 75					
FT-TW433	NA	26 - 30	NA	1315308.00	271489.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		59 - 63					
		71 - 75					
FT-TW434	NA	26 - 30	NA	1315501.00	271826.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
		71 - 75					
FT-TW435	NA	21 - 25	NA	1315384.00	271823.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
		71 - 75					
FT-TW436	NA	26 - 30	NA	1315283.00	271818.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
		61 - 65					
		71 - 75					
FT-TW437	NA	21 - 25	NA	1315942.00	271562.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
FT-TW438	NA	21 - 25	NA	1316041.00	271570.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
FT-TW439	NA	21 - 25	NA	1316135.00	271596.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
FT-TW440	NA	21 - 25	NA	1316225.00	271613.00	NA	TW
		31 - 35					
		41 - 45					
		51 - 55					
Site 7-Fuel Depot Area							
FD-SB-101			55.77	1316442.38	274471.88	12/15/2010	SB
FD-SB-102			55.64	1316432.37	274479.15	12/15/2010	SB
FD-SB-103			55.60	1316420.25	274479.93	12/15/2010	SB
FD-SB-104			55.23	1316403.75	274483.66	12/15/2010	SB
FD-SB-105			56.46	1316445.35	274519.08	12/15/2010	SB
FD-SB-106			56.17	1316436.30	274500.68	12/15/2010	SB
FD-SB-107			55.20	1316430.01	274460.58	12/15/2010	SB
FD-SB-108			54.71	1316427.79	274440.89	12/15/2010	SB
FD-SB-109			55.55	1316407.66	274496.80	12/15/2010	SB
FD-SB-110			54.73	1316403.18	274470.31	12/15/2010	SB
FD-SB-111			54.21	1316398.50	274455.57	12/15/2010	SB
FD-AS-42	57.82		55.40	1316912.82	274524.49	12/15/2010	AS
FD-AS-43	56.53		53.39	1316949.12	274567.67	12/15/2010	AS
FD-AS-44	55.89		53.45	1316980.09	274516.88	12/15/2010	AS
FD-MW-10S	56.81		53.93	1316946.62	274536.93	12/15/2010	MW

Notes:
Bold and *Italics* : Indicates estimated
* : Product detected
2009 elevations collected in NAVD88

BANC3

November 2009 Survey Table

Survey Coordinates for Site 6a, 10b, and Southern Area
NWIRP Calverton, New York

Well ID	Area	correct	NORTHING	EASTING	ELEVATION	NOTES
ET-MW01S	ENGINE TEST HOUSE		272723.823	1319219.576	47.6	vertical datum NAVD 1988
ET-MW01S	ENGINE TEST HOUSE	yes	272723.399	1319219.528	47.53	**BANC3 NAVD88 NAD83**
MW01S Ground	ENGINE TEST HOUSE	yes	272722.820	1319219.420	45.17	**BANC3 NAVD88 NAD83**
ET-MW02S	ENGINE TEST HOUSE		272738.874	1319326.485	47.03	vertical datum NAVD 1988
ET-MW02S	ENGINE TEST HOUSE	yes	272738.484	1319326.641	46.95	**BANC3 NAVD88 NAD83**
MW02S Ground	ENGINE TEST HOUSE	yes	272738.930	1319326.120	44.52	**BANC3 NAVD88 NAD83**
ET-MW03S	ENGINE TEST HOUSE		272862.296	1319401.194	47.86	vertical datum NAVD 1988
ET-MW03S	ENGINE TEST HOUSE	yes	272861.958	1319402.282	47.81	**BANC3 NAVD88 NAD83**
MW03S Ground	ENGINE TEST HOUSE	yes	272861.460	1319402.050	45.24	**BANC3 NAVD88 NAD83**
FCMW01S	FUEL CALIBRATION		273844.465	1318444.639		vertical datum NAD 1929
FCMW02I	FUEL CALIBRATION		273393.849	1318372.631		vertical datum NAD 1929
FC-MW-02-S	FUEL CALIBRATION		273393.112	1318384.821		vertical datum NAD 1929
FCMW03S	FUEL CALIBRATION		273393.840	1318566.739		vertical datum NAD 1929
FCMW04I	FUEL CALIBRATION		273427.030	1318714.008		vertical datum NAD 1929
FCMW04S	FUEL CALIBRATION		273411.440	1318715.848		vertical datum NAD 1929
FCMW05I	FUEL CALIBRATION		272995.356	1318883.388		vertical datum NAD 1929
FCMW05I	FUEL CALIBRATION	yes	272994.867	1318882.801	47.35	**BANC3 NAVD88 NAD83**
FCMW05I Ground	FUEL CALIBRATION	yes	272995.250	1318882.570	45.43	**BANC3 NAVD88 NAD83**
FCMW05S	FUEL CALIBRATION		272990.566	1318873.018		vertical datum NAD 1929
FCMW05S	FUEL CALIBRATION	yes	272990.179	1318872.447	48.03	**BANC3 NAVD88 NAD83**
FCMW05S Ground	FUEL CALIBRATION	yes	272990.460	1318873.030	45.50	**BANC3 NAVD88 NAD83**
FCMW06S	FUEL CALIBRATION		273038.435	1318373.963		vertical datum NAD 1929
FCMW06S	FUEL CALIBRATION	yes	273038.079	1318373.515	50.66	**BANC3 NAVD88 NAD83**
FCMW06S Ground	FUEL CALIBRATION	yes	273038.140	1318373.010	48.48	**BANC3 NAVD88 NAD83**
FCMW07S	FUEL CALIBRATION		273262.390	1318793.910	48.38	vertical datum NAVD 1988
FCMW07S	FUEL CALIBRATION	yes	273262.560	1318793.874	48.34	**BANC3 NAVD88 NAD83**

Survey Coordinates for Site 6a, 10b, and Southern Area
NWIRP Calverton, New York

Well ID	Area	correct	NORTHING	EASTING	ELEVATION	NOTES
FCMW07S Ground	FUEL CALIBRATION	yes	273261.800	1318794.657	45.89	**BANC3 NAVD88 NAD83**
FCMW07I	FUEL CALIBRATION	yes	273255.823	1318800.451	48.25	**BANC3 NAVD88 NAD83**
FCMW07I Ground	FUEL CALIBRATION	yes	273255.311	1318800.603	46.13	**BANC3 NAVD88 NAD83**
SA-MW126D	SOUTHERN AREA	yes	271465.639	1319704.630	40.04	**BANC3 NAVD88 NAD83**
SA-MW126D Ground	SOUTHERN AREA	yes	271465.348	1319704.525	37.37	**BANC3 NAVD88 NAD83**
SA-MW126I	SOUTHERN AREA		271465.210	1319714.730	40.05	vertical datum NAVD 1988
SA-MW126I	SOUTHERN AREA	yes	271464.635	1319714.762	39.97	**BANC3 NAVD88 NAD83**
SA-MW126I Ground	SOUTHERN AREA	yes	271464.249	1319714.376	37.52	**BANC3 NAVD88 NAD83**
SA-MW126S	SOUTHERN AREA		271463.060	1319725.000	39.9	vertical datum NAVD 1988
SA-MW126S	SOUTHERN AREA	yes	271462.442	1319724.782	39.79	**BANC3 NAVD88 NAD83**
SA-MW126S Ground	SOUTHERN AREA	yes	271462.073	1319724.520	37.36	**BANC3 NAVD88 NAD83**
SA-MW127I	SOUTHERN AREA		271425.840	1320597.180	40.84	vertical datum NAVD 1988
SA-MW127I	SOUTHERN AREA	yes	271425.635	1320597.039	40.79	**BANC3 NAVD88 NAD83**
SA-MW127I Ground	SOUTHERN AREA	yes	271424.548	1320597.096	38.43	**BANC3 NAVD88 NAD83**
SA-MW127S	SOUTHERN AREA		271426.280	1320603.800	40.62	vertical datum NAVD 1988
SA-MW127S	SOUTHERN AREA	yes	271425.918	1320603.580	40.57	**BANC3 NAVD88 NAD83**
SA-MW127S Ground	SOUTHERN AREA	yes	271425.252	1320603.614	38.26	**BANC3 NAVD88 NAD83**
SA-MW127D	SOUTHERN AREA	yes	271424.734	1320587.296	40.57	**BANC3 NAVD88 NAD83**
SA-MW127D Gound	SOUTHERN AREA	yes	271424.032	1320587.332	38.46	**BANC3 NAVD88 NAD83**
SA-MW128D	SOUTHERN AREA		271412.700	1321990.730	40.74	vertical datum NAVD 1988
SA-MW128D	SOUTHERN AREA	yes	271412.202	1321990.425	40.64	**BANC3 NAVD88 NAD83**
SA-MW128D Ground	SOUTHERN AREA	yes	271411.541	1321990.992	38.34	**BANC3 NAVD88 NAD83**
SA-MW128I	SOUTHERN AREA		271416.430	1321999.470	41	vertical datum NAVD 1988
SA-MW128I	SOUTHERN AREA	yes	271415.806	1321999.320	40.96	**BANC3 NAVD88 NAD83**
SA-MW128I Ground	SOUTHERN AREA	yes	271415.583	1322000.031	38.62	**BANC3 NAVD88 NAD83**
SA-MW128S	SOUTHERN AREA		271422.530	1322008.510	40.53	vertical datum NAVD 1988

Survey Coordinates for Site 6a, 10b, and Southern Area
NWIRP Calverton, New York

Well ID	Area	correct	NORTHING	EASTING	ELEVATION	NOTES
SA-MW128S	SOUTHERN AREA	yes	271421.752	1322008.457	40.54	**BANC3 NAVD88 NAD83**
SA-MW128S Ground	SOUTHERN AREA	yes	271421.586	1322008.625	38.19	**BANC3 NAVD88 NAD83**
SA-MW129D	SOUTHERN AREA		271402.340	1322941.910	52.26	vertical datum NAVD 1988
SA-MW-129I	SOUTHERN AREA		271402.880	1322934.810	52.23	vertical datum NAVD 1988
SA-MW-129S	SOUTHERN AREA		271403.540	1322926.200	51.99	vertical datum NAVD 1988
SA-PZ-118I	SOUTHERN AREA	yes	269844.390	1323195.339	31.68	**BANC3 NAVD88 NAD83**
SA-PZ-118I Ground	SOUTHERN AREA	yes	269844.255	1323194.772	29.22	**BANC3 NAVD88 NAD83**
SA-PZ-118S	SOUTHERN AREA	yes	269855.829	1323191.469	31.13	**BANC3 NAVD88 NAD83**
SA-PZ-118S Ground	SOUTHERN AREA	yes	269855.485	1323190.914	29.23	**BANC3 NAVD88 NAD83**
SA-PZ-120S	SOUTHERN AREA		271173.270	1324445.650	32.34	vertical datum NAVD 1988
SA-PZ-122D	SOUTHERN AREA		270923.080	1322939.230	41.35	vertical datum NAVD 1988
SA-PZ-122D	SOUTHERN AREA	yes	270922.330	1322938.832	43.47	**BANC3 NAVD88 NAD83**
SA-PZ-122D Ground	SOUTHERN AREA	yes	270921.957	1322938.490	41.31	**BANC3 NAVD88 NAD83**
SA-PZ-122I	SOUTHERN AREA		270917.450	1322940.980	43.58	vertical datum NAVD 1988
SA-PZ-122I	SOUTHERN AREA	yes	270916.486	1322940.785	43.57	**BANC3 NAVD88 NAD83**
SA-PZ-122I Ground	SOUTHERN AREA	yes	270916.333	1322940.204	41.20	**BANC3 NAVD88 NAD83**
SA-PZ-122S	SOUTHERN AREA		270910.390	1322943.370	43.8	vertical datum NAVD 1988
SA-PZ-122S	SOUTHERN AREA	yes	270909.596	1322942.979	43.75	**BANC3 NAVD88 NAD83**
SA-PZ-122S Ground	SOUTHERN AREA	yes	270909.369	1322942.495	41.11	**BANC3 NAVD88 NAD83**
SA-PZ-123I1	SOUTHERN AREA		270457.450	1323048.540	37.58	vertical datum NAVD 1988
SA-PZ-123I1	SOUTHERN AREA	yes	270456.373	1323048.102	37.51	**BANC3 NAVD88 NAD83**
SA-PZ-123I1 Ground	SOUTHERN AREA	yes	270456.505	1323047.837	34.75	**BANC3 NAVD88 NAD83**
SA-PZ-123I	SOUTHERN AREA		270467.980	1323045.790	38.09	vertical datum NAVD 1988
SA-PZ-123I	SOUTHERN AREA	yes	270467.029	1323045.420	38.02	**BANC3 NAVD88 NAD83**
SA-PZ-123I Ground	SOUTHERN AREA	yes	270467.046	1323045.016	35.16	**BANC3 NAVD88 NAD83**
SA-PZ-123S	SOUTHERN AREA		270448.040	1323051.400	37.04	vertical datum NAVD 1988

Survey Coordinates for Site 6a, 10b, and Southern Area
NWIRP Calverton, New York

Well ID	Area	correct	NORTHING	EASTING	ELEVATION	NOTES
SA-PZ-123S	SOUTHERN AREA	yes	270447.244	1323051.080	36.96	**BANC3 NAVD88 NAD83**
SA-PZ-123S Ground	SOUTHERN AREA	yes	270447.206	1323050.767	34.47	**BANC3 NAVD88 NAD83**
SA-MW130I	ENGINE TEST HOUSE	yes	272488.571	1320364.528	48.33	**BANC3 NAVD88 NAD83**
SA-MW130I Ground	ENGINE TEST HOUSE	yes	272488.278	1320364.993	45.91	**BANC3 NAVD88 NAD83**
SA-MW130S	ENGINE TEST HOUSE	yes	272483.420	1320364.006	48.60	**BANC3 NAVD88 NAD83**
SA-MW130S Ground	ENGINE TEST HOUSE	yes	272483.179	1320364.327	45.83	**BANC3 NAVD88 NAD83**
SA-MW131I	SOUTHERN AREA	yes	270697.538	1322255.018	38.24	**BANC3 NAVD88 NAD83**
SA-MW131I Ground	SOUTHERN AREA	yes	270697.169	1322254.884	36.03	**BANC3 NAVD88 NAD83**
SA-MW131S	SOUTHERN AREA	yes	270695.046	1322258.405	38.59	**BANC3 NAVD88 NAD83**
SA-MW131S Ground	SOUTHERN AREA	yes	270694.808	1322258.203	36.20	**BANC3 NAVD88 NAD83**
SA-MW131D	SOUTHERN AREA	yes	270700.553	1322251.322	37.82	**BANC3 NAVD88 NAD83**
SA-MW131D Ground	SOUTHERN AREA	yes	270700.143	1322251.154	35.84	**BANC3 NAVD88 NAD83**
SA-MW132I	SOUTHERN AREA	yes	269953.367	1321512.220	36.76	**BANC3 NAVD88 NAD83**
SA-MW132I Ground	SOUTHERN AREA	yes	269952.989	1321512.488	34.02	**BANC3 NAVD88 NAD83**
SA-MW132S	SOUTHERN AREA	yes	269955.745	1321516.735	36.75	**BANC3 NAVD88 NAD83**
SA-MW132S Ground	SOUTHERN AREA	yes	269955.512	1321516.835	34.09	**BANC3 NAVD88 NAD83**
Ws Staff Gg 1 WS PRSC	SOUTHERN AREA	yes	269847.497	1321370.550	30.83	**BANC3 NAVD88 NAD83**
Tp Staff Gg 1 WS PRSC	SOUTHERN AREA	yes	269847.357	1321370.571	32.37	**BANC3 NAVD88 NAD83**
Ws Staff Gg 2 ES PRSC	SOUTHERN AREA	yes	269926.659	1322533.478	30.77	**BANC3 NAVD88 NAD83**
Tp Staff Gg 2 ES PRSC	SOUTHERN AREA	yes	269926.970	1322534.696	32.41	**BANC3 NAVD88 NAD83**
BM ES Conn Ave HDWL	SOUTHERN AREA	yes	269793.255	1323249.596	30.44	**BANC3 NAVD88 NAD83**

Elevations are to the top of inner casing.
Coordinates in NY State Plane, Long Island Zone, NAD 83, US Survey feet; Elevation NAVD88
Tied to NGS Monument, "Wauwepex" KU0295, First Order Horiz, Second Order, Class 0, Vertical
276941.480 1309567.830 78.15 79.13 NGVD 29

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April 2010 Survey Table

April 2010
Survey Coordinates for Southern Area
NWIRP Calverton, New York

Survey Point #	Northing	Easting	Elevation	Notes and Well IDs
1	271334.765	1322037.884	35.911	CIP
3	271321.895	1322022.678	36.071	CIP
5	270626.929	1322214.453	39.299	CIP
2001	271417.912	1320819.002	36.955	PZ 134-SG
2002	271418.322	1320818.619	39.620	PZ 134-TC
2003	271426.884	1320548.643	39.511	PZ 133I-SG
2004	271427.210	1320548.850	41.545	PZ 133I-TC
2005	271427.979	1320544.284	39.319	PZ 133I1-SG
2006	271428.149	1320544.254	41.430	PZ 133I1-TC
2007	271429.868	1320285.256	36.688	PZ 135-SG
2008	271429.913	1320285.021	38.747	PZ 135-TC
2009	271428.439	1320121.020	37.417	PZ 136-SG
2010	271428.042	1320121.128	39.552	PZ 136-TC
20	271368.603	1320434.534	39.326	CIP
2011	271335.268	1320419.373	38.282	EOP
2012	271319.151	1320419.272	38.559	CL
2013	271302.822	1320418.970	37.911	EOP
2014	271301.648	1320393.607	37.975	EOP
2015	271290.039	1320370.610	38.165	EOP
2016	271263.495	1320357.554	38.518	EOP
2017	271211.053	1320355.289	39.457	EOP
2018	271210.970	1320343.536	40.708	CL
2019	271209.201	1320330.248	39.397	EOP
2020	271269.026	1320325.314	38.524	EOP
2021	271271.115	1320343.292	38.757	CL
2022	271288.643	1320361.203	38.422	DRILL HOLE
2023	271291.228	1320325.391	38.330	DRILL HOLE
2024	271292.131	1320313.179	38.056	EOP
2025	271306.704	1320281.054	38.766	EOP
2026	271307.042	1320255.949	39.174	EOP
2027	271319.411	1320255.159	39.198	CL
2028	271334.903	1320255.590	38.741	EOP
2029	271334.701	1320344.028	38.453	EOP
2030	271319.131	1320344.027	38.749	CLXCL
2031	271433.815	1319979.740	39.251	PZ 137-SG
2032	271433.688	1319979.880	41.666	PZ 137-TC
2033	271658.641	1320288.831	39.951	PZ 139-SG
2034	271658.480	1320288.416	42.277	PZ-139-TC
2035	271661.237	1320418.305	41.302	TW 319
2036	271666.769	1320185.918	37.946	TW 322
2037	271670.254	1320058.713	36.940	PZ 138-SG
2038	271670.238	1320058.124	40.030	PZ 138-TC
2039	271659.701	1319839.872	37.756	TW 318

April 2010
Survey Coordinates for Southern Area
NWIRP Calverton, New York

2040	272025.158	1319758.884	43.011	TW 320
2041	272056.824	1319966.630	44.769	TW 321
11	272282.640	1320126.792	44.166	CIP
2042	270599.976	1320330.852	33.169	PZ 146-SG
2043	270599.795	1320328.500	38.697	PZ 146-TC
2044	273345.581	1319341.422	45.738	TW 324
2045	273176.549	1319605.907	53.543	TW 325
2046	273234.183	1319666.547	55.234	TW 323

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August 2010 Survey Table

August 2010
Survey Coordinates for the Southern Area
NWIRP Calverton, New York

Point #	North	East	Elevation	description	NY SPC LI Zone, NAD 83, NAVD 88, US Survey Feet
3000	272688.774	1319265.933	44.475	TW 340	
3002	272604.978	1319193.719	44.180	TW 333	
30	272199.502	1319809.224	44.410	NAIL	
3003	272874.941	1319039.078	45.472	TW343	
3004	272952.724	1319085.466	45.132	TW344	
3005	272786.397	1318979.014	45.680	TW342	
3006	272702.497	1318930.086	46.106	TW341	
3007	270327.490	1323079.606	31.868	GT @ SA PZ 168S	
3008	270327.333	1323079.903	35.390	T/OUTER CASE PZ 168S	
3009	270327.508	1323079.990	34.718	T/INNER CASE PZ 168S	
3010	270324.198	1323080.406	34.400	T/INNER CASE PZ 168I	
3011	270324.157	1323080.463	35.167	T/OUTER CASE PZ 168I	
3012	270324.432	1323080.056	31.561	GT@ PZ 168I	
3013	270294.706	1323087.197	31.216	GT@ PZ 169I	
3014	270294.196	1323087.268	34.783	T/OUTER @ PZ 169I	
3015	270294.314	1323087.438	34.071	T/INNER @ PZ 169I	
3016	270231.526	1323100.403	33.567	T/OUTER @ PZ 166I	
3017	270231.552	1323100.387	33.034	T/INNER @ PZ 166I	
3018	270231.917	1323100.149	30.160	GT @ PZ 166I	
3019	270278.290	1323090.313	31.047	GT @ SAPTW-2	
3020	270278.761	1323090.733	33.942	T/OUTER CASE @ SAPTW-2	
3021	270279.044	1323090.956	33.574	T/INNER CASE @ SAPTW-2	
3022	270373.027	1323068.903	35.644	T/INNER CASE @ PZ164I	
3023	270372.890	1323068.943	36.346	T/OUTER CASE @ PZ164I	
3024	270372.994	1323069.598	32.779	GT @ PZ164I	
3025	270376.233	1323068.783	32.819	GT @ PZ164S	
3026	270376.082	1323068.462	36.513	T/ OUTERCASE @ PZ164S	
3027	270375.859	1323068.371	35.753	GT @ PZ140	
41	270266.261	1323083.550	30.345	TRAV PK	
40	270445.222	1323014.923	34.479	TRAV PK	
3028	271135.746	1321100.503	43.319	GT @ PZ 140	
3029	271135.653	1321100.826	46.752	T/OUTER CASE@ PZ 140	
3030	271135.594	1321100.676	46.400	T/INNER CASE @ PZ 140	
3031	270989.345	1321124.113	43.793	GT @ PZ141	
3032	270989.501	1321124.199	46.257	T/OUTER CASE @ PZ141	
3033	270989.478	1321124.046	46.083	T/INNER CASE @ PZ141	
3034	270753.404	1321148.261	44.470	GT @ PZ142	
3035	270753.603	1321148.814	47.684	T/OUTER CASE @ PZ142	
3036	270753.885	1321148.787	47.262	T/INNER CASE @ PZ142	
3037	270500.140	1321167.007	46.394	T/INNER CASE @ PZ143	
3038	270500.459	1321167.366	46.737	T/OUTER CASE @ PZ143	
3039	270499.967	1321167.287	43.950	GT @ PZ143	
3040	270488.603	1320918.999	37.366	TW 329	
3041	270968.876	1320897.490	37.128	TW 328	
3042	271429.247	1320355.531	38.209	GT @PZ 161I	
3043	271429.228	1320355.571	40.585	T/CASE @PZ 161I	
3044	271417.305	1320592.112	38.278	GT @SAPTW-1	
3045	271417.910	1320591.999	41.170	T/OUTER CASE @SAPTW-1	
3046	271418.223	1320592.049	40.949	T/INNER CASE @SAPTW-1	
3047	271422.213	1320636.573	37.639	GT/@ PZ 170I	
3048	271422.153	1320636.148	40.376	T/CASE @ PZ 170I	
3049	270675.880	1320452.813	38.927	GT@ PZ 144I	
3050	270676.134	1320452.989	42.012	T/OUTER CASE @ PZ 144I	
3051	270676.080	1320453.000	41.761	T/INNER CASE @ PZ 144I	
3052	270676.118	1320454.983	41.503	T/INNER CASE @ PZ 144S	
3053	270676.184	1320455.443	42.023	T/OUTER CASE @ PZ 144S	
3054	270676.010	1320455.844	38.823	GT @ PZ 144S	
3055	271029.720	1321859.288	37.741	GT @ PZ 165S	

August 2010
Survey Coordinates for the Southern Area
NWIRP Calverton, New York

3056	270259.637	1323047.860	30.734	T/CASE@ PZ165S
3057	270279.303	1323192.813	26.658	GT@ @ PZ167S
3058	270279.806	1323193.080	30.349	T/CASE@ PZ167S
3059	271029.278	1321862.661	40.632	T/CASE OUTER @ PZ 144S
3060	271029.209	1321862.370	40.560	T/CASE INNER CASE @ PZ 144S
3061	271020.906	1321863.797	41.554	T/CASE INNER CASE @ PZ 145I
3062	271020.613	1321863.537	41.678	T/CASE OUTER CASE @ PZ 145I
3063	271022.542	1321868.441	49.257	GT@ PZ 145I
42	271320.702	1321862.525	39.326	HUB TACK
43	271289.637	1322021.143	35.755	PK
44	271365.222	1320244.817	37.062	HUB TACK
46	271400.386	1320593.830	38.293	PK
3064	271418.754	1320710.339	37.630	GT @ PZ163I
3065	271419.219	1320710.330	40.174	T/CASE @ PZ163I
3066	271461.051	1320586.474	41.800	T/CASE @ PZ162I
3067	271461.119	1320586.125	38.667	GT @ PZ162I
3068	271425.755	1320603.685	41.454	T/CASE @ MW127S
3069	271424.618	1320587.353	41.565	T/CASE @ MW127D
45	271618.234	1320204.652	37.412	HUB TACK
3070	271548.886	1320250.426	37.024	GT PZ160I 1
3071	271549.179	1320250.125	38.947	T/CASE PZ160I 1
3072	271546.994	1320248.154	39.293	T/CASE PZ160I
3073	271547.085	1320248.207	37.194	GT PZ160I
3074	271601.539	1320199.948	37.059	GT PZ159I
3075	271601.397	1320199.864	39.166	T/CASE PZ159I
3076	271602.723	1320201.471	39.369	T/CASE PZ159I-1
3077	271602.714	1320202.075	37.140	GT PZ159I-1
3078	271622.748	1320190.443	37.360	GT PZ158I-1
3079	271622.551	1320190.184	39.365	T/CASE PZ158I-1
3080	271622.664	1320187.372	39.734	T/CASE PZ158I
3081	271622.579	1320187.610	37.047	GT PZ158I
3082	271641.092	1320169.653	37.297	GT PZ157I
3083	271641.222	1320169.437	39.510	T/CASE PZ157I
3084	271643.509	1320169.886	39.761	T/CASE PZ157I-1
3085	271643.248	1320169.877	37.313	GT PZ157I-1
3086	271670.284	1320061.146	37.200	GT PZ138I
3087	271670.102	1320061.081	39.799	T/CASE PZ138I
3088	271659.888	1320105.888	37.186	GT PZ150I-1
3089	271672.364	1320130.553	37.505	GT PZ151I-1
3090	271684.706	1320151.692	37.947	GT PZ152I-1
3091	271699.246	1320176.159	39.701	GT PZ152I-1
3092	271673.206	1320179.505	38.403	GT PZ156I
3093	271666.226	1320185.510	38.062	TW322
3094	271029.298	1321863.304	37.947	gt PZ 145s
3095	271029.127	1321862.733	41.203	T/OUTER CASE PZ 145s
3096	271029.346	1321862.675	40.956	T/INNER CASE PZ 145s
3097	271020.899	1321863.717	41.109	T/INNER PZ 145I
3098	271020.656	1321864.312	38.111	GT PZ 145I
3099	271020.766	1321863.817	41.446	T/OUT CASE PZ 145I
3100	271011.252	1321864.435	41.124	T/OUTER CASE PZ 145D
3101	271011.347	1321864.403	40.984	T/INNER CASE PZ 145D
3102	271011.312	1321864.976	37.844	GT PZ 145D

Survey points resurveyed.
Disregard these points.
JB 2-16-12

BANC3

December 2010 Survey Table

SURVEY TABLE
DECEMBER 2010 LOCATIONS

Location ID	Easting	Northing	Elevation	Comment/Point No.	Note
SAPZ120S	1324415.000	271128.000		east of Conn. Ave	missed well
T/PIPE SAPZ-120-S	1324447.915	271009.278	32.48	5038	surveyed 12/15/10
T/outer CASING SAPZ-120-S	1324447.794	271009.418	33.41	5037	surveyed 12/15/10
Ground at Well	1324447.485	271008.886	29.92	5036	surveyed 12/15/10
SAPZ149I1	1319998.000	271827.000		Bio Study Area	missed well
T/PIPE PZ-149I1	1320018.201	271825.506	44.73	5001	surveyed 12/14/10
Ground PZ-149I1	1320018.003	271825.867	42.24	5002	surveyed 12/14/10
SAPZ154I	1320134.000	271646.000		Bio Study Area	missed well
T/PIPE PZ-154I	1320134.624	271646.767	37.14	5005	surveyed 12/14/10
Ground PIPE PZ-154I	1320134.714	271647.140	36.79	5006	surveyed 12/14/10
SAPZ155I	1320157.000	271660.000		Bio Study Area	missed well
Ground PZ-155I	1320156.259	271659.481	37.36	5003	surveyed 12/14/10
T/PIPE PZ-155I	1320156.765	271659.830	40.24	5004	surveyed 12/14/10
SATW327	1320710.000	271055.000		County property	South of River Road - missed TW
TW-327	1320778.568	271146.990	36.14	5000	surveyed 12/14/10
SATW331	1319061.000	272460.000		near ponds	
TW-331	1319063.368	272462.914	46.554	5015	surveyed 12/14/10
SATW332	1319130.000	272532.000		near ponds	
TW-332	1319128.337	272529.708	44.45	5014	surveyed 12/14/10
SATW334	1319319.000	272284.000		near ponds	
TW-334	1319322.710	272280.290	41.17	5012	surveyed 12/14/10
SATW335	1319384.000	272352.000		near ponds	
TW-335	1319390.501	272340.384	41.89	5011	surveyed 12/14/10
SATW336	1319463.000	272400.000		near ponds	
TW-336	1319464.358	272402.599	43.33	5010	surveyed 12/14/10
SATW337	1319520.000	272068.000		near ponds	
TW-337	1319517.537	272073.639	43.40	5009	surveyed 12/14/10
SATW338	1319584.000	272163.000		near ponds	
TW-338	1319587.501	272154.576	43.72	5008	surveyed 12/14/10
SATW339	1319649.000	272239.000		near ponds	
TW-339	1319651.310	272235.349	44.80	5007	surveyed 12/14/10
SATW345	1321177.000	270984.000		Site 6A	
					no well SATW 345?
SATW346	1318887.000	273115.000		Site 6A	
SA-TW-346	1318923.186	273097.252	45.78	5017	surveyed 12/14/10
SATW347	1318945.000	273194.000		Site 6A	
SA-TW-347	1318971.388	273182.580	45.88	5016	surveyed 12/14/10
SATW348	1318844.000	273039.000		Site 6A	
SA-TW-348	1318864.802	273019.672	45.55	5018	surveyed 12/14/10
SATW349	1318652.000	273227.000		Site 6A	
SA-TW-349	1318665.981	273192.800	45.53	5025	surveyed 12/14/10
SATW350	1318702.000	273280.000		Site 6A	

SURVEY TABLE
DECEMBER 2010 LOCATIONS

SA-TW-350	1318726.762	273261.545	45.31	5045	surveyed 12/15/10
SATW351	1318666.000	273373.000		Site 6A	
SA-TW-351	1318760.346	273320.369	41.60	5046	surveyed 12/15/10
SATW352	1321628.000	271561.000		Site 6A	
SA-TW-352	1321606.527	271552.585	43.86	5043	surveyed 12/15/10
SATW353	1321771.000	271561.000		Site 6A	
SA-TW-353	1321735.365	271531.782	43.56	5042	surveyed 12/15/10
SATW354	1321905.000	271561.000		Site 6A	
SA-TW-354	1321869.473	271556.031	39.76	5044	surveyed 12/15/10
SA-TW-355	1322076.817	271571.081	38.26	5039	surveyed 12/15/10
SA-TW-356	1322177.592	271533.483	34.59	5040	surveyed 12/15/10
SA-TW-357	1322269.345	271544.835	36.24	5041	surveyed 12/15/10
SA-TW-358	1318321.130	273309.546	45.10	5023	surveyed 12/14/10
SA-TW-359	1318314.610	273401.797	45.05	5022	surveyed 12/14/10
SA-TW-360	1318366.129	273477.320	45.79	5020	surveyed 12/14/10
SA-TW-361	1318430.401	273557.222	46.16	5021	surveyed 12/14/10
SA-TW-362	1318504.816	273323.331	43.69	5019	surveyed 12/14/10
SA-TW-363	1318635.920	273122.332	47.27	5024	surveyed 12/14/10
SA-TW-364	1318823.310	272899.009	47.75	5026	surveyed 12/14/10
FCMW03S				Site 6A	replacement well not marked
Ground at Well	1318566.452	273394.349	43.72	5027	surveyed 12/14/10
T/Outer CASING	1318566.064	273393.711	46.44	5028	surveyed 12/14/10
T/PIPE	1318566.270	273393.767	45.83	5029	surveyed 12/14/10
FCMW02S				Site 6A	replacement well not marked
T/PIPE	1318384.301	273393.052	46.33	5030	surveyed 12/14/10
T/Outer CASING	1318384.135	273393.014	46.70	5031	surveyed 12/14/10
Ground at Well	1318383.984	273393.466	44.27	5032	surveyed 12/14/10
FCMW02I				Site 6A	replacement well not marked
Ground at Well	1318372.115	273394.302	44.40	5033	surveyed 12/14/10
T/Outer CASING	1318372.437	273394.074	46.86	5034	surveyed 12/14/10
T/PIPE	1318372.563	273393.918	46.40	5035	surveyed 12/14/10
SB					
FD-~~AS~~-101	1316442.381	274471.878	55.77	5057	surveyed 12/15/10
FDSB101				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-102 SB	1316432.367	274479.145	55.64	5054	surveyed 12/15/10
FDSB102				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-103 SB	1316420.248	274479.930	55.60	5051	surveyed 12/15/10
FDSB103				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-104 SB	1316403.748	274483.657	55.23	5049	surveyed 12/15/10

All corrections made on 2-10-2011 by Jacob Birkel

SURVEY TABLE
DECEMBER 2010 LOCATIONS

All corrections made on 2-10-2011 by Jacob Bickel

FDSB104 SB				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-105	1316445.352	274519.083	56.46	5056	surveyed 12/15/10
FDSB105 SB				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-106	1316436.298	274500.679	56.17	5055	surveyed 12/15/10
FDSB106 SB				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-107	1316430.011	274460.582	55.20	5053	surveyed 12/15/10
FDSB107 SB				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-108	1316427.791	274440.886	54.71	5052	surveyed 12/15/10
FDSB108 SB				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-109	1316407.657	274496.799	55.55	5050	surveyed 12/15/10
FDSB109 SB				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-110	1316403.175	274470.310	54.73	5048	surveyed 12/15/10
FDSB110 SB				Site 7 - Fuel Depot	new soil borings (Oct 2010)
FD-~~AS~~-111	1316398.497	274455.565	54.21	5047	surveyed 12/15/10
FDSB111				Site 7 - Fuel Depot	new soil borings (Oct 2010)
Ground at Well	1316913.460	274524.354	55.40	5058	surveyed 12/15/10
T/CASING FD-AS-42	1316912.823	274524.491	57.82	5059	surveyed 12/15/10
Ground at Well	1316950.238	274567.748	53.39	5063	surveyed 12/15/10
T/CASING FD-AS-43	1316949.115	274567.672	56.53	5064	surveyed 12/15/10
T/CASING FD-AS-44	1316980.085	274516.881	55.89	5065	surveyed 12/15/10
Ground at Well	1316980.627	274517.299	53.45	5066	surveyed 12/15/10
T/CASING MW-10S	1316946.622	274536.933	57.53	5060	surveyed 12/15/10
T/PIPE MW-10S	1316946.364	274536.934	56.81	5061	surveyed 12/15/10
GT	1316946.217	274537.542	53.93	5062	surveyed 12/15/10
IP 15FT/MH-SITE 7A	1316678.070	274103.874	57.59	52	surveyed 12/15/10
SC MON	1316824.340	274427.485	57.03	5067	surveyed 12/15/10

Notes (added on February 10,2012):

Survey conducted on December 14 and 15, 2010

Orange shading indicates coordinates pulled from GIS and provided to surveyors prior to survey

Appendix I

Peconic River Groundwater, Surface Water, and Sediment Sample Log Sheets

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-124-20110315
Sample Location: SA-PZ-124
Sampled By: JB V S
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
Date: 3-15-11								
Time: 1220								
Method: Peristaltic	Clear	6.27	0.148	9.84	7.14	11.12	0.0	-15

PURGE DATA:

	Volume gal	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Date: 3-15-11								
Method: Peristaltic	0.0	6.14	0.144	9.77	4491	11.62	0.0	40
Monitor Reading (ppm): —	0.5	6.19	0.148	9.83	17.00	11.47	0.0	4
Well Casing Diameter & Material	1.0	6.27	0.148	9.84	7.14	11.12	0.0	-15
Type: 2" Stainless Steel								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.: Time 1202
—	SA-PZ-Dup01-20110315

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-125-20110315
Sample Location: SA-PZ-125
Sampled By: JB VS
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-15-11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1130	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic	clear	5.92	0.053	11.55	2.80	10.79	0.0	68

PURGE DATA:

Date: 3-15-11	Volume gal	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Peristaltic	0.0	6.82	0.052	11.51	6.82	11.13	0.0	8
Monitor Reading (ppm):	0.5	6.16	0.053	11.52	3.91	11.02	0.0	46
Well Casing Diameter & Material	1.0	5.92	0.053	11.55	2.80	10.79	0.0	68
Type: 2" Stainless Steel								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SAPZ-147-20110315
Sample Location: SAPZ-147
Sampled By: JB VS
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
Date: 3-15-11								
Time: 1300								
Method: Low Peristaltic	clear	6.00	0.093	10.64	8.89	8.89	0.0	34

PURGE DATA:

	Volume gal	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Date: 3-15-11								
Method: Peristaltic	0.0	6.32	0.089	10.55	66.0	11.09	0.0	15
Monitor Reading (ppm):	0.5	6.07	0.093	10.62	35.0	11.16	0.0	28
Well Casing Diameter & Material	1.0	6.00	0.093	10.64	8.89	8.89	0.0	34
Type: 2" Stainless Steel								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L): 1 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40m	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-148-20110315
Sample Location: SA-PZ-148
Sampled By: JB VS
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
Date: 3-15-11								
Time: 1210								
Method: Peristaltic	clear	5.62	0.055	9.44	8.43	11.22	0.0	95

PURGE DATA:

	Volume gal	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Date: 3-15-11								
Method: Peristaltic	0.0	6.33	0.052	9.50	16.10	12.20	0.0	47
Monitor Reading (ppm):	0.5	5.81	0.054	9.41	11.30	11.95	0.0	77
Well Casing Diameter & Material	1.0	5.62	0.055	9.44	8.43	11.22	0.0	95
Type: 2" Stainless Steel								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SD-124-20110315
Sample Location: SA-SD-124
Sampled By: JB VS
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 3-15-11 Time: 1230 Method: Hand trowel Monitor Reading (ppm): —	0-6" bgs	brown to tan	F sandy silt tr organics · wet

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOC	1 4oz glass jar	yes	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.: Time 1200
—	SA-SD-Dup01-20110315

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SD-125-20110315
Sample Location: SA-SD-125
Sampled By: JB VS
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 3-15-11 Time: 1145 Method: Hand trowel Monitor Reading (ppm): —	0-6" bgs	brown tan	silty F sand and organics wet

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOC	1 4oz glass jar	yes	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SD-201-20110315
Sample Location: SA-SD-201-201
Sampled By: JB VS
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 3-15-11 Time: 1330 Method: Hand Trowel Monitor Reading (ppm): —	0-6' bgs	brown to tan	silty sand tr. F. organics wet

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOC	1 4 oz glass jar	yes	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SD-204-20110315
Sample Location: SA-SD-204
Sampled By: JB VS
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 3-15-11 Time: 1045 Method: Hand trowel Monitor Reading (ppm): —	0-6"	brown to tan	F sand some silt and pebbles & F. organics wet

COMPOSITE SAMPLE DATA:

	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:				
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOC	2 4oz glass jar	yes	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

Sample ID No.: SA-SW-124-20110315
Sample Location: SA-SW-124
Sampled By: JB VS
C.O.C. No.:

[X] Stream
[] Spring
[] Pond
[] Lake
[] Other:
[] QA Sample Type:

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: 3-15-11 Time: 1225 Depth: ~~Dr~~ 6" Method: Direct Dip	clear	—	—	—	—	—	—	—

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	SA-SW-Dup01-20110315 Time 1201

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[X] Stream
[] Spring
[] Pond
[] Lake
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SW-125-20110315
Sample Location: SA-SW-125
Sampled By: JB VS
C.O.C. No.:

Type of Sample:
[] 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: 3-15-11 Time: 1140 Depth: 6" Method: Direct Dip	clear	—	—	—	—	—	—	—

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vial	yes

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[X] Stream
[] Spring
[] Pond
[] Lake
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SW-201-20110315
Sample Location: SA-SW-201
Sampled By: JB VS
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-15-11 / Time: 1345 / Depth: 6" / Method: Direct Dip	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
	Clear	—	—	—	—	—	—	—

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3 40mL glass vials	yes

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[X] Stream
[ ] Spring
[ ] Pond
[ ] Lake
[ ] Other:
[ ] QA Sample Type:

Sample ID No.: SA-SW-204-20110315
Sample Location: SA-SW-204
Sampled By: JB VS
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 3-15-11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 1055								
Depth: 6"	clear	—	—	—	—	—	—	—
Method: Direct Dip								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	9 40mL glass vials	yes

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
yes	—

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-124-20110928
Sample Location: SA-PZ-124
Sampled By: JB, KF
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 (%)	ORP (mV)
Date: 9/28/11								
Time: 1108								
Method: Low Flow - Peristaltic	clear	6.32	0.156	13.82	2.06	3.64	0.1	-59

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Date: 9/28/11								
Method: Low Flow -	400 ml/min	5.98	0.146	15.85	8.82	6.03	0.1	-28
Monitor Reading (ppm): --		6.27	0.153	15.01	3.30	3.32	0.1	-56
Well Casing Diameter & Material		6.33	0.155	14.10	1.72	3.75	0.1	-60
Type: Stainless Steel		6.32	0.156	13.82	2.06	3.64	0.1	-59
Total Well Depth (TD):			~~SEE LOW FLOW PURGE SHEET FOR DETAILS~~				KF	
Static Water Level (WL): —								
One Casing Volume(gal/L):								
Start Purge (hrs): 1048								
End Purge (hrs): 1108								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 8L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit = —

some fine sediment

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	SA-PZ-DUP01-20110928 @1200

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-125-20110928
Sample Location: SA-PZ-125
Sampled By: JB, KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/28/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 0857								
Method: Low Flow - Peristaltic	clear	5.24	0.061	14.28	0.37	5.45	0.0	1.70

PURGE DATA:

Date: 9/28/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	~~Other~~ ORP
Method: Low Flow -	400mL/min	4.38	0.104	20.50	2.78	8.76	0.0	241
Monitor Reading (ppm): --		5.17	0.125	15.48	1.42	5.73	0.1	203
Well Casing Diameter & Material		5.40	0.059	16.03	1.02	5.47	0.0	172
Type: Stainless Steel		5.24	0.061	14.28	0.37	5.45	0.0	1.70
Total Well Depth (TD):		~~SEE LOW FLOW PURGE SHEET FOR DETAILS~~ KF						
Static Water Level (WL): —								
One Casing Volume(gal/L):								
Start Purge (hrs): 0837								
End Purge (hrs): 0857								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 8L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	Y

OBSERVATIONS / NOTES:

D.O. Test Kit =

fine sands in water

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-147-20110928
Sample Location: SA-PZ-147
Sampled By: JB KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/28/11	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	ORP
Time: 1142	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	(mV)
Method: Low Flow - Peristaltic		5.71	0.129	13.93	1.13	2.44	0.1	54

PURGE DATA:

Date: 9/28/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Method: Low Flow -	400 ml/min	6.01	.135	16.23	18.7	7.81	0.1	27
Monitor Reading (ppm): --		5.83	.130	14.37	5.97	3.50	0.1	49
Well Casing Diameter & Material		5.74	0.131	13.69	2.59	2.30	0.1	63
Type: Stainless Steel		5.71	0.129	13.93	1.13	2.44	0.1	54
Total Well Depth (TD):			~~SEE LOW FLOW PURGE SHEET FOR DETAILS~~				KS	
Static Water Level (WL): —								
One Casing Volume(gal/L):								
Start Purge (hrs): 1122								
End Purge (hrs): 1142								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 8L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	✓

OBSERVATIONS / NOTES:

D.O. Test Kit = —

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NWIRP Calverton
Project No.: 112G02045

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

Sample ID No.: SA-PZ-148-20110928
Sample Location: SA-PZ-148
Sampled By: JB KF
C.O.C. No.:
Type of Sample:
[X] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 9/28/11	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	ORP (mV)
Time: 1040								
Method: Low Flow - Peristaltic		5.23	.060	14.42	12.4	2.80	0.0	112

PURGE DATA:

Date: 9/28/11	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other (ORP)
Method: Low Flow -	400ml/min	5.45	.062	14.17	290	4.77	0.0	82
Monitor Reading (ppm): --		5.33	.060	14.97	18.6	5.95	0.0	99
Well Casing Diameter & Material		5.28	.059	14.73	8.08	3.17	0.0	110
Type: Stainless Steel		5.23	.060	14.42	12.4	2.80	0.0	112
Total Well Depth (TD):			~~SEE LOW FLOW PURGE SHEET FOR DETAILS~~				KF	
Static Water Level (WL): —								
One Casing Volume(gal/L):								
Start Purge (hrs): 1020								
End Purge (hrs): 1040								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 8 L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2 - 40mL glass vials	✓

OBSERVATIONS / NOTES:

D.O. Test Kit = —

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SD-124-20110928
Sample Location: SA-SD-124
Sampled By: J. Birkett
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 9/28/11 Time: 1115 Method: Grab Monitor Reading (ppm): —	0 - 6"	Brown	wet fine sand, some silt, organics

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOCs	4 oz Jar	1	Y

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SD-12-5-20110928
Sample Location: SA-SD-12-5
Sampled By: J. Birkett
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 9/28/11 Time: 0910 Method: Grab Monitor Reading (ppm): —	0 - 6"	Brown	wet Organic - fine sand and silt

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
9/28/11				
Method:				
Grab				
Monitor Readings				
(Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOCs	~~40~~ 4 oz	Y	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SD-201-20110928
Sample Location: SA-SD-201
Sampled By: J. Birkett, KF
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 9/28/11 Time: 1205 Method: Grab Monitor Reading (ppm): —	0 - 6"	Light brown	wet Fine sand, some silt, trace pebbles

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOCs	4 oz jar	Y	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
	SA-SD-~~201~~ Dup01-20110928 0 1300

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SD-204-20110928
Sample Location: SA-SD-204
Sampled By: J. Birkett
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 9/28/11 Time: 1230 Method: Grab Monitor Reading (ppm): —	0 - 6"	brown	organics some sand and silt lots of roots wet

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOCs	4 oz jar	6	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD ✓

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[x] Stream
[] Spring
[] Pond
[] Lake
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SW-124-20110928
Sample Location: SA-SW-124
Sampled By: J. Birkett
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: 9/28/11 Time: 1110 Depth: Surface Method: Grab	tan tint	6.44	.085	19.65	–	5.88	0.0	–3

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	40 mL glass vials –2	Y

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[x] Stream
[] Spring
[] Pond
[] Lake
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SW-125-20110928
Sample Location: SA-SW-125
Sampled By: J. Birkett
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
Date: 9/28/11 Time: 0900 Depth: surface Method: Direct dip	tan tint	5.70	0.079	18.56	—	4.77	0.0	108

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	40 mL glass vials	✓

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[x] Stream
[] Spring
[] Pond
[] Lake
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SW-201-20110928
Sample Location: SA-SW-201
Sampled By: J. Birkett, KF
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: 9/28/11 Time: 1150 Depth: surface Method: Grab	tan tint	5.93	.079	21.18	—	18.00	0.0	29

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	40 mL glass vials - 2	Y

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD

Duplicate ID No.: @1400
~~SA-PZ~~ KF SA-SW-DUP01-20110928

Signature(s):

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Project Site Name: NWIRP Calverton
Project No.: 112G02045

[x] Stream
[] Spring
[] Pond
[] Lake
[] Other:
[] QA Sample Type:

Sample ID No.: SA-SW-204-20110928
Sample Location: SA-SW-204
Sampled By: J. Birkett
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: 9/28/11								
Time: 1220								
Depth: Surface								ORP
Method: Grab	tan tint	6.02	0.079	19.85	--	9.29	0	71

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	40 mL glass vials - 6	Y

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Appendix J

Analytical Data Tables

Appendix
Groundwater Analytical Results
Site 2
NWIRP Calverton, New York

GROUNDWATER

LOCATION	FTMW01I	FTMW01I	FTMW01S	FTMW01S	FTMW02I	FTMW02I	FTMW02S	FTMW02S	FTMW02S	FTMW02S	FTMW03S	FTMW03S	FTMW04	FTMW04	FTMW05I
SAMPLE ID	FT-MW01I-20110314	FT-MW01I-20111018	FT-MW-01S-20110314	FT-MW01S-20111018	FT-MW-02I-20110315	FT-MW02I-20110929	FT-MW-02S-20110315	FT-MW-02S-20110315-D	FT-MW02S-20110929	FT-MW02S-20110929-D	FT-MW-03-20110314	FT-MW03S-20111018	FT-MW-04-20110314	FT-MW04-20110929	FT-MW-05I-20110314
SAMPLE DATE	3/14/2011	10/18/2011	3/14/2011	10/18/2011	3/15/2011	9/29/2011	3/15/2011	3/15/2011	9/29/2011	9/29/2011	3/14/2011	10/18/2011	3/14/2011	9/29/2011	3/14/2011
VOLATILES (UG/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	0.5 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	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	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
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.81 J	1.2	1.3	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	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
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
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
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
1,2-DICHLOROBENZENE	0.5 U	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.58 J	3.9	3.7	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	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
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
1,4-DICHLOROBENZENE	0.5 U	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	1.3	1.2	0.5 U	--	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	10 U	--	10 U	--	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 U	--	10 U	10 UR	10 U
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	26 J	13 J	6.1 J	6 J	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	2.5 U	--	--	2.5 U	2.5 U	--	--	--	2.5 U	--
2-HEXANONE	2.5 U	--	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	--	2.5 U	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U	2.5 U	2.5 U
ACETONE	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	27 J	2.5 UR	12 J	9.5 J	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	0.5 U	--	0.5 U	--	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	--	0.5 U	0.5 UJ	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
BROMOFORM	0.5 U	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U
BROMOMETHANE	0.5 U	--	0.5 U	--	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	--	0.5 U	0.5 UJ	0.5 U
CARBON DISULFIDE	0.5 U	--	0.5 U	--	0.5 U	0.5 U	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	0.5 U	--	0.5 U	--	0.5 U	0.5 U	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
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
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
CHLOROFORM	0.5 U	--	0.5 U	--	0.5 U	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.5 U	--	0.5 U	--	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	--	0.5 U	0.5 UJ	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	4.1 J	2.8 J	0.73 J	0.88 J	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
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
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	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
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	4.7	4.8	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
ISOPROPYLBENZENE	0.5 U	--	0.5 U	--	0.5 U	0.5 U	0.89 J	0.8 J	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	7.8	7.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	--	0.5 U	--	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	--	0.5 U	0.5 UJ	0.5 U
METHYL 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
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	0.5 U
METHYLENE 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	0.5 U	0.5 U
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	16	16	3	2.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.91 J	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	4.5	4.4	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	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
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	11	12	0.5 U	0.74 J	0.5 U	3.2	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	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	1.8	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	--	--	2.5 U	--	2.5 U	--	--	--	--	--	--	--	2.5 U
ETHENE	--	--	--	--	2.5 U	--	2.5 U	--	--	--	--	--	--	--	2.5 U
METHANE	--	--	--	--	2.5 U	--	470.6	--	--	--	--	--	--	--	2.5 U

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	FTMW05I	FTMW05S	FTMW05S	FTMW06I	FTMW06I	FTMW06S	FTMW06S	FTMW07S	FTMW07S	FTMW08I	FTMW08I	FTMW08S	FTMW08S
SAMPLE ID	FT-MW05I-20110929	FT-MW-05S-20110314	FT-MW05S-20110929	FT-MW-06I-20110314	FT-MW06I-20110929	FT-MW-06S-20110314	FT-MW06S-20110929	FT-MW-07S-20110315	FT-MW07S-20110929	FT-MW-08I-20110314	FT-MW08I-20110929	FT-MW-08S-20110314	FT-MW08S-20110929
SAMPLE DATE	9/29/2011	3/14/2011	9/29/2011	3/14/2011	9/29/2011	3/14/2011	9/29/2011	3/15/2011	9/29/2011	3/14/2011	9/29/2011	3/14/2011	9/29/2011
VOLATILES (UG/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	0.5 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	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	1.2	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	10 UR	10 U	10 UR	10 U	10 UR	10 U	10 UR	10 UR	10 UR	10 U	10 UR	10 U	10 UR
2-BUTANONE	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 UJ
2-CHLOROETHYL VINYL ETHER	2.5 U	--	2.5 U	--	2.5 U	--	2.5 UR	--	2.5 U	--	2.5 U	--	2.5 UJ
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ
ACETONE	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOMETHANE	0.5 UJ	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	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.79 J	0.5 U	0.5 U	0.63 J	0.52 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.5 UJ	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	0.5 U	0.5 U	0.5 UJ
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	0.54 J	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 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.5 UJ	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	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	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	1 U	1 U
METHYL ACETATE	0.5 UJ	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	0.5 U	0.5 U	0.5 UJ
METHYL 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
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	0.5 U	0.5 U
METHYLENE 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
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	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	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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
VOLATILE GASES (UG/L)													
ETHANE	--	2.5 U	--	--	--	--	--	--	--	2.5 U	--	2.5 UJ	--
ETHENE	--	2.5 U	--	--	--	--	--	--	--	2.5 U	--	2.5 UJ	--
METHANE	--	2.5 U	--	--	--	--	--	--	--	208	--	2.5 U	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

Appendix
Groundwater Analytical Results
Site 10B
NWIRP Calverton, New York

GROUNDWATER

LOCATION	ETMW01S	ETMW01S	ETMW01S	ETMW02S	ETMW02S	ETMW03S	ETMW03S
SAMPLE ID	ET-MW-01S-20110312	ET-MW01S-20110926	ET-MW01S-20110926-D	ET-MW-02S-20110312	ET-MW02S-20110926	ET-MW-03S-20110312	ET-MW03S-20110926
SAMPLE DATE	3/12/2011	9/26/2011	9/26/2011	3/12/2011	9/26/2011	3/12/2011	9/26/2011
VOLATILES (UG/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
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
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
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
1,1-DICHLOROETHANE	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
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
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
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ
1,2-DIBROMOETHANE	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
1,2-DICHLOROETHANE	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
1,3-DICHLOROBENZENE	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
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	2.5 U	2.5 UJ	--	2.5 U	--	2.5 U
2-HEXANONE	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	2.5 UR	2.5 U	2.5 UJ	2.5 UR	2.5 U	2.5 UR	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	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
BROMOFORM	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	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
CHLORODIBROMOMETHANE	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
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.5 U	0.45 J	0.45 J	0.5 U	0.5 U	0.5 U	0.49 J
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
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
CYCLOHEXANE	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
ETHYLBENZENE	0.5 U	0.5 U	0.5 UJ	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	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
METHYL ACETATE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
METHYL CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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
METHYLENE CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	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
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
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
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	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

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/KG = micrograms per kilogram

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an estimated value.

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	FCMW01I	FCMW01I	FCMW01S	FCMW01S	FCMW02I	FCMW02I	FCMW02S	FCMW02S	FCMW03S	FCMW03S	FCMW04I	FCMW04I	FCMW04S	FCMW04S	FCMW05I
SAMPLE ID	FC-MW-01I-20110313	FC-MW01I-20110929	FC-MW-01S-20110313	FC-MW01S-20110929	FC-MW-02IR1-20110314	FC-MW02IR1-20110928	FC-MW-02SR1-20110314	FC-MW02SR1-20110928	FC-MW-03SR1-20110313	FC-MW03SR1-20110926	FC-MW-04I-20110313	FC-MW04I-20110928	FC-MW-04S-20110313	FC-MW04S-20110928	FC-MW-05I-20110313
SAMPLE DATE	3/13/2011	9/29/2011	3/13/2011	9/29/2011	3/14/2011	9/28/2011	3/14/2011	9/28/2011	3/13/2011	9/26/2011	3/13/2011	9/28/2011	3/13/2011	9/28/2011	3/13/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/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	2.5 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	0.5 U	2.5 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	2.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.61 J
1,1-DICHLOROETHANE	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U	16	14	1.1	9.3 J	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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	2.5 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	2.5 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	2.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.49 J	0.5 U	0.5 U	0.5 U	0.5 U	1.5	3.8	2.9	2.5 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	2.5 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	2.5 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	2.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 U	10 UR	10 U	10 UR	10 U	50 UJ	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	2.5 U	--	2.5 UJ	--	2.5 UJ	--	2.5 U	--	12.5 U	--	2.5 U	--	2.5 U	--
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	2.5 UR	2.5 U	2.5 UR	2.5 U	2.5 U	2.5 U	2.5 U	17	2.5 U	12.5 U	2.5 UR	2.5 U	2.5 UR	2.5 U	2.5 UR
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	2.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ
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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	0.5 U	2.5 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	2.5 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	2.5 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	7.3	4.4	0.5 U	5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.57 J	2.5 U	0.5 U	0.63 J	0.5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.44 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.85 J	0.5 U	2.5 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	2.5 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	0.97 J	2.1	0.5 U	2.5 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	2.5 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 UJ	0.5 U	0.5 UJ	6.8	6	46	23 J	0.5 U	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	0.5 U	0.5 U	5.6	4.1	21	10 J	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	17	25	19	5 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL CYCLOHEXANE	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	2.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	11	11	0.55 J	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
TOLUENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.98 J	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	2.5 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	2.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 J	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ
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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	--	--	2.5 U	--	2.5 U	--	2.5 U	--	--	--	--	--	2.5 U
ETHENE	--	--	--	--	2.5 U	--	2.5 U	--	2.5 U	--	--	--	--	--	2.5 U
METHANE	--	--	--	--	2.5 U	--	3300	--	1200	--	--	--	--	--	2.5 U

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	FCMW05I	FCMW05I	FCMW05S	FCMW05S	FCMW05S	FCMW06S	FCMW06S	FCMW07I	FCMW07I	FCMW07S	FCMW07S	FCMW08S	FCMW08S	FCPZ05I1	FCPZ05I1
SAMPLE ID	FC-MW-05I-20110602	FC-MW05I-20110926	FC-MW-05S-20110313	FC-MW-05S-20110603	FC-MW05S-20110926	FC-MW-06S-20110313	FC-MW06S-20110928	FC-MW-07I-20110313	FC-MW07I-20110926	FC-MW-07S-20110313	FC-MW07S-20110926	FC-MW-08S-20110313	FC-MW08S-20110928	FC-PZ-05I1-20101216	FC-PZ-05I1-20110313
SAMPLE DATE	6/2/2011	9/26/2011	3/13/2011	6/3/2011	9/26/2011	3/13/2011	9/28/2011	3/13/2011	9/26/2011	3/13/2011	9/26/2011	3/13/2011	9/28/2011	12/16/2010	3/13/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	130	47
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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.7 U	0.5 U
1,1-DICHLOROETHANE	0.55 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	470	73
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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	25	4.1 J
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	1.7 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	2.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	6.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 U	10 UR	10 U	50 UR	10 U	10 UR	10 U	10 UR	--	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	17 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	2.5 U	--	--	2.5 U	--	2.5 UR	--	12.5 UR	--	2.5 U	--	2.5 UJ	--	--
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	4.2 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	4.2 U	2.5 U
ACETONE	2.5 U	2.5 U	2.5 UR	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 U	17 UR	2.5 UR
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.3 J	9
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	2.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
BROMOFORM	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	6.7 U	0.5 UJ
BROMOMETHANE	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.7 U	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	140	29
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
CHLOROMETHANE	0.5 U	0.43 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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 UJ	0.5 U	2.5 U	0.5 U	0.9 J	0.5 U	0.5 UJ	52	63
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	2.9	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	21	30
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	7.1 J	2.9
METHYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	6.7 U	0.5 U
METHYL 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9 J	0.5 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	0.62 J	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
METHYLENE 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.7 J	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	110	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	1.7 U	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	7.1 J	--
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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	2.5 U	--	--	--	--	--	--	--	--	--	--	--	--
ETHENE	--	--	2.5 U	--	--	--	--	--	--	--	--	--	--	--	--
METHANE	--	--	18.9	--	--	--	--	--	--	--	--	--	--	--	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	FCPZ05I1	FCPZ05I1	FCPZ05I1	FCPZ05I1	SAMW126D	SAMW126D	SAMW126I	SAMW126I	SAMW126S	SAMW126S	SAMW127D	SAMW127D	SAMW127I	SAMW127I	SAMW127S
SAMPLE ID	FC-PZ-05I1-20110313-D	FC-PZ-05I1-20110602	FC-PZ05I1-20110926	FC-PZ05I1-20110926-D	SA-MW-126D-20110310	SA-MW-126D-20110921	SA-MW-126I-20110310	SA-MW-126I-20110921	SA-MW-126S-20110310	SA-MW-126S-20110920	SA-MW-127D-20110310	SA-MW-127D-20110922	SA-MW-127I-20110310	SA-MW-127I-20110922	SA-MW-127S-20110310
SAMPLE DATE	3/13/2011	6/2/2011	9/26/2011	9/26/2011	3/10/2011	9/21/2011	3/10/2011	9/21/2011	3/10/2011	9/20/2011	3/10/2011	9/22/2011	3/10/2011	9/22/2011	3/10/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	51	530	320 J	360 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	8.1	4.1	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	86	1000	790 J	830 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7	0.5 U	0.5 U	93	71	0.5 U
1,1-DICHLOROETHENE	7.7 J	75	42 J	60 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.6	3.8	0.5 U
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	1.2	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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 UJ	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	0.54 J	2	4.5	3.5 J	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	10 U	10 UR	10 UR	50 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	2.5 U	12.5 UJ	--	2.5 U	--	2.5 U	--	2.5 U	--	2.5 U	--	2.5 U	--
2-HEXANONE	2.5 U	2.5 U	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	2.5 U	2.5 U	2.5 U	12.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
BENZENE	11	18	2.3	2.6 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 UJ	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOMETHANE	0.5 U	0.5 UJ	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	2.5 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	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	31	220	230 J	250 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	26	8.5	0.5 U
CHLOROFORM	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.52 J	2.2	0.77 J	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	2.3	1	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	73	78	30	26 J	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ISOPROPYLBENZENE	36	38	11	9.2 J	0.5 U	0.5 U	0.5 U	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	2.6	21	8.2 J	4 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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 CYCLOHEXANE	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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 TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
STYRENE	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	0.7 J	0.56 J	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	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	0.92 J	0.68 J	2.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	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	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	--	--	--	--	--	--	--	--	2.5 UJ	--	2.5 UJ	--	2.5 U
ETHENE	--	--	--	--	--	--	--	--	--	--	2.5 UJ	--	2.5 UJ	--	2.5 U
METHANE	--	--	--	--	--	--	--	--	--	--	2.5 UJ	--	6.1 J	--	2.5 U

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAMW127S	SAMW128D	SAMW128D	SAMW128D	SAMW128I	SAMW128I	SAMW128S	SAMW128S	SAMW129D	SAMW129D	SAMW129I	SAMW129I	SAMW129S	SAMW129S	SAMW130I
SAMPLE ID	SA-MW-127S-20110922	SA-MW-128D-20110310	SA-MW-128D-20110922	SA-MW-128D-20110922-D	SA-MW-128I-20110310	SA-MW-128I-20110922	SA-MW-128S-20110310	SA-MW-128S-20110922	SA-MW-129D-20110310	SA-MW-129D-20110922	SA-MW-129I-20110310	SA-MW-129I-20110922	SA-MW-129S-20110310	SA-MW-129S-20110922	SA-MW-130I-20110311
SAMPLE DATE	9/22/2011	3/10/2011	9/22/2011	9/22/2011	3/10/2011	9/22/2011	3/10/2011	9/22/2011	3/10/2011	9/22/2011	3/10/2011	9/22/2011	3/10/2011	9/22/2011	3/11/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/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	0.5 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	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	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	0.5 U	0.5 U
1,1-DICHLOROETHANE	0.5 U	2.1	2.6	2.7	5.1	5	0.5 U	0.5 U	2.7	3	7	2.2	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	0.68 J	0.5 U	0.5 U	0.5 U	0.67 J	0.64 J	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	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 UJ
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	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	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	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	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	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	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	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	0.5 U	0.5 U
1-4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	2.5 UR	--	2.5 U	2.5 U	--	2.5 U	--	2.5 U	--	2.5 U	--	2.5 U	--	2.5 U	--
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	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	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	0.5 U	0.5 U
BROMOFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	0.5 U	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	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	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	0.5 U	0.5 U
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	0.45 J	0.5 U	0.56 J	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	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	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	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	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	0.5 U	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	0.5 U	0.5 U	0.5 U	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	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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 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	0.5 U	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE 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	0.5 U	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	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	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	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	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAMW130I	SAMW130S	SAMW130S	SAMW131D	SAMW131D	SAMW131I	SAMW131I	SAMW131S	SAMW131S	SAMW132I	SAMW132I	SAMW132S	SAMW132S	SAPZ118I	SAPZ118I
SAMPLE ID	SA-MW-130I-20110923	SA-MW-130S-20110311	SA-MW-130S-20110923	SA-MW-131D-20110309	SA-MW-131D-20110927	SA-MW-131I-20110309	SA-MW-131I-20110927	SA-MW-131S-20110309	SA-MW-131S-20110927	SA-MW-132I-20110309	SA-MW-132I-20110927	SA-MW-132S-20110309	SA-MW-132S-20110927	SA-PZ-118I-20110311	SA-PZ-118I-20110920
SAMPLE DATE	9/23/2011	3/11/2011	9/23/2011	3/9/2011	9/27/2011	3/9/2011	9/27/2011	3/9/2011	9/27/2011	3/9/2011	9/27/2011	3/9/2011	9/27/2011	3/11/2011	9/20/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	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 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	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	18 J	20	16	0.5 U	0.5 U	0.5 U	4.6	6.9	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	2 J	2.3	1.5	0.5 U	0.5 U	0.5 U	0.94 J	1.5	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	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	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 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 UJ
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
1-4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	2.5 U	--	2.5 U	--	2.5 UJ	--	2.5 UJ	--	2.5 UJ	--	2.5 UJ	--	2.5 UJ	--	2.5 UJ
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U
ACETONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ
BENZENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
BROMOFORM	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 UJ
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
CHLOROFORM	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.59 J	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	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	0.5 U
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	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	0.5 U
METHYL CYCLOHEXANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
STYRENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
TOLUENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	--	2.5 U	--	2.5 U	--	2.5 U	--	--	--	--	--	2.5 UJ	--
ETHENE	--	--	--	2.5 U	--	2.5 U	--	2.5 U	--	--	--	--	--	2.5 UJ	--
METHANE	--	--	--	18.6	--	19.2	--	18.5	--	--	--	--	--	2.5 UJ	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAPZ118S	SAPZ118S	SAPZ118S	SAPZ120S	SAPZ120S	SAPZ122D	SAPZ122D	SAPZ122D	SAPZ122I	SAPZ122I	SAPZ122S	SAPZ122S	SAPZ123I	SAPZ123I	SAPZ123I1
SAMPLE ID	SA-PZ-118S-20110311	SA-PZ-118S-20110311-D	SA-PZ-118S-20110920	SA-PZ-120S-20110309	SA-PZ-120S-20110920	SA-PZ-122D-20110312	SA-PZ-122D-20110920	SA-PZ-122D-20110920-D	SA-PZ-122I-20110312	SA-PZ-122I-20110923	SA-PZ-122S-20110312	SA-PZ-122S-20110920	SA-PZ-123I-20110312	SA-PZ-123I-20110920	SA-PZ-123I1-20110311
SAMPLE DATE	3/11/2011	3/11/2011	9/20/2011	3/9/2011	9/20/2011	3/12/2011	9/20/2011	9/20/2011	3/12/2011	9/23/2011	3/12/2011	9/20/2011	3/12/2011	9/20/2011	3/11/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	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	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	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	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	0.5 U	0.5 U
1,1-DICHLOROETHANE	6.1	5.8	3.5	0.5 U	0.5 U	1.4	1.8 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	37	37	11
1,1-DICHLOROETHENE	1.1	1.1	0.91 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.9	4.7	0.5 U
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	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	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	0.7 J	0.64 J	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	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	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	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 UJ	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	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	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	0.5 U	0.5 U
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	2.5 UR	--	2.5 U	--	2.5 U	2.5 U	--	2.5 U	--	2.5 UJ	--	2.5 U	--
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UR	2.5 U	2.5 U	2.5 UR	2.5 UJ	2.5 UR	2.5 UJ	2.5 UR	2.5 U	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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 UJ	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	0.5 U	0.5 U
BROMOFORM	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
BROMOMETHANE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	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	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	0.51 J	0.83 J	0.5 U
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.93 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	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	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	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	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	0.5 U	0.5 U
ETHYLBENZENE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	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	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	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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 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	0.5 U	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE 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	0.5 U	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	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 UJ	0.5 U	0.5 UJ	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	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	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	2.5 UJ	--	--	--	--	--	--	--	--	--	--	--	2.5 U	--	2.5 UJ
ETHENE	2.5 UJ	--	--	--	--	--	--	--	--	--	--	--	2.5 U	--	2.5 UJ
METHANE	235.4 J	--	--	--	--	--	--	--	--	--	--	--	16.9	--	4.1 J

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAPZ123I	SAPZ123S	SAPZ123S	SAPZ124	SAPZ124	SAPZ124	SAPZ124	SAPZ125	SAPZ125	SAPZ133I	SAPZ133I	SAPZ133I	SAPZ133I	SAPZ133I	SAPZ133I
SAMPLE ID	SA-PZ-123I-20110920	SA-PZ-123S-20110311	SA-PZ-123S-20110920	SA-PZ-124-20110315	SA-PZ-124-20110315-D	SA-PZ-124-20110928	SA-PZ-124-20110928-D	SA-PZ-125-20110315	SA-PZ-125-20110928	SA-PZ-133I-20101215	SA-PZ-133I-20101215-D	SA-PZ-133I-20110308	SA-PZ-133I-20110609	SA-PZ-133I-20110621	SA-PZ-133I-20110919
SAMPLE DATE	9/20/2011	3/11/2011	9/20/2011	3/15/2011	3/15/2011	9/28/2011	9/28/2011	3/15/2011	9/28/2011	12/15/2010	12/15/2010	3/8/2011	6/9/2011	6/21/2011	9/19/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--	--	--	45.1 J	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--	--	--	870	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	9.3	0.5 U	0.5 U	3.6	3.8 J	0.5 UJ	2.6 J	0.5 U	0.5 U	18	17	11	9.5	10 J	4.2
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	2 U	2 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 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	2 U	2 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 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	85	0.5 U	2.6	54	58 J	79	67 J	0.5 U	0.5 U	130	130	63	76	90 J	31
1,1-DICHLOROETHENE	7.8	0.5 U	0.5 U	4.7	4.8 J	6.5	5 J	0.5 U	0.5 U	6.9	6.7	3.9	4.3	4.2 J	2
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	0.5 U	0.5 U	--	--	--	--
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	--	--	--	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.92 J	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.84 J	0.5 U	0.5 U	0.89 J
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	2 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	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 UJ	0.5 U	0.5 UR	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 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	2 U	2 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 UJ	0.5 U	0.5 UR	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	0.54 J	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	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	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	--	--	--	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 UR	2.5 U	2.5 UJ	5 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	2.5 U	--	2.5 U	--	--	2.5 U	2.5 UR	--	2.5 UJ	--	--	--	--	--	2.5 UJ
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UR	2.5 U	2.5 UJ	1.3 U	1.3 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UR	2.5 U	2.5 UJ	1.3 U	1.3 U	2.5 U	2.5 UJ	2.5 UJ	2.5 U
ACETONE	2.5 U	2.5 U	2.5 U	2.5 UR	2.5 UR	2.5 UJ	2.5 UR	2.5 UR	2.5 UJ	5 UR	5 UR	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	0.35 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	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 UJ	0.5 U	0.5 UR	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	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UR	0.5 UJ	0.5 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UR	0.5 U	0.5 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	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 UJ	0.5 U	0.5 UR	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 UJ	0.5 U	0.5 UR	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	2	0.5 U	0.5 U	2.3	2.2 J	2.7 J	2.2 J	0.5 U	0.5 U	33	34	5.2	6.7	7.4 J	1.9
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UR	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	2 U	2 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 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	2 U	2 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 UJ	0.5 UJ	0.5 UR	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 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 UJ	0.5 U	0.5 U	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	0.5 UJ	0.5 U	0.5 UR	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 UJ	1 U	1 UR	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UR	0.5 U	0.5 UJ	2 U	2 U	0.5 U	0.5 UJ	0.5 U	0.5 U
METHYL CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	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 TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	1 U	0.5 U	0.5 UJ	0.5 U	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	2 U	2 U	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	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 UJ	0.5 UJ	0.5 UR	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 UJ	0.5 U	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	0.5 U	0.5 U	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	0.5 U	0.5 U	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	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 UJ	0.5 U	0.5 UR	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	0.5 U	0.5 U	0.5 UJ	0.5 U	0.94 J	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UR	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 UJ	0.5 UJ	0.5 UR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	2.5 UJ	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHENE	--	2.5 UJ	--	--	--	--	--	--	--	--	--	--	--	--	--
METHANE	--	6.1 J	--	--	--	--	--	--	--	--	--	--	--	--	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAPZ133I1	SAPZ133I1	SAPZ133I1	SAPZ133I1	SAPZ135I	SAPZ135I	SAPZ135I	SAPZ135I	SAPZ135I	SAPZ135I	SAPZ135I	SAPZ135I	SAPZ136I	SAPZ136I	SAPZ136I
SAMPLE ID	SA-PZ-133I1-20110310	SA-PZ-133I1-20110609	SA-PZ-133I1-20110621	SA-PZ-133I1-20110919	SA-PZ-135I-20101214	SA-PZ-135I-20110308	SA-PZ-135I-20110607	SA-PZ-135I-20110621	SA-PZ-135I-0850	SA-PZ-135-080311-1315	SA-PZ-135-080411-0855	SA-PZ-135-20110919	SA-PZ-136I-20101214	SA-PZ-136I-20110308	SA-PZ-136I-20110607
SAMPLE DATE	3/10/2011	6/9/2011	6/21/2011	9/19/2011	12/14/2010	3/8/2011	6/7/2011	6/21/2011	8/3/2011	8/3/2011	8/4/2011	9/19/2011	12/14/2010	3/8/2011	6/7/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	46.1 J	--	--	--	--	26.7 J	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	2760	--	--	--	--	927	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	11	22 J	14	5.8	12	7.3	5.6	4.6	4.8 J	6.3	4	14	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	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.69 J	0.5 U	0.86 J	0.67 J	0.74 J	2 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	130	120	170	100	54	34	35	27	26 J	31	29	53	1.5 J	1.8	0.5 U
1,1-DICHLOROETHENE	6.6	13 J	8.3	6.4	3.3 J	2.6	2.8	1.9	1.9 J	2	1.8	3.5	2 U	0.5 U	0.5 U
1,1-DICHLOROPROPENE	--	--	--	--	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	0.62 J	0.5 U	0.5 U	0.5 U	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	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 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	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	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	0.5 U	0.5 UJ
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 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	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	0.5 U	0.5 U
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	--	--	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	--	--	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 UJ	2.5 U	5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	2.5 U	--	--	--	--	--	--	--	2.5 U	--	--	--
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	1.3 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.3 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 UJ	2.5 U	2.5 U	1.3 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.3 U	2.5 U	2.5 U
ACETONE	2.5 U	2.5 UJ	2.5 UJ	2.5 U	5 UR	2.5 U	4.4 J	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	5 UR	2.5 UJ	2.5 UR
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	--	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	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	0.5 U	0.5 U
BROMOFORM	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	2 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	2 U	0.5 UJ	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
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	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	0.5 U	0.5 UJ
CHLOROETHANE	12	22 J	15	11	5.4	1.2	1.8	2.1	0.5 UJ	0.5 UJ	1.3	2.8	2 U	0.5 U	0.5 U
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.5 U	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	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	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 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	0.5 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	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	0.5 U	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	0.5 U	0.5 U	0.5 U	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	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U
METHYL 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	0.5 U	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	0.5 U	0.5 UJ	0.5 U	0.5 U	1.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
NAPHTHALENE	--	--	--	--	2 U	--	--	--	--	--	--	--	2 U	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	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 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
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	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	0.5 U	--	--	--	--	--	--	--	0.5 U	--	--
TOTAL XYLENES	--	--	--	--	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	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	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
VINYL CHLORIDE	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAPZ136I	SAPZ136I	SAPZ136I	SAPZ136I	SAPZ136I	SAPZ137I	SAPZ137I	SAPZ138I	SAPZ138I	SAPZ138I	SAPZ138I1	SAPZ138I1	SAPZ138I1	SAPZ138I1	SAPZ138I1
SAMPLE ID	SA-PZ-136I-20110621	SA-PZ-136-080311-1115	SA-PZ-136-080311-1435	SA-PZ-136-080411-1050	SA-PZ-136I-20110919	SA-PZ-137I-20110608	SA-PZ-137-20110919	SA-PZ-138I-20101215	SA-PZ-138I-20110308	SA-PZ138I-20110621	SA-PZ-138I1-20101215	SA-PZ-138I1-20110308	SA-PZ138I1-20110621	SA-PZ138I1-20110621-D	SA-PZ-138I1-20110920
SAMPLE DATE	6/21/2011	8/3/2011	8/3/2011	8/4/2011	9/19/2011	6/8/2011	9/19/2011	12/15/2010	3/8/2011	6/21/2011	12/15/2010	3/8/2011	6/21/2011	6/21/2011	9/20/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	877	--	--	--	--	--	--	--	--	25 U	--	--	25 U	25 U	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	1600	--	--	--	--	--	--	--	--	731	--	--	5220	5260	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	0.5 U	21	21 J	23	0.5 U	0.5 U	0.5 U	5.6	0.5 U	1.5	260	340	320	300	250
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	2 U	0.5 U	0.5 U	20 U	0.5 U	10 U	10 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	2 U	0.5 U	0.5 U	20 U	0.5 U	10 U	10 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.65 J	0.5 U	0.5 U	0.5 U	0.65 J	0.5 U	0.61 J	2 U	0.5 U	0.5 U	20 U	0.5 U	10 U	10 U	0.5 U
1,1-DICHLOROETHANE	1.5	140	150 J	130	1.7	1.2	1.2	20	4.1	9.6	1100	1200	1500	1500	1100
1,1-DICHLOROETHENE	0.5 U	10	10 J	8.6	0.5 U	0.5 U	0.5 U	1.2 J	0.5 U	0.6 J	63	86	100	85	65
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	0.5 U	--	--	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	--	--	10 U	10 U	1.2
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	5 U	9.9	10 U	10 U	4.8
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	2 U	0.5 U	0.5 U	20 U	0.5 U	10 U	10 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	5 U	0.5 U	10 U	10 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	5 U	3.7	10 U	10 U	1.9
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	5 U	1	10 U	10 U	0.81 J
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	10 U	10 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	5 U	1.6	10 U	10 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	5 U	7.2	10 U	10 U	0.5 U
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	--	--	10 UR	--	--	200 UR	200 UR	10 UR
2-BUTANONE	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	2.5 U	50 U	2.5 U	50 U	50 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	--	2.5 UJ	--	2.5 UJ	--	--	--	--	--	--	--	2.5 U
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.3 U	2.5 U	2.5 U	13 U	2.5 U	50 U	50 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.3 U	2.5 U	2.5 U	13 U	2.5 U	50 U	50 U	2.5 U
ACETONE	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ	5 UR	2.5 U	2.5 U	50 UR	2.5 U	50 U	50 U	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	2.6	10 U	10 U	1.6
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	--	--	0.5 U	--	--	10 U	10 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	5 U	0.5 U	10 U	10 U	0.5 U
BROMOFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	10 U	10 U	0.5 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	2 U	0.5 U	0.5 U	20 U	0.5 UJ	10 U	10 U	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	10 U	10 U	0.5 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	0.5 U	0.5 U	5 U	0.5 U	10 U	10 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	5 U	0.55 J	10 U	10 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	5 U	0.5 U	10 U	10 U	0.5 U
CHLOROETHANE	0.5 U	14 J	14 J	12	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	320	240	250	280	150
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	10 U	10 U	0.5 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.84 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	10 U	10 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	2 U	0.5 U	0.5 U	20 U	0.5 U	10 U	10 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	2 U	0.5 U	0.5 U	20 U	0.5 U	10 U	10 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	5 U	1.4	10 U	10 U	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	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	5 U	0.5 U	10 U	10 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	5 U	0.5 U	10 U	10 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	8.3 J	8.2	10 U	10 U	2.5
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10 U	1 U	20 U	20 U	1 U
METHYL ACETATE	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	10 U	10 U	0.5 U
METHYL 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	5 U	0.5 U	10 U	10 U	0.5 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	5 U	0.5 U	10 U	10 U	0.5 U
METHYLENE 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	20 U	0.5 U	10 U	10 U	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	2 U	--	--	20 U	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	10 U	10 U	0.5 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	5 U	0.5 U	10 U	10 U	0.5 U
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.5 U	10 U	10 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	0.5 U	0.5 U	5 U	0.5 U	10 U	10 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	0.5 U	--	--	5 U	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	0.5 U	--	--	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	5 U	0.5 U	10 U	10 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	5 U	0.5 U	10 U	10 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U	0.97 J	10 U	10 U	0.65 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	5 U	0.5 U	10 U	10 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	5 U	0.5 U	10 U	10 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAPZ139I	SAPZ139I	SAPZ139I	SAPZ139I	SAPZ140I	SAPZ140I	SAPZ141I	SAPZ142I	SAPZ142I	SAPZ142I	SAPZ143I	SAPZ143I	SAPZ143I	SAPZ144I	SAPZ144I
SAMPLE ID	SA-PZ-139I-20101215	SA-PZ-139I-20110308	SA-PZ-139I-20110610	SA-PZ-139I-20110620	SA-PZ-140-20110312	SA-PZ-140-20110921	SA-PZ-141-20110921	SA-PZ-142-20110312	SA-PZ-142-20110312-D	SA-PZ-142-20110921	SA-PZ-143-20110312	SA-PZ-143-20110921	SA-PZ-143-20110921-D	SA-PZ-144I-20110311	SA-PZ-144I-20110311-D
SAMPLE DATE	12/15/2010	3/8/2011	6/10/2011	6/20/2011	3/12/2011	9/21/2011	9/21/2011	3/12/2011	3/12/2011	9/21/2011	3/12/2011	9/21/2011	9/21/2011	3/11/2011	3/11/2011
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	40.7 J	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	172	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	1.3 J	0.5 U	0.5 U	0.5 U	4.8	8.4	0.5 U	40 J	35	17	62	84	88	0.5 U	0.5 U
1,1,2,2-TETRACHLOROETHANE	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	9.2	6.5	5.9 J	4.6	41	69	8.6	200	210	100	390	530	490	4.4	4.2
1,1-DICHLOROETHENE	2 U	0.5 U	0.5 U	0.5 U	3.1	5.1	0.5 U	17 J	15	9.4	30	36	40	0.6 J	0.52 J
1,1-DICHLOROPROPENE	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	0.8 J	0.94 J	0.9 J	0.9 J	0.5 UJ	0.5 UJ
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	1	0.83 J	0.5 U	1.7 J	1.5	2.3	3	3.2	3	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	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	0.88 J	0.79 J	0.62 J	0.66 J	0.86 J	0.94 J	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	0.7 J	0.64 J	0.6 J	0.5 U	0.5 U
1,2-DICHLOROPROPANE	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.63 J	0.62 J	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	1.3	0.89 J	0.5 U	3 J	2.8	2	1.3	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	--	--	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	2.5 U	2.5 U	--	--	2.5 U	--	2.5 U	2.5 U	--	--
2-HEXANONE	1.3 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	1.3 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	5 UR	2.5 U	2.5 UJ	2.5 UJ	2.5 UR	2.5 U	2.5 U	2.5 UR	2.5 UR	2.5 U	2.5 UR	2.5 U	2.5 U	2.5 U	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.55 J	0.97 J	0.95 J	0.5 U	0.5 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	0.5 U	0.5 U
BROMOFORM	2 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOMETHANE	2 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	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	0.5 U	0.5 U
CHLOROETHANE	2 U	0.5 U	0.5 U	0.5 U	5.7	6.8	0.5 U	28 J	27	7.8	47	40	45	0.5 U	0.5 U
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.55 J	0.53 J	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	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	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	0.5 U	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	0.5 U	0.5 U	0.5 U	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	1 U	1 U	1 U	1 U
METHYL ACETATE	2 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
METHYL 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	0.5 U	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
NAPHTHALENE	2 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	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 UJ	0.5 U	0.6 J	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	0.5 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	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	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	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	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	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	--	--	--	--	--	2.5 U	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--	2.5 U	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--	21.2	--	--	--	--	--	--	--

Footnotes:

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UG/L = micrograms per liter

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> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAPZ144I	SAPZ144S	SAPZ144S	SAPZ145D	SAPZ145D	SAPZ145D	SAPZ145I	SAPZ145I	SAPZ145S	SAPZ145S	SAPZ147	SAPZ147	SAPZ148	SAPZ148	SAPZ149I1
SAMPLE ID	SA-PZ-144I-20110922	SA-PZ-144S-20110311	SA-PZ-144S-20110922	SA-PZ-145D-20110309	SA-PZ-145D-20110309-D	SA-PZ-145D-20110927	SA-PZ-145I-20110309	SA-PZ-145I-20110927	SA-PZ-145S-20110309	SA-PZ-145S-20110927	SA-PZ-147-20110315	SA-PZ-147-20110928	SA-PZ-148-20110315	SA-PZ-148-20110928	SA-PZ-149I1-20101215
SAMPLE DATE	9/22/2011	3/11/2011	9/22/2011	3/9/2011	3/9/2011	9/27/2011	3/9/2011	9/27/2011	3/9/2011	9/27/2011	3/15/2011	9/28/2011	3/15/2011	9/28/2011	12/15/2010
METALS (UG/L)															
ALUMINUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	5.6	0.98 J	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 UR	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	2 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	2 U
1,1-DICHLOROETHANE	4.6	0.5 U	0.5 U	24 J	24	28	72	62	0.5 U	0.5 U	17	0.77 J	0.5 U	0.5 UR	6.7
1,1-DICHLOROETHENE	0.8 J	0.5 U	0.5 U	1.5 J	1.4	1.8	7.4	5.8	0.5 U	0.5 U	3	0.5 UR	0.5 U	0.5 UR	0.82 J
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5 U
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	--
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.78 J	0.5 U	0.5 U	0.5 U	1.4	0.5 U	0.5 U	0.87 J	0.5 UR	0.5 U	0.5 UR	0.69 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	2 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	3 J
1,2-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	2 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	2.7 J
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 UR	0.5 U	0.5 UR	13
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	--
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UR	2.5 U	2.5 UR	5 U
2-CHLOROETHYL VINYL ETHER	2.5 U	--	2.5 U	--	--	2.5 UJ	--	2.5 U	--	2.5 U	--	2.5 UR	--	2.5 UR	--
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UR	2.5 U	2.5 UR	1.3 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UR	2.5 U	2.5 UR	1.3 U
ACETONE	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UR	2.5 UR	2.5 UR	2.5 UR	5 UR
BENZENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	--
BROMODICHLOROMETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
BROMOFORM	0.5 U	0.5 U	0.5 U	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 UR	0.5 UJ	0.5 UR	2 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	2 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
CHLOROETHANE	0.5 U	0.5 U	0.5 U	0.58 J	0.57 J	0.5 U	2.1	3.1	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 UR	10
CHLOROFORM	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
CHLOROMETHANE	0.48 J	0.5 U	0.5 U	0.5 UJ	0.69 J	0.51 J	0.5 U	0.65 J	0.62 J	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 UR	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	2 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	2 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 UR	0.5 U
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.39 J
M+P-XYLENES	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UR	1 U	1 UR	1 U
METHYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 U	0.5 UR	2 U
METHYL CYCLOHEXANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
METHYLENE CHLORIDE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2 U
O-XYLENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
STYRENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UR	0.5 U	0.5 UR	0.5 U
TOLUENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5 U
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 J	0.5 U	1 J	0.5 U
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	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 UR	0.5 U	0.5 UR	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	--	2.5 U	--	--	2.5 U	--	2.5 U	--	--	--	--	--	--
ETHENE	--	--	--	2.5 U	--	--	2.5 U	--	2.5 U	--	--	--	--	--	--
METHANE	--	--	--	56.5	--	--	2.5 U	--	2.5 U	--	--	--	--	--	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAPZ149I1	SAPZ149I1	SAPZ151I1	SAPZ151I1	SAPZ151I1	SAPZ151I1	SAPZ155I	SAPZ155I	SAPZ155I	SAPZ157I	SAPZ157I	SAPZ157I	SAPZ157I	SAPZ157I	SAPZ157I
SAMPLE ID	SA-PZ-149I1-20110308	SA-PZ-149I1-20110620	SA-PZ-151I1-20101215	SA-PZ-151I1-20110308	SA-PZ-151I1-20110308-D	SA-PZ151I1-20110622	SA-PZ-155I-20101215	SA-PZ-155I-20110307	SA-PZ155I-20110622	SA-PZ-157I-20101214	SA-PZ-157I-20110307	SA-PZ-157I-20110321	SA-PZ-157I-20110328	SA-PZ-157I-20110404	SA-PZ-157I-20110411
SAMPLE DATE	3/8/2011	6/20/2011	12/15/2010	3/8/2011	3/8/2011	6/22/2011	12/15/2010	3/7/2011	6/22/2011	12/14/2010	3/7/2011	3/21/2011	3/28/2011	4/4/2011	4/11/2011
METALS (UG/L)															
ALUMINUM	--	--	100 U	--	--	25 U	100 U	--	25 U	100 U	--	--	--	--	--
ANTIMONY	--	--	2.48 U	--	--	12.5 U	4.07 U	--	12.5 U	4.07 U	--	--	--	--	--
ARSENIC	--	--	7.03 J	--	--	5 U	12.1	--	5 U	2.97 J	--	--	--	--	--
BARIUM	--	--	30.6 J	--	--	26 U	22.7 J	--	25 U	25.5 J	--	--	--	--	--
BERYLLIUM	--	--	2.5 U	--	--	1.5 U	2.5 U	--	1.5 U	2.5 U	--	--	--	--	--
CADMIUM	--	--	0.872 U	--	--	1.5 U	2.5 U	--	1.5 U	0.747 U	--	--	--	--	--
CALCIUM	--	--	15700	--	--	16000	5830	--	6810	9500	--	--	--	--	--
CHROMIUM	--	--	0.765 J	--	--	2.5 U	0.868 J	--	2.5 U	5 U	--	--	--	--	--
COBALT	--	--	2.5 U	--	--	7.5 U	2.5 U	--	7.5 U	2.37 U	--	--	--	--	--
COPPER	--	--	2.5 U	--	--	5 U	2.5 U	--	5 U	2.5 U	--	--	--	--	--
IRON	--	112	1170	214 J	225 J	612	2080	499 J	205	10600	3090 J	--	--	--	--
LEAD	--	--	5 U	--	--	3 U	1.99 U	--	3 U	5 U	--	--	--	--	--
MAGNESIUM	--	--	987 J	--	--	1100	1800 J	--	1820	2730 J	--	--	--	--	--
MANGANESE	--	1630	5580	5460	5750	5270	484	340	291	1400	533	--	--	--	--
MERCURY	--	--	0.18 UJ	--	--	0.17 U	0.18 UJ	--	0.1 UJ	0.18 UJ	--	--	--	--	--
NICKEL	--	--	2.5 U	--	--	10 U	3.58 J	--	10 U	2.5 U	--	--	--	--	--
POTASSIUM	--	--	3100 J	--	--	3080	930 J	--	935 J	1170 J	--	--	--	--	--
SELENIUM	--	--	2.5 U	--	--	5 U	2.5 U	--	5 U	2.5 U	--	--	--	--	--
SILVER	--	--	1.42 U	--	--	2.5 U	2.5 U	--	2.5 U	2.5 U	--	--	--	--	--
SODIUM	--	--	8170	--	--	6460	9940	--	8830	10300	--	--	--	--	--
THALLIUM	--	--	5 U	--	--	10 U	5 U	--	10 U	5 U	--	--	--	--	--
VANADIUM	--	--	10 U	--	--	10 U	1.77 J	--	10 U	10 U	--	--	--	--	--
ZINC	--	--	10 U	--	--	11.7 J	10 U	--	10 U	10.8 U	--	--	--	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	--	--	--	5.02	--	--	7.42	4.12	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--	--	--	--	--	0.02 U	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	0.05 U	--	--	2.11	0.074 J	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	0.075 U	--	--	0.226	0.05 U	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--	0.5 U	--	--	0.5 U	0.9 U	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	--	1.31 J	2.6 J	3.2 J	2.1	0.3 UJ	0.989 J	0.662	122 J	1.1 J	1	1.4	2	1.9
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	0.5 U	0.5 UJ	32	36 J	39 J	10 U	16	19	7.8	17	21	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 UJ	3.3 U	0.5 UJ	0.5 UJ	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
1,1,2-TRICHLOROETHANE	0.5 U	0.5 UJ	3.3 U	0.5 UJ	0.5 UJ	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 UJ	3.3 U	0.5 UJ	0.5 UJ	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
1,1-DICHLOROETHANE	18	12 J	190	310	310	390	70	70	43	75	71	--	--	--	--
1,1-DICHLOROETHENE	1.7	1.3 J	13	20 J	22 J	24	3.4 J	5.4	2.4	4.1 J	5.2	--	--	--	--
1,1-DICHLOROPROPENE	--	--	0.84 U	--	--	--	0.5 U	--	--	0.5 U	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	0.5 UJ	--	--	--	10 U	--	--	0.5 U	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	1.9	0.5 UJ	4.1 U	9.6 J	11 J	10 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	3.3 U	0.5 UJ	0.5 UJ	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
1,2-DIBROMOETHANE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
1,2-DICHLOROBENZENE	7.8	3.2 J	5.8 J	6.9 J	7.5 J	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
1,2-DICHLOROETHANE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
1,2-DICHLOROPROPANE	0.5 U	0.5 UJ	3.3 U	0.5 UJ	0.5 UJ	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
1,3-DICHLOROBENZENE	6	2.5 J	4 J	5.3 J	5.8 J	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
1,4-DICHLOROBENZENE	28	12 J	22	23 J	26 J	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
1,4-DIOXANE	--	10 UR	--	--	--	200 UR	--	--	10 UR	--	--	--	--	--	--
2-BUTANONE	2.5 U	2.5 UJ	8.4 U	2.5 UJ	2.5 UJ	50 U	5 U	2.5 U	2.5 U	5 U	2.5 U	--	--	--	--
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	2.5 U	2.5 UJ	2.1 U	2.5 UJ	2.5 UJ	50 U	1.3 U	2.5 U	2.5 U	1.3 U	2.5 U	--	--	--	--
4-METHYL-2-PENTANONE	2.5 U	2.5 UJ	2.1 U	2.5 UJ	2.5 UJ	50 U	1.3 U	2.5 U	2.5 U	1.3 U	2.5 U	--	--	--	--
ACETONE	2.5 UJ	2.5 UJ	8.4 UR	2.5 UJ	2.5 UJ	50 UJ	5 UR	2.5 U	2.5 U	5 UR	2.5 U	--	--	--	--
BENZENE	0.5 U	0.5 UJ	1.6 J	2.1 J	2.3 J	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
BROMOCHLOROMETHANE	--	0.5 UJ	--	--	--	10 U	--	--	0.5 U	--	--	--	--	--	--
BROMODICHLOROMETHANE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
BROMOFORM	0.5 U	0.5 UJ	3.3 U	0.5 UJ	0.5 UJ	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
BROMOMETHANE	0.5 UJ	0.5 UJ	3.3 U	0.5 UJ	0.5 UJ	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
CARBON DISULFIDE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
CARBON TETRACHLORIDE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
CHLOROBENZENE	5.1	1.5 J	0.84 U	2.7 J	3 J	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
CHLORODIBROMOMETHANE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
CHLOROETHANE	18	14 J	140	220	220	260	2 U	7.5	2.2	7.6	3.3	--	--	--	--
CHLOROFORM	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
CHLOROMETHANE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 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 UJ	3.3 U	0.76 J	0.85 J	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 UJ	3.3 U	0.5 UJ	0.5 UJ	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
CYCLOHEXANE	0.5 U	0.5 UJ	0.84 U	0.82 J	0.85 J	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
DICHLORODIFLUOROMETHANE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
ETHYLBENZENE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
ISOPROPYLBENZENE	1.8	0.5 UJ	1.1 J	2.5 J	2.7 J	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
M+P-XYLENES	1 U	1 UJ	1.7 U	1 UJ	1 UJ	20 U	1 U	1 U	1 U	1 U	1 U	--	--	--	--
METHYL ACETATE	0.5 U	0.5 UJ	3.3 U	0.5 UJ	0.5 UJ	10 U	2 U	0.5 U	0.5 U	2 U	0.5 U	--	--	--	--
METHYL CYCLOHEXANE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
METHYL TERT-BUTYL ETHER	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
METHYLENE CHLORIDE	0.5 U	0.5 UJ	3.9 U	0.5 UJ	0.5 UJ	10 U	1.3 U	0.5 U	0.5 U	1.1 U	0.5 U	--	--	--	--
NAPHTHALENE	--	--	3.3 U	--	--	--	2 U	--	--	2 U	--	--	--	--	--
O-XYLENE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
STYRENE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
TETRACHLOROETHENE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
TOLUENE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
TOTAL 1,2-DICHLOROETHENE	--	--	0.84 U	--	--	--	0.5 U	--	--	0.5 U	--	--	--	--	--
TOTAL XYLENES	--	--	0.84 U	--	--	--	0.5 U	--	--	0.5 U	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 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 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
TRICHLOROETHENE	0.5 U	0.5 UJ	0.84 U	0.53 J	0.58 J	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
TRICHLOROFLUOROMETHANE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
VINYL CHLORIDE	0.5 U	0.5 UJ	0.84 U	0.5 UJ	0.5 UJ	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	--	--	--
VOLATILE GASES (UG/L)															
ETHANE	--	--	0.27 UJ	2.5 U	2.5 U	0.5 U	0.27 UJ	2.5 U	0.5 U	0.27 UJ	2.5 U	--	--	--	--
ETHENE	--	--	0.25 UJ	2.5 U	2.5 U	0.5 U	0.25 UJ	2.5 U	0.5 U	0.25 UJ	2.5 U	--	--	--	--
METHANE	--	--	210	402.2	319.5	344.1	2.5	8.1	0.5 U	12	2.5 U	--	--	--	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SAPZ157I	SAPZ157I	SAPZ157I	SAPZ157I1	SAPZ157I1	SAPZ157I1	SAPZ157I1	SAPZ157I1	SAPZ157I1	SAPZ157I1	SAPZ157I1	SAPZ157I1	SAPZ157I1	SAPZ157I1	SAPZ158I
SAMPLE ID	SA-PZ-157I-20110420	SA-PZ-157I-20110509	SA-PZ157I-20110621	SA-PZ-157I1-20101214	SA-PZ-157I1-20101214-D	SA-PZ-157I1-20110307	SA-PZ-157I1-20110321	SA-PZ-157I1-20110328	SA-PZ-157I1-20110404	SA-PZ-157I1-20110411	SA-PZ-157I1-20110420	SA-PZ-157I1-20110509	SA-PZ157I1-20110621	SA-PZ-157I1-20110921	SA-PZ-158I-20101213
SAMPLE DATE	4/20/2011	5/9/2011	6/21/2011	12/14/2010	12/14/2010	3/7/2011	3/21/2011	3/28/2011	4/4/2011	4/11/2011	4/20/2011	5/9/2011	6/21/2011	9/21/2011	12/13/2010
METALS (UG/L)															
ALUMINUM	--	--	25 U	100 U	100 U	--	--	--	--	--	--	--	49.9 U	--	--
ANTIMONY	--	--	12.5 U	3.49 U	5 U	--	--	--	--	--	--	--	12.5 U	--	--
ARSENIC	--	--	5 U	5.32 J	3.63 J	--	--	--	--	--	--	--	5 U	--	--
BARIUM	--	--	25 U	21.4 J	21.5 J	--	--	--	--	--	--	--	25 U	--	--
BERYLLIUM	--	--	1.5 U	2.5 U	2.5 U	--	--	--	--	--	--	--	1.5 U	--	--
CADMIUM	--	--	1.5 U	0.892 U	0.908 U	--	--	--	--	--	--	--	1.5 U	--	--
CALCIUM	--	--	6420	14800	14800	--	--	--	--	--	--	--	15900	--	--
CHROMIUM	--	--	2.5 U	5 U	1.08 J	--	--	--	--	--	--	--	2.5 U	--	--
COBALT	--	--	7.5 U	1.64 U	2.5 U	--	--	--	--	--	--	--	7.5 U	--	--
COPPER	--	--	5 U	2.5 U	2.5 U	--	--	--	--	--	--	--	5 U	--	--
IRON	--	--	978	2610	2580	1150 J	--	--	--	--	--	--	776	--	--
LEAD	--	--	3 U	2.01 U	5 U	--	--	--	--	--	--	--	3 U	--	--
MAGNESIUM	--	--	1440	1150 J	1140 J	--	--	--	--	--	--	--	1130	--	--
MANGANESE	--	--	1050	5540	5510	5580	--	--	--	--	--	--	5200	--	--
MERCURY	--	--	0.62 R	0.18 UJ	0.18 UJ	--	--	--	--	--	--	--	0.42 J	--	--
NICKEL	--	--	10 U	2.5 U	2.5 U	--	--	--	--	--	--	--	10 U	--	--
POTASSIUM	--	--	1420	2520 J	2530 J	--	--	--	--	--	--	--	2820	--	--
SELENIUM	--	--	5 U	2.21 J	2.5 U	--	--	--	--	--	--	--	5 U	--	--
SILVER	--	--	2.5 U	2.5 U	2.5 U	--	--	--	--	--	--	--	2.5 U	--	--
SODIUM	--	--	9530	7920	7740	--	--	--	--	--	--	--	5990	--	--
THALLIUM	--	--	10 U	5 U	5 U	--	--	--	--	--	--	--	10 U	--	--
VANADIUM	--	--	8.39 J	10 U	10 U	--	--	--	--	--	--	--	10 U	--	--
ZINC	--	--	7.12 J	10 U	10 U	--	--	--	--	--	--	--	10 U	--	--
MISCELLANEOUS PARAMETERS															
CHLORIDE (MG/L)	--	--	7.48	6.65	--	--	--	--	--	--	--	--	4.51	--	--
FLUORIDE (MG/L)	--	--	--	0.028 J	--	--	--	--	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	1.02	0.1 U	--	--	--	--	--	--	--	--	0.05 U	--	--
NITRITE-N (MG/L)	--	--	0.236	0.05 U	--	--	--	--	--	--	--	--	0.075 U	--	--
SULFIDE (MG/L)	--	--	0.5 U	0.9 U	--	--	--	--	--	--	--	--	0.5 U	--	--
TOTAL ORGANIC CARBON (MG/L)	1.2 U	2.4	0.599	107 J	0.3 UJ	2.5 J	3	3.6	2.9	2.7	1.8	2.1	1.9	--	--
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	--	31 J	9.7	20	21	20 J	--	--	--	--	--	16 J	23	46	9.4
1,1,2,2-TETRACHLOROETHANE	--	0.5 UJ	0.5 U	2 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2 U
1,1,2-TRICHLOROETHANE	--	0.5 UJ	0.5 U	2 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.5 UJ	0.7 J	2 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2 U
1,1-DICHLOROETHANE	--	280 J	45	100	100	190	--	--	--	--	--	140	280	540	42
1,1-DICHLOROETHENE	--	17 J	3.4	7.6	7.9	14 J	--	--	--	--	--	13 J	19	25	2.1 J
1,1-DICHLOROPROPENE	--	--	--	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	0.5 U
1,2,3-TRICHLOROBENZENE	--	1.7 J	0.5 U	--	--	--	--	--	--	--	--	2.7 J	5 U	3.4	--
1,2,4-TRICHLOROBENZENE	--	5 J	0.85 J	2.5 U	2.6 U	9.4 J	--	--	--	--	--	8.6 J	6.3 J	9.6	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	--	0.5 UJ	0.5 U	2 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2 U
1,2-DIBROMOETHANE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	--	1.9 J	0.5 U	2.1 J	2.2 J	7.4 J	--	--	--	--	--	9.8 J	7.4 J	5.9	0.5 U
1,2-DICHLOROETHANE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.57 J	0.5 U
1,2-DICHLOROPROPANE	--	0.5 UJ	0.5 U	2 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2 U
1,3-DICHLOROBENZENE	--	1.4 J	0.5 U	1.4 J	1.4 J	5.6 J	--	--	--	--	--	7.3 J	5.9 J	4.5	0.5 U
1,4-DICHLOROBENZENE	--	6.6 J	0.5 U	7.3	7.4	26 J	--	--	--	--	--	37 J	26	19	0.5 U
1,4-DIOXANE	--	10 UR	10 UR	--	--	--	--	--	--	--	--	10 UR	100 UR	10 UR	--
2-BUTANONE	--	2.5 UJ	2.5 UJ	5 U	5 U	2.5 UJ	--	--	--	--	--	2.5 U	25 U	2.5 U	5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5 U	--
2-HEXANONE	--	2.5 UJ	2.5 U	1.3 U	1.3 U	2.5 UJ	--	--	--	--	--	2.5 U	25 U	2.5 U	1.3 U
4-METHYL-2-PENTANONE	--	2.5 UJ	2.5 U	1.3 U	1.3 U	2.5 UJ	--	--	--	--	--	2.5 U	25 U	2.5 U	1.3 U
ACETONE	--	2.5 UJ	2.5 U	8.1 J	7.3 J	2.5 UJ	--	--	--	--	--	2.5 UJ	25 U	2.5 U	5 UR
BENZENE	--	1.7 J	0.5 U	0.5 U	0.5 U	1.7 J	--	--	--	--	--	1.9 J	5 U	2.1	0.5 U
BROMOCHLOROMETHANE	--	0.5 UJ	0.5 U	--	--	--	--	--	--	--	--	0.5 UJ	5 U	0.5 U	--
BROMODICHLOROMETHANE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
BROMOFORM	--	0.5 UJ	0.5 UJ	2 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2 U
BROMOMETHANE	--	0.5 UJ	0.5 U	2 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2 U
CARBON DISULFIDE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
CHLOROBENZENE	--	0.53 J	0.5 U	0.73 J	0.5 U	3 J	--	--	--	--	--	5.1 J	5 U	1.7	0.5 U
CHLORODIBROMOMETHANE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
CHLOROETHANE	--	200 J	3.4 J	49	49	160	--	--	--	--	--	130	200	430	2 U
CHLOROFORM	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
CHLOROMETHANE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	--	0.62 J	0.5 U	2 U	2 U	0.59 J	--	--	--	--	--	0.96 J	5 U	1.1	2 U
CIS-1,3-DICHLOROPROPENE	--	0.5 UJ	0.5 U	2 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2 U
CYCLOHEXANE	--	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.75 J	0.5 U
DICHLORODIFLUOROMETHANE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
ETHYLBENZENE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
ISOPROPYLBENZENE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	1.7 J	--	--	--	--	--	3 J	5 U	0.5 U	0.5 U
M+P-XYLENES	--	1 UJ	1 U	1 U	1 U	1 UJ	--	--	--	--	--	1 UJ	10 U	1 U	1 U
METHYL ACETATE	--	0.5 UJ	0.5 U	2 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2 U
METHYL CYCLOHEXANE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	--	0.5 UJ	0.5 U	1.8 U	2 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	2.2 U
NAPHTHALENE	--	--	--	2 U	2 U	--	--	--	--	--	--	--	--	--	2 U
O-XYLENE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
STYRENE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
TETRACHLOROETHENE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
TOLUENE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	0.5 U
TOTAL XYLENES	--	--	--	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	0.5 U
TRANS-1,2-DICHLOROETHENE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.58 J	0.5 U
TRANS-1,3-DICHLOROPROPENE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
TRICHLOROETHENE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.73 J	0.5 U
TRICHLOROFLUOROMETHANE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
VINYL CHLORIDE	--	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	--	--	--	--	--	0.5 UJ	5 U	0.5 U	0.5 U
VOLATILE GASES (UG/L)															
ETHANE	--	--	0.5 UJ	0.27 UJ	0.27 UJ	2.5 U	--	--	--	--	--	--	0.5 U	--	--
ETHENE	--	--	0.5 UJ	0.25 UJ	0.25 UJ	2.5 U	--	--	--	--	--	--	0.5 U	--	--
METHANE	--	--	0.5 U	78	90	258.4	--	--	--	--	--	--	207.53	--	--

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

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GROUNDWATER

LOCATION SAMPLE ID SAMPLE DATE	SAPZ158I SA-PZ-158I-20110307RE 3/7/2011	SAPZ158I SA-PZ-158I-20110321 3/21/2011	SAPZ158I SA-PZ-158I-20110328 3/28/2011	SAPZ158I SA-PZ-158I-20110404 4/4/2011	SAPZ158I SA-PZ-158I-20110411 4/11/2011
METALS (UG/L)					
ALUMINUM	--	--	--	--	--
ANTIMONY	--	--	--	--	--
ARSENIC	--	--	--	--	--
BARIUM	--	--	--	--	--
BERYLLIUM	--	--	--	--	--
CADMIUM	--	--	--	--	--
CALCIUM	--	--	--	--	--
CHROMIUM	--	--	--	--	--
COBALT	--	--	--	--	--
COPPER	--	--	--	--	--
IRON	--	--	--	--	--
LEAD	--	--	--	--	--
MAGNESIUM	--	--	--	--	--
MANGANESE	--	--	--	--	--
MERCURY	--	--	--	--	--
NICKEL	--	--	--	--	--
POTASSIUM	--	--	--	--	--
SELENIUM	--	--	--	--	--
SILVER	--	--	--	--	--
SODIUM	--	--	--	--	--
THALLIUM	--	--	--	--	--
VANADIUM	--	--	--	--	--
ZINC	--	--	--	--	--
MISCELLANEOUS PARAMETERS					
CHLORIDE (MG/L)	--	--	--	--	--
FLUORIDE (MG/L)	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--
SULFIDE (MG/L)	--	--	--	--	--
TOTAL ORGANIC CARBON (MG/L)	--	1.2	1.1	1.7	0.999
VOLATILES (UG/L)					
1,1,1-TRICHLOROETHANE	11 J	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	0.5 UJ	--	--	--	--
1,1,2-TRICHLOROETHANE	0.5 UJ	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 UJ	--	--	--	--
1,1-DICHLOROETHANE	43 J	--	--	--	--
1,1-DICHLOROETHENE	3 J	--	--	--	--
1,1-DICHLOROPROPENE	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	0.5 UJ	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.5 UJ	--	--	--	--
1,2-DIBROMOETHANE	0.5 UJ	--	--	--	--
1,2-DICHLOROBENZENE	0.5 UJ	--	--	--	--
1,2-DICHLOROETHANE	0.5 UJ	--	--	--	--
1,2-DICHLOROPROPANE	0.5 UJ	--	--	--	--
1,3-DICHLOROBENZENE	0.5 UJ	--	--	--	--
1,4-DICHLOROBENZENE	0.5 UJ	--	--	--	--
1,4-DIOXANE	--	--	--	--	--
2-BUTANONE	2.5 UJ	--	--	--	--
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--
2-HEXANONE	2.5 UJ	--	--	--	--
4-METHYL-2-PENTANONE	2.5 UJ	--	--	--	--
ACETONE	2.5 UJ	--	--	--	--
BENZENE	0.5 UJ	--	--	--	--
BROMOCHLOROMETHANE	--	--	--	--	--
BROMODICHLOROMETHANE	0.5 UJ	--	--	--	--
BROMOFORM	0.5 UJ	--	--	--	--
BROMOMETHANE	0.5 UJ	--	--	--	--
CARBON DISULFIDE	0.5 UJ	--	--	--	--
CARBON TETRACHLORIDE	0.5 UJ	--	--	--	--
CHLOROBENZENE	0.5 UJ	--	--	--	--
CHLORODIBROMOMETHANE	0.5 UJ	--	--	--	--
CHLOROETHANE	1.6 J	--	--	--	--
CHLOROFORM	0.5 UJ	--	--	--	--
CHLOROMETHANE	0.5 UJ	--	--	--	--
CIS-1,2-DICHLOROETHENE	0.5 UJ	--	--	--	--
CIS-1,3-DICHLOROPROPENE	0.5 UJ	--	--	--	--
CYCLOHEXANE	0.5 UJ	--	--	--	--
DICHLORODIFLUOROMETHANE	0.5 UJ	--	--	--	--
ETHYLBENZENE	0.5 UJ	--	--	--	--
ISOPROPYLBENZENE	0.5 UJ	--	--	--	--
M+P-XYLENES	1 UJ	--	--	--	--
METHYL ACETATE	0.5 UJ	--	--	--	--
METHYL CYCLOHEXANE	0.5 UJ	--	--	--	--
METHYL TERT-BUTYL ETHER	0.5 UJ	--	--	--	--
METHYLENE CHLORIDE	0.5 UJ	--	--	--	--
NAPHTHALENE	--	--	--	--	--
O-XYLENE	0.5 UJ	--	--	--	--
STYRENE	0.5 UJ	--	--	--	--
TETRACHLOROETHENE	0.5 UJ	--	--	--	--
TOLUENE	0.5 UJ	--	--	--	--
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.5 UJ	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	0.5 UJ	--	--	--	--
TRICHLOROETHENE	0.5 UJ	--	--	--	--
TRICHLOROFLUOROMETHANE	0.5 UJ	--	--	--	--
VINYL CHLORIDE	0.5 UJ	--	--	--	--
VOLATILE GASES (UG/L)					
ETHANE	--	--	--	--	--
ETHENE	--	--	--	--	--
METHANE	--	--	--	--	--

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GROUNDWATER

LOCATION	SATW349	SATW358	SATW358	SATW358	SATW359	SATW359	SATW359	SATW360	SATW360	SATW360	SATW360	SATW361	SATW361	SATW361	SATW362
SAMPLE ID	SA-TW349-4145	SA-TW358-1115	SA-TW358-2125	SA-TW358-3135	SA-TW359-1115	SA-TW359-2125	SA-TW359-3135	SA-TW360-1115	SA-TW360-1115-D	SA-TW360-2125	SA-TW360-3135	SA-TW361-1115	SA-TW361-2125	SA-TW361-3135	SA-TW362-1115
SAMPLE DATE	12/16/2010	12/14/2010	12/14/2010	12/14/2010	12/14/2010	12/14/2010	12/14/2010	12/15/2010	12/15/2010	12/15/2010	12/15/2010	12/15/2010	12/15/2010	12/15/2010	12/16/2010
VOLATILES (UG/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	0.5 U	0.5 U	0.5 U	0.5 U	17
1,1,2,2-TETRACHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2-TRICHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	0.5 U	4.9 J
1,1-DICHLOROETHENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,1-DICHLOROPROPENE	0.5 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	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	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	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	0.5 U	0.5 U
1,2-DICHLOROETHANE	0.5 U	2.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 U	0.33 U	0.5 U	0.5 U	0.5 U	0.5 U	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-BUTANONE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	1.3 U	13 U	13 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
4-METHYL-2-PENTANONE	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
ACETONE	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR	5 UR
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	0.5 U	0.5 U
BROMOFORM	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
BROMOMETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	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	0.5 U	0.5 U
CHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CIS-1,3-DICHLOROPROPENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	6.1	0.5 U	0.5 U	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	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	0.5 U	0.5 U	0.5 U	0.5 U	0.45 J
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	0.5 U	0.5 U	0.5 U	0.5 U	0.44 J
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	1 U	1 U
METHYL ACETATE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
METHYL 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	0.5 U	0.44 J
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	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	0.5 U	0.5 U	0.5 U	2.3 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.84 J
NAPHTHALENE	2 U	2 U	1.7 U	2 U	2 U	2 U	6.8 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	4.5 U
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	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	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 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	0.5 U	0.5 U
TOTAL XYLENES	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	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	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U

GROUNDWATER Footnotes:

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UG/L = micrograms per liter

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R = The chemical was rejected.

GROUNDWATER

LOCATION	SATW362	SATW362	SATW363	SATW363	SATW363	SATW363	SATW363	SATW364	SATW364	SATW364	SATW401	SATW401	SATW401	SATW401	SATW402
SAMPLE ID	SA-TW362-2125	SA-TW362-3135	SA-TW363-2125	SA-TW363-3135	SA-TW363-4145	SA-TW363-1115	SA-TW363-1115-D	SA-TW364-1115	SA-TW364-2125	SA-TW364-3135	SA-TW401-1115	SA-TW401-2125	SA-TW401-2630	SA-TW401-3135	SA-TW402-1115
SAMPLE DATE	12/16/2010	12/16/2010	12/13/2010	12/13/2010	12/13/2010	12/14/2010	12/14/2010	12/13/2010	12/13/2010	12/13/2010	6/3/2011	6/3/2011	6/3/2011	6/3/2011	6/2/2011
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.51 J	0.55 J	0.5 U	2.2 J	2 J	0.5 U	6.8	0.5 U	0.5 U	0.5 U	5	23	0.5 U
1,1,2,2-TETRACHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	2 U	2 U	2 U	2 U	2 U	8.1	7.9	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	1.6 J	1.1 J	0.5 U	6.5	6.6	0.5 U	16	0.5 U	0.5 U	0.5 U	2.2	24	0.86 J
1,1-DICHLOROETHENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.59 J	2 U	0.5 U	0.5 U	0.5 U	2.6	0.5 U
1,1-DICHLOROPROPENE	0.5 U	0.5 U	9.4 U	9.8 U	0.5 U	10 U	0.5 U	10 U	0.5 U	9.5 U	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	--	--	--	--	--	--	--	--	--	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	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	1 U	0.5 U	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	1.6 U	1.5 U	0.5 U	0.64 U	0.5 U	0.5 U	0.51 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	2.5 U	2.9 U	2.7 U	2.5 U	2.6 U	2.5 U	2.6 U	2.8 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 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	1.4 U	1.3 U	0.5 U	0.5 U	0.5 U	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	1.5 U	1.4 U	0.5 U	0.5 U	0.5 U	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	--	--	--	--	--	--	--	--	--	--	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	1.3 U	1.3 U	13 U	13 U	13 U	13 U	13 U	13 U	13 U	13 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	1.3 U	1.3 U	62	120	1.3 U	3.3 J	1.3 J	1.3 U	1.7 J	1.3 U	2.5 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U
ACETONE	5 UR	5 UR	5 UR	13 U	5 UR	5 UR	5 UR	5 UR	3.5 U	2.5 U	2.5 UJ	6.6	26	2.5 UJ	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 J	1.1 J	0.5 U	1.3 J	0.5 U	0.5 U	0.5 U	0.87 J	5.3	0.5 U
BROMOCHLOROMETHANE	--	--	--	--	--	--	--	--	--	--	0.5 U	0.5 U	0.5 UJ	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	0.5 U	0.5 U
BROMOFORM	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOMETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.94 J	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	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	0.53 J	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	2 U	2 U	2 U	2 U	2 U	0.6 J	1 J	2 U	9.9	0.9 J	0.5 U	1.4	10	2.1	2 U
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.78 J	0.92 J	0.5 U	0.45 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	0.72 J	0.58 J	0.5 U	0.5 U
CIS-1,2-DICHLOROETHENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	0.5 U	1.1 U	0.5 U	30	0.5 U	5.4	5.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.8	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 UJ	0.5 U	0.5 U	0.5 UJ	0.5 U
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	120	120	0.5 U	0.5 U	0.5 U	0.5 U	3.7	69	23	0.5 U
ISOPROPYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	53	50	0.5 U	17	0.5 U	0.5 U	12	53	23	0.5 U
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	160	150	1 U	1 U	1 U	1 U	1 U	1 U	9.4	1 U
METHYL ACETATE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U
METHYL CYCLOHEXANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.6 J	1.6 J	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 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	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.53 U	0.51 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
NAPHTHALENE	2 U	2 U	2 U	2 U	2 U	210	240	5 U	19	2 U	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	21	20	0.5 U	3.7 J	0.5 U	0.5 U	0.5 U	4.9	7.7	0.5 U
STYRENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.65 J	0.58 J	0.5 U	0.89 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.49 J	0.5 U	0.5 U	0.98 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 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	--	--	--	--	--
TOTAL XYLENES	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	180	170	0.5 U	3.7 J	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	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	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U

GROUNDWATER Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SATW402	SATW402	SATW402	SATW402	SATW403	SATW403	SATW403	SATW403	SATW403	SATW404	SATW404	SATW405	SATW405	SATW405	SATW406	SATW406
SAMPLE ID	SA-TW402-2125	SA-TW402-2630	SA-TW402-2630-D	SA-TW402-3135	SA-TW403-1115	SA-TW403-2125	SA-TW403-2630	SA-TW403-3135	SA-TW404-2125	SA-TW404-3135	SA-TW405-2125	SA-TW405-2125-D	SA-TW405-3135	SA-TW406-2125	SA-TW406-3135
SAMPLE DATE	6/2/2011	6/2/2011	6/2/2011	6/2/2011	6/2/2011	6/2/2011	6/2/2011	6/2/2011	6/3/2011	6/3/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011	6/6/2011
VOLATILES (UG/L)																
1,1,1-TRICHLOROETHANE	270 J	46	43 J	110	0.5 U	0.5 U	8.6	15	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 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	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHANE	660 J	100	100 J	280 J	1.6	1.7	26	56	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROETHENE	49	7.2	6.9 J	17	0.5 U	0.5 U	1.4	3.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	0.5 UJ	7.2	0.5 U	0.5 U	0.5 U	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	4.8	4.6 J	24	0.5 U	0.59 J	0.5 U	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 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	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMOETHANE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROBENZENE	1.2	0.5 U	1.1 J	6.1	0.5 U	0.5 U	0.5 U	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 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	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 U	0.5 UJ	3.2	0.5 U	0.5 U	0.5 U	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 UJ	13	0.5 U	0.5 U	0.5 U	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	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	2.5 U	2.5 U	2.5 UJ	12 J	2.5 U	2.5 U	4.5 J	7.6	2.5 UJ	2.5 UJ	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 UR
BENZENE	20	6.2	5.9 J	4.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BROMOCHLOROMETHANE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
BROMOFORM	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
BROMOMETHANE	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	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
CARBON DISULFIDE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	160 J	58	54 J	79	1.9	3.9	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	160 U	0.5 U
CHLOROFORM	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROMETHANE	2	0.5 U	0.5 UJ	0.68 J	0.5 U	0.5 U	0.5 U	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 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	0.5 U	0.5 U	0.5 U	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
CYCLOHEXANE	2.2	0.5 U	0.5 UJ	1.2	0.5 U	0.5 U	0.5 U	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 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ETHYLBENZENE	140 J	0.5 U	0.5 UJ	23	0.5 U	0.5 U	0.5 U	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	42	24	23 J	21	1.8	0.5 U	0.5 U	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	70	1 U	1 UJ	2.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
METHYL CYCLOHEXANE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE CHLORIDE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	9.1	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
STYRENE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.8	8.9	0.5 U	0.5 U	0.93 J	2	180
TOLUENE	1.3	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROETHENE	0.85 J	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U

GROUNDWATER Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SATW407	SATW407	SATW408	SATW408	SATW408	SATW409	SATW409	SATW409	SATW410	SATW410	SATW410	SATW410	SATW411	SATW411	SATW411
SAMPLE ID	SA-TW407-2125	SA-TW407-3135	SA-TW408-3337	SA-TW408-3842	SA-TW408-4347	SA-TW409-3337	SA-TW409-3842	SA-TW409-4347	SA-TW410-3337	SA-TW410-3842	SA-TW410-3842-D	SA-TW410-4347	SA-TW411-3337	SA-TW411-3842	SA-TW411-4347
SAMPLE DATE	6/6/2011	6/6/2011	6/10/2011	6/10/2011	6/10/2011	6/9/2011	6/9/2011	6/9/2011	6/9/2011	6/9/2011	6/9/2011	6/9/2011	6/8/2011	6/8/2011	6/8/2011
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	0.5 U	0.5 U	0.5 U	19	11	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 J	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
1,1-DICHLOROETHANE	0.5 U	0.5 U	34	190	50	13	3.7	7.2	22	11	10	25	64 J	10 J	48 J
1,1-DICHLOROETHENE	0.5 U	0.5 U	3.3	11	3.3	0.83 J	0.5 U	0.5 U	1.3	0.93 J	0.76 J	1.2	2.9 J	0.62 J	2.3 J
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 U	1.3	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 U	3.7	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 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
1,2-DICHLOROBENZENE	0.5 U	0.5 U	6.4	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
1,3-DICHLOROBENZENE	0.5 U	0.5 U	4.7	0.64 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
1,4-DICHLOROBENZENE	0.5 U	0.5 U	26	2.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ
ACETONE	2.5 UR	2.5 UR	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	8.2 J	2.5 UJ	7.3 J
BENZENE	0.5 U	0.5 U	0.75 J	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
BROMOFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 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 UJ	0.5 UJ	0.5 UJ
CHLOROBENZENE	0.5 U	0.5 U	3.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
CHLOROETHANE	0.5 U	0.5 U	46	110	4.7	0.5 U	0.5 U	0.5 U	5.2	0.5 U	0.5 U	0.5 U	10 J	0.5 UJ	7.9 J
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
CHLOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.61 J	0.6 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
DICHLORODIFLUOROMETHANE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
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	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
ISOPROPYLBENZENE	0.5 U	0.5 U	0.62 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
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 UJ	1 UJ	1 UJ
METHYL ACETATE	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
METHYL 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 UJ	0.5 UJ	0.5 UJ
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	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
METHYLENE CHLORIDE	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
TETRACHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
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 UJ	0.5 UJ	0.5 UJ
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ

GROUNDWATER Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SATW412	SATW412	SATW412	SATW413	SATW413	SATW413	SATW413	SATW414	SATW414	SATW414	SATW415	SATW415	SATW415	SATW416	SATW416
SAMPLE ID	SA-TW412-3337	SA-TW412-3842	SA-TW412-4347	SA-TW413-3337	SA-TW413-3842	SA-TW413-3842-D	SA-TW413-4347	SA-TW414-3337	SA-TW414-3842	SA-TW414-4347	SA-TW415-3337	SA-TW415-3842	SA-TW415-4347	SA-TW416-3337	SA-TW416-3842
SAMPLE DATE	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/8/2011	6/7/2011	6/7/2011	6/7/2011	6/7/2011	6/7/2011	6/7/2011	6/6/2011	6/6/2011
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	5.3 J	18 J	2.1	75 J	55 J	53 J	23 J	150	160	150	210	56	0.5 U	32	120
1,1,2,2-TETRACHLOROETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
1,1,2-TRICHLOROETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.59 J	0.5 U	0.5 U
1,1-DICHLOROETHANE	89 J	100 J	25	360 J	280 J	260 J	180 J	710	530	580	850	170	6.9	140	440
1,1-DICHLOROETHENE	5.4 J	7.6 J	1.3	27 J	19 J	18 J	11 J	41	37	34 J	45 J	9.9	0.53 J	5.9	18
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	2.7	0.51 J	0.53 J	1.1 J	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-TRICHLOROBENZENE	0.74 J	0.9 J	0.5 U	1.8 J	0.75 J	0.84 J	0.5 UJ	9.1	1.6	1.4 J	3.7 J	0.5 U	0.5 U	0.5 U	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
1,2-DIBROMOETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
1,2-DICHLOROBENZENE	0.5 UJ	0.5 UJ	0.5 U	0.91 J	0.5 UJ	0.5 UJ	0.5 UJ	6.1	1.4	1.9 J	2.6 J	0.5 U	0.5 U	0.5 U	0.77 J
1,2-DICHLOROETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.72 J	0.72 J	0.55 J	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U
1,2-DICHLOROPROPANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
1,3-DICHLOROBENZENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	3.5	0.5 U	0.79 J	0.8 J	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DICHLOROBENZENE	0.8 J	1.1 J	0.5 U	1.7 J	0.5 UJ	0.5 UJ	0.5 UJ	16	2	3.6 J	3.3 J	0.5 U	0.5 U	0.5 U	0.5 U
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 UJ	7 J	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-HEXANONE	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	2.5 UJ	8 J	2.5 U	11 J	6.6 J	4.6 J	5.2 J	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 UR
BENZENE	0.5 UJ	0.5 UJ	0.5 U	0.71 J	0.5 UJ	0.5 UJ	0.5 UJ	2.1	1.3	1.4 J	2 J	0.5 U	0.5 U	0.5 U	1
BROMOCHLOROMETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
BROMODICHLOROMETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
BROMOFORM	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
BROMOMETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
CARBON DISULFIDE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
CARBON TETRACHLORIDE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
CHLOROBENZENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	1.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
CHLOROETHANE	15 J	16 J	1.4	63 J	30 J	33 J	19 J	110 J	79 J	88 J	100 J	20 J	1	50 J	80 J
CHLOROFORM	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
CHLOROMETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
CIS-1,2-DICHLOROETHENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
CIS-1,3-DICHLOROPROPENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
CYCLOHEXANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	1.2	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 UJ	0.5 U	0.5 UJ	0.5 UJ	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
ETHYLBENZENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	6.2	0.5 U	0.62 J	3.4 J	0.5 U	0.5 U	0.5 U	0.7 J
M+P-XYLENES	1 UJ	1 UJ	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
METHYL CYCLOHEXANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
METHYL TERT-BUTYL ETHER	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
METHYLENE CHLORIDE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
STYRENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
TETRACHLOROETHENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
TOLUENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
TRANS-1,3-DICHLOROPROPENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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
TRICHLOROETHENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.69 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRICHLOROFLUOROMETHANE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
VINYL CHLORIDE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	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

GROUNDWATER Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SATW416	SATW416	SATW417	SATW417	SATW417	SATW417	SATW417	SATW417	SATW418	SATW418	SATW418	SATW418	SATW418	SATW419	SATW419
SAMPLE ID	SA-TW416-4347	SA-TW416-4852	SA-TW417-2832	SA-TW417-3337	SA-TW417-3337-D	SA-TW417-3842	SA-TW417-4347	SA-TW417-4852	SA-TW418-2832	SA-TW418-3337	SA-TW418-3842	SA-TW418-4347	SA-TW418-4852	SA-TW419-2832	SA-TW419-3337
SAMPLE DATE	6/6/2011	6/7/2011	10/10/2011	10/10/2011	10/10/2011	10/10/2011	10/10/2011	10/11/2011	10/11/2011	10/11/2011	10/11/2011	10/11/2011	10/11/2011	10/11/2011	10/11/2011
VOLATILES (UG/L)															
1,1,1-TRICHLOROETHANE	120	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	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	0.5 U	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.71 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	390	1.9	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	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	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	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	0.5 U	0.5 U
1,2-DICHLOROBENZENE	0.74 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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 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	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	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	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	0.5 U	0.5 U
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	2.5 UR	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	2.5 UR	2.5 UR	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	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	0.5 U	0.5 U
BROMOFORM	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	0.5 U	0.5 U
CARBON DISULFIDE	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	1.1	0.5 U	0.89 J	0.5 U	0.5 U	0.5 U
CARBON TETRACHLORIDE	0.5 U	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	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	0.5 U	0.5 U
CHLORODIBROMOMETHANE	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHLOROETHANE	76 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	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	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	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	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	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ISOPROPYLBENZENE	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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 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	0.5 U	0.5 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	0.5 U	0.5 U	0.5 U	0.5 U
METHYLENE 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	0.5 U	0.5 U
NAPHTHALENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	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	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	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	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	0.5 U	0.5 U
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.5 U	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	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	0.5 U	0.5 U

GROUNDWATER Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

GROUNDWATER

LOCATION	SATW419	SATW419	SATW419	SATW419	SATW420	SATW420	SATW420	SATW420	SATW420
SAMPLE ID	SA-TW419-4347	SA-TW419-4347-D	SA-TW419-4852	SA-TW419-3842	SA-TW420-3337	SA-TW420-2832	SA-TW420-3842	SA-TW420-4347	SA-TW420-4852
SAMPLE DATE	10/11/2011	10/11/2011	10/11/2011	10/12/2011	10/11/2011	10/12/2011	10/12/2011	10/12/2011	10/12/2011
VOLATILES (UG/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
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
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
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
1,1-DICHLOROETHANE	0.5 U	0.5 U	1.5 J	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
1,1-DICHLOROPROPENE	--	--	--	--	--	--	--	--	--
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
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
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
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
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
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
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
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
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
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-CHLOROETHYL VINYL ETHER	2.5 UJ	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 U	2.5 UJ	2.5 UJ
2-HEXANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
ACETONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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
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
BROMOFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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
CARBON DISULFIDE	0.5 U	0.87 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.74 J	0.5 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	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
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
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
CHLOROFORM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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
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
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
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
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
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
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
M+P-XYLENES	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	0.5 U	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 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
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
METHYLENE 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
NAPHTHALENE	--	--	--	--	--	--	--	--	--
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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
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
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
TOTAL 1,2-DICHLOROETHENE	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	--	--	--	--	--	--	--	--	--
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
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
TRICHLOROETHENE	0.5 U	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	0.5 U	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

GROUNDWATER Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

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Appendix
Sediment Analytical Results
Southern Area
NWIRP Calverton, New York

SEDIMENT

LOCATION	SASD124	SASD124	SASD124	SASD125	SASD125	SASD201	SASD201	SASD201	SASD204	SASD204
SAMPLE ID	SA-SD-124-20110315	SA-SD-124-20110315-D	SA-SD-124-20110928	SA-SD-125-20110315	SA-SD-125-20110928	SA-SD-201-20110315	SA-SD-201-20110928	SA-SD-201-20110928-D	SA-SD-204-20110315-RE	SA-SD-204-20110928
SAMPLE DATE	3/15/2011	3/15/2011	9/28/2011	3/15/2011	9/28/2011	3/15/2011	9/28/2011	9/28/2011	3/15/2011	9/28/2011
VOLATILES (UG/KG)										
1,1,1-TRICHLOROETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,1,2,2-TETRACHLOROETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,1,2-TRICHLOROETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,1-DICHLOROETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,1-DICHLOROETHENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,2,3-TRICHLOROBENZENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,2,4-TRICHLOROBENZENE	3.3 U	3.35 U	3.3 J	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,2-DIBROMO-3-CHLOROPROPANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,2-DIBROMOETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,2-DICHLOROBENZENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,2-DICHLOROETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,2-DICHLOROPROPANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,3-DICHLOROBENZENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,4-DICHLOROBENZENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
1,4-DIOXANE	65 UR	65 UR	75 UR	85 UR	85 UR	65 UR	65 UR	65 UR	85 UR	500 UR
2-BUTANONE	16.5 U	17 U	18.5 UJ	21.5 U	21 UJ	16.5 U	16 U	16 U	21 UJ	125 UJ
2-CHLOROETHYL VINYL ETHER	--	--	18.5 UJ	--	21 UJ	--	16 U	16 U	--	125 UJ
2-HEXANONE	16.5 U	17 U	18.5 UJ	21.5 U	21 UJ	16.5 U	16 U	16 U	21 UJ	125 UJ
4-METHYL-2-PENTANONE	16.5 U	17 U	18.5 UJ	21.5 U	21 UJ	16.5 U	16 U	16 U	21 UJ	125 UJ
ACETONE	16.5 U	17 U	7.8 J	21.5 U	21 UJ	16.5 U	16 U	16 U	22 J	125 UJ
BENZENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
BROMOCHLOROMETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
BROMODICHLOROMETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
BROMOFORM	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
BROMOMETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CARBON DISULFIDE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CARBON TETRACHLORIDE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CHLOROBENZENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CHLORODIBROMOMETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CHLOROETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CHLOROFORM	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CHLOROMETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CIS-1,2-DICHLOROETHENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CIS-1,3-DICHLOROPROPENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
CYCLOHEXANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
DICHLORODIFLUOROMETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
ETHYLBENZENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
ISOPROPYLBENZENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
M+P-XYLENES	6.5 U	6.5 U	7.5 UJ	8.5 U	8.5 UJ	6.5 U	6.5 U	6.5 U	8.5 UJ	50 UJ
METHYL ACETATE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
METHYL CYCLOHEXANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
METHYL TERT-BUTYL ETHER	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
METHYLENE CHLORIDE	3.5 J	3.5 J	3.65 UJ	4.3 U	4.2 UJ	2 J	2.8 J	3.2 U	4.25 UJ	25 UJ
O-XYLENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
STYRENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
TETRACHLOROETHENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	30 J
TOLUENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
TRANS-1,2-DICHLOROETHENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
TRANS-1,3-DICHLOROPROPENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
TRICHLOROETHENE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
TRICHLOROFLUOROMETHANE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ
VINYL CHLORIDE	3.3 U	3.35 U	3.65 UJ	4.3 U	4.2 UJ	3.3 U	3.15 U	3.2 U	4.25 UJ	25 UJ

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/KG = micrograms per kilogram

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an estimated value.

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

Appendix
Surface Water Analytical Results
Southern Area
NWIRP Calverton, New York

SURFACE WATER

LOCATION	SASW124	SASW124	SASW125	SASW201	SASW204	SASW124	SASW125	SASW201	SASW201	SASW204
SAMPLE ID	SA-SW-124-20110315	SA-SW-124-20110315-D	SA-SW-125-20110315	SA-SW-201-20110315	SA-SW-204-20110315	SA-SW-124-20110928	SA-SW-125-20110928	SA-SW-201-20110928	SA-SW-201-20110928-D	SA-SW-204-20110928
SAMPLE DATE	3/15/2011	3/15/2011	3/15/2011	3/15/2011	3/15/2011	9/28/2011	9/28/2011	9/28/2011	9/28/2011	9/28/2011
VOLATILES (UG/L)										
1,1,1-TRICHLOROETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.84 J	0.5 U
1,1,2,2-TETRACHLOROETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,1,2-TRICHLOROETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,1-DICHLOROETHANE	0.61 J	0.76 J	0.5 U	0.5 U	0.5 U	1.8 J	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,1-DICHLOROETHENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	1.2 J	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,2,3-TRICHLOROBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,2,4-TRICHLOROBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,2-DIBROMO-3-CHLOROPROPANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UJ
1,2-DIBROMOETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,2-DICHLOROBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,2-DICHLOROETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,2-DICHLOROPROPANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,3-DICHLOROBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,4-DICHLOROBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
1,4-DIOXANE	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR
2-BUTANONE	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 U
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 U
2-HEXANONE	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 U
4-METHYL-2-PENTANONE	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 U
ACETONE	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 U	2.5 UR	2.5 UR	2.5 UR	2.5 UR	2.5 U
BENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
BROMOCHLOROMETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
BROMODICHLOROMETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
BROMOFORM	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 UJ
BROMOMETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CARBON DISULFIDE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CARBON TETRACHLORIDE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CHLOROBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CHLORODIBROMOMETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CHLOROETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CHLOROFORM	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CHLOROMETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
CYCLOHEXANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
DICHLORODIFLUOROMETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 UJ	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
ETHYLBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
ISOPROPYLBENZENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
M+P-XYLENES	1 U	1 UJ	1 U	1 U	1 U	1 UR	1 UR	1 UR	1 UR	1 U
METHYL ACETATE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
METHYL CYCLOHEXANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
METHYLENE CHLORIDE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
O-XYLENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
STYRENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
TETRACHLOROETHENE	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
TOLUENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
TRICHLOROETHENE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	6.2 J	0.5 UR	0.5 UR	0.5 UR	0.5 U
TRICHLOROFLUOROMETHANE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U
VINYL CHLORIDE	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UR	0.5 UR	0.5 UR	0.5 UR	0.5 U

Footnotes:

-- = The chemical was not analyzed or no value was available.

UG/L = micrograms per liter

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an estimated value.

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

Appendix
Groundwater Analytical Results
Peconic River Sportsman's Club
NWIRP Calverton, New York

GROUNDWATER

LOCATION	CAPRSC01	CAPRSC01	CAPRSC01	CAPRSC01	CAPRSC02	CAPRSC02	CAPRSC02	CAPRSC02	CAPRSC02	CAPRSC02	CAPRSC02	CAPRSC02	CAPRSC02	CAPRSC03	CAPRSC03
SAMPLE ID	CA-PRSC-01-20110216	CA-PRSC-01-20110413	CA-PRSC-01-20110629	CA-PRSC-01-20110629-D	CA-PRSC-02-01-20110216	CA-PRSC-02-02-20110216	CA-PRSC-02-03-20110216	CA-PRSC-02-01-20110413	CA-PRSC-02-02-20110413	CA-PRSC-02-03-20110413	CA-PRSC-02-01-20110629	CA-PRSC-02-02-20110629	CA-PRSC-02-03-20110629	CA-PRSC-03-20110216	CA-PRSC-03-20110216-D
SAMPLE DATE	2/16/2011	4/13/2011	6/29/2011	6/29/2011	2/16/2011	2/16/2011	2/16/2011	4/13/2011	4/13/2011	4/13/2011	6/29/2011	6/29/2011	6/29/2011	2/16/2011	2/16/2011
VOLATILES (UG/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	0.5 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	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	--	--
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	0.5 U	0.5 U
1,1-DICHLOROETHANE	0.5 U	0.5 U	0.5 U	0.5 U	10	0.5 U	0.5 U	10	0.5 U	0.5 U	12	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	3.9	0.5 U	0.5 U	4.2	0.5 U	0.5 U	3.6	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	--	--
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	--	--
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	--	--
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	--	--
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	--	--
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	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	--	--
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	--	--
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	--	--
1,4-DIOXANE	--	10 UR	10 UR	10 UR	--	--	--	10 UR	10 UR	10 UR	10 UR	10 UR	10 UR	--	--
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-HEXANONE	--	2.5 UJ	2.5 U	2.5 U	--	--	--	2.5 UJ	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	--	--
4-METHYL-2-PENTANONE	--	2.5 U	2.5 U	2.5 U	--	--	--	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	--
ACETONE	2.5 UJ	2.5 UR	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UR	2.5 UR	2.5 UR	2.5 U	2.5 U	2.5 U	2.5 UJ	2.5 UJ
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	--	--
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	--	--
BROMOFORM	--	0.5 U	0.5 U	0.5 U	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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 UJ	--	--
CARBON DISULFIDE	--	0.5 U	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	--	0.5 U	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	--	--
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	--	--
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 UJ	--	--
CHLOROFORM	--	0.5 U	0.5 U	0.5 U	--	--	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	--	--
CIS-1,2-DICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	1.1	0.5 U	0.5 U	1.2	0.5 U	0.5 U	1.4	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	--	--
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	--	--
DICHLORODIFLUOROMETHANE	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	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 UJ	0.5 UJ
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	0.5 U	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	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	1 U	1 U	1 U	1 U
METHYL ACETATE	--	0.5 U	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 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	--	--
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	--	--
METHYLENE 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	0.5 U	0.5 U
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
STYRENE	--	0.79 J	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 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	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	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	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	--	--
TRICHLOROETHENE	0.5 U	0.5 U	0.5 U	0.5 U	0.7 J	0.5 U	0.5 U	0.68 J	0.5 U	0.5 U	0.66 J	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	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 UJ	0.5 U	0.5 U	0.5 U	0.5 UJ	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 UJ	0.5 UJ

Footnotes:
-- = The chemical was not analyzed or no value was available.
UG/L = micrograms per liter
Data Qualifiers:
Blank (i.e., no qualifier) = the chemical was detected.
> = The chemical was detected.
J = The chemical was detected but the concentration reported is an
U = The chemical was not detected.
< = The chemical was not detected.
R = The chemical was rejected.

GROUNDWATER

LOCATION	CAPRSC03	CAPRSC03	CAPRSC03	CAPRSC04	CAPRSC04
SAMPLE ID	CA-PRSC-03-20110413	CA-PRSC-03-20110413-D	CA-PRSC-03-20110629	CA-PRSC-04-20110216	CA-PRSC-04-20110413
SAMPLE DATE	4/13/2011	4/13/2011	6/29/2011	2/16/2011	4/13/2011
VOLATILES (UG/L)					
1,1,1-TRICHLOROETHANE	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
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	0.5 U
1,1-DICHLOROETHANE	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
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	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	10 UR	10 UR	10 UR	--	10 UR
2-BUTANONE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-HEXANONE	2.5 UJ	2.5 UJ	2.5 U	--	2.5 UJ
4-METHYL-2-PENTANONE	2.5 U	2.5 U	2.5 U	--	2.5 U
ACETONE	2.5 UR	2.5 UR	2.5 U	2.5 UJ	2.5 UR
BENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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	0.5 U	0.5 U	0.5 U	--	0.5 U
BROMOMETHANE	0.5 U	0.5 U	0.5 U	--	0.5 U
CARBON DISULFIDE	0.5 U	0.5 U	0.5 U	--	0.5 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	0.5 U	0.5 U	0.5 U	--	0.5 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	0.5 U
CIS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 UJ	--	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 UJ	0.5 U
ETHYLBENZENE	0.5 U	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	1 U
METHYL ACETATE	0.5 U	0.5 U	0.5 U	--	0.5 U
METHYL CYCLOHEXANE	0.5 U	0.5 U	0.5 U	--	0.5 U
METHYL TERT-BUTYL ETHER	0.5 U	0.5 U	0.5 U	--	0.5 U
METHYLENE CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
O-XYLENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
STYRENE	0.5 U	0.5 U	0.5 U	--	0.5 U
TETRACHLOROETHENE	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 UJ
TOLUENE	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
TRANS-1,3-DICHLOROPROPENE	0.5 U	0.5 U	0.5 UJ	--	0.5 U
TRICHLOROETHENE	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
VINYL CHLORIDE	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U

Footnotes:
-- = The chemical was not analyzed or no value was available.
UG/L = micrograms per liter
Data Qualifiers:
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Appendix K

Validation Summaries

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**FEBRUARY 10, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) 1012119

SAMPLES: 20/Aqueous/VOC

SA-DUP01-20101214	SA-DUP02-20101215	SA-RB01-20101214
SA-TB01-20101213	SA-TW358-1115	SA-TW538-2125
SA-TW358-3135	SA-TW359-1115	SA-TW359-2125
SA-TW359-3135	SA-TW360-1115	SA-TW360-2125
SA-TW360-3135	SA-TW363-1115	SA-TW363-2125
SA-TW363-3135	SA-TW363-4145	SA-TW364-1115
SA-TW364-2125	SA-TW364-3135	

Overview

The sample sets for NWIRP Calverton, SDG 1012119 consisted of eighteen (18) aqueous environmental samples, one(1) rinsate blank, and one (1) aqueous trip blank. All twenty (20) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). Two field duplicate sample pairs were associated with this sample data group (SDG); SA-DUP01-20101214/SA-TW363-1115 and SA-DUP02-20101215/SA-TW360-2125.

The samples were collected by Tetra Tech on December 13, 14, and 15, 2010 and analyzed by CompuChem, a division of Liberty Analytical Corporation. All analyses were conducted in accordance with EPA Method SW-846 8260B 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 Recoveries
- * Laboratory Control Sample/Laboratory Control Sample Duplicate Results
- * Matrix Spike/Matrix Spike Duplicate Results
- Field Duplicate Precision Results
- * 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.

Volatile (VOC)

All initial and continuing calibrations performed on instrument 5972hp59 had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for acetone. All samples were affected. The positive and non-detected results reported for acetone were estimated, (J) and rejected, (UR), respectively, due to calibration noncompliance.

The following analytes were detected in the associated method blanks and the field quality control blanks at the maximum concentrations as indicated below:

Compound	Maximum Conc. (µg/L)	Action Level (µg/L)
1,1-Dichloropropene [1]	9.2	46.0
1,2-Dichloroethene [1]	2.5	12.5
2-Hexanone [1]	1.8	9.0
Naphthalene [1]	1.8	9.0
1,2,4-Trichlorobenzene [2]	1.0	5.0
Naphthalene [2]	2.9	14.5
1,2-Dichloropropene [3]	9.7	48.5
1,2-Dichloroethane [3]	2.5	12.5
2-Hexanone [3]	1.4	7.0
1,3-Dichlorobenzene [3]	0.37	1.85
1,4-Dichlorobenzene [3]	0.39	1.95
1,2-Dichlorobenzene [3]	0.42	2.1
1,2,4-Trichlorobenzene [3]	1.1	5.5
Naphthalene [3]	3.4	17.0
Methylene Chloride [4]	1.1	11.0
Acetone [4]	36.0	360

1 Maximum concentration detected in laboratory method blank VBLKHI affecting samples SA-DUP01-20101214, SA-RB01-20101214, SA-TB01-20101213, SA-TW358-1115, SA-TW538-2125, SA-TW363-1115, SA-TW363-2125, SA-TW363-3135, SA-TW363-4145, SA-TW364-1115, SA-TW364-2125, and SA-TW364-3135.

2 Maximum concentration detected in laboratory method blank VBLKHL affecting sample SA-TW358-3135.

3 Maximum concentration detected in the trip blank, SA-TB01-20101213, affecting all samples in this SDG.

4 Maximum concentration detected in the rinsate blank, SA-RB0120101214.

An action level of 10X the maximum concentration for the common contaminants, methylene chloride and acetone, and an action level of 5X the maximum concentration for the remaining compounds were established to evaluate blank contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level were qualified as non-detected, (U), as a result of laboratory blank contamination. Results reported below the Level of Quantitation (LOQ) were qualified as non-detected, (U), and reported to the LOQ. The trip and rinsate blank were not qualified for laboratory method blank contamination.

Positive results reported below the LOQ but above the method detection limit were qualified as estimated, (J). Non-detected results are reported to the LOD.

Additional Comments

The Relative Percent Differences (RPDs) were greater than 30% for 4-methyl-2-pentanone and chloroethane in the field duplicate sample pair, SA-DUP01-20101214/SA-TW363-1115. No action was taken since the difference between the results for these compounds were reported less than 2X the LOQ.

Chlorodibromomethane was detected in the field duplicate sample, SA-DUP01-20101214 but not in the environmental sample, SA-TW363-1115. Because the difference between the positive result and the non-detect was less than 2X the LOQ, no action was necessary in the field duplicate pair.

1,2-Dibromoethane was detected in sample, SA-TW363-1115, but not in the field duplicate sample, SA-DUP01-20101214. However, this compound was not detected in the dilution of this sample and in the dilution the field duplicate sample. The non-detected result reported for 1,2-dibromoethane in the diluted analysis was used in the data validation reported at a slightly higher detection level.

Naphthalene exceeded the instrument's linear calibration range in samples SA-DUP01-20101214 and SA-TW363-1115. The laboratory reanalyzed these samples at a 2X dilution. The diluted results for naphthalene in these samples were used in the validation of the data.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Acetone results were estimated or rejected due to initial and continuing calibration RRFs below 0.05. Method blank contamination resulted in qualification of sample analyte data.

Other Factors Affecting Data Quality: Volatile compounds were detected in the rinsate and trip blanks. Field duplicate imprecision was noted in one field duplicate pair. Positive results reported below the LOQ but above the method detection limit were qualified as estimated, (J). Non-detected results are reported to the LOD. Two samples were diluted because initial result compound results exceeded the instruments' linear calibration ranges.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

TetraTech NUS
Michelle L. Allen
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20101214			SA-DUP01-20101214DL			SA-DUP02-20101215			SA-RB01-20101214		
SDG: 1012119	LAB_ID	1012119-09			1012119-09RE1			1012119-19			1012119-13		
FRACTION: OV	SAMP_DATE	12/14/2010			12/14/2010			12/15/2010			12/14/2010		
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	SA-TW363-1115			SA-TW363-1115			SA-TW360-1115					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		2	J	P				0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		2	U					2	U		2	U	
1,1,2-TRICHLOROETHANE		7.9						2	U		2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2	U					2	U		2	U	
1,1-DICHLOROETHANE		6.6						0.5	U		0.5	U	
1,1-DICHLOROETHENE		2	U					2	U		2	U	
1,1-DICHLOROPROPENE		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		2	U					2	U		2	U	
1,2-DIBROMOETHANE		0.5	U					0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U	B				0.5	U		0.5	U	
1,2-DICHLOROETHANE		2.6	U	A				0.5	U		2.7	J	P
1,2-DICHLOROPROPANE		2	U					2	U		2	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	
2-BUTANONE		5	U					5	U		4.8	J	P
2-HEXANONE		13	U	A				1.3	U		1.6	J	P
4-METHYL-2-PENTANONE		1.3	J	P				1.3	U		1.3	U	
ACETONE		5	UR	C				5	UR	C	36	J	C
BENZENE		1.1	J	P				0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U					0.5	U		0.5	U	
BROMOFORM		2	U					2	U		2	U	
BROMOMETHANE		2	U					2	U		2	U	
CARBON DISULFIDE		0.5	U					0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U					0.5	U		0.5	U	
CHLOROBENZENE		0.5	U					0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.53	J	P				0.5	U		0.5	U	
CHLOROETHANE		1	J	P				2	U		2	U	
CHLOROFORM		0.92	J	P				0.5	U		0.5	U	
CHLOROMETHANE		0.5	U					0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		2	U					2	U		2	U	
CIS-1,3-DICHLOROPROPENE		2	U					2	U		2	U	
CYCLOHEXANE		5.1						0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U					0.5	U		0.5	U	
ETHYLBENZENE		120						0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TB01-20101213			SA-TW358-1115			SA-TW358-2125			SA-TW358-3135		
SDG: 1012119	LAB_ID	1012119-01			1012119-12			1012119-11			1012119-10		
FRACTION: OV	SAMP_DATE	12/13/2010			12/14/2010			12/14/2010			12/14/2010		
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		2	U		2	U		2	U		2	U	
1,1,2-TRICHLOROETHANE		2	U		2	U		2	U		2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2	U		2	U		2	U		2	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		2	U		2	U		2	U		2	U	
1,1-DICHLOROPROPENE		9.7			10	U	A	0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		1.1	J	P	0.5	U		1	U	A	0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		2	U		2	U		2	U		2	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.42	J	P	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		2.5	J	P	2.5	U	A	2.5	U	A	0.5	U	
1,2-DICHLOROPROPANE		2	U		2	U		2	U		2	U	
1,3-DICHLOROBENZENE		0.37	J	P	0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.39	J	P	0.5	U		0.33	U	B	0.5	U	
2-BUTANONE		5	U		5	U		5	U		5	U	
2-HEXANONE		1.4	J	P	13	U	A	13	U	A	1.3	U	
4-METHYL-2-PENTANONE		1.3	U		1.3	U		1.3	U		1.3	U	
ACETONE		5	UR	C	5	UR	C	5	UR	C	5	UR	C
BENZENE		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		2	U		2	U		2	U		2	U	
BROMOMETHANE		2	U		2	U		2	U		2	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		2	U		2	U		2	U		2	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		2	U		2	U		2	U		2	U	
CIS-1,3-DICHLOROPROPENE		2	U		2	U		2	U		2	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	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW359-1115			SA-TW359-2125			SA-TW359-3135			SA-TW360-1115		
SDG: 1012119	LAB_ID	1012119-16			1012119-15			1012119-14			1012119-20		
FRACTION: OV	SAMP_DATE	12/14/2010			12/14/2010			12/14/2010			12/15/2010		
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		2	U		2	U		2	U		2	U	
1,1,2-TRICHLOROETHANE		2	U		2	U		2	U		2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2	U		2	U		2	U		2	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		2	U		2	U		2	U		2	U	
1,1-DICHLOROPROPENE		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		2	U		2	U		2	U		2	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		2	U		2	U		2	U		2	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	
2-BUTANONE		5	U		5	U		5	U		5	U	
2-HEXANONE		1.3	U		1.3	U		1.3	U		1.3	U	
4-METHYL-2-PENTANONE		1.3	U		1.3	U		1.3	U		1.3	U	
ACETONE		5	UR	C	5	UR	C	5	UR	C	5	UR	C
BENZENE		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		2	U		2	U		2	U		2	U	
BROMOMETHANE		2	U		2	U		2	U		2	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		2	U		2	U		2	U		2	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		2	U		2	U		2	U		2	U	
CIS-1,3-DICHLOROPROPENE		2	U		2	U		2	U		2	U	
CYCLOHEXANE		6.1			0.5	U		0.5	U		0.5	U	
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	

PROJ_NO: 02045	NSAMPLE	SA-TW360-2125			SA-TW360-3135			SA-TW363-1115			SA-TW363-1115DL		
SDG: 1012119	LAB_ID	1012119-18			1012119-17			1012119-08			1012119-08RE1		
FRACTION: OV	SAMP_DATE	12/15/2010			12/15/2010			12/14/2010			12/14/2010		
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		2.2	J	P			
1,1,2,2-TETRACHLOROETHANE		2	U		2	U		2	U				
1,1,2-TRICHLOROETHANE		2	U		2	U		8.1					
1,1,2-TRICHLOROTRIFLUOROETHANE		2	U		2	U		2	U				
1,1-DICHLOROETHANE		0.5	U		0.5	U		6.5					
1,1-DICHLOROETHENE		2	U		2	U		2	U				
1,1-DICHLOROPROPENE		0.5	U		0.5	U		10	U	A			
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,2-DIBROMO-3-CHLOROPROPANE		2	U		2	U		2	U				
1,2-DIBROMOETHANE		0.5	U		0.5	U					1	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.64	U	B			
1,2-DICHLOROETHANE		0.5	U		0.5	U		2.5	U	A			
1,2-DICHLOROPROPANE		2	U		2	U		2	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				
2-BUTANONE		5	U		5	U		5	U				
2-HEXANONE		1.3	U		1.3	U		13	U	A			
4-METHYL-2-PENTANONE		1.3	U		1.3	U		3.3	J	P			
ACETONE		5	UR	C	5	UR	C	5	UR	C			
BENZENE		0.5	U		0.5	U		1	J	P			
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMOFORM		2	U		2	U		2	U				
BROMOMETHANE		2	U		2	U		2	U				
CARBON DISULFIDE		0.5	U		0.5	U		0.5	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		2	U		2	U		0.6	J	P			
CHLOROFORM		0.5	U		0.5	U		0.78	J	P			
CHLOROMETHANE		0.5	U		0.5	U		0.5	U				
CIS-1,2-DICHLOROETHENE		2	U		2	U		2	U				
CIS-1,3-DICHLOROPROPENE		2	U		2	U		2	U				
CYCLOHEXANE		0.5	U		0.5	U		5.4					
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U				
ETHYLBENZENE		0.5	U		0.5	U		120					

PROJ_NO: 02045	NSAMPLE	SA-TW363-2125			SA-TW363-3135			SA-TW363-4145			SA-TW364-1115		
SDG: 1012119	LAB_ID	1012119-07			1012119-06			1012119-05			1012119-04		
FRACTION: OV	SAMP_DATE	12/13/2010			12/13/2010			12/13/2010			12/13/2010		
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		0.51	J	P	0.55	J	P	0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		2	U		2	U		2	U		2	U	
1,1,2-TRICHLOROETHANE		2	U		2	U		2	U		2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2	U		2	U		2	U		2	U	
1,1-DICHLOROETHANE		1.6	J	P	1.1	J	P	0.5	U		0.5	U	
1,1-DICHLOROETHENE		2	U		2	U		2	U		2	U	
1,1-DICHLOROPROPENE		9.4	U	A	9.8	U	A	0.5	U		10	U	A
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		2	U		2	U		2	U		2	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		1.6	U	B	1.5	U	B	0.5	U		0.5	U	
1,2-DICHLOROETHANE		2.5	U	A	2.9	U	A	2.7	U	A	2.5	U	A
1,2-DICHLOROPROPANE		2	U		2	U		2	U		2	U	
1,3-DICHLOROBENZENE		1.4	U	B	1.3	U	B	0.5	U		0.5	U	
1,4-DICHLOROBENZENE		1.5	U	B	1.4	U	B	0.5	U		0.5	U	
2-BUTANONE		5	U		5	U		5	U		5	U	
2-HEXANONE		13	U	A	13	U	A	13	U	A	13	U	A
4-METHYL-2-PENTANONE		62			120			1.3	U		1.3	U	
ACETONE		5	UR	C	13	U	B	5	UR	C	5	UR	C
BENZENE		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		2	U		2	U		2	U		2	U	
BROMOMETHANE		2	U		2	U		2	U		2	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		2	U		2	U		2	U		2	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		2	U		2	U		2	U		2	U	
CIS-1,3-DICHLOROPROPENE		2	U		2	U		2	U		2	U	
CYCLOHEXANE		0.5	U		30			0.5	U		0.5	U	
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	

PROJ_NO: 02045	NSAMPLE	SA-TW364-2125			SA-TW364-3135		
SDG: 1012119	LAB_ID	1012119-03			1012119-02		
FRACTION: OV	SAMP_DATE	12/13/2010			12/13/2010		
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
1,1,1-TRICHLOROETHANE		6.8			0.5	U	
1,1,2,2-TETRACHLOROETHANE		2	U		2	U	
1,1,2-TRICHLOROETHANE		2	U		2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2	U		2	U	
1,1-DICHLOROETHANE		16			0.5	U	
1,1-DICHLOROETHENE		0.59	J	P	2	U	
1,1-DICHLOROPROPENE		0.5	U		9.5	U	A
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		2	U		2	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.51	U	B	0.5	U	
1,2-DICHLOROETHANE		2.6	U	A	2.8	U	A
1,2-DICHLOROPROPANE		2	U		2	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U	
2-BUTANONE		5	U		5	U	
2-HEXANONE		13	U	A	13	U	A
4-METHYL-2-PENTANONE		1.7	J	P	1.3	U	
ACETONE		3.5	U	B	2.5	U	B
BENZENE		1.3	J	P	0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U	
BROMOFORM		2	U		2	U	
BROMOMETHANE		2	U		2	U	
CARBON DISULFIDE		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.94	J	P	0.5	U	
CHLOROBENZENE		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U	
CHLOROETHANE		9.9			2	U	
CHLOROFORM		0.45	J	P	0.5	U	
CHLOROMETHANE		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		2	U		2	U	
CIS-1,3-DICHLOROPROPENE		2	U		2	U	
CYCLOHEXANE		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20101214			SA-DUP01-20101214DL			SA-DUP02-20101215			SA-RB01-20101214		
SDG: 1012119	LAB_ID	1012119-09			1012119-09RE1			1012119-19			1012119-13		
FRACTION: OV	SAMP_DATE	12/14/2010			12/14/2010			12/15/2010			12/14/2010		
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	SA-TW363-1115			SA-TW363-1115			SA-TW360-1115					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ISOPROPYLBENZENE		50						0.5	U		0.5	U	
M+P-XYLENES		150						1	U		1	U	
METHYL ACETATE		2	U					2	U		2	U	
METHYL CYCLOHEXANE		1.6	J	P				0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U					0.5	U		0.5	U	
METHYLENE CHLORIDE		0.51	U	B				0.5	U		1.1	J	P
NAPHTHALENE					240			2	U		1.4	J	P
O-XYLENE		20						0.5	U		0.5	U	
STYRENE		0.58	J	P				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	
TOTAL 1,2-DICHLOROETHENE		0.5	U					0.5	U		0.5	U	
TOTAL XYLENES		170						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: 02045	NSAMPLE	SA-TB01-20101213			SA-TW358-1115			SA-TW358-2125			SA-TW358-3135		
SDG: 1012119	LAB_ID	1012119-01			1012119-12			1012119-11			1012119-10		
FRACTION: OV	SAMP_DATE	12/13/2010			12/14/2010			12/14/2010			12/14/2010		
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
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		2	U		2	U		2	U		2	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		2.3	U	B
NAPHTHALENE		3.4	J	P	2	U		1.7	U	A	2	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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	
TOTAL 1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOTAL XYLENES		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: 02045	NSAMPLE	SA-TW359-1115			SA-TW359-2125			SA-TW359-3135			SA-TW360-1115		
SDG: 1012119	LAB_ID	1012119-16			1012119-15			1012119-14			1012119-20		
FRACTION: OV	SAMP_DATE	12/14/2010			12/14/2010			12/14/2010			12/15/2010		
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
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		2	U		2	U		2	U		2	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
NAPHTHALENE		2	U		2	U		6.8	U	A	2	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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	
TOTAL 1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOTAL XYLENES		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: 02045	NSAMPLE	SA-TW360-2125			SA-TW360-3135			SA-TW363-1115			SA-TW363-1115DL		
SDG: 1012119	LAB_ID	1012119-18			1012119-17			1012119-08			1012119-08RE1		
FRACTION: OV	SAMP_DATE	12/15/2010			12/15/2010			12/14/2010			12/14/2010		
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
ISOPROPYLBENZENE		0.5	U		0.5	U		53					
M+P-XYLENES		1	U		1	U		160					
METHYL ACETATE		2	U		2	U		2	U				
METHYL CYCLOHEXANE		0.5	U		0.5	U		1.6	J	P			
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U				
METHYLENE CHLORIDE		0.5	U		0.5	U		0.53	U	B			
NAPHTHALENE		2	U		2	U					210		
O-XYLENE		0.5	U		0.5	U		21					
STYRENE		0.5	U		0.5	U		0.65	J	P			
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U				
TOLUENE		0.5	U		0.5	U		0.5	U				
TOTAL 1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U				
TOTAL XYLENES		0.5	U		0.5	U		180					
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: 02045	NSAMPLE	SA-TW363-2125			SA-TW363-3135			SA-TW363-4145			SA-TW364-1115		
SDG: 1012119	LAB_ID	1012119-07			1012119-06			1012119-05			1012119-04		
FRACTION: OV	SAMP_DATE	12/13/2010			12/13/2010			12/13/2010			12/13/2010		
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
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		2	U		2	U		2	U		2	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
NAPHTHALENE		2	U		2	U		2	U		5	U	A
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.98	J	P	0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOTAL 1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOTAL XYLENES		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: 02045	NSAMPLE	SA-TW364-2125			SA-TW364-3135		
SDG: 1012119	LAB_ID	1012119-03			1012119-02		
FRACTION: OV	SAMP_DATE	12/13/2010			12/13/2010		
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
ISOPROPYLBENZENE		17			0.5	U	
M+P-XYLENES		1	U		1	U	
METHYL ACETATE		2	U		2	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U	
NAPHTHALENE		19			2	U	
O-XYLENE		3.7	J	P	0.5	U	
STYRENE		0.89	J	P	0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U	
TOTAL 1,2-DICHLOROETHENE		0.5	U		0.5	U	
TOTAL XYLENES		3.7	J	P	0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**FEBRUARY 10, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) 1012134

SAMPLES: 9/Aqueous/VOC

JB 2-16-12

FC-~~PC~~ PZ-05I1-20101216	SA-TB02-20101215	SA-TW349-4145
SA-TW361-1115	SA-TW361-2125	SA-TW361-3135
SA-TW362-1115	SA-TW362-2125	SA-TW362-3135

Overview

The sample sets for NWIRP Calverton, SDG 1012134 consisted of eight (8) aqueous environmental samples and one (1) aqueous trip blank. All nine (9) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). No field duplicate sample pairs were associated with this sample data group (SDG).

The samples were collected by Tetra Tech on December 15 and 16, 2010 and analyzed by CompuChem, a division of Liberty Analytical Corporation. All analyses were conducted in accordance with EPA Method SW-846 8260B 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 Recoveries
*	• Laboratory Control Sample/Laboratory Control Sample Duplicate Results
*	• 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.

Volatile (VOC)

All initial and continuing calibrations performed on instrument 5972hp59 had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for acetone. All samples were affected. The non-detected results reported for acetone were rejected, (UR), due to calibration noncompliance.

The following analytes were detected in the associated trip blank at the maximum concentrations as indicated below:

Compound	Maximum Conc. (µg/L)	Action Level (µg/L)
Cyclohexane [1]	0.51	2.55
Naphthalene [1]	1.8	9.0

1 Maximum concentration detected in the trip blank, SA-TB02-20101215, affecting all samples in this SDG.

An action level of 5X the maximum concentration was established to evaluate laboratory contamination for the above compounds. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level were qualified as non-detected, (U), as a result of laboratory blank contamination. Results reported below the Level of Quantitation (LOQ) were qualified as non-detected, (U), and reported to the LOQ.

Positive results reported below the LOQ but above the method detection limit were qualified as estimated, (J). Non-detected results are reported to the LOD.

Additional Comments

Methylene chloride was detected in the two environmental samples; however, it was not detected in the laboratory method blank or the trip blank. The presence of methylene chloride is a suspected laboratory contaminant.

As stated in the laboratory's case narrative, due to the screening of sample FC-PZ-05I1-20101216, the sample was analyzed at a dilution.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Acetone results were estimated or rejected due to initial and continuing calibration RRFs below 0.05.

Other Factors Affecting Data Quality: Some samples were qualified for trip blank contamination. Positive results reported below the LOQ but above the method detection limit were qualified as estimated, (J). Non-detected results are reported to the LOD. One sample was initially analyzed at a dilution.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006).

TetraTech NUS
Michelle L. Allen
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	FC-PZ-05I1-20101216			SA-TB02-20101215			SA-TW349-4145			SA-TW361-1115		
SDG: 1012134	LAB_ID	1012134-09			1012134-04			1012134-05			1012134-03		
FRACTION: OV	SAMP_DATE	12/16/2010			12/15/2010			12/16/2010			12/15/2010		
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		130			0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		6.7	U		2	U		2	U		2	U	
1,1,2-TRICHLOROETHANE		6.7	U		2	U		2	U		2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		6.7	U		2	U		2	U		2	U	
1,1-DICHLOROETHANE		470			0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		25			2	U		2	U		2	U	
1,1-DICHLOROPROPENE		1.7	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		1.7	U		0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		6.7	U		2	U		2	U		2	U	
1,2-DIBROMOETHANE		1.7	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		1.7	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		1.7	U		0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		6.7	U		2	U		2	U		2	U	
1,3-DICHLOROBENZENE		1.7	U		0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		1.7	U		0.5	U		0.5	U		0.5	U	
2-BUTANONE		17	U		5	U		5	U		5	U	
2-HEXANONE		4.2	U		1.3	U		1.3	U		1.3	U	
4-METHYL-2-PENTANONE		4.2	U		1.3	U		1.3	U		1.3	U	
ACETONE		17	UR	C	5	UR	C	5	UR	C	5	UR	C
BENZENE		2.3	J	P	0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		1.7	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		6.7	U		2	U		2	U		2	U	
BROMOMETHANE		6.7	U		2	U		2	U		2	U	
CARBON DISULFIDE		1.7	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		1.7	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		1.7	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		1.7	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		140			2	U		2	U		2	U	
CHLOROFORM		1.7	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		1.7	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		6.7	U		2	U		2	U		2	U	
CIS-1,3-DICHLOROPROPENE		6.7	U		2	U		2	U		2	U	
CYCLOHEXANE		1.7	U		0.51	J	P	0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		1.7	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		52			0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW361-2125			SA-TW361-3135			SA-TW362-1115			SA-TW362-2125		
SDG: 1012134	LAB_ID	1012134-02			1012134-01			1012134-08			1012134-07		
FRACTION: OV	SAMP_DATE	12/15/2010			12/15/2010			12/16/2010			12/16/2010		
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		17			0.5	U	
1,1,2,2-TETRACHLOROETHANE		2	U		2	U		2	U		2	U	
1,1,2-TRICHLOROETHANE		2	U		2	U		2	U		2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2	U		2	U		2	U		2	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		4.9	J	P	0.5	U	
1,1-DICHLOROETHENE		2	U		2	U		2	U		2	U	
1,1-DICHLOROPROPENE		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		2	U		2	U		2	U		2	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		2	U		2	U		2	U		2	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	
2-BUTANONE		5	U		5	U		5	U		5	U	
2-HEXANONE		1.3	U		1.3	U		1.3	U		1.3	U	
4-METHYL-2-PENTANONE		1.3	U		1.3	U		1.3	U		1.3	U	
ACETONE		5	UR	C	5	UR	C	5	UR	C	5	UR	C
BENZENE		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		2	U		2	U		2	U		2	U	
BROMOMETHANE		2	U		2	U		2	U		2	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		2	U		2	U		2	U		2	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		2	U		2	U		2	U		2	U	
CIS-1,3-DICHLOROPROPENE		2	U		2	U		2	U		2	U	
CYCLOHEXANE		0.5	U	B	0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U		0.45	J	P	0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW362-3135		
SDG: 1012134	LAB_ID	1012134-06		
FRACTION: OV	SAMP_DATE	12/16/2010		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U	
1,1,2,2-TETRACHLOROETHANE		2	U	
1,1,2-TRICHLOROETHANE		2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2	U	
1,1-DICHLOROETHANE		0.5	U	
1,1-DICHLOROETHENE		2	U	
1,1-DICHLOROPROPENE		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		2	U	
1,2-DIBROMOETHANE		0.5	U	
1,2-DICHLOROBENZENE		0.5	U	
1,2-DICHLOROETHANE		0.5	U	
1,2-DICHLOROPROPANE		2	U	
1,3-DICHLOROBENZENE		0.5	U	
1,4-DICHLOROBENZENE		0.5	U	
2-BUTANONE		5	U	
2-HEXANONE		1.3	U	
4-METHYL-2-PENTANONE		1.3	U	
ACETONE		5	UR	C
BENZENE		0.5	U	
BROMODICHLOROMETHANE		0.5	U	
BROMOFORM		2	U	
BROMOMETHANE		2	U	
CARBON DISULFIDE		0.5	U	
CARBON TETRACHLORIDE		0.5	U	
CHLOROBENZENE		0.5	U	
CHLORODIBROMOMETHANE		0.5	U	
CHLOROETHANE		2	U	
CHLOROFORM		0.5	U	
CHLOROMETHANE		0.5	U	
CIS-1,2-DICHLOROETHENE		2	U	
CIS-1,3-DICHLOROPROPENE		2	U	
CYCLOHEXANE		1.1	U	B
DICHLORODIFLUOROMETHANE		0.5	U	
ETHYLBENZENE		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-PZ-05I1-20101216			SA-TB02-20101215			SA-TW349-4145			SA-TW361-1115		
SDG: 1012134	LAB_ID	1012134-09			1012134-04			1012134-05			1012134-03		
FRACTION: OV	SAMP_DATE	12/16/2010			12/15/2010			12/16/2010			12/15/2010		
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
ISOPROPYLBENZENE		21			0.5	U		0.5	U		0.5	U	
M+P-XYLENES		7.1	J	P	1	U		1	U		1	U	
METHYL ACETATE		6.7	U		2	U		2	U		2	U	
METHYL CYCLOHEXANE		1.9	J	P	0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		1.7	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		2.7	J	P	0.5	U		0.5	U		0.5	U	
NAPHTHALENE		110			1.8	J	P	2	U		2	U	
O-XYLENE		1.7	U		0.5	U		0.5	U		0.5	U	
STYRENE		1.7	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		1.7	U		0.5	U		0.5	U		0.5	U	
TOLUENE		1.7	U		0.5	U		0.5	U		0.5	U	
TOTAL 1,2-DICHLOROETHENE		1.7	U		0.5	U		0.5	U		0.5	U	
TOTAL XYLENES		7.1	J	P	0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		1.7	U		0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		1.7	U		0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		1.7	U		0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		1.7	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		1.7	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW361-2125			SA-TW361-3135			SA-TW362-1115			SA-TW362-2125		
SDG: 1012134	LAB_ID	1012134-02			1012134-01			1012134-08			1012134-07		
FRACTION: OV	SAMP_DATE	12/15/2010			12/15/2010			12/16/2010			12/16/2010		
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
ISOPROPYLBENZENE		0.5	U		0.5	U		0.44	J	P	0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		2	U		2	U		2	U		2	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.44	J	P	0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.84	J	P	0.5	U	
NAPHTHALENE		2	U		2	U		4.5	U	B	2	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		0.49	J	P
TOLUENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOTAL 1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
TOTAL XYLENES		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: 02045	NSAMPLE	SA-TW362-3135
SDG: 1012134	LAB_ID	1012134-06
FRACTION: OV	SAMP_DATE	12/16/2010
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
ISOPROPYLBENZENE	0.5	U	
M+P-XYLENES	1	U	
METHYL ACETATE	2	U	
METHYL CYCLOHEXANE	0.5	U	
METHYL TERT-BUTYL ETHER	0.5	U	
METHYLENE CHLORIDE	0.5	U	
NAPHTHALENE	2	U	
O-XYLENE	0.5	U	
STYRENE	0.5	U	
TETRACHLOROETHENE	0.5	U	
TOLUENE	0.5	U	
TOTAL 1,2-DICHLOROETHENE	0.5	U	
TOTAL XYLENES	0.5	U	
TRANS-1,2-DICHLOROETHENE	0.5	U	
TRANS-1,3-DICHLOROPROPENE	0.5	U	
TRICHLOROETHENE	0.5	U	
TRICHLOROFLUOROMETHANE	0.5	U	
VINYL CHLORIDE	0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**MAY 6, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / OVG**
NWIRP CALVERTON CTO WE08
SDG C1497

SAMPLES: 21 / Aqueous / VOC

SA-DUP01-20110308	SA-DUP02-20110308	SA-PZ-133I-20110308
SA-PZ-135I-20110308	SA-PZ-136I-20110308	SA-PZ-138I-20110308
SA-PZ-138I1-20110308	SA-PZ-139I-20110308	SA-PZ-149I1-20110308
SA-PZ-151I1-20110308	SA-PZ-155I-20110307	SA-PZ-157I-20110307
SA-PZ-157I1-20110307	SA-PZ-158I-20110307	SA-PZ-158I1-20110307
SA-PZ-159I-20110307	SA-PZ-159I1-20110308	SA-PZ-160I-20110308
SA-PZ-160I1-20110308	SA-PZ-161I-20110308	SA-TB01-20110307

8 / Aqueous / OVG

SA-DUP01-20110308	SA-PZ-151I1-20110308	SA-PZ-155I-20110307
SA-PZ-157I-20110307	SA-PZ-157I1-20110307	SA-PZ-159I-20110307
SA-PZ-159I1-20110308	SA-PZ-160I-20110308	

Overview

The sample set for NWIRP Calverton, SDG C1497 consisted of twenty-one (21) aqueous environmental samples including one (1) aqueous trip blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC) and eight (8) samples were analyzed for organic volatile gases (OVG). Two (2) field duplicate pairs were included in this Sample Delivery Group (SDG): SA-DUP01-20110308 / SA-PZ-151I1-20110308 and SA-DUP02-20110308 / SA-PZ-161I-20110308.

The samples were collected by Tetra Tech on March 7, and 8, 2011 and analyzed by ChemTech. All analyses were conducted in accordance with EPA Method SW-846 8260B and RSK-175 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
- Laboratory Control Sample Recoveries
- * Blank Results
- 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 continuing calibration verification (CCV) percent difference (%D) was greater than the 20% quality control limit for 4-methyl-2-pentanone, 2-hexanone, bromoform, and 1,2-dibromo-3-chloropropane for instrument MSVOAG on 03/14/11 @ 13:15 affecting samples SA-PZ-158I-20110307, SA-PZ-158I1-20110307, SA-PZ-157I1-20110307, SA-PZ-151I1-20110308, SA-DUP01-20110308, and SA-PZ-160I-20110308. The non-detected 4-methyl-2-pentanone, 2-hexanone, bromoform, and 1,2-dibromo-3-chloropropane results for the aforementioned samples were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for bromomethane for instrument MSVOAG on 03/16/11 @ 17:00 affecting samples SA-PZ-138I1-20110308, SA-PZ-160I1-20110308, SA-PZ-139I-20110308, SA-PZ-135I-20110308, SA-PZ-160I1-20110308, and SA-DUP02-20110308. The non-detected bromomethane results for the aforementioned samples were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for acetone and bromomethane for instrument MSVOAG on 03/17/11 @ 09:23 affecting samples SA-PZ-136I-20110308, and SA-PZ-149I1-20110308. The non-detected acetone and bromo-methane results for the aforementioned samples were qualified estimated, (UJ).

The laboratory control sample (LCS) BSG0314W3 percent recovery (%R) was greater than the quality control limit for 4-methyl-2-pentanone. All affected samples had non-detected results for 4-methyl-2-pentanone and no action was taken.

The matrix spike (MS) and the MS duplicate (MSD) %Rs were less than the quality control limit for 1,1-dichloroethane and bromoform for the spiked sample SA-PZ-159I1-20110308. The positive 1,1-dichloroethane result for the sample was qualified estimated, (J), and the non-detected bromoform result for the sample was qualified estimated, (UJ).

The MSD %R was less than the quality control limit for o-xylene for the spiked sample SA-PZ-159I1-20110308. The non-detected o-xylene result for the sample was not qualified as the MS %R and the MS/MSD relative percent difference (RPD) were within the quality control limits.

The surrogate %Rs for dibromofluoromethane and toluene-d8 were less than the quality control limit for samples SA-PZ-158I-20110307 and SA-PZ-157I1-20110307. Sample SA-PZ-158I-20110307 was re-analyzed with an improved %R for dibromofluoromethane. The re-analysis results were reported. Sample SA-PZ-157I1-20110307 was not re-analyzed. Sample SA-PZ-158I-20110307 and SA-PZ-157I1-20110307 positive and non-detected VOC analytes were qualified estimated, (J) and (UJ), respectively.

Samples SA-PZ-158I1-20110307, SA-PZ-151I1-20110308, SA-DUP01-20110308, and SA-PZ-160I-20110308 also had surrogate %Rs for toluene-d8 less than the quality control limit. In samples SA-PZ-158I1-20110307, SA-PZ-151I1-20110308, SA-DUP01-20110308, and SA-PZ-160I-20110308, positive and non-detected VOC analytes were qualified estimated, (J) and (UJ), respectively.

Positive results below the limit of detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

OVG

The MS and MSD %Rs were less than the quality control limit for ethane and ethene for spiked sample SA-PZ-159I1-20110308. The non-detected ethane and ethene results for sample SA-PZ-159I1-20110308 were qualified estimated, (UJ).

The MS %R for methane was less than the quality control limit, the MSD %R was greater than the quality control limit for methane, and the MS/MSD relative percent difference (RPD) was greater than the quality control limit for spike sample SA-PZ-159I1-20110308. No action was taken as the concentration of the sample was more than 5X the concentration of the spike added to the sample.

Additional Comments

Positive results below the LOD and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Initial laboratory submitted Form I results for VOCs had sample analyte results for only twenty (20) VOC analytes. The electronic database (EDD) had sample results for forty-nine (49) VOC analytes. The project manager and the laboratory were contacted on this issue. The expanded list of VOCs was determined to be the correct list of VOCs to be analyzed for by the laboratory. The laboratory provided corrected Form I sample result, method blank, LCS, and MS/MSD forms.

The laboratory did not initially provide forms for the Laboratory Control Samples and the MS/MSD for the VOC analytes. The laboratory was contacted and provided the correct forms.

The following samples were analyzed for VOCs both undiluted and diluted by the laboratory. Only the VOC analyte results which were higher than the highest calibration level in the undiluted sample were reported from the dilution analyses.

Sample	Dilution
SA-DUP01-20110308	1X, 10X
SA-DUP02-20110308	1X, 5X
SA-PZ-138I1-20110308	1X, 20X
SA-PZ-151I1-20110308	1X, 10X
SA-PZ-157I1-20110307	1X, 5X
SA-PZ-160I-20110308	1X, 5X
SA-PZ-160I1-20101213	1X, 5X
SA-PZ-161I-20110308	1X, 5X

The following samples were analyzed for OVGs both undiluted and diluted by the laboratory due to high methane results in the undiluted analyses. Only the OVG analyte methane results were reported from the dilution analyses.

Sample	Dilution
SA-DUP01-20110308	1X, 10X
SA-PZ-151I1-20110308	1X, 10X
SA-PZ-157I1-20110307	1X, 10X
SA-PZ-159I1-20110308	1X, 5X

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC analyte results were qualified due to continuing calibration verification quality control limit non-compliances. Bromoform and 1,1-dichloroethane results for sample SA-PZ-159I1-20110308 were qualified due to MS/MSD quality control limit non-compliances. VOC analyte results for samples SA-PZ-158I-20110307, SA-PZ-157I1-20110307, SA-PZ-158I1-20110307, SA-PZ-151I1-20110308, SA-DUP01-20110308, and SA-PZ-160I-20110308 were qualified due to surrogate %R quality control limit non-compliances. The non-detected OVG gas ethane and ethene results for sample SA-PZ-159I1-20110308 were qualified estimated due to MS/MSD %R quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. 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)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110308			SA-DUP01-20110308DL			SA-DUP02-20110308			SA-DUP02-20110308DL		
SDG: C1497	LAB_ID	C1497-10			C1497-10DL			C1497-21			C1497-21DL		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308			SA-PZ-161I-20110308			SA-PZ-161I-20110308		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		39	J	R				30					
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U				
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U				
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U				
1,1-DICHLOROETHANE					310						140		
1,1-DICHLOROETHENE		22	J	R				10					
1,2,4-TRICHLOROBENZENE		11	J	R				0.5	U				
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	CR				0.5	U				
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U				
1,2-DICHLOROBENZENE		7.5	J	R				0.5	U				
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U				
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U				
1,3-DICHLOROBENZENE		5.8	J	R				0.5	U				
1,4-DICHLOROBENZENE		26	J	R				0.5	U				
2-BUTANONE		2.5	UJ	R				2.5	U				
2-HEXANONE		2.5	UJ	CR				2.5	U				
4-METHYL-2-PENTANONE		2.5	UJ	CR				2.5	U				
ACETONE		2.5	UJ	R				2.5	U				
BENZENE		2.3	J	R				0.5	U				
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U				
BROMOFORM		0.5	UJ	CR				0.5	U				
BROMOMETHANE		0.5	UJ	R				0.5	UJ	C			
CARBON DISULFIDE		0.5	UJ	R				0.5	U				
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U				
CHLOROBENZENE		3	J	R				0.5	U				
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U				
CHLOROETHANE					220			11					
CHLOROFORM		0.5	UJ	R				0.5	U				
CHLOROMETHANE		0.5	UJ	R				0.5	U				
CIS-1,2-DICHLOROETHENE		0.85	J	PR				0.5	U				
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U				
CYCLOHEXANE		0.85	J	PR				0.5	U				
DICHLORODIFLUOROMETHANE		0.5	UJ	R				0.5	U				
ETHYLBENZENE		0.5	UJ	R				0.5	U				
ISOPROPYLBENZENE		2.7	J	R				0.5	U				

PROJ_NO: 02045	NSAMPLE	SA-PZ-133I-20110308			SA-PZ-135I-20110308			SA-PZ-136I-20110308			SA-PZ-138I1-20110308		
SDG: C1497	LAB_ID	C1497-20			C1497-18			C1497-16			C1497-13		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		11			7.3			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		63			34			1.8					
1,1-DICHLOROETHENE		3.9			2.6			0.5	U		86		
1,2,4-TRICHLOROBENZENE		0.84	J	P	0.5	U		0.5	U		9.9		
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		3.7		
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		1		
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		1.6		
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	U		7.2		
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	UJ	C	2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		2.6		
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.55	J	P
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		5.2			1.2			0.5	U				
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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		1.4		
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		8.2		

PROJ_NO: 02045	NSAMPLE	SA-PZ-138I1-20110308DL			SA-PZ-138I-20110308			SA-PZ-139I-20110308			SA-PZ-149I1-20110308		
SDG: C1497	LAB_ID	C1497-13DL			C1497-11			C1497-17			C1497-15		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		340			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		1200			4.1			6.5			18		
1,1-DICHLOROETHENE					0.5	U		0.5	U		1.7		
1,2,4-TRICHLOROBENZENE					0.5	U		0.5	U		1.9		
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		7.8		
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		6		
1,4-DICHLOROBENZENE					0.5	U		0.5	U		28		
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	U		2.5	U		2.5	U	
ACETONE					2.5	U		2.5	U		2.5	UJ	C
BENZENE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	U	
BROMOMETHANE					0.5	U		0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE					0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U		0.5	U	
CHLOROBENZENE					0.5	U		0.5	U		5.1		
CHLORODIBROMOMETHANE					0.5	U		0.5	U		0.5	U	
CHLOROETHANE		240			0.5	U		0.5	U		18		
CHLOROFORM					0.5	U		0.5	U		0.5	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	
ETHYLBENZENE					0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	U		0.5	U		1.8		

PROJ_NO: 02045	NSAMPLE	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308DL			SA-PZ-155I-20110307			SA-PZ-157I1-20110307		
SDG: C1497	LAB_ID	C1497-08			C1497-08DL			C1497-07			C1497-05		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		36	J	R				19			20	J	R
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,1-DICHLOROETHANE					310			70					
1,1-DICHLOROETHENE		20	J	R				5.4			14	J	R
1,2,4-TRICHLOROBENZENE		9.6	J	R				0.5	U		9.4	J	R
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	CR				0.5	U		0.5	UJ	CR
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,2-DICHLOROBENZENE		6.9	J	R				0.5	U		7.4	J	R
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,3-DICHLOROBENZENE		5.3	J	R				0.5	U		5.6	J	R
1,4-DICHLOROBENZENE		23	J	R				0.5	U		26	J	R
2-BUTANONE		2.5	UJ	R				2.5	U		2.5	UJ	R
2-HEXANONE		2.5	UJ	CR				2.5	U		2.5	UJ	CR
4-METHYL-2-PENTANONE		2.5	UJ	CR				2.5	U		2.5	UJ	CR
ACETONE		2.5	UJ	R				2.5	U		2.5	UJ	R
BENZENE		2.1	J	R				0.5	U		1.7	J	R
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
BROMOFORM		0.5	UJ	CR				0.5	U		0.5	UJ	CR
BROMOMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
CARBON DISULFIDE		0.5	UJ	R				0.5	U		0.5	UJ	R
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLOROBENZENE		2.7	J	R				0.5	U		3	J	R
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLOROETHANE					220			7.5					
CHLOROFORM		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
CIS-1,2-DICHLOROETHENE		0.76	J	PR				0.5	U		0.59	J	PR
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	UJ	R
CYCLOHEXANE		0.82	J	PR				0.5	U		0.5	UJ	R
DICHLORODIFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
ETHYLBENZENE		0.5	UJ	R				0.5	U		0.5	UJ	R
ISOPROPYLBENZENE		2.5	J	R				0.5	U		1.7	J	R

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110307DL			SA-PZ-157I-20110307			SA-PZ-158I1-20110307			SA-PZ-158I1-20110307DL		
SDG: C1497	LAB_ID	C1497-05DL			C1497-02			C1497-04			C1497-04DL		
FRACTION: OV	SAMP_DATE	3/7/2011			3/7/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					21			21	J	R			
1,1,2,2-TETRACHLOROETHANE					0.5	U		0.5	UJ	R			
1,1,2-TRICHLOROETHANE					0.5	U		0.5	UJ	R			
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U		0.5	UJ	R			
1,1-DICHLOROETHANE		190			71						170		
1,1-DICHLOROETHENE					5.2			12	J	R			
1,2,4-TRICHLOROBENZENE					0.5	U		6.9	J	R			
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	UJ	CR			
1,2-DIBROMOETHANE					0.5	U		0.5	UJ	R			
1,2-DICHLOROBENZENE					0.5	U		5	J	R			
1,2-DICHLOROETHANE					0.5	U		0.5	UJ	R			
1,2-DICHLOROPROPANE					0.5	U		0.5	UJ	R			
1,3-DICHLOROBENZENE					0.5	U		3.5	J	R			
1,4-DICHLOROBENZENE					0.5	U		17	J	R			
2-BUTANONE					2.5	U		2.5	UJ	R			
2-HEXANONE					2.5	U		2.5	UJ	CR			
4-METHYL-2-PENTANONE					2.5	U		2.5	UJ	CR			
ACETONE					2.5	U		2.5	UJ	R			
BENZENE					0.5	U		1.4	J	R			
BROMODICHLOROMETHANE					0.5	U		0.5	UJ	R			
BROMOFORM					0.5	U		0.5	UJ	CR			
BROMOMETHANE					0.5	U		0.5	UJ	R			
CARBON DISULFIDE					0.5	U		0.5	UJ	R			
CARBON TETRACHLORIDE					0.5	U		0.5	UJ	R			
CHLOROBENZENE					0.5	U		1.8	J	R			
CHLORODIBROMOMETHANE					0.5	U		0.5	UJ	R			
CHLOROETHANE		160			3.3						130		
CHLOROFORM					0.5	U		0.5	UJ	R			
CHLOROMETHANE					0.5	U		0.5	UJ	R			
CIS-1,2-DICHLOROETHENE					0.5	U		0.63	J	PR			
CIS-1,3-DICHLOROPROPENE					0.5	U		0.5	UJ	R			
CYCLOHEXANE					0.5	U		0.5	UJ	R			
DICHLORODIFLUOROMETHANE					0.5	U		0.5	UJ	R			
ETHYLBENZENE					0.5	U		0.5	UJ	R			
ISOPROPYLBENZENE					0.5	U		0.5	UJ	R			

PROJ_NO: 02045	NSAMPLE	SA-PZ-158I-20110307RE			SA-PZ-159I1-20110308			SA-PZ-159I-20110307			SA-PZ-160I1-20110308		
SDG: C1497	LAB_ID	C1497-03RE			C1497-09			C1497-06			C1497-14		
FRACTION: OV	SAMP_DATE	3/7/2011			3/8/2011			3/7/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		11	J	R	13			18			47		
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		43	J	R	89	J	D	65					
1,1-DICHLOROETHENE		3	J	R	8.8			4.9			17		
1,2,4-TRICHLOROBENZENE		0.5	UJ	R	4.2			0.5	U		2.7		
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	UJ	R	5			0.5	U		2.2		
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R	3.6			0.5	U		1.2		
1,4-DICHLOROBENZENE		0.5	UJ	R	17			0.5	U		5.2		
2-BUTANONE		2.5	UJ	R	2.5	U		2.5	U		1.5	J	P
2-HEXANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UJ	R	48			2.5	U		2.5	U	
BENZENE		0.5	UJ	R	0.98	J	P	0.5	U		0.82	J	P
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R	0.5	UJ	D	0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	UJ	C
CARBON DISULFIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R	2			0.5	U		0.66	J	P
CHLORODIBROMOMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROETHANE		1.6	J	R	87			3.3			55		
CHLOROFORM		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R	0.99	J	P	0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	UJ	R	0.63	J	P	0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-160I1-20110308DL			SA-PZ-160I-20110308			SA-PZ-160I-20110308DL			SA-PZ-161I-20110308		
SDG: C1497	LAB_ID	C1497-14DL			C1497-12			C1497-12DL			C1497-19		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS							100.0					
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					30	J	R				26		
1,1,2,2-TETRACHLOROETHANE					0.5	UJ	R				0.5	U	
1,1,2-TRICHLOROETHANE					0.5	UJ	R				0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	UJ	R				0.5	U	
1,1-DICHLOROETHANE		210						130					
1,1-DICHLOROETHENE					9.3	J	R				10		
1,2,4-TRICHLOROBENZENE					0.63	J	PR				0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	UJ	CR				0.5	U	
1,2-DIBROMOETHANE					0.5	UJ	R				0.5	U	
1,2-DICHLOROBENZENE					0.5	UJ	R				0.5	U	
1,2-DICHLOROETHANE					0.5	UJ	R				0.5	U	
1,2-DICHLOROPROPANE					0.5	UJ	R				0.5	U	
1,3-DICHLOROBENZENE					0.5	UJ	R				0.5	U	
1,4-DICHLOROBENZENE					0.5	UJ	R				0.5	U	
2-BUTANONE					2.5	UJ	R				2.5	U	
2-HEXANONE					2.5	UJ	CR				2.5	U	
4-METHYL-2-PENTANONE					2.5	UJ	CR				2.5	U	
ACETONE					7	J	R				2.5	U	
BENZENE					0.5	UJ	R				0.5	U	
BROMODICHLOROMETHANE					0.5	UJ	R				0.5	U	
BROMOFORM					0.5	UJ	CR				0.5	U	
BROMOMETHANE					0.5	UJ	R				0.5	U	
CARBON DISULFIDE					0.5	UJ	R				0.5	U	
CARBON TETRACHLORIDE					0.5	UJ	R				0.5	U	
CHLOROBENZENE					0.5	UJ	R				0.5	U	
CHLORODIBROMOMETHANE					0.5	UJ	R				0.5	U	
CHLOROETHANE					11	J	R				9.5		
CHLOROFORM					0.5	UJ	R				0.5	U	
CHLOROMETHANE					0.5	UJ	R				0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	UJ	R				0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	UJ	R				0.5	U	
CYCLOHEXANE					0.5	UJ	R				0.5	U	
DICHLORODIFLUOROMETHANE					0.5	UJ	R				0.5	U	
ETHYLBENZENE					0.5	UJ	R				0.5	U	
ISOPROPYLBENZENE					0.5	UJ	R				0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-161I-20110308DL			SA-TB01-20110307		
SDG: C1497	LAB_ID	C1497-19DL			C1497-01		
FRACTION: OV	SAMP_DATE	3/8/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U	
1,1-DICHLOROETHANE		140			0.5	U	
1,1-DICHLOROETHENE					0.5	U	
1,2,4-TRICHLOROBENZENE					0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U	
1,2-DIBROMOETHANE					0.5	U	
1,2-DICHLOROBENZENE					0.5	U	
1,2-DICHLOROETHANE					0.5	U	
1,2-DICHLOROPROPANE					0.5	U	
1,3-DICHLOROBENZENE					0.5	U	
1,4-DICHLOROBENZENE					0.5	U	
2-BUTANONE					2.5	U	
2-HEXANONE					2.5	U	
4-METHYL-2-PENTANONE					2.5	U	
ACETONE					2.5	U	
BENZENE					0.5	U	
BROMODICHLOROMETHANE					0.5	U	
BROMOFORM					0.5	U	
BROMOMETHANE					0.5	U	
CARBON DISULFIDE					0.5	U	
CARBON TETRACHLORIDE					0.5	U	
CHLOROBENZENE					0.5	U	
CHLORODIBROMOMETHANE					0.5	U	
CHLOROETHANE					0.5	U	
CHLOROFORM					0.5	U	
CHLOROMETHANE					0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U	
CYCLOHEXANE					0.5	U	
DICHLORODIFLUOROMETHANE					0.5	U	
ETHYLBENZENE					0.5	U	
ISOPROPYLBENZENE					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110308			SA-DUP01-20110308DL			SA-DUP02-20110308			SA-DUP02-20110308DL		
SDG: C1497	LAB_ID	C1497-10			C1497-10DL			C1497-21			C1497-21DL		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308			SA-PZ-161I-20110308			SA-PZ-161I-20110308		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES		1	UJ	R				1	U				
METHYL ACETATE		0.5	UJ	R				0.5	U				
METHYL CYCLOHEXANE		0.5	UJ	R				0.5	U				
METHYL TERT-BUTYL ETHER		0.5	UJ	R				0.5	U				
METHYLENE CHLORIDE		0.5	UJ	R				0.5	U				
O-XYLENE		0.5	UJ	R				0.5	U				
STYRENE		0.5	UJ	R				0.5	U				
TETRACHLOROETHENE		0.5	UJ	R				0.5	U				
TOLUENE		0.5	UJ	R				0.5	U				
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U				
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U				
TRICHLOROETHENE		0.58	J	PR				0.5	U				
TRICHLOROFLUOROMETHANE		0.5	UJ	R				0.5	U				
VINYL CHLORIDE		0.5	UJ	R				0.5	U				

PROJ_NO: 02045	NSAMPLE	SA-PZ-133I-20110308			SA-PZ-135I-20110308			SA-PZ-136I-20110308			SA-PZ-138I1-20110308		
SDG: C1497	LAB_ID	C1497-20			C1497-18			C1497-16			C1497-13		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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		0.97	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: 02045	NSAMPLE	SA-PZ-138I1-20110308DL			SA-PZ-138I-20110308			SA-PZ-139I-20110308			SA-PZ-149I1-20110308		
SDG: C1497	LAB_ID	C1497-13DL			C1497-11			C1497-17			C1497-15		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES					1	U		1	U		1	U	
METHYL ACETATE					0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308DL			SA-PZ-155I-20110307			SA-PZ-157I1-20110307		
SDG: C1497	LAB_ID	C1497-08			C1497-08DL			C1497-07			C1497-05		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES		1	UJ	R				1	U		1	UJ	R
METHYL ACETATE		0.5	UJ	R				0.5	U		0.5	UJ	R
METHYL CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	UJ	R
METHYL TERT-BUTYL ETHER		0.5	UJ	R				0.5	U		0.5	UJ	R
METHYLENE CHLORIDE		0.5	UJ	R				0.5	U		0.5	UJ	R
O-XYLENE		0.5	UJ	R				0.5	U		0.5	UJ	R
STYRENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TETRACHLOROETHENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TOLUENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRICHLOROETHENE		0.53	J	PR				0.5	U		0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
VINYL CHLORIDE		0.5	UJ	R				0.5	U		0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110307DL			SA-PZ-157I-20110307			SA-PZ-158I1-20110307			SA-PZ-158I1-20110307DL		
SDG: C1497	LAB_ID	C1497-05DL			C1497-02			C1497-04			C1497-04DL		
FRACTION: OV	SAMP_DATE	3/7/2011			3/7/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES					1	U		1	UJ	R			
METHYL ACETATE					0.5	U		0.5	UJ	R			
METHYL CYCLOHEXANE					0.5	U		0.5	UJ	R			
METHYL TERT-BUTYL ETHER					0.5	U		0.5	UJ	R			
METHYLENE CHLORIDE					0.5	U		0.5	UJ	R			
O-XYLENE					0.5	U		0.5	UJ	R			
STYRENE					0.5	U		0.5	UJ	R			
TETRACHLOROETHENE					0.5	U		0.5	UJ	R			
TOLUENE					0.5	U		0.5	UJ	R			
TRANS-1,2-DICHLOROETHENE					0.5	U		0.5	UJ	R			
TRANS-1,3-DICHLOROPROPENE					0.5	U		0.5	UJ	R			
TRICHLOROETHENE					0.5	U		0.5	UJ	R			
TRICHLOROFLUOROMETHANE					0.5	U		0.5	UJ	R			
VINYL CHLORIDE					0.5	U		0.5	UJ	R			

PROJ_NO: 02045	NSAMPLE	SA-PZ-158I-20110307RE			SA-PZ-159I1-20110308			SA-PZ-159I-20110307			SA-PZ-160I1-20110308		
SDG: C1497	LAB_ID	C1497-03RE			C1497-09			C1497-06			C1497-14		
FRACTION: OV	SAMP_DATE	3/7/2011			3/8/2011			3/7/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES		1	UJ	R	1	U		1	U		1	U	
METHYL ACETATE		0.5	UJ	R	3.8			0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
STYRENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TOLUENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-160I1-20110308DL			SA-PZ-160I-20110308			SA-PZ-160I-20110308DL			SA-PZ-161I-20110308		
SDG: C1497	LAB_ID	C1497-14DL			C1497-12			C1497-12DL			C1497-19		
FRACTION: OV	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS							100.0					
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES					1	UJ	R				1	U	
METHYL ACETATE					0.5	UJ	R				0.5	U	
METHYL CYCLOHEXANE					0.5	UJ	R				0.5	U	
METHYL TERT-BUTYL ETHER					0.5	UJ	R				0.5	U	
METHYLENE CHLORIDE					0.5	UJ	R				0.5	U	
O-XYLENE					0.5	UJ	R				0.5	U	
STYRENE					0.5	UJ	R				0.5	U	
TETRACHLOROETHENE					0.5	UJ	R				0.5	U	
TOLUENE					0.5	UJ	R				0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	UJ	R				0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	UJ	R				0.5	U	
TRICHLOROETHENE					0.5	UJ	R				0.5	U	
TRICHLOROFLUOROMETHANE					0.5	UJ	R				0.5	U	
VINYL CHLORIDE					0.5	UJ	R				0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-161I-20110308DL			SA-TB01-20110307		
SDG: C1497	LAB_ID	C1497-19DL			C1497-01		
FRACTION: OV	SAMP_DATE	3/8/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
M+P-XYLENES					1	U	
METHYL ACETATE					0.5	U	
METHYL CYCLOHEXANE					0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U	
METHYLENE CHLORIDE					0.5	U	
O-XYLENE					0.5	U	
STYRENE					0.5	U	
TETRACHLOROETHENE					0.5	U	
TOLUENE					0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U	
TRICHLOROETHENE					0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U	
VINYL CHLORIDE					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110308			SA-DUP01-20110308DL			SA-PZ-151I1-20110308			SA-PZ-151I1-20110308DL		
SDG: C1497	LAB_ID	C1497-10			C1497-10DL			C1497-08			C1497-08DL		
FRACTION: OVG	SAMP_DATE	3/8/2011			3/8/2011			3/8/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF	SA-PZ-151I1-20110308			SA-PZ-151I1-20110308								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		2.5	U					2.5	U				
ETHENE		2.5	U					2.5	U				
METHANE					319.5						402.2		

PROJ_NO: 02045	NSAMPLE	SA-PZ-155I-20110307			SA-PZ-157I1-20110307			SA-PZ-157I1-20110307DL			SA-PZ-157I-20110307		
SDG: C1497	LAB_ID	C1497-07			C1497-05			C1497-05DL			C1497-02		
FRACTION: OVG	SAMP_DATE	3/7/2011			3/7/2011			3/7/2011			3/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		2.5	U		2.5	U					2.5	U	
ETHENE		2.5	U		2.5	U					2.5	U	
METHANE		8.1						258.4			2.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-159I1-20110308			SA-PZ-159I1-20110308DL			SA-PZ-159I-20110307			SA-PZ-160I-20110308		
SDG: C1497	LAB_ID	C1497-09			C1497-09DL			C1497-06			C1497-12		
FRACTION: OVG	SAMP_DATE	3/8/2011			3/8/2011			3/7/2011			3/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		2.5	UJ	D				2.5	U		2.5	U	
ETHENE		2.5	UJ	D				2.5	U		2.5	U	
METHANE					195.4			2.5	U		4.2		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**MAY 6, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / OVG**
NWIRP CALVERTON CTO WE08
SDG C1519

SAMPLES: 20 / Aqueous / VOC

SA-DUP03-20110309	SA-MW-126D-20110310	SA-MW-126I-20110310
SA-MW-126S-20110310	SA-MW-127S-20110310	SA-MW-128D-20110310
SA-MW-129D-20110310	SA-MW-129I-20110310	SA-MW-129S-20110310
SA-MW-131D-20110309	SA-MW-131I-20110309	SA-MW-131S-20110309
SA-MW-132I-20110309	SA-MW-132S-20110309	SA-PZ-120S-20110309
SA-PZ-133I1-20110310	SA-PZ-145D-20110309	SA-PZ-145I-20110309
SA-PZ-145S-20110309	SA-TB02-20110309	

7 / Aqueous / OVG

SA-MW-127S-20110310	SA-MW-131D-20110309	SA-MW-131I-20110309
SA-MW-131S-20110309	SA-PZ-145D-20110309	SA-PZ-145I-20110309
SA-PZ-145S-20110309		

Overview

The sample set for NWIRP Calverton, SDG C1519 consisted of twenty (20) aqueous environmental samples including one (1) aqueous trip blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC) and seven (7) samples were analyzed for organic volatile gases (OVG). One (1) field duplicate pair was included in this Sample Delivery Group (SDG): SA-DUP03-20110309 / SA-PZ-145D-20110309.

The samples were collected by Tetra Tech on March 9, and 10, 2011 and analyzed by ChemTech. All analyses were conducted in accordance with EPA Method SW-846 8260B and RSK-175 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
- Laboratory Control Sample Recoveries
- * Blank Results
- 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 initial calibration relative response factor (RRF) was less than the quality control limit of 0.05 for 1,4-dioxane for the instrument MSVOAG on 03/15/11 and 03/22/11. Additionally, all continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane. All sample results were non-detected and were qualified rejected, (UR).

The CCV percent difference (%D) was greater than the 20% quality control limit for bromomethane and acetone for instrument MSVOAG on 03/17/11 @ 10:05 affecting sample SA-TB02-20110309. The non-detected results for bromomethane and acetone for sample SA-TB02-20110309 were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for 1,1,1-trichloroethane, trans-1,3-dichloropropene, 1,2-dibromoethane, bromoform, and 1,2-dibromo-3-chloropropane for instrument MSVOAG on 03/21/11 @ 14:59 affecting samples SA-MW-132S-20110309, SA-MW-132I-20110309, SA-MW-131D-20110309, SA-PZ-120S-20110309, SA-PZ-145D-20110309, and SA-MW-131S-20110309. The non-detected 1,1,1-trichloroethane, trans-1,3-dichloropropene, 1,2-dibromoethane, bromoform, and 1,2-dibromo-3-chloropropane results for the aforementioned samples were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for acetone and 1,2,3-trichlorobenzene for instrument MSVOAG on 03/24/11 @ 10:59 affecting samples SA-PZ-133I1-20110310 (dilution analysis) and SA-MW-128D-20110310. Non-detected acetone and 1,2,3-trichloro-benzene results in sample SA-MW-128D-20110310 were qualified estimated, (UJ). SA-PZ-133I1-20110310 was not affected because acetone and 1,2,3-trichlorobenzene results were not reported from the dilution analysis.

The laboratory control sample (LCS) BSG0321W3 percent recovery (%R) was greater than the quality control limit for 1,2-dibromoethane. All affected samples had non-detected results for 1,2-dibromoethane and no action was taken.

The laboratory control sample (LCS) BSG0324W1 percent recovery (%R) was greater than the quality control limit for 2-hexanone. All affected samples had non-detected results for 2-hexanone and no action was taken.

The matrix spike (MS) and the MS duplicate (MSD) %Rs were greater than the quality control limit for 4-methyl-2-pentanone and 2-hexanone for the spiked sample SA-MW-127D-20110310 from SDG 1520. Additionally the MS 1,2-dibromoethane and 1,2-dibromo-3-chloropropane %Rs and the MSD acetone and 1,4-dioxane %Rs (as well as MS/MSD RPDs) were greater than the quality control limit. No action was taken as this sample was not included in this SDG and there was no obvious applicability of these results to other samples in this SDG.

The surrogate %Rs for toluene-d8 were less than the quality control limit for samples SA-MW-131D-20110309 and SA-PZ-145D-20110309. Both samples were re-analyzed with similar %Rs less than the quality control limit for toluene-d8. As there was no improvement in the re-analysis surrogate %Rs, the original sample results were reported. The sample SA-MW-131D-20110309 and SA-PZ-145D-20110309 positive and non-detected VOC analytes were qualified estimated, (J) and (UJ), respectively, with the exception of 1,4-dioxane non-detected results which were previously qualified rejected.

Positive results below the limit of detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Fifty-two (52) analytes were reported in this SDG.

OVG

The laboratory did not provide a sample analysis log for the CCV, blank, LCS, and sample analyses. A run analysis log was manually entered on the first CCV Form by the chemistry data validator.

Additional Comments

Positive results below the LOD and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The following sample was analyzed for VOCs both undiluted and diluted by the laboratory. Only 1,1-dichloroethane, which was higher than the highest calibration level in the undiluted sample, was reported from the dilution analysis.

Sample	Dilution
SA-PZ-133I1-20110310	1X, 5X

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane VOC analyte results were qualified due initial and continuing calibration RRF non-compliances. Sample VOC results were qualified due to continuing calibration verification quality control limit non-compliances. VOC analyte results for samples SA-MW-131D-20110309 and SA-PZ-145D-20110309 were qualified due to surrogate %R quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
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Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. 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)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110309			SA-MW-126D-20110310			SA-MW-126I-20110310			SA-MW-126S-20110310		
SDG: C1519	LAB_ID	C1519-11			C1519-12			C1519-16			C1519-14		
FRACTION: OV	SAMP_DATE	3/9/2011			3/10/2011			3/10/2011			3/10/2011		
MEDIA: SOIL	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	SA-PZ-145D-20110309											
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		24			0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		1.4			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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.57	J	P	0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.69	J	P	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: 02045	NSAMPLE	SA-MW-127S-20110310			SA-MW-128D-20110310			SA-MW-129D-20110310			SA-MW-129I-20110310		
SDG: C1519	LAB_ID	C1519-20			C1519-19			C1519-13			C1519-15		
FRACTION: OV	SAMP_DATE	3/10/2011			3/10/2011			3/10/2011			3/10/2011		
MEDIA: SOIL	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		2.1			2.7			7		
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.64	J	P
1,2,3-TRICHLOROBENZENE		0.5	U		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	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	UJ	C	2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-129S-20110310			SA-MW-131D-20110309			SA-MW-131I-20110309			SA-MW-131S-20110309		
SDG: C1519	LAB_ID	C1519-17			C1519-05			C1519-06			C1519-03		
FRACTION: OV	SAMP_DATE	3/10/2011			3/9/2011			3/9/2011			3/9/2011		
MEDIA: SOIL	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	UJ	CR	0.5	U		0.5	UJ	C
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		18	J	R	16			0.5	U	
1,1-DICHLOROETHENE		0.5	U		2	J	R	1.5			0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	UJ	CR	0.5	U		0.5	UJ	C
1,2-DIBROMOETHANE		0.5	U		0.5	UJ	CR	0.5	U		0.5	UJ	C
1,2-DICHLOROBENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	UJ	R	2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	UJ	R	2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	UJ	R	2.5	U		2.5	U	
ACETONE		2.5	U		2.5	UJ	R	2.5	U		2.5	U	
BENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	UJ	CR	0.5	U		0.5	UJ	C
BROMOMETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-MW-132I-20110309			SA-MW-132S-20110309			SA-PZ-120S-20110309			SA-PZ-133I1-20110310		
SDG: C1519	LAB_ID	C1519-04			C1519-02			C1519-07			C1519-18		
FRACTION: OV	SAMP_DATE	3/9/2011			3/9/2011			3/9/2011			3/10/2011		
MEDIA: SOIL	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	UJ	C	0.5	UJ	C	0.5	UJ	C	11		
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		4.6			0.5	U		0.5	U				
1,1-DICHLOROETHENE		0.94	J	P	0.5	U		0.5	U		6.6		
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	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		12		
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.93	J	P	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: 02045	NSAMPLE	SA-PZ-133I1-20110310-DL			SA-PZ-145D-20110309			SA-PZ-145I-20110309			SA-PZ-145S-20110309		
SDG: C1519	LAB_ID	C1519-18DL			C1519-09			C1519-08			C1519-10		
FRACTION: OV	SAMP_DATE	3/10/2011			3/9/2011			3/9/2011			3/9/2011		
MEDIA: SOIL	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	UJ	CR	5.6			0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	UJ	R	0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE					0.5	UJ	R	0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	UJ	R	0.5	U		0.5	U	
1,1-DICHLOROETHANE		130			24	J	R	72			0.5	U	
1,1-DICHLOROETHENE					1.5	J	R	7.4			0.5	U	
1,2,3-TRICHLOROBENZENE					0.5	UJ	R	0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE					0.78	J	PR	0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	UJ	CR	0.5	U		0.5	U	
1,2-DIBROMOETHANE					0.5	UJ	CR	0.5	U		0.5	U	
1,2-DICHLOROBENZENE					0.5	UJ	R	0.5	U		0.5	U	
1,2-DICHLOROETHANE					0.5	UJ	R	0.5	U		0.5	U	
1,2-DICHLOROPROPANE					0.5	UJ	R	0.5	U		0.5	U	
1,3-DICHLOROBENZENE					0.5	UJ	R	0.5	U		0.5	U	
1,4-DICHLOROBENZENE					0.5	UJ	R	0.5	U		0.5	U	
1,4-DIOXANE					10	UR	C	10	UR	C	10	UR	C
2-BUTANONE					2.5	UJ	R	2.5	U		2.5	U	
2-HEXANONE					2.5	UJ	R	2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	UJ	R	2.5	U		2.5	U	
ACETONE					2.5	UJ	R	2.5	U		2.5	U	
BENZENE					0.5	UJ	R	0.5	U		0.5	U	
BROMOCHLOROMETHANE					0.5	UJ	R	0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	UJ	R	0.5	U		0.5	U	
BROMOFORM					0.5	UJ	CR	0.5	U		0.5	U	
BROMOMETHANE					0.5	UJ	R	0.5	U		0.5	U	
CARBON DISULFIDE					0.5	UJ	R	0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	UJ	R	0.5	U		0.5	U	
CHLOROBENZENE					0.5	UJ	R	0.5	U		0.5	U	
CHLORODIBROMOMETHANE					0.5	UJ	R	0.5	U		0.5	U	
CHLOROETHANE					0.58	J	PR	2.1			0.5	U	
CHLOROFORM					0.5	UJ	R	0.5	U		0.5	U	
CHLOROMETHANE					0.5	UJ	R	0.5	U		0.62	J	P
CIS-1,2-DICHLOROETHENE					0.5	UJ	R	0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	UJ	R	0.5	U		0.5	U	
CYCLOHEXANE					0.5	UJ	R	0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TB02-20110309		
SDG: C1519	LAB_ID	C1519-01		
FRACTION: OV	SAMP_DATE	3/9/2011		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U	
1,1-DICHLOROETHANE		0.5	U	
1,1-DICHLOROETHENE		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U	
1,2-DIBROMOETHANE		0.5	U	
1,2-DICHLOROBENZENE		0.5	U	
1,2-DICHLOROETHANE		0.5	U	
1,2-DICHLOROPROPANE		0.5	U	
1,3-DICHLOROBENZENE		0.5	U	
1,4-DICHLOROBENZENE		0.5	U	
1,4-DIOXANE		10	UR	C
2-BUTANONE		2.5	U	
2-HEXANONE		2.5	U	
4-METHYL-2-PENTANONE		2.5	U	
ACETONE		2.5	UJ	C
BENZENE		0.5	U	
BROMOCHLOROMETHANE		0.5	U	
BROMODICHLOROMETHANE		0.5	U	
BROMOFORM		0.5	U	
BROMOMETHANE		0.5	UJ	C
CARBON DISULFIDE		0.5	U	
CARBON TETRACHLORIDE		0.5	U	
CHLOROBENZENE		0.5	U	
CHLORODIBROMOMETHANE		0.5	U	
CHLOROETHANE		0.5	U	
CHLOROFORM		0.5	U	
CHLOROMETHANE		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U	
CYCLOHEXANE		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110309			SA-MW-126D-20110310			SA-MW-126I-20110310			SA-MW-126S-20110310		
SDG: C1519	LAB_ID	C1519-11			C1519-12			C1519-16			C1519-14		
FRACTION: OV	SAMP_DATE	3/9/2011			3/10/2011			3/10/2011			3/10/2011		
MEDIA: SOIL	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	SA-PZ-145D-20110309											
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-127S-20110310			SA-MW-128D-20110310			SA-MW-129D-20110310			SA-MW-129I-20110310		
SDG: C1519	LAB_ID	C1519-20			C1519-19			C1519-13			C1519-15		
FRACTION: OV	SAMP_DATE	3/10/2011			3/10/2011			3/10/2011			3/10/2011		
MEDIA: SOIL	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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-129S-20110310			SA-MW-131D-20110309			SA-MW-131I-20110309			SA-MW-131S-20110309		
SDG: C1519	LAB_ID	C1519-17			C1519-05			C1519-06			C1519-03		
FRACTION: OV	SAMP_DATE	3/10/2011			3/9/2011			3/9/2011			3/9/2011		
MEDIA: SOIL	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	UJ	R	0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
M+P-XYLENES		1	U		1	UJ	R	1	U		1	U	
METHYL ACETATE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
STYRENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	UJ	CR	0.5	U		0.5	UJ	C
TRICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-MW-132I-20110309			SA-MW-132S-20110309			SA-PZ-120S-20110309			SA-PZ-133I1-20110310		
SDG: C1519	LAB_ID	C1519-04			C1519-02			C1519-07			C1519-18		
FRACTION: OV	SAMP_DATE	3/9/2011			3/9/2011			3/9/2011			3/10/2011		
MEDIA: SOIL	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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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	UJ	C	0.5	UJ	C	0.5	UJ	C	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: 02045	NSAMPLE	SA-PZ-133I1-20110310-DL			SA-PZ-145D-20110309			SA-PZ-145I-20110309			SA-PZ-145S-20110309		
SDG: C1519	LAB_ID	C1519-18DL			C1519-09			C1519-08			C1519-10		
FRACTION: OV	SAMP_DATE	3/10/2011			3/9/2011			3/9/2011			3/9/2011		
MEDIA: SOIL	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	UJ	R	0.5	U		0.5	U	
ETHYLBENZENE					0.5	UJ	R	0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	UJ	R	0.5	U		0.5	U	
M+P-XYLENES					1	UJ	R	1	U		1	U	
METHYL ACETATE					0.5	UJ	R	0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	UJ	R	0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	UJ	R	0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	UJ	R	0.5	U		0.5	U	
O-XYLENE					0.5	UJ	R	0.5	U		0.5	U	
STYRENE					0.5	UJ	R	0.5	U		0.5	U	
TETRACHLOROETHENE					0.5	UJ	R	0.5	U		0.5	U	
TOLUENE					0.5	UJ	R	0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	UJ	R	0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	UJ	CR	0.5	U		0.5	U	
TRICHLOROETHENE					0.5	UJ	R	0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE					0.5	UJ	R	0.5	U		0.5	U	
VINYL CHLORIDE					0.5	UJ	R	0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TB02-20110309
SDG: C1519	LAB_ID	C1519-01
FRACTION: OV	SAMP_DATE	3/9/2011
MEDIA: SOIL	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE	0.5	U	
ETHYLBENZENE	0.5	U	
ISOPROPYLBENZENE	0.5	U	
M+P-XYLENES	1	U	
METHYL ACETATE	0.5	U	
METHYL CYCLOHEXANE	0.5	U	
METHYL TERT-BUTYL ETHER	0.5	U	
METHYLENE CHLORIDE	0.5	U	
O-XYLENE	0.5	U	
STYRENE	0.5	U	
TETRACHLOROETHENE	0.5	U	
TOLUENE	0.5	U	
TRANS-1,2-DICHLOROETHENE	0.5	U	
TRANS-1,3-DICHLOROPROPENE	0.5	U	
TRICHLOROETHENE	0.5	U	
TRICHLOROFLUOROMETHANE	0.5	U	
VINYL CHLORIDE	0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**MAY 24, 2011**
FROM:	**A. COGNETTI**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / OVG**
NWIRP CALVERTON CTO WE08
SAMPLE DELIVERY GROUP (SDG) - C1520

SAMPLES: 14/Aqueous/VOC

SA-DUP04-20110311	SA-DUP05-20110311	SA-MW-127D-20110310
SA-MW-127I-20110310	SA-MW-128I-20110310	SA-MW-128S-20110310
SA-MW-130I-20110311	SA-MW-130S-20110311	SA-PZ-118I-20110311
SA-PZ-118S-20110311	SA-PZ-123I1-20110311	SA-PZ-123S-20110311
SA-PZ-144I-20110311	SA-PZ-144S-20110311	

6/Aqueous/OVG

SA-MW-127D-20110310	SA-MW-127I-20110310	SA-PZ-118I-20110311
SA-PZ-118S-20110311	SA-PZ-123I-20110311	SA-PZ-123S-20110311

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C1520 consisted of fourteen (14) aqueous environmental samples analyzed for volatile organic compounds (VOC). Seven (7) aqueous environmental samples were analyzed for organic volatile gases (OVG). There are two (2) field duplicate pairs included in this SDG: SA-PZ-118S-20110311/ SA-DUP04-20110311 and SA-PZ-144I-20110311/ SA-DUP05-20110311.

The samples were collected by Tetra Tech on March 10 and 11, 2011 and analyzed by ChemTech. All analyses were conducted in accordance with EPA Method SW-846 8260B and RSK-175 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
- Laboratory Control Sample Recoveries
- * Laboratory Blank Results
- 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 initial calibration relative response factor (RRF) was less than the 0.05 quality control limit for 1,4-dioxane on instrument MSVOAG on March 22, 2011 and instrument MSVOAH on March 23, 2011. Additionally, all continuing calibrations in this SDG for both instruments had RRFs for 1,4-dioxane less than the 0.05 quality control limit. All nondetected 1,4-dioxane results were qualified as rejected (UR).

The continuing calibration percent drift (%D) for 1,2,3-trichlorobenzene were greater than the 20% quality limit on March 24, 2011 @ 10:59 on instrument MSVOAG. The nondetected 1,4-dioxane results in the affected samples SA-MW-128S-20110310, SA-PZ-118S-20110311, SA-MW-130I-20110311, SA-MW-130S-20110311, SA-PZ-118I-20110311, SA-PZ-144I-20110311, SA-PZ-123S-20110311, SA-DUP04-20110311, SA-DUP05-20110311 and SA-MW-127D-20110310 were qualified as rejected due to a more severe calibration noncompliance. The nondetected 1,2,3-trichlorobenzene results in the affected samples were qualified as estimated (UJ).

OVG

The initial calibration %RSDs for ethane, ethene and methane were greater than 15% and the correlation coefficients were < 0.995 on March 15, 2011 affecting all samples. The positive and nondetected ethane, ethene and methane results were qualified as estimated (J) and (UJ), respectively.

The MS/MSD %Rs of ethane were less than the lower quality control limit in the spiked sample SA-MW-127D-20110310. The RPD for ethane was greater than the quality control limit. The nondetected ethane result in sample SA-MW-127D-20110310 was qualified as estimated (UJ).

The MSD %R of ethene was less than the lower quality control limit and the RPD was outside quality control limits in the spiked sample SA-MW-127D-20110310. The nondetected ethene result was qualified as estimated (UJ).

The MS/MSD %Rs of ethane, ethene and methane were less than the lower quality control limit in spiked sample SA-PZ-123I1-20110311. The RPDs for ethane and ethene exceeded quality control limits. The positive methane result and the nondetected ethane and ethene results were qualified as estimated (J) and (UJ), respectively.

Additional Comments

The laboratory incorrectly listed the sample identification on all forms for sample SA-MW-130I-20110311 as written on the chain of custody. The reviewer manually changed the sample identification from SA-PZ to SA-MW on the forms to the correct identification.

The laboratory control sample (LCS) BSG0324W1 had a percent recovery (%R) of 2-hexanone greater than the upper quality control limit. All affected samples had non-detected results for 2-hexanone and no action was taken.

The matrix spike (MS) and the MS duplicate (MSD) %Rs for 4-methyl-2-pentanone and 2-hexanone were greater than the upper quality control limit for the spiked sample SA-MW-127D-20110310. The MS %Rs of 1,2-dibromoethane and 1,2-dibromo-3-chloropropane were greater than the upper quality control limit in spiked sample SA-MW-127D-20110310. The MSD %Rs of acetone and 1,4-dioxane and the relative percent differences (RPDs) for these analytes were greater than the quality control limits. No action was taken on the nondetected 4-methyl-2-pentanone, 2-hexanone, 1,2-dibromoethane, 1,2-dibromo-3-chloropropane, acetone and 1,4-dioxane results in the spiked sample SA-MW-127D-20110310.

The MSD %Rs of 1,2-dichlorobenzene and 1,4-dioxane were greater than the upper quality control limit in the spiked sample SA-PZ-123I1-20110311. The RPD for 1,4-dioxane was also greater than the quality control limit. No action was taken on the nondetected 1,2-dichlorobenzene and 1,4-dioxane results in sample SA-PZ-123I1-20110311.

Sample SA-PZ-118S-20110311 was diluted 5X in order to obtain a concentration of methane within instrument calibration range. Only the methane result from the diluted sample was used for validation and reporting purposes. The ethane and ethene results were taken from the original analysis.

The laboratory did not provide a sample OVG analysis log for the initial calibration, continuing calibration, blank and LCS.

The MSD %R of methane was less than the lower quality control limit in spiked sample SA-MW-127D-20110310. The MS %R and RPD for methane were within quality control limit. No action was taken.

Positive results below the LOD and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Nondetected results were reported to the limit of detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane nondected results were rejected due initial and continuing calibration RRF non-compliances. The initial calibration %RSDs exceeded quality control limits for several analytes resulting in the qualification of OVG results. Continuing calibration %D exceeded quality control limits for 1,2,3-trichlorobenzene resulting in the qualification of data.

Other Factors Affecting Data Quality: The MS/MSD %Rs of several OVG were less than quality control limits in spiked samples SA-MW-127D-20110310 and SA-PZ-123I1-20110311 resulting in the qualification of data. Positive results below the Limit of Detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

Ann Cognetti

TetraTech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA 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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP04-20110311			SA-DUP05-20110311			SA-MW-127D-20110310			SA-MW-127I-20110310		
SDG: C1520	LAB_ID	C1520-17			C1520-18			C1520-04			C1520-02		
FRACTION: OV	SAMP_DATE	3/11/2011			3/11/2011			3/10/2011			3/10/2011		
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	SA-PZ-118S-20110311			SA-PZ-144I-20110311								
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		8.1		
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
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		5.8			4.2			0.5	U		93		
1,1-DICHLOROETHENE		1.1			0.52	J	P	0.5	U		5.6		
1,2,3-TRICHLOROBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
1,2,4-TRICHLOROBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	C	0.5	UJ	C	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
2-HEXANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
4-METHYL-2-PENTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
ACETONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		26		
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-DUP04-20110311			SA-DUP05-20110311			SA-MW-127D-20110310			SA-MW-127I-20110310		
SDG: C1520	LAB_ID	C1520-17			C1520-18			C1520-04			C1520-02		
FRACTION: OV	SAMP_DATE	3/11/2011			3/11/2011			3/10/2011			3/10/2011		
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	SA-PZ-118S-20110311			SA-PZ-144I-20110311								
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		8.1		
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		5.8			4.2			0.5	U		93		
1,1-DICHLOROETHENE		1.1			0.52	J	P	0.5	U		5.6		
1,2,3-TRICHLOROBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		26		
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-128I-20110310			SA-MW-128S-20110310			SA-MW-130I-20110311			SA-MW-130S-20110311		
SDG: C1520	LAB_ID	C1520-01			C1520-03			C1520-08			C1520-09		
FRACTION: OV	SAMP_DATE	3/10/2011			3/10/2011			3/11/2011			3/11/2011		
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		5.1			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	UJ	C	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	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-118I-20110311			SA-PZ-118S-20110311			SA-PZ-123I1-20110311			SA-PZ-123S-20110311		
SDG: C1520	LAB_ID	C1520-10			C1520-07			C1520-12			C1520-16		
FRACTION: OV	SAMP_DATE	3/11/2011			3/11/2011			3/11/2011			3/11/2011		
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		6.1			11			0.5	U	
1,1-DICHLOROETHENE		0.5	U		1.1			0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	C	0.5	UJ	C	0.5	U		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	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-144I-20110311			SA-PZ-144S-20110311		
SDG: C1520	LAB_ID	C1520-11			C1520-15		
FRACTION: OV	SAMP_DATE	3/11/2011			3/11/2011		
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
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U	
1,1-DICHLOROETHANE		4.4			0.5	U	
1,1-DICHLOROETHENE		0.6	J	P	0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	C	0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP04-20110311			SA-DUP05-20110311			SA-MW-127D-20110310			SA-MW-127I-20110310		
SDG: C1520	LAB_ID	C1520-17			C1520-18			C1520-04			C1520-02		
FRACTION: OV	SAMP_DATE	3/11/2011			3/11/2011			3/10/2011			3/10/2011		
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	SA-PZ-118S-20110311			SA-PZ-144I-20110311								
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-128I-20110310			SA-MW-128S-20110310			SA-MW-130I-20110311			SA-MW-130S-20110311		
SDG: C1520	LAB_ID	C1520-01			C1520-03			C1520-08			C1520-09		
FRACTION: OV	SAMP_DATE	3/10/2011			3/10/2011			3/11/2011			3/11/2011		
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-118I-20110311			SA-PZ-118S-20110311			SA-PZ-123I1-20110311			SA-PZ-123S-20110311		
SDG: C1520	LAB_ID	C1520-10			C1520-07			C1520-12			C1520-16		
FRACTION: OV	SAMP_DATE	3/11/2011			3/11/2011			3/11/2011			3/11/2011		
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-144I-20110311			SA-PZ-144S-20110311		
SDG: C1520	LAB_ID	C1520-11			C1520-15		
FRACTION: OV	SAMP_DATE	3/11/2011			3/11/2011		
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
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-MW-127D-20110310			SA-MW-127I-20110310			SA-PZ-118I-20110311			SA-PZ-118S-20110311		
SDG: C1520	LAB_ID	C1520-04			C1520-02			C1520-10			C1520-07		
FRACTION: OVG	SAMP_DATE	3/10/2011			3/10/2011			3/11/2011			3/11/2011		
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
ETHANE		2.5	UJ	CD	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
ETHENE		2.5	UJ	CD	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
METHANE		2.5	UJ	C	6.1	J	C	2.5	UJ	C			

PROJ_NO: 02045	NSAMPLE	SA-PZ-118S-20110311DL			SA-PZ-123I1-20110311			SA-PZ-123S-20110311		
SDG: C1520	LAB_ID	C1520-07DL			C1520-12			C1520-16		
FRACTION: OVG	SAMP_DATE	3/11/2011			3/11/2011			3/11/2011		
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
ETHANE					2.5	UJ	CD	2.5	UJ	C
ETHENE					2.5	UJ	CD	2.5	UJ	C
METHANE		235.4	J	C	4.1	J	CDP	6.1	J	C

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**MAY 9, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / OVG**
NWIRP CALVERTON CTO WE08
SDG C1534

SAMPLES: 20 / Aqueous / VOC

ET-MW-02S-20110312	ET-MW-03S-20110312	ET-MW01S-20110312
FC-MW-01I-20110313	FC-MW-01S-20110313	FC-MW-04I-20110313
FC-MW-04S-20110313	FC-MW-05I-20110313	PZ FC-~~MW~~-05I1-20110313
FC-MW-05S-20110313	SA-DUP06-20110312	SA-PZ-122D-20110312
SA-PZ-122I-20110312	SA-PZ-122S-20110312	SA-PZ-123I-20110312
SA-PZ-140I-20110312	SA-PZ-142I-20110312	SA-PZ-143I-20110312
SA-RB01-20110312	SA-TB03-20110312	

4 / Aqueous / OVG

FC-MW-05I-20110313	FC-MW-05S-20110313	SA-PZ-123I-20110312
SA-PZ-142I-20110312		

Overview

The sample set for NWIRP Calverton, SDG C1534 consisted of twenty (20) aqueous environmental samples including one (1) aqueous trip blank and one (1) aqueous rinse blank. All aqueous samples were analyzed for volatile organic compounds (VOC) and four (4) samples were analyzed for organic volatile gases (OVG). Two (2) field duplicate sample pairs were included in this data validation package. One (1) field duplicate sample pair included samples from this Sample Delivery Group (SDG); SA-DUP06-20110312 / SA-PZ-142I-20110312, and one (1) field duplicate sample pair included samples from this SDG and SDG C1535: FC-DUP07-20110313 (SDG C1535) / FC-~~MW~~ PZ-05I1-20110313.

The samples were collected by Tetra Tech on March 12, and 13, 2011 and analyzed by ChemTech. All analyses were conducted in accordance with EPA Method SW-846 8260B and RSK-175 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
- * Laboratory Control Sample Recoveries
- * Blank Results
- Matrix Spike/Matrix Spike Duplicate Recoveries
- Surrogate Spike Recoveries
- * Internal Standard Recoveries
- Field Duplicate Precision
- * Compound Identification
- * Compound Quantitation
- * Detection Limits

Edits made by JB 2-16-12

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 relative response factor (RRF) was less than the quality control limit of 0.05 for 1,4-dioxane and acetone for the instrument MSVOAD on 03/22/11. Additionally, all continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane and acetone. All sample acetone and 1,4-dioxane results were non-detected and were qualified rejected, (UR).

The CCV percent difference (%D) was greater than the 20% quality control limit for bromoform for instrument MSVOAD on 03/26/11 @ 12:02 affecting samples SA-TB03-20110312, SA-PZ-140-20110312, PZ FC-MW-05I1-20110313, FC-MW-04I-20110313, and the dilution re-analyses for samples SA-PZ-143-20110312, SA-PZ-142-20110312, and SA-DUP06-20110312. The non-detected results for bromoform for samples SA-TB03-20110312, SA-PZ-140-20110312, FC-MW-05I1-20110313, and FC-MW-04I-20110313 were qualified estimated, (UJ). The non-detected bromoform results for the dilution analyses were not qualified as the bromoform results were reported from the undiluted sample analyses.

The CCV %D was greater than the 20% quality control limit for trichlorofluoromethane, tetrachloroethene, and bromoform for instrument MSVOAD on 03/25/11 @ 23:02 affecting samples SA-PZ-122I-20110312, SA-PZ-122S-20110312, ET-MW-03S-20110312, ET-MW-02S-20110312, ET-MW01S-20110312, SA-RB01-20110312, SA-DUP06-20110312, FC-MW-05S-20110313, FC-MW-01I-20110313, FC-MW-01S-20110313, FC-MW-05I-20110313, and FC-MW-04S-20110313. The non-detected trichlorofluoromethane, tetrachloroethene, and bromoform results for the aforementioned samples were qualified estimated, (UJ).

The matrix spike (MS) percent recovery (%R) was less than the quality control limit for 1,4-dioxane for spiked sample FC-MW-04S-20110313. No action was taken as the MS duplicate (MSD) %R for 1,4-dioxane was within the quality control limits and the relative percent difference (RPD) for the 1,4-dioxane MS/MSD was within the quality control limits.

The MS/MSD RPD was greater than the quality control limit for vinyl chloride for spiked sample FC-MW-04S-20110313. No action was taken as both the MS and the MSD %Rs for vinyl chloride were within the quality control limits.

The surrogate %R for 4-bromofluorobenzene was greater than the quality control limit for sample SA-PZ-142-20110312. The sample was not re-analyzed. The sample SA-PZ-142-20110312 positive VOC analytes were qualified estimated, (J), and the non-detected sample VOC results were not qualified.

The RPD was greater than the 30% quality control limit for 1,1-dichloroethene for field duplicate samples FC-DUP07-20110313 (SDG C1535) and FC-MW-05I1-20110313. The aforementioned positive sample 1,1-dichloroethene results were qualified estimated, (J) PZ

Positive results below the limit of detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

OVG

The laboratory did not provide a sample analysis log for the CCV, blank, LCS, and sample analyses. A run analysis log was manually entered on the first CCV Form by the chemistry data validator.

Edits made by JB 2-16-12

Additional Comments

The following samples were analyzed for VOCs both undiluted and diluted by the laboratory. Only the VOC analyte 1,1-dichloroethane result, which was higher than the highest calibration level in the undiluted sample, was reported from the dilution analysis.

Sample	Dilution
SA-DUP06-20110312	1X, 10X
SA-PZ-142-20110312	1X, 10X
SA-PZ-143-20110312	1X, 10X

Fifty-two (52) analytes were reported for VOCs.

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane and acetone VOC analyte results were qualified due initial and continuing calibration RRF non-compliances. Sample VOC results were qualified due to continuing calibration verification quality control limit non-compliances. Positive VOC analyte results for sample SA-PZ-142-20110312 were qualified due to a surrogate %R quality control limit non-compliance.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit. Samples FC-DUP07-20110313 (SDG C1535) and FC-~~MW~~-05I1-20110313 1,1-dichloroethene VOC results were qualified for field duplicate imprecision. PZ

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

Edits made by JB 2-16-12

TetraTech NUS
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)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

JB 2-16-12

PROJ_NO: 02045	NSAMPLE	FC-MW-05I-20110313			FC-MW-05S-20110313			SA-PZ-123I-20110312			SA-PZ-142-20110312		
SDG: C1534	LAB_ID	C1534-17			C1534-14			C1534-06			C1534-03		
FRACTION: OVG	SAMP_DATE	3/13/2011			3/13/2011			3/12/2011			3/12/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		2.5	U		2.5	U		2.5	U		2.5	U	
ETHENE		2.5	U		2.5	U		2.5	U		2.5	U	
METHANE		2.5	U		18.9			16.9			21.2		

PROJ_NO: 02045	NSAMPLE	ET-MW01S-20110312			ET-MW-02S-20110312			ET-MW-03S-20110312			FC-MW-01I-20110313		
SDG: C1534	LAB_ID	C1534-11			C1534-10			C1534-09			C1534-15		
FRACTION: OV	SAMP_DATE	3/12/2011			3/12/2011			3/12/2011			3/13/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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	

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PROJ_NO: 02045	NSAMPLE	FC-MW-01S-20110313			FC-MW-04I-20110313			FC-MW-04S-20110313			FC-MW-05I1-20110313		
SDG: C1534	LAB_ID	C1534-16			C1534-22			C1534-19			C1534-18		
FRACTION: OV	SAMP_DATE	3/13/2011			3/13/2011			3/13/2011			3/13/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		47		
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		73		
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		4.1	J	G
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		9		
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		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		29		
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FC-MW-05I-20110313			FC-MW-05S-20110313			SA-DUP06-20110312			SA-DUP06-20110312-DL		
SDG: C1534	LAB_ID	C1534-17			C1534-14			C1534-13			C1534-13DL		
FRACTION: OV	SAMP_DATE	3/13/2011			3/13/2011			3/12/2011			3/12/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF							SA-PZ-142-20110312			SA-PZ-142-20110312		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U		35					
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		0.61	J	P	0.5	U		0.5	U				
1,1-DICHLOROETHANE		0.5	U		0.5	U					210		
1,1-DICHLOROETHENE		0.5	U		0.5	U		15					
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U				
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		1.5					
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		0.79	J	P			
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		0.62	J	P			
1,4-DICHLOROBENZENE		0.5	U		0.5	U		2.8					
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C			
2-BUTANONE		2.5	U		2.5	U		2.5	U				
2-HEXANONE		2.5	U		2.5	U		2.5	U				
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U				
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C			
BENZENE		0.5	U		0.5	U		0.5	U				
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMOFORM		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C			
BROMOMETHANE		0.5	U		0.5	U		0.5	U				
CARBON DISULFIDE		0.5	U		0.5	U		0.5	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		27					
CHLOROFORM		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-122D-20110312			SA-PZ-122I-20110312			SA-PZ-122S-20110312			SA-PZ-123I-20110312		
SDG: C1534	LAB_ID	C1534-05			C1534-07			C1534-08			C1534-06		
FRACTION: OV	SAMP_DATE	3/12/2011			3/12/2011			3/12/2011			3/12/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		1.4			0.5	U		0.5	U		37		
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		4.9		
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		0.7	J	P
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.51	J	P
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-140-20110312			SA-PZ-142-20110312			SA-PZ-142-20110312-DL			SA-PZ-143-20110312		
SDG: C1534	LAB_ID	C1534-04			C1534-03			C1534-03DL			C1534-02		
FRACTION: OV	SAMP_DATE	3/12/2011			3/12/2011			3/12/2011			3/12/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		4.8			40	J	R				62		
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		41						200					
1,1-DICHLOROETHENE		3.1			17	J	R				30		
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U					0.94	J	P
1,2,4-TRICHLOROBENZENE		1			1.7	J	R				3		
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		0.88	J	PR				0.66	J	P
1,2-DICHLOROETHANE		0.5	U		0.5	U					0.7	J	P
1,2-DICHLOROPROPANE		0.5	U		0.5	U					0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.63	J	PR				0.5	U	
1,4-DICHLOROBENZENE		1.3			3	J	R				1.3		
1,4-DIOXANE		10	UR	C	10	UR	C				10	UR	C
2-BUTANONE		2.5	U		2.5	U					2.5	U	
2-HEXANONE		2.5	U		2.5	U					2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U					2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C				2.5	UR	C
BENZENE		0.5	U		0.5	U					0.55	J	P
BROMOCHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMOFORM		0.5	UJ	C	0.5	U					0.5	U	
BROMOMETHANE		0.5	U		0.5	U					0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U					0.5	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		5.7			28	J	R				47		
CHLOROFORM		0.5	U		0.5	U					0.5	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	

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PROJ_NO: 02045	NSAMPLE	SA-PZ-143-20110312-DL			SA-RB01-20110312			SA-TB03-20110312		
SDG: C1534	LAB_ID	C1534-02DL			C1534-12			C1534-01		
FRACTION: OV	SAMP_DATE	3/12/2011			3/12/2011			3/12/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS									
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U		0.5	U	
1,1-DICHLOROETHANE		390			0.5	U		0.5	U	
1,1-DICHLOROETHENE					0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE					0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE					0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U		0.5	U	
1,2-DIBROMOETHANE					0.5	U		0.5	U	
1,2-DICHLOROBENZENE					0.5	U		0.5	U	
1,2-DICHLOROETHANE					0.5	U		0.5	U	
1,2-DICHLOROPROPANE					0.5	U		0.5	U	
1,3-DICHLOROBENZENE					0.5	U		0.5	U	
1,4-DICHLOROBENZENE					0.5	U		0.5	U	
1,4-DIOXANE					10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	U		2.5	U	
ACETONE					2.5	UR	C	2.5	UR	C
BENZENE					0.5	U		0.5	U	
BROMOCHLOROMETHANE					0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U	
BROMOFORM					0.5	UJ	C	0.5	UJ	C
BROMOMETHANE					0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U	
CHLOROBENZENE					0.5	U		0.5	U	
CHLORODIBROMOMETHANE					0.5	U		0.5	U	
CHLOROETHANE					0.5	U		0.5	U	
CHLOROFORM					0.5	U		0.5	U	
CHLOROMETHANE					0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U		0.5	U	
CYCLOHEXANE					0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	ET-MW01S-20110312			ET-MW-02S-20110312			ET-MW-03S-20110312			FC-MW-01I-20110313		
SDG: C1534	LAB_ID	C1534-11			C1534-10			C1534-09			C1534-15		
FRACTION: OV	SAMP_DATE	3/12/2011			3/12/2011			3/12/2011			3/13/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
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	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

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PROJ_NO: 02045	NSAMPLE	FC-MW-01S-20110313			FC-MW-04I-20110313			FC-MW-04S-20110313			FC-~~MW~~-05I1-20110313		
SDG: C1534	LAB_ID	C1534-16			C1534-22			C1534-19			C1534-18		
FRACTION: OV	SAMP_DATE	3/13/2011			3/13/2011			3/13/2011			3/13/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		63		
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		30		
M+P-XYLENES		1	U		1	U		1	U		2.9		
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	C	0.5	U		0.5	UJ	C	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	UJ	C	0.5	U		0.5	UJ	C	0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-MW-05I-20110313			FC-MW-05S-20110313			SA-DUP06-20110312			SA-DUP06-20110312-DL		
SDG: C1534	LAB_ID	C1534-17			C1534-14			C1534-13			C1534-13DL		
FRACTION: OV	SAMP_DATE	3/13/2011			3/13/2011			3/12/2011			3/12/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF							SA-PZ-142-20110312			SA-PZ-142-20110312		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U				
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		0.5	U		0.5	U		0.5	U				
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U				
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U				
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U				
O-XYLENE		0.5	U		0.5	U		0.5	U				
STYRENE		0.5	U		0.5	U		0.5	U				
TETRACHLOROETHENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C			
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	UJ	C	0.5	UJ	C	0.5	UJ	C			
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U				

PROJ_NO: 02045	NSAMPLE	SA-PZ-122D-20110312			SA-PZ-122I-20110312			SA-PZ-122S-20110312			SA-PZ-123I-20110312		
SDG: C1534	LAB_ID	C1534-05			C1534-07			C1534-08			C1534-06		
FRACTION: OV	SAMP_DATE	3/12/2011			3/12/2011			3/12/2011			3/12/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	UJ	C	0.5	UJ	C	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	UJ	C	0.5	UJ	C	0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

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PROJ_NO: 02045	NSAMPLE	SA-PZ-140-20110312			SA-PZ-142-20110312			SA-PZ-142-20110312-DL			SA-PZ-143-20110312		
SDG: C1534	LAB_ID	C1534-04			C1534-03			C1534-03DL			C1534-02		
FRACTION: OV	SAMP_DATE	3/12/2011			3/12/2011			3/12/2011			3/12/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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	
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		0.5	U		0.5	U					0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U					0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U					0.5	U	
O-XYLENE		0.5	U		0.5	U					0.5	U	
STYRENE		0.5	U		0.5	U					0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U					0.6	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		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	

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PROJ_NO: 02045	NSAMPLE	SA-PZ-143-20110312-DL			SA-RB01-20110312			SA-TB03-20110312		
SDG: C1534	LAB_ID	C1534-02DL			C1534-12			C1534-01		
FRACTION: OV	SAMP_DATE	3/12/2011			3/12/2011			3/12/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS									
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE					0.5	U		0.5	U	
ETHYLBENZENE					0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	U		0.5	U	
M+P-XYLENES					1	U		1	U	
METHYL ACETATE					0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U	
STYRENE					0.5	U		0.5	U	
TETRACHLOROETHENE					0.5	UJ	C	0.5	U	
TOLUENE					0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U		0.5	U	
TRICHLOROETHENE					0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE					0.5	UJ	C	0.5	U	
VINYL CHLORIDE					0.5	U		0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**MAY 24, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / OVG**
NWIRP CALVERTON CTO WE08
SDG C1535

SAMPLES: 19 / Aqueous / VOC

FC-DUP07-20110313	FC-MW-02IR1-20110314	FC-MW-02SR1-20110314
FC-MW-03SR1-20110313	FC-MW-06S-20110313	FC-MW-07I-20110313
FC-MW-07S-20110313	FC-MW-08S-20110313	FT-MW-01I-20110314
FT-MW-01S-20110314	FT-MW-03-20110314	FT-MW-04-20110314
FT-MW-05I-20110314	FT-MW-05S-20110314	FT-MW-06I-20110314
FT-MW-06S-20110314	FT-MW-08I-20110314	FT-MW-08S-20110314
SA-SB01-20110314		

7 / Aqueous / OVG

FC-MW-02IR1-20110314	FC-MW-02SR1-20110314	FC-MW-03SR1-20110313
FT-MW-05I-20110314	FT-MW-05S-20110314	FT-MW-08I-20110314
FT-MW-08S-20110314		

Overview

The sample set for NWIRP Calverton, SDG C1535 consisted of nineteen (19) aqueous environmental samples including one (1) aqueous sample QC blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC) and seven (7) samples were analyzed for organic volatile gases (OVG) as listed above. One (1) field duplicate pair was included with samples from this Sample Delivery Group (SDG) and SDG C1534: FC-DUP07-20110313 / FC-MW-05I1-20110313 (SDG C1534).

The samples were collected by Tetra Tech on March 13, and 14, 2011 and analyzed by ChemTech. All analyses were conducted in accordance with EPA Method SW-846 8260B and RSK-175 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
*	•	Laboratory Control Sample Recoveries
*	•	Blank Results
	•	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 initial calibration relative response factor (RRF) was less than the quality control limit of 0.05 for 1,4-dioxane for the instrument MSVOAD on 03/24/11. Additionally, all continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane. All sample 1,4-dioxane results were non-detected and were qualified rejected, (UR).

The matrix spike duplicate (MSD) percent recovery (%R) was less than the quality control limit for styrene for spiked sample FT-MW-08S-20110314. No action was taken as the matrix spike (MS) %R for styrene was within the quality control limits and the relative percent difference (RPD) for the styrene MS/MSD was within the quality control limits.

The RPD was greater than the 30% quality control limit for 1,1-dichloroethene for field duplicate samples FC-DUP07-20110313 and FC-MW-05I1-20110313 (SDG C15334). The aforementioned positive sample 1,1-dichloroethene results were qualified estimated, (J).

Positive results below the limit of detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

OVG

The MSD for spiked sample FT-MW-08S-20110314 had %Rs less than the quality control limit for the OVG gases ethane, ethene, and methane and the MS had %Rs less than the quality control limit for ethane and ethene. The sample non-detected results ethane and ethene for sample FT-MW-08S-20110314 were qualified estimated, (UJ), and the methane non-detected result for the sample was not qualified.

Additional Comments

The laboratory did not provide an OVG sample analysis log for the CCV, blank, LCS, MS/MSD, and sample analyses. A run analysis log was manually entered on the first CCV Form for the two sample dates of 03/25/11 and 03/28/11 by the chemistry data validator.

The following samples were analyzed for OVGs both undiluted and diluted by the laboratory. Only the methane results, which were higher than the highest calibration level in the undiluted sample analyses, were reported from the dilution analyses.

Sample	Dilution
FC-MW-02SR1-20110314	1X, 50X
FC-MW-03SR1-20110313	1X, 50X
FT-MW-08I-20110314	1X, 10X

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane VOC analyte results were qualified due initial and continuing calibration RRF non-compliances. Sample FT-MW-08S-20110314 ethane and ethene non-detected results were qualified due to MS/MSD quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit. Samples FC-DUP07-20110313 and FC-MW-05I1-20110313 (SDG C1534) 1,1-dichloroethene VOC results were qualified for field duplicate imprecision.

The data for these analyses were reviewed with reference to the SOP #HW-24 Revision #2, October 2006, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
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)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficent r < 0.995
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02045	NSAMPLE	FC-DUP07-20110313			FC-MW-02IR1-20110314			FC-MW-02SR1-20110314			FC-MW-03SR1-20110313		
SDG: C1535	LAB_ID	C1535-06			C1535-11			C1535-07			C1535-04		
FRACTION: OV	SAMP_DATE	3/13/2011			3/14/2011			3/14/2011			3/13/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF	FC-MW-05I1-20110313											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		51			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		86			0.5	U		16			1.1		
1,1-DICHLOROETHENE		7.7	J	G	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		1.2			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		0.54	J	P	0.5	U		1.5			2.9		
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		10	U		10	U		10	U		10	U	
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		11			0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		31			0.5	U		7.3			0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.52	J	P	0.5	U		0.5	U		0.57	J	P
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		0.97	J	P	0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-MW-06S-20110313			FC-MW-07I-20110313			FC-MW-07S-20110313			FC-MW-08S-20110313		
SDG: C1535	LAB_ID	C1535-05			C1535-02			C1535-01			C1535-03		
FRACTION: OV	SAMP_DATE	3/13/2011			3/13/2011			3/13/2011			3/13/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		10	U		10	U		10	U		10	U	
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FT-MW-01I-20110314			FT-MW-01S-20110314			FT-MW-03-20110314			FT-MW-04-20110314		
SDG: C1535	LAB_ID	C1535-21			C1535-19			C1535-15			C1535-17		
FRACTION: OV	SAMP_DATE	3/14/2011			3/14/2011			3/14/2011			3/14/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		10	U		10	U		10	U		10	U	
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FT-MW-05I-20110314			FT-MW-05S-20110314			FT-MW-06I-20110314			FT-MW-06S-20110314		
SDG: C1535	LAB_ID	C1535-16			C1535-14			C1535-18			C1535-20		
FRACTION: OV	SAMP_DATE	3/14/2011			3/14/2011			3/14/2011			3/14/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		10	U		10	U		10	U		10	U	
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.63	J	P	0.5	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: 02045	NSAMPLE	FT-MW-08I-20110314			FT-MW-08S-20110314			SA-SB01-20110314		
SDG: C1535	LAB_ID	C1535-12			C1535-08			C1535-13		
FRACTION: OV	SAMP_DATE	3/14/2011			3/14/2011			3/14/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS									
	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		1.2			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		10	U		10	U		10	U	
2-BUTANONE		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.54	J	P	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: 02045	NSAMPLE	FC-DUP07-20110313			FC-MW-02IR1-20110314			FC-MW-02SR1-20110314			FC-MW-03SR1-20110313		
SDG: C1535	LAB_ID	C1535-06			C1535-11			C1535-07			C1535-04		
FRACTION: OV	SAMP_DATE	3/13/2011			3/14/2011			3/14/2011			3/13/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF	FC-MW-05I1-20110313											
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		73			0.5	U		6.8			46		
ISOPROPYLBENZENE		36			0.5	U		5.6			21		
M+P-XYLENES		2.6			1	U		17			19		
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		1.9			0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		11			0.55	J	P
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		0.98	J	P	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: 02045	NSAMPLE	FC-MW-06S-20110313			FC-MW-07I-20110313			FC-MW-07S-20110313			FC-MW-08S-20110313		
SDG: C1535	LAB_ID	C1535-05			C1535-02			C1535-01			C1535-03		
FRACTION: OV	SAMP_DATE	3/13/2011			3/13/2011			3/13/2011			3/13/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.62	J	P	0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FT-MW-01I-20110314			FT-MW-01S-20110314			FT-MW-03-20110314			FT-MW-04-20110314		
SDG: C1535	LAB_ID	C1535-21			C1535-19			C1535-15			C1535-17		
FRACTION: OV	SAMP_DATE	3/14/2011			3/14/2011			3/14/2011			3/14/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FT-MW-05I-20110314			FT-MW-05S-20110314			FT-MW-06I-20110314			FT-MW-06S-20110314		
SDG: C1535	LAB_ID	C1535-16			C1535-14			C1535-18			C1535-20		
FRACTION: OV	SAMP_DATE	3/14/2011			3/14/2011			3/14/2011			3/14/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FT-MW-08I-20110314			FT-MW-08S-20110314			SA-SB01-20110314		
SDG: C1535	LAB_ID	C1535-12			C1535-08			C1535-13		
FRACTION: OV	SAMP_DATE	3/14/2011			3/14/2011			3/14/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS									
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U	
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		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FC-MW-02IR1-20110314			FC-MW-02SR1-20110314			FC-MW-02SR1-20110314DL			FC-MW-03SR1-20110313		
SDG: C1535	LAB_ID	C1535-11			C1535-07			C1535-07DL			C1535-04		
FRACTION: OVG	SAMP_DATE	3/14/2011			3/14/2011			3/14/2011			3/13/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		2.5	U		2.5	U					2.5	U	
ETHENE		2.5	U		2.5	U					2.5	U	
METHANE		2.5	U					3300					

PROJ_NO: 02045	NSAMPLE	FC-MW-03SR1-20110313DL			FT-MW-05I-20110314			FT-MW-05S-20110314			FT-MW-08I-20110314		
SDG: C1535	LAB_ID	C1535-04DL			C1535-16			C1535-14			C1535-12		
FRACTION: OVG	SAMP_DATE	3/13/2011			3/14/2011			3/14/2011			3/14/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE					2.5	U		2.5	U		2.5	U	
ETHENE					2.5	U		2.5	U		2.5	U	
METHANE		1200			2.5	U		2.5	U				

PROJ_NO: 02045	NSAMPLE	FT-MW-08I-20110314DL			FT-MW-08S-20110314		
SDG: C1535	LAB_ID	C1535-12DL			C1535-08		
FRACTION: OVG	SAMP_DATE	3/14/2011			3/14/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE					2.5	UJ	D
ETHENE					2.5	UJ	D
METHANE		208			2.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**May 24, 2011**
FROM:	**M. CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC AND OVG**
NWIRP CALVERTON CTO WE08
SAMPLE DELIVERY GROUP (SDG) C1548

SAMPLES:

5/Sediment/

SA-SD-124-20110315	SA-SD-125-20110315
SA-SD-201-20110315	SA-SD-204-20110315
SA-SD-DUP01-20110315	

16/Aqueous/

FT-DUP08-20110315	FT-MW-02I-20110315
FT-MW-02S-20110315	FT-MW-07S-20110315
SA-PZ-124-20110315	SA-PZ-125-20110315
SA-PZ-147-20110315	SA-PZ-148-20110315
SA-PZ-DUP01-20110315	SA-RB02-20110315
SA-SW-124-20110315	SA-SW-125-20110315
SA-SW-201-20110315	SA-SW-204-20110315
SA-SW-DUP01-20110315	SA-TB04-20110315

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C1548 consists of five (5) soil samples, fourteen (14) aqueous samples, one (1) rinsate blank, and one (1) trip blank. All samples were analyzed for volatile organic compounds (VOC). Samples FT-MW-02I-20110315 and FT-MW-02S-20110315 were analyzed for organic volatile gases (OVG). This SDG contained four field duplicate pairs: FT-DUP08-20110315/FT-MW-02S-20110315, SA-PZ-DUP01-20110315/SA-PZ-124-20110315, SA-SW-DUP01-20110315/SA-SW-124-20110315, and SA-SD-DUP01-20110315/SA-SD-124-20110315

The samples were collected on March 15th, 2011 and analyzed by Chemtech. Analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. VOC analyses were conducted in accordance with EPA Method SW-846 8260B. OVG analyses were conducted in accordance with EPA Method RSK 175. The data contained in this SDG were validated with regard to the following parameters:

*	• Data completeness
*	• GC/MS tuning
*	• Holding times
	• Initial/Continuing Calibrations
*	• Laboratory Method Blank Results
	• Surrogate Recoveries
*	• Laboratory Control/Laboratory Control Duplicate Sample Recoveries
	• Matrix Spike/Matrix Spike Duplicate Recoveries
*	• Internal Standard Recoveries
	• Field Duplicate Recoveries
*	• Compound Quantitation
*	• Compound Identification
*	• 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.

Volatile Organic Compounds

Samples SA-SW-DUP01-20110315 and SA-PZ-DUP01-20110315 had percent recoveries <85% for surrogate toluene-d8. Positive results were qualified as estimated (J) and non-detected results were qualified as estimated (UJ). Re-analyses yielded similar results.

Sample SA-SD-204-20110315 and the re-analysis had a percent recovery <85% for surrogate 4-bromofluorobenzene. The re-analysis was used for validation because BFB improved. Positive results were qualified as estimated (J) and non-detected results were qualified as estimated (UJ).

The initial calibration analyzed instrument MSVOAD on 3/22/11 had a relative response factor < 0.05 for acetone and 1,4-dioxane. Samples SA-PZ-125-20110315, SA-SW-125-20110315, SA-PZ-148-20110315, SA-PZ-124-20110315, FT-DUP08-20110315, SA-SW-124-20110315, SA-PZ-147-20110315, SA-SW-201-20110315, SA-SW-DUP01-20110315, and SA-PZ-DUP01-20110315 were affected. Non-detected results were qualified as rejected (UR).

The continuing calibration analyzed instrument MSVOAD on 3/26/11 at 12:02 had a relative response factor < 0.05 for acetone and 1,4-dioxane and a percent difference > 20% for bromoform. Samples SA-PZ-125-20110315, SA-SW-125-20110315, SA-PZ-148-20110315, SA-PZ-124-20110315, and FT-DUP08-20110315 were affected. Non-detected acetone and 1,4-dioxane results were qualified as rejected (UR). Non-detected bromoform results were qualified as estimated (UJ).

The continuing calibration analyzed instrument MSVOAD on 3/26/11 at 23:52 had a relative response factor < 0.05 for acetone and 1,4-dioxane and a percent difference > 20% for 1,4-dioxane and tetrachloroethane. Samples SA-SW-124-20110315, SA-PZ-147-20110315, SA-SW-201-20110315, SA-SW-DUP01-20110315, and SA-PZ-DUP01-20110315 were affected. Non-detected acetone and 1,4-dioxane results were qualified as rejected (UR). Non-detected tetrachloroethane results were qualified as estimated (UJ).

The initial calibration analyzed instrument MSVOAH on 3/23/11 had a relative response factor < 0.05 for 1,4-dioxane. Samples SA-TB04-20110315, FT-MW-07S-20110315, SA-RB02-20110315, FT-MW-02I-20110315, SA-SW-204-20110315, and FT-MW-02S-20110315 were affected. Non-detected results were qualified as rejected (UR).

The continuing calibration analyzed instrument MSVOAH on 3/26/11 at 09:57 had a relative response factor < 0.05 for 1,4-dioxane and a percent difference > 20% for bromochloromethane. SA-TB04-20110315, FT-MW-07S-20110315, SA-RB02-20110315, FT-MW-02I-20110315, SA-SW-204-20110315, and FT-MW-02S-20110315 were affected. Non-detected 1,4-dioxane results were qualified as rejected (UR). Non-detected bromochloromethane results were qualified as estimated (UJ).

The initial calibration analyzed instrument MSVOAK on 3/25/11 had a relative response factor < 0.05 for 1,4-dioxane. Samples SA-SD-204-20110315, SA-SD-125-20110315, SA-SD-124-20110315, SA-SD-201-20110315, and SA-SD-DUP01-20110315 were affected. Non-detected results were qualified as rejected (UR).

The continuing calibration analyzed instrument MSVOAK on 3/26/11 at 10:45 had a relative response factor < 0.05 for 1,4-dioxane. Sample SA-SD-204-20110315RE was affected. Non-detected 1,4-dioxane results

were qualified as rejected (UR).

Field duplicate pair FT-DUP08-20110315/FT-MW-02S-20110315 had a relative percent difference > 30% for 2-butanone, acetone, and cis-1,2-dichloroethene.

Organic Volatile Gases

The OVG matrix spike and matrix spike duplicate had a percent recovery less than the lower control limit for ethane, ethylene, and methane. No action was required because the samples used for spikes were not samples contained in this SDG.

Additional Comments

The sediment matrix spike and matrix spike duplicate for sample SA-SD-204-20110315 had percent recoveries greater than the upper quality control limit for methyl acetate and a percent recovery less than lower limit for styrene. No action was required for styrene as only a MS recovery was out of control limits. Methyl acetate results were not qualified as they were all non-detected.

Sample SA-SD-204-20110315 was reanalyzed due to poor internal standard recoveries. The reanalysis internal standard recoveries were within quality control limits. The reanalysis was used for validation purposes.

The water matrix spike and matrix spike duplicate for sample SA-SW-204-20110315 had a percent recovery greater than the upper limit for 1,4-dioxane. No validation action was taken as sample result was non-detected and qualified for a more severe non-compliance.

Sample FT-MW-02S-20110315 was analyzed at a 20X for methane.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Several initial and continuing calibration non-compliances for acetone and 1,4-dioxane results in the rejection of non-detected sample results. Several surrogate non-compliances resulted in the qualification of sample results.

Other Factors Affecting Data Quality: Field duplicate pair FT-DUP08-20110315/FT-MW-02S-20110315 was qualified for non-compliances.

The data for these analyses were reviewed with reference to the USEPA Region II Standard Operating Procedures for Validating Volatile Organic Compounds by SW-846 Method 8260B HW-24 Revision #2 (October 2006) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April, 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

TO: D. Brayack
DATE: 5/24/2011
SDG: C1548
PAGE: 4

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

PROJ_NO: 02045	NSAMPLE	FT-DUP08-20110315			FT-MW-02I-20110315			FT-MW-02S-20110315			FT-MW-07S-20110315		
SDG: C1548	LAB_ID	C1548-06			C1548-05			C1548-03			C1548-02		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
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	FT-MW-02S-20110315											
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		0.81	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		0.58	J	P	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		13	J	G	2.5	U		26	J	G	2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	U		27	J	G	2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	UJ	C	0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		2.8	J	G	0.5	U		4.1	J	G	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: 02045	NSAMPLE	SA-PZ-124-20110315			SA-PZ-125-20110315			SA-PZ-147-20110315			SA-PZ-148-20110315		
SDG: C1548	LAB_ID	C1548-17			C1548-13			C1548-20			C1548-16		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
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		3.6			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		54			0.5	U		17			0.5	U	
1,1-DICHLOROETHENE		4.7			0.5	U		3			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		0.87	J	P	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	UJ	C	0.5	UJ	C	0.5	U		0.5	UJ	C
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		2.3			0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-DUP01-20110315			SA-RB02-20110315			SA-SW-124-20110315			SA-SW-125-20110315		
SDG: C1548	LAB_ID	C1548-25			C1548-04			C1548-18			C1548-14		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
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	SA-PZ-124-20110315											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		3.8	J	R	0.5	U		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		58	J	R	0.5	U		0.61	J	P	0.5	U	
1,1-DICHLOROETHENE		4.8	J	R	0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	U		2.5	UR	C	2.5	UR	C
BENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	R	0.5	UJ	C	0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R	0.5	U		0.5	U		0.5	UJ	C
BROMOMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROETHANE		2.2	J	R	0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-SW-201-20110315			SA-SW-204-20110315			SA-SW-DUP01-20110315			SA-TB04-20110315		
SDG: C1548	LAB_ID	C1548-22			C1548-10			C1548-24			C1548-01		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
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							SA-SW-124-20110315					
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	UJ	R	0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.76	J	PR	0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	UJ	R	2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	UJ	R	2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	UJ	R	2.5	U	
ACETONE		2.5	UR	C	2.5	U		2.5	UR	C	2.5	U	
BENZENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	R	0.5	UJ	C
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	

PROJ_NO: 02045	NSAMPLE	FT-DUP08-20110315			FT-MW-02I-20110315			FT-MW-02S-20110315			FT-MW-07S-20110315		
SDG: C1548	LAB_ID	C1548-06			C1548-05			C1548-03			C1548-02		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
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	FT-MW-02S-20110315											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
ETHYLBENZENE		4.8			0.5	U		4.7			0.5	U	
ISOPROPYLBENZENE		0.8	J	P	0.5	U		0.89	J	P	0.5	U	
M+P-XYLENES		7.6			1	U		7.8			1	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		16			0.5	U		16			0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.91	J	P	0.5	U		0.5	U		0.5	U	
TOLUENE		4.4			0.5	U		4.5			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		12			0.5	U		11			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: 02045	NSAMPLE	SA-PZ-124-20110315			SA-PZ-125-20110315			SA-PZ-147-20110315			SA-PZ-148-20110315		
SDG: C1548	LAB_ID	C1548-17			C1548-13			C1548-20			C1548-16		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	UJ	C	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: 02045	NSAMPLE	SA-PZ-DUP01-20110315			SA-RB02-20110315			SA-SW-124-20110315			SA-SW-125-20110315		
SDG: C1548	LAB_ID	C1548-25			C1548-04			C1548-18			C1548-14		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
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	SA-PZ-124-20110315											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	R	0.5	UJ	C	0.5	U		0.5	U	
ETHYLBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
M+P-XYLENES		1	UJ	R	1	U		1	U		1	U	
METHYL ACETATE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
STYRENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	CR	0.5	U		0.5	UJ	C	0.5	U	
TOLUENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-SW-201-20110315			SA-SW-204-20110315			SA-SW-DUP01-20110315			SA-TB04-20110315		
SDG: C1548	LAB_ID	C1548-22			C1548-10			C1548-24			C1548-01		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
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							SA-SW-124-20110315					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	R	0.5	UJ	C
ETHYLBENZENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
M+P-XYLENES		1	U		1	U		1	UJ	R	1	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
STYRENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
TETRACHLOROETHENE		0.5	UJ	C	0.5	U		0.5	UJ	CR	0.5	U	
TOLUENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	UJ	R	0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-SD-124-20110315			SA-SD-125-20110315			SA-SD-201-20110315			SA-SD-204-20110315-RE		
SDG: C1548	LAB_ID	C1548-19			C1548-15			C1548-21			C1548-07RE		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.0			58.0			76.0			59.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,1,2,2-TETRACHLOROETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,1,2-TRICHLOROETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,1-DICHLOROETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,1-DICHLOROETHENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,2,3-TRICHLOROBENZENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,2,4-TRICHLOROBENZENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,2-DIBROMO-3-CHLOROPROPANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,2-DIBROMOETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,2-DICHLOROBENZENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,2-DICHLOROETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,2-DICHLOROPROPANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,3-DICHLOROBENZENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,4-DICHLOROBENZENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
1,4-DIOXANE		65	UR	C	85	UR	C	65	UR	C	85	UR	CR
2-BUTANONE		16.5	U		21.5	U		16.5	U		21	UJ	R
2-HEXANONE		16.5	U		21.5	U		16.5	U		21	UJ	R
4-METHYL-2-PENTANONE		16.5	U		21.5	U		16.5	U		21	UJ	R
ACETONE		16.5	U		21.5	U		16.5	U		22	J	PR
BENZENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
BROMOCHLOROMETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
BROMODICHLOROMETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
BROMOFORM		3.3	U		4.3	U		3.3	U		4.25	UJ	R
BROMOMETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CARBON DISULFIDE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CARBON TETRACHLORIDE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CHLOROBENZENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CHLORODIBROMOMETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CHLOROETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CHLOROFORM		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CHLOROMETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CIS-1,2-DICHLOROETHENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CIS-1,3-DICHLOROPROPENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
CYCLOHEXANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-SD-DUP01-20110315		
SDG: C1548	LAB_ID	C1548-23		
FRACTION: OV	SAMP_DATE	3/15/2011		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	75.0		
	DUP_OF	SA-SD-124-20110315		
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		3.35	U	
1,1,2,2-TETRACHLOROETHANE		3.35	U	
1,1,2-TRICHLOROETHANE		3.35	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		3.35	U	
1,1-DICHLOROETHANE		3.35	U	
1,1-DICHLOROETHENE		3.35	U	
1,2,3-TRICHLOROBENZENE		3.35	U	
1,2,4-TRICHLOROBENZENE		3.35	U	
1,2-DIBROMO-3-CHLOROPROPANE		3.35	U	
1,2-DIBROMOETHANE		3.35	U	
1,2-DICHLOROBENZENE		3.35	U	
1,2-DICHLOROETHANE		3.35	U	
1,2-DICHLOROPROPANE		3.35	U	
1,3-DICHLOROBENZENE		3.35	U	
1,4-DICHLOROBENZENE		3.35	U	
1,4-DIOXANE		65	UR	C
2-BUTANONE		17	U	
2-HEXANONE		17	U	
4-METHYL-2-PENTANONE		17	U	
ACETONE		17	U	
BENZENE		3.35	U	
BROMOCHLOROMETHANE		3.35	U	
BROMODICHLOROMETHANE		3.35	U	
BROMOFORM		3.35	U	
BROMOMETHANE		3.35	U	
CARBON DISULFIDE		3.35	U	
CARBON TETRACHLORIDE		3.35	U	
CHLOROBENZENE		3.35	U	
CHLORODIBROMOMETHANE		3.35	U	
CHLOROETHANE		3.35	U	
CHLOROFORM		3.35	U	
CHLOROMETHANE		3.35	U	
CIS-1,2-DICHLOROETHENE		3.35	U	
CIS-1,3-DICHLOROPROPENE		3.35	U	
CYCLOHEXANE		3.35	U	

PROJ_NO: 02045	NSAMPLE	SA-SD-124-20110315			SA-SD-125-20110315			SA-SD-201-20110315			SA-SD-204-20110315-RE		
SDG: C1548	LAB_ID	C1548-19			C1548-15			C1548-21			C1548-07RE		
FRACTION: OV	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011			3/15/2011		
MEDIA: SEDIMENT	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	76.0			58.0			76.0			59.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
ETHYLBENZENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
ISOPROPYLBENZENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
M+P-XYLENES		6.5	U		8.5	U		6.5	U		8.5	UJ	R
METHYL ACETATE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
METHYL CYCLOHEXANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
METHYL TERT-BUTYL ETHER		3.3	U		4.3	U		3.3	U		4.25	UJ	R
METHYLENE CHLORIDE		3.5	J	P	4.3	U		2	J	P	4.25	UJ	R
O-XYLENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
STYRENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
TETRACHLOROETHENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
TOLUENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
TRANS-1,2-DICHLOROETHENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
TRANS-1,3-DICHLOROPROPENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
TRICHLOROETHENE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
TRICHLOROFLUOROMETHANE		3.3	U		4.3	U		3.3	U		4.25	UJ	R
VINYL CHLORIDE		3.3	U		4.3	U		3.3	U		4.25	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-SD-DUP01-20110315		
SDG: C1548	LAB_ID	C1548-23		
FRACTION: OV	SAMP_DATE	3/15/2011		
MEDIA: SEDIMENT	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	75.0		
	DUP_OF	SA-SD-124-20110315		
PARAMETER		RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		3.35	U	
ETHYLBENZENE		3.35	U	
ISOPROPYLBENZENE		3.35	U	
M+P-XYLENES		6.5	U	
METHYL ACETATE		3.35	U	
METHYL CYCLOHEXANE		3.35	U	
METHYL TERT-BUTYL ETHER		3.35	U	
METHYLENE CHLORIDE		3.5	J	P
O-XYLENE		3.35	U	
STYRENE		3.35	U	
TETRACHLOROETHENE		3.35	U	
TOLUENE		3.35	U	
TRANS-1,2-DICHLOROETHENE		3.35	U	
TRANS-1,3-DICHLOROPROPENE		3.35	U	
TRICHLOROETHENE		3.35	U	
TRICHLOROFLUOROMETHANE		3.35	U	
VINYL CHLORIDE		3.35	U	

PROJ_NO: 02045	NSAMPLE	FT-MW-02I-20110315			FT-MW-02S-20110315			FT-MW-02S-20110315-DL		
SDG: C1548	LAB_ID	C1548-05			C1548-03			C1548-03DL		
FRACTION: OVG	SAMP_DATE	3/15/2011			3/15/2011			3/15/2011		
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
ETHANE		2.5	U		2.5	U				
ETHENE		2.5	U		2.5	U				
METHANE		2.5	U					470.6		

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**MAY 10, 2011**
FROM:	**A. COGNETTI**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NWIRP CALVERTON CTO WE08
SAMPLE DELIVERY GROUP (SDG) C1864

SAMPLES: 8/Aqueous/VOC

CA-PRSC-01-20110413	CA-PRSC-02-01-20110413
CA-PRSC-02-02-20110413	CA-PRSC-02-03-20110413
CA-PRSC-03-20110413	CA-PRSC-04-20110413
CA-PRSC-DUP01-20110413	CA-PRSC-TB01-20110413

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C1864 consists of seven (7) environmental aqueous samples and a trip blank. The samples were analyzed for volatile organic compounds (VOC). The field duplicate pair within this SDG is and CA-PRSC-03-20110413/CA-PRSC-DUP01-20110413.

The samples were collected by Tetra Tech on April 13, 2011 and analyzed by Chemtech. VOC analyses were conducted in accordance with EPA Method SW-846 8260B. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
• Initial/continuing calibrations
* • Laboratory Method Blank Results
• Surrogate Recoveries
* • Matrix Spike / Matrix Spike Duplicate Recoveries
* • Laboratory Control Sample Recoveries
* • Internal Standard Recoveries
* • Compound Quantitation
* • Compound Identification
* • Field Duplicate Precision
* • 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.

Volatile Organic Compounds

The relative response factor (RRF) for 1,4-dioxane and acetone were less than the 0.05 quality control limit in the initial calibration on April 18, 2011, continuing calibration on April 20, 201 @ 13:06 and continuing calibration on April 21, 2011 @ 10:12 on instrument MSVOAD. The nondetected acetone and 1,4-dioxane results were qualified as rejected (UR) in the affected samples. All samples are affected by this noncompliance.

The percent relative standard deviation (%RSD) for 2-hexanone was greater than the 15% quality control limit in the initial calibration on April 18, 2011 for instrument MSVOAD. The nondetected 2-hexanone results in the affected samples were qualified as estimated (UJ).

In the continuing calibration on April 20, 2011 @ 13:06, tetrachloroethene had a percent difference (%D) greater than 20% but less than 90%. The nondetected tetrachloroethene results were qualified as estimated (UJ) in the affected samples.

The percent recovery (%R) of surrogate 4-bromofluorobenzene was greater than the upper quality control limit in sample CA-PRSC-01-20110413. The sample was reanalyzed and similar results were found. The original sample was used for validation and reporting purposes. The positive styrene result in sample CA-PRSC-01-20110413 was qualified as estimated (J).

Additional Comments

Several compounds had %Rs greater than the upper quality control limit in the matrix spike/matrix spike duplicate (MS/MSD) of spiked sample CA-PRSC-01-20110413. The compounds were chloromethane, chloroethane, methyl tert-butyl ether, cis-1,2-dichloroethene, bromochloromethane, benzene, 1,2-dichloropropane, bromodichloromethane, toluene, 2-hexanone, chlorobenzene and ethyl benzene. No action was taken on the nondetected results of the aforementioned compounds in sample CA-PRSC-01-20110413.

The MSD %Rs of 1,1-dichloroethene, trichloroethene, 1,1,2-trichloroethane, o-xylene and 1,4-dioxane were greater than the upper quality control limit in spiked sample CA-PRSC-01-20110413. The %Rs of these compounds in the MS and the RPDs were within quality control limits. No action was taken on the nondetected results of the aforementioned compounds in sample CA-PRSC-01-20110413.

Nondetected results were reported to the limit of detection (LOD).

LOD in the database is equal to the method detection limit. No action was taken.

Positive results below the Reporting Limit (RL) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: RRFs for acetone and 1,4-dioxane were less than the 0.05 quality control limit resulting in the rejected of nondetected results. The %RSD for 2-hexanone was greater than the 15% quality control limit resulting in the qualification of data. The continuing calibration %D for tetrachloroethene exceeded quality control limits resulting in the qualification of data. The %R of surrogate 4-bromofluorobenzene was greater than the upper quality control limit in sample CA-PRSC-01-20110413 resulting in the qualification of styrene.

Other Factors Affecting Data Quality: None.

TO: D. Brayack
FROM: A. Cognetti
DATE: May 10, 2011
SDG: C1864
PAGE: 3

The data for these analyses were reviewed with reference USEPA Region II Standard Operating Procedures for Validating Volatile Organic Compounds by SW-846 Method 8260B HW-24 Revision #2 (August 2008) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA 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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	CA-PRSC-01-20110413			CA-PRSC-02-01-20110413			CA-PRSC-02-02-20110413			CA-PRSC-02-03-20110413		
SDG: C1864	LAB_ID	C1864-08			C1864-03			C1864-04			C1864-05		
FRACTION: OV	SAMP_DATE	4/13/2011			4/13/2011			4/13/2011			4/13/2011		
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		10			0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		4.2			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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		1.2			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: 02045	NSAMPLE	CA-PRSC-03-20110413			CA-PRSC-04-20110413			CA-PRSC-DUP01-20110413			CA-PRSC-TB01-20110413		
SDG: C1864	LAB_ID	C1864-06			C1864-02			C1864-07			C1864-01		
FRACTION: OV	SAMP_DATE	4/13/2011			4/13/2011			4/13/2011			4/13/2011		
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							CA-PRSC-03-20110413					
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	CA-PRSC-01-20110413			CA-PRSC-02-01-20110413			CA-PRSC-02-02-20110413			CA-PRSC-02-03-20110413		
SDG: C1864	LAB_ID	C1864-08			C1864-03			C1864-04			C1864-05		
FRACTION: OV	SAMP_DATE	4/13/2011			4/13/2011			4/13/2011			4/13/2011		
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.79	J	PR	0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
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		0.68	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: 02045	NSAMPLE	CA-PRSC-03-20110413			CA-PRSC-04-20110413			CA-PRSC-DUP01-20110413			CA-PRSC-TB01-20110413		
SDG: C1864	LAB_ID	C1864-06			C1864-02			C1864-07			C1864-01		
FRACTION: OV	SAMP_DATE	4/13/2011			4/13/2011			4/13/2011			4/13/2011		
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							CA-PRSC-03-20110413					
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
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	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 16, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C2506

SAMPLES: 22/Aqueous/VOC

JB 2-16-12

FC-MW-05I-20110602	FC-~~MW~~ PZ-05I1-20110602	FC-MW-05S-20110603
FD-TB02-20110602	FD-TW118-1620	FD-TW118-2125
FD-TW118-2630	SA-DUP01-20110602	SA-TW401-1115
SA-TW401-2125	SA-TW401-2630	SA-TW401-3135
SA-TW402-1115	SA-TW402-2125	SA-TW402-2630
SA-TW402-3135	SA-TW403-1115	SA-TW403-2125
SA-TW403-2630	SA-TW403-3135	SA-TW404-2125
SA-TW404-3135		

Overview

The sample set for NWIRP Calverton SDG C2506 consisted of twenty-one (21) aqueous environmental samples and one (1) trip blank. All twenty-two (22) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). One field duplicate sample pair was associated with this sample data group (SDG); SA-DUP01-20110602/SA-TW402-2630.

The samples were collected by Tetra Tech on June 2 and 3, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Methods SW-846 8260B 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
- Matrix Spike/Matrix Spike Duplicate Results
- Laboratory Control Sample 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.

Volatiles (VOC)

The 14 day holding time was exceeded in the diluted analyses of samples, SA-TW402-2125 and SA-TW402 -3135, and the reanalysis of sample SA-DUP01-20110602. The results from the reanalysis of sample SA-DUP01-20110602 were not used in the data validation; therefore, no actions were necessary. The results used from the diluted analyses of samples, SA-TW402-2125 and SA-TW402-3135, were qualified as estimated, (J).

The initial and continuing calibrations performed on instruments MSVOAG and MSVOAH had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The continuing calibration performed on instrument MSVOAG on 06/15/11 @ 14:18 had a Percent Drift (%Drift) for bromomethane was above the 20% quality control limit. The non-detected results reported for this compound in the affected samples, FC-MW-05I1-20110602, FD-TB02-20110602, FD-TW118-1620, FD-TW118-2125, and FD-TW118-2630, were qualified as estimated, (UJ).

The %Drift from the continuing calibration performed on instrument MSVOAG on 06/16/11 @ 11:23 for bromomethane was above the 20% quality control limit. Samples FC-MW-05I-20110602, SA-DUP01-20110602, SA-TW401-2125, SA-TW402-1115, SA-TW402-2125, SA-TW402-2630, SA-TW402-3135, SA-TW403-1115, SA-TW403-2125, SA-TW403-2630, and SA-TW403-3135 were affected. Only non-detected results were reported for this compound in the affected samples, and these non-detects were qualified as estimated, (UJ).

The continuing calibration performed on instrument MSVOAG on 06/17/11 @ 01:50 had Percent Differences (%Ds) for methyl acetate, bromochloromethane, and tetrachloroethene exceeded the 20% quality control criteria. In addition, the %Drift for bromomethane was greater than the 20% quality control limit. Samples FC-MW-05S-20110603 and SA-TW401-2630 were affected. The non-detected results reported for these compounds in the affected samples were qualified as estimated, (UJ).

The continuing calibration performed on instrument MSVOAH on 6/17/11 @ 16:00 had %Ds or %Drifts greater than the 20% quality control limit for dichlorofluoromethane, 4-methyl-2-pentanone, 1,4-dioxane, and acetone. Samples SA-TW401-1115, SA-TW401-3135, SA-TW404-2125, and SA-TW404-3135 were affected. The non-detected results reported for these compounds, with the exception of 1,4-dioxane, were qualified as estimated, (UJ). No action was necessary for the 1,4-dioxane results because they were rejected for a more severe calibration noncompliance.

The Percent Recovery (%R) for the surrogate spike compound, toluene-d8, was below the lower quality control limit in sample, SA-DUP01-20110602. The sample was reanalyzed with acceptable surrogate %Rs; however, the sample was outside of reanalyzed outside the 14 day holding time. The results from the initial analysis were used in the data validation. The positive and non-detected results reported from the initial analysis of this sample were qualified as estimated, (J) and (UJ), respectively.

The LCS, BSH0617W1, had a %R for acetone above the upper quality control limit. The positive result reported for acetone in associated sample, SA-TW402-3135, was qualified as estimated, (J). No action was taken for the non-detected results reported in the remaining associated samples

Additional Comments

The following analyte was detected in the associated trip blank at the maximum concentration as indicated

below:

Analyte	Maximum Conc. (µg/L)	Action Level (µg/L)
Methylene Chloride [1]	1.4	14

[1] Maximum concentration detected in the trip blank, FD-TB02-20110602, affecting all samples in this SDG.

An action level of 10X the maximum concentration was established to evaluate laboratory contamination for the common laboratory contaminant, methylene chloride. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No action was taken because no positive results were reported for methylene chloride in the affected samples.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) had %Rs for 1,1,1-trichloroethane and 1,1,-dichloroethane below the lower quality control limit. The Relative Percent Differences (RPDs) were also above the 30% quality control limit for these compounds. No action was taken because the concentrations of these compounds were 2X greater in the parent sample, SA-TW402-3135, and the associated Laboratory Control Sample (LCS) had acceptable %Rs and RPDs for 1,1,1-trichloroethane and 1,1,-dichloroethane.

1,2-Dichlorobenzene was detected in the field duplicate sample, SA-DUP01-20110602, but not in the environmental sample, SA-TW402-2630. No action was taken for field duplicate imprecision because the difference between the positive and non-detected results was less than 2X the Limit of Quantitation (LOQ).

The following samples were diluted due to target compounds exceeding the instrument's linear calibration range:

Sample	Compound	Dilution
FC-~~MW~~-05I1-20110602	1,1,1-Trichloroethane	10X
PZ JB 2-16-12	1,1-Dichloroethane	10X
	Chloroethane	10X
SA-TW402-2125	1,1,1-Trichloroethane	20X
	1,1-Dichloroethane	20X
	Chloroethane	20X
	Ethylbenzene	20X
SA-TW402-3135	1,1-Dichloroethane	10X

The diluted results for these compounds were used in the data validation.

Positive results reported below the LOQ but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: Holding times were exceeded for the reanalysis of three samples. The 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05. Several continuing calibration %Ds and %Drifts exceeded the 20% quality control limit. An LCS %R for acetone was above the upper quality control limit.

Other Factors Affecting Data Quality: Methylene chloride was detected in the trip blank. One sample had a low surrogate %R. The MS/MSD had noncompliant %Rs and RPDs for 1,1,1-trichloroethane and 1,1-

dichloroethane. Positive results reported below the LOQ but above the MDL were qualified as estimated. Some samples were analyzed at a dilution due to linear calibration range exceedences.

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), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
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Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's r < 0.995 / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	FC-~~MW~~-05I1-20110602 PZ JB 2-16-12	FC-~~MW~~-05I1-20110602DL PZ JB 2-16-12	FC-MW-05I-20110602	FC-MW-05S-20110603
SDG: C2506	LAB_ID	C2506-05	C2506-05DL	C2506-17	C2506-22
FRACTION: OV	SAMP_DATE	6/2/2011	6/2/2011	6/2/2011	6/3/2011
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				530			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				1000			0.55	J	P	0.5	U	
1,1-DICHLOROETHENE	75						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	2						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	10	UR	C				10	UR	C	10	UR	C
2-BUTANONE	2.5	U					2.5	U		2.5	U	
2-HEXANONE	2.5	U					2.5	U		2.5	U	
4-METHYL-2-PENTANONE	2.5	U					2.5	U		2.5	U	
ACETONE	2.5	U					2.5	U		2.5	U	
BENZENE	18						0.5	U		0.5	U	
BROMOCHLOROMETHANE	0.5	U					0.5	U		0.5	UJ	C
BROMODICHLOROMETHANE	0.5	U					0.5	U		0.5	U	
BROMOFORM	0.5	U					0.5	U		0.5	U	
BROMOMETHANE	0.5	UJ	C				0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE	0.5	U					0.5	U		0.5	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				220			0.5	U		0.5	U	
CHLOROFORM	0.5	U					0.5	U		0.5	U	
CHLOROMETHANE	2.2						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	2.3						0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-MW-05I1-20110602			FC-MW-05I1-20110602DL			FC-MW-05I-20110602			FC-MW-05S-20110603		
SDG: C2506	LAB_ID	C2506-05			C2506-05DL			C2506-17			C2506-22		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/3/2011		
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	
ETHYLBENZENE		78						0.5	U		0.5	U	
ISOPROPYLBENZENE		38						0.5	U		2.9		
M+P-XYLENES		21						1	U		1	U	
METHYL ACETATE		0.5	U					0.5	U		0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U					0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U					0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U					0.5	U		0.5	U	
O-XYLENE		0.5	U					0.5	U		0.5	U	
STYRENE		0.5	U					0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U					0.5	U		0.5	UJ	C
TOLUENE		0.7	J	P				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		0.92	J	P				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: 02045	NSAMPLE	FD-TB02-20110602			FD-TW118-1620			FD-TW118-2125			FD-TW118-2630		
SDG: C2506	LAB_ID	C2506-01			C2506-02			C2506-03			C2506-04		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/2/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FD-TB02-20110602			FD-TW118-1620			FD-TW118-2125			FD-TW118-2630		
SDG: C2506	LAB_ID	C2506-01			C2506-02			C2506-03			C2506-04		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/2/2011		
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		0.51	J	P	1			0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		1.4			0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-DUP01-20110602			SA-TW401-1115			SA-TW401-2125			SA-TW401-2630		
SDG: C2506	LAB_ID	C2506-16			C2506-18			C2506-19			C2506-20		
FRACTION: OV	SAMP_DATE	6/2/2011			6/3/2011			6/3/2011			6/3/2011		
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	SA-TW402-2630											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		43	J	R	0.5	U		0.5	U		5		
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		100	J	R	0.5	U		0.5	U		2.2		
1,1-DICHLOROETHENE		6.9	J	R	0.5	U		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		4.6	J	R	0.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		1.1	J	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	CR	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	R	2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R	2.5	UJ	C	2.5	U		2.5	U	
ACETONE		2.5	UJ	R	2.5	UJ	C	6.6			26		
BENZENE		5.9	J	R	0.5	U		0.5	U		0.87	J	P
BROMOCHLOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	UJ	C
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	CR	0.5	U		0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROETHANE		54	J	R	0.5	U		0.9	J	P	1.4		
CHLOROFORM		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R	0.5	U		0.72	J	P	0.58	J	P
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		2.8		

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110602			SA-TW401-1115			SA-TW401-2125			SA-TW401-2630		
SDG: C2506	LAB_ID	C2506-16			C2506-18			C2506-19			C2506-20		
FRACTION: OV	SAMP_DATE	6/2/2011			6/3/2011			6/3/2011			6/3/2011		
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	SA-TW402-2630											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	R	0.5	UJ	C	0.5	U		0.5	U	
ETHYLBENZENE		0.5	UJ	R	0.5	U		3.7			69		
ISOPROPYLBENZENE		23	J	R	0.5	U		12			53		
M+P-XYLENES		1	UJ	R	1	U		1	U		1	U	
METHYL ACETATE		0.5	UJ	R	0.5	U		0.5	U		0.5	UJ	C
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	UJ	R	0.5	U		0.5	U		4.9		
STYRENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	UJ	C
TOLUENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	UJ	R	0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW401-3135			SA-TW402-1115			SA-TW402-2125			SA-TW402-2125DL		
SDG: C2506	LAB_ID	C2506-21			C2506-10			C2506-11			C2506-11DL		
FRACTION: OV	SAMP_DATE	6/3/2011			6/2/2011			6/2/2011			6/2/2011		
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		23			0.5	U					270	J	H
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		24			0.86	J	P				660	J	H
1,1-DICHLOROETHENE		2.6			0.5	U		49					
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		1.2					
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		10	UR	C	10	UR	C	10	UR	C			
2-BUTANONE		2.5	U		2.5	U		2.5	U				
2-HEXANONE		2.5	U		2.5	U		2.5	U				
4-METHYL-2-PENTANONE		2.5	UJ	C	2.5	U		2.5	U				
ACETONE		2.5	UJ	C	2.5	U		2.5	U				
BENZENE		5.3			0.5	U		20					
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMOFORM		0.5	U		0.5	U		0.5	U				
BROMOMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C			
CARBON DISULFIDE		0.5	U		0.5	U		0.5	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		10			2.1						160	J	H
CHLOROFORM		0.5	U		0.5	U		0.5	U				
CHLOROMETHANE		0.5	U		0.5	U		2					
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		2.2					

PROJ_NO: 02045	NSAMPLE	SA-TW401-3135			SA-TW402-1115			SA-TW402-2125			SA-TW402-2125DL		
SDG: C2506	LAB_ID	C2506-21			C2506-10			C2506-11			C2506-11DL		
FRACTION: OV	SAMP_DATE	6/3/2011			6/2/2011			6/2/2011			6/2/2011		
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	UJ	C	0.5	U		0.5	U				
ETHYLBENZENE		23			0.5	U					140	J	H
ISOPROPYLBENZENE		23			0.5	U		42					
M+P-XYLENES		9.4			1	U		70					
METHYL ACETATE		0.5	U		0.5	U		0.5	U				
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U				
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U				
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U				
O-XYLENE		7.7			0.5	U		9.1					
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		1.3					
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		0.85	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: 02045	NSAMPLE	SA-TW402-2630			SA-TW402-3135			SA-TW402-3135DL			SA-TW403-1115		
SDG: C2506	LAB_ID	C2506-12			C2506-13			C2506-13DL			C2506-06		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/2/2011		
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		46			110						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		100						280	J	H	1.6		
1,1-DICHLOROETHENE		7.2			17						0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		7.2						0.5	U	
1,2,4-TRICHLOROBENZENE		4.8			24						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		6.1						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		3.2						0.5	U	
1,4-DICHLOROBENZENE		0.5	U		13						0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C				10	UR	C
2-BUTANONE		2.5	U		2.5	U					2.5	U	
2-HEXANONE		2.5	U		2.5	U					2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U					2.5	U	
ACETONE		2.5	U		12	J	E				2.5	U	
BENZENE		6.2			4.7						0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMOFORM		0.5	U		0.5	U					0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U					0.5	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		58			79						1.9		
CHLOROFORM		0.5	U		0.5	U					0.5	U	
CHLOROMETHANE		0.5	U		0.68	J	P				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		1.2						0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW402-2630			SA-TW402-3135			SA-TW402-3135DL			SA-TW403-1115		
SDG: C2506	LAB_ID	C2506-12			C2506-13			C2506-13DL			C2506-06		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/2/2011		
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	
ETHYLBENZENE		0.5	U		23						0.5	U	
ISOPROPYLBENZENE		24			21						1.8		
M+P-XYLENES		1	U		2.1						1	U	
METHYL ACETATE		0.5	U		0.5	U					0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U					0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U					0.5	U	
O-XYLENE		0.5	U		0.5	U					0.5	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: 02045	NSAMPLE	SA-TW403-2125			SA-TW403-2630			SA-TW403-3135			SA-TW404-2125		
SDG: C2506	LAB_ID	C2506-07			C2506-08			C2506-09			C2506-23		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/3/2011		
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		8.6			15			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		1.7			26			56			0.5	U	
1,1-DICHLOROETHENE		0.5	U		1.4			3.3			0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.59	J	P	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	UJ	C
ACETONE		2.5	U		4.5	J	P	7.6			2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		3.9			0.5	U		1.2			0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW403-2125			SA-TW403-2630			SA-TW403-3135			SA-TW404-2125		
SDG: C2506	LAB_ID	C2506-07			C2506-08			C2506-09			C2506-23		
FRACTION: OV	SAMP_DATE	6/2/2011			6/2/2011			6/2/2011			6/3/2011		
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	UJ	C
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U		0.5	U		3.8		
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: 02045	NSAMPLE	SA-TW404-3135
SDG: C2506	LAB_ID	C2506-24
FRACTION: OV	SAMP_DATE	6/3/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.5	U	
1,1,2,2-TETRACHLOROETHANE	0.5	U	
1,1,2-TRICHLOROETHANE	0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.5	U	
1,1-DICHLOROETHANE	0.5	U	
1,1-DICHLOROETHENE	0.5	U	
1,2,3-TRICHLOROBENZENE	0.5	U	
1,2,4-TRICHLOROBENZENE	0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.5	U	
1,2-DIBROMOETHANE	0.5	U	
1,2-DICHLOROBENZENE	0.5	U	
1,2-DICHLOROETHANE	0.5	U	
1,2-DICHLOROPROPANE	0.5	U	
1,3-DICHLOROBENZENE	0.5	U	
1,4-DICHLOROBENZENE	0.5	U	
1,4-DIOXANE	10	UR	C
2-BUTANONE	2.5	U	
2-HEXANONE	2.5	U	
4-METHYL-2-PENTANONE	2.5	UJ	C
ACETONE	2.5	UJ	C
BENZENE	0.5	U	
BROMOCHLOROMETHANE	0.5	U	
BROMODICHLOROMETHANE	0.5	U	
BROMOFORM	0.5	U	
BROMOMETHANE	0.5	U	
CARBON DISULFIDE	0.5	U	
CARBON TETRACHLORIDE	0.5	U	
CHLOROBENZENE	0.5	U	
CHLORODIBROMOMETHANE	0.5	U	
CHLOROETHANE	0.5	U	
CHLOROFORM	0.5	U	
CHLOROMETHANE	0.5	U	
CIS-1,2-DICHLOROETHENE	0.5	U	
CIS-1,3-DICHLOROPROPENE	0.5	U	
CYCLOHEXANE	0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW404-3135
SDG: C2506	LAB_ID	C2506-24
FRACTION: OV	SAMP_DATE	6/3/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE	0.5	UJ	C
ETHYLBENZENE	0.5	U	
ISOPROPYLBENZENE	0.5	U	
M+P-XYLENES	1	U	
METHYL ACETATE	0.5	U	
METHYL CYCLOHEXANE	0.5	U	
METHYL TERT-BUTYL ETHER	0.5	U	
METHYLENE CHLORIDE	0.5	U	
O-XYLENE	0.5	U	
STYRENE	0.5	U	
TETRACHLOROETHENE	8.9		
TOLUENE	0.5	U	
TRANS-1,2-DICHLOROETHENE	0.5	U	
TRANS-1,3-DICHLOROPROPENE	0.5	U	
TRICHLOROETHENE	0.5	U	
TRICHLOROFLUOROMETHANE	0.5	U	
VINYL CHLORIDE	0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 16, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C2595

SAMPLES: 20/Aqueous/VOC

SA-PZ136I-20110607	SA-RB01-20110607	SA-TB03-20110606
SA-TW405-2125	SA-TW405-3135	SA-TW406-2125
SA-TW406-3135	SA-TW407-2125	SA-TW407-3135
SA-TW414-3337	SA-TW414-3842	SA-TW414-4347
SA-TW415-3337	SA-TW415-3842	SA-TW415-4347
SA-TW416-3337	SA-TW416-3842	SA-TW416-4347
SA-TW416-4852	SADUP02-20110606	

Overview

The sample set for NWIRP Calverton SDG C2595 consisted of eighteen (18) aqueous environmental samples, one (1) rinsate blank, and one (1) trip blank. All twenty (20) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). One field duplicate sample pair was associated with this sample data group (SDG); SADUP02-20110606/SA-TW405-2125.

The samples were collected by Tetra Tech on May 6 and 7, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Methods SW-846 8260B 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
• Matrix Spike/Matrix Spike Duplicate Results
• Laboratory Control Sample 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.

Volatiles (VOC)

The initial and continuing calibrations performed on instrument MSVOAD had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for acetone. All samples with the exception of sample, SA-TW415-4347, were affected. Only non-detected results were reported for acetone in the affected samples and these non-detects were qualified as rejected, (UR).

The initial and continuing calibrations performed on instrument MSVOAD and MSVOAG had RRFs less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The continuing calibration Percent Difference (%D) performed on instrument MSVOAD on 06/16/11 @ 13:44 for 1,2-dichloroethane was above the 20% quality control limit. The non-detected result reported for this compound in the affected sample, SA-TW416-3337, was qualified as estimated, (UJ).

The continuing calibration %Ds performed on instrument MSVOAD on 06/17/11 @ 11:18 for trichlorofluoromethane, carbon tetrachloride, 1,2-dichloroethane, dibromochloromethane and bromoform exceeded the 20% quality control criteria. Samples SA-PZ136I-20110607 , SA-RB01-20110607, SA-TW416-4852, SA-TW415-3337, SA-TW415-3842, SA-TW414-3337, SA-TW414-3842, and SA-TW414-4347 were affected. The positive and non-detected results reported for these compounds in the affected samples were qualified as estimated, (J) and (UJ), respectively.

The Percent Recoveries (%Rs) for the surrogate spike compound, dibromofluoromethane, were above the upper quality control limit in samples, SA-TW414-4347 and SA-TW415-3337. The samples were reanalyzed at a dilution with acceptable results. The positive results reported from the undiluted analyses of these samples were qualified as estimated, (J). No action was necessary for the positive results used in the data validation from the diluted analyses.

The Laboratory Control Sample (LCS), BSD0615W3, had a %R for chloroethane above the upper quality control limit. Samples SA-TB03-20110606, SA-TW405-2125, SA-TW405-3135, SA-TW406-2125, SA-TW406-3135, SA-TW407-2125, SA-TW407-3135, SA-TW416-3842, SA-TW416-4347, and SADUP02-20110606 were affected. The positive results reported for chloroethane in the affected samples were qualified as estimated, (J). Non-detects were not affected.

The LCS, BSD0606W1, had a %R for chloroethane above the upper quality control limit. Sample SA-TW416-3337 was affected. The positive result reported for chloroethane in the affected sample was qualified as estimated, (J).

The LCS, BSD0617W2, had a %R for chloroethane above the upper quality control limit. Samples SA-PZ136I-20110607, SA-RB01-20110607, SA-TW414-3337, SA-TW414-3842, SA-TW414-4347, SA-TW415-3337, SA-TW415-3842 and SA-TW416-4852 were affected. The positive results reported for chloroethane in the affected samples were qualified as estimated, (J). Non-detects were not affected.

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) %Rs for chloroethane were below the lower quality control limit. The associated LCS had a noncompliant %R for chloroethane. The positive result reported for chloroethane in the parent sample, SA-TW416-3337, was qualified as estimated, (J).

Additional Comments

The continuing calibration performed on instrument MSVOAD on 06/18/11 @ 15:00 had several %Ds outside the quality control limit. No action was taken for these noncompliances because the results for these

compounds in the associated samples were not used in the data validation.

The following analyte was detected in the associated trip blank at the maximum concentration as indicated below:

Analyte	Maximum Conc. (µg/L)	Action Level (µg/L)
Methylene Chloride [1]	6	60

[1] Maximum concentration detected in the trip blank, SA-TB03-20110606, affecting all samples in this SDG.

An action level of 10X the maximum concentration was established to evaluate laboratory contamination for the common laboratory contaminant, methylene chloride. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No action was taken because no positive results were reported for methylene chloride in the affected samples.

Toluene was detected in the rinsate blank. Field blanks were not used to qualify environmental sample results.

The following samples were diluted due to target compounds exceeding the instrument's linear calibration range:

Sample	Compound	Dilution
SA-TW406-3135	Tetrachloroethene	5X
SA-TW414-3337	1,1-Dichloroethene	20X
SA-TW414-3842	1,1,1-Trichloroethane	20X
	1,1-Dichloroethene	20X
SA-TW414-4347	1,1,1-Trichloroethane	20X
	1,1-Dichloroethene	20X
SA-TW415-3337	1,1,1-Trichloroethane	20X
	1,1-Dichloroethene	20X
SA-TW415-3842	1,1-Dichloroethene	10X
SA-TW416-3842	1,1-Dichloroethene	10X
SA-TW416-4347	1,1-Dichloroethene	10X

The diluted results for these compounds were used in the data validation.

Positive results reported below the Limit of Quantitation (LOQ) but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The acetone and 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05, with the exception of one acetone result. Several continuing calibration %Ds exceeded the 20% quality control limit. Some LCS %Rs for chloroethane were above the upper quality control limit.

Other Factors Affecting Data Quality: The MS/MSD had low %Rs for chloroethane. Methylene chloride was detected in the trip blank. Two samples had high surrogate %Rs. Positive results reported below the

LOQ but above the MDL were qualified as estimated, (J). Several samples were analyzed at a dilution due to linear calibration range exceedences.

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), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
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Chemist/Data Validator

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Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	SADUP02-20110606			SA-PZ136I-20110607			SA-RB01-20110607			SA-TB03-20110606		
SDG: C2595	LAB_ID	C2595-04			C2595-15			C2595-14			C2595-01		
FRACTION: OV	SAMP_DATE	6/6/2011			6/7/2011			6/7/2011			6/6/2011		
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	SA-TW405-2125											
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	UJ	C	0.5	UJ	C	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SADUP02-20110606			SA-PZ136I-20110607			SA-RB01-20110607			SA-TB03-20110606		
SDG: C2595	LAB_ID	C2595-04			C2595-15			C2595-14			C2595-01		
FRACTION: OV	SAMP_DATE	6/6/2011			6/7/2011			6/7/2011			6/6/2011		
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	SA-TW405-2125											
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		6		
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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		0.53	J	P	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	UJ	C	0.5	UJ	C	0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW405-2125			SA-TW405-3135			SA-TW406-2125			SA-TW406-3135		
SDG: C2595	LAB_ID	C2595-03			C2595-02			C2595-07			C2595-08		
FRACTION: OV	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/6/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UR	C	2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW405-2125			SA-TW405-3135			SA-TW406-2125			SA-TW406-3135		
SDG: C2595	LAB_ID	C2595-03			C2595-02			C2595-07			C2595-08		
FRACTION: OV	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/6/2011		
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.93	J	P	2					
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: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW406-3135DL			SA-TW407-2125			SA-TW407-3135			SA-TW414-3337		
	LAB_ID	C2595-08DL			C2595-06			C2595-05			C2595-20		
	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/7/2011		
	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		150		
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				
1,1-DICHLOROETHENE					0.5	U		0.5	U		41		
1,2,3-TRICHLOROBENZENE					0.5	U		0.5	U		2.7		
1,2,4-TRICHLOROBENZENE					0.5	U		0.5	U		9.1		
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		6.1		
1,2-DICHLOROETHANE					0.5	U		0.5	U		0.72	J	CP
1,2-DICHLOROPROPANE					0.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE					0.5	U		0.5	U		3.5		
1,4-DICHLOROBENZENE					0.5	U		0.5	U		16		
1,4-DIOXANE					10	UR	C	10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	U		2.5	U		2.5	U	
ACETONE					2.5	UR	C	2.5	UR	C	2.5	UR	C
BENZENE					0.5	U		0.5	U		2.1		
BROMOCHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	UJ	C
BROMOMETHANE					0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U		0.5	UJ	C
CHLOROBENZENE					0.5	U		0.5	U		1.6		
CHLORODIBROMOMETHANE					0.5	U		0.5	U		0.5	UJ	C
CHLOROETHANE					0.5	U		0.5	U		110	J	E
CHLOROFORM					0.5	U		0.5	U		0.5	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		1.2		

PROJ_NO: 02045	NSAMPLE	SA-TW406-3135DL			SA-TW407-2125			SA-TW407-3135			SA-TW414-3337		
SDG: C2595	LAB_ID	C2595-08DL			C2595-06			C2595-05			C2595-20		
FRACTION: OV	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/7/2011		
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	
ETHYLBENZENE					0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	U		0.5	U		6.2		
M+P-XYLENES					1	U		1	U		1	U	
METHYL ACETATE					0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U		0.5	U	
STYRENE					0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		180			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		0.69	J	P
TRICHLOROFLUOROMETHANE					0.5	U		0.5	U		0.5	UJ	C
VINYL CHLORIDE					0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW414-3337DL			SA-TW414-3842			SA-TW414-3842DL			SA-TW414-4347		
	LAB_ID	C2595-20DL			C2595-21			C2595-21DL			C2595-22		
	SAMP_DATE	6/7/2011			6/7/2011			6/7/2011			6/7/2011		
	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								160					
1,1,2,2-TETRACHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U					0.5	U	
1,1-DICHLOROETHANE		710						530					
1,1-DICHLOROETHENE					37						34	J	R
1,2,3-TRICHLOROBENZENE					0.51	J	P				0.53	J	PR
1,2,4-TRICHLOROBENZENE					1.6						1.4	J	R
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U					0.5	U	
1,2-DIBROMOETHANE					0.5	U					0.5	U	
1,2-DICHLOROBENZENE					1.4						1.9	J	R
1,2-DICHLOROETHANE					0.72	J	CP				0.55	J	CPR
1,2-DICHLOROPROPANE					0.5	U					0.5	U	
1,3-DICHLOROBENZENE					0.5	U					0.79	J	PR
1,4-DICHLOROBENZENE					2						3.6	J	R
1,4-DIOXANE					10	UR	C				10	UR	C
2-BUTANONE					2.5	U					2.5	U	
2-HEXANONE					2.5	U					2.5	U	
4-METHYL-2-PENTANONE					2.5	U					2.5	U	
ACETONE					2.5	UR	C				2.5	UR	C
BENZENE					1.3						1.4	J	R
BROMOCHLOROMETHANE					0.5	U					0.5	U	
BROMODICHLOROMETHANE					0.5	U					0.5	U	
BROMOFORM					0.5	UJ	C				0.5	UJ	C
BROMOMETHANE					0.5	U					0.5	U	
CARBON DISULFIDE					0.5	U					0.5	U	
CARBON TETRACHLORIDE					0.5	UJ	C				0.5	UJ	C
CHLOROBENZENE					0.5	U					0.5	U	
CHLORODIBROMOMETHANE					0.5	UJ	C				0.5	UJ	C
CHLOROETHANE					79	J	E				88	J	ER
CHLOROFORM					0.5	U					0.5	U	
CHLOROMETHANE					0.5	U					0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
CYCLOHEXANE					0.5	U					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW414-3337DL			SA-TW414-3842			SA-TW414-3842DL			SA-TW414-4347		
SDG: C2595	LAB_ID	C2595-20DL			C2595-21			C2595-21DL			C2595-22		
FRACTION: OV	SAMP_DATE	6/7/2011			6/7/2011			6/7/2011			6/7/2011		
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	
ETHYLBENZENE					0.5	U					0.5	U	
ISOPROPYLBENZENE					0.5	U					0.62	J	PR
M+P-XYLENES					1	U					1	U	
METHYL ACETATE					0.5	U					0.5	U	
METHYL CYCLOHEXANE					0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U					0.5	U	
METHYLENE CHLORIDE					0.5	U					0.5	U	
O-XYLENE					0.5	U					0.5	U	
STYRENE					0.5	U					0.5	U	
TETRACHLOROETHENE					0.5	U					0.5	U	
TOLUENE					0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
TRICHLOROETHENE					0.5	U					0.5	U	
TRICHLOROFLUOROMETHANE					0.5	UJ	C				0.5	UJ	C
VINYL CHLORIDE					0.5	U					0.5	U	

PROJ_NO: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW414-4347DL			SA-TW415-3337			SA-TW415-3337DL			SA-TW415-3842		
	LAB_ID	C2595-22DL			C2595-17			C2595-17DL			C2595-18		
	SAMP_DATE	6/7/2011			6/7/2011			6/7/2011			6/7/2011		
	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		150						210			56		
1,1,2,2-TETRACHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U					0.5	U	
1,1-DICHLOROETHANE		580						850					
1,1-DICHLOROETHENE					45	J	R				9.9		
1,2,3-TRICHLOROBENZENE					1.1	J	R				0.5	U	
1,2,4-TRICHLOROBENZENE					3.7	J	R				0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U					0.5	U	
1,2-DIBROMOETHANE					0.5	U					0.5	U	
1,2-DICHLOROBENZENE					2.6	J	R				0.5	U	
1,2-DICHLOROETHANE					0.5	UJ	C				0.5	UJ	C
1,2-DICHLOROPROPANE					0.5	U					0.5	U	
1,3-DICHLOROBENZENE					0.8	J	PR				0.5	U	
1,4-DICHLOROBENZENE					3.3	J	R				0.5	U	
1,4-DIOXANE					10	UR	C				10	UR	C
2-BUTANONE					2.5	U					2.5	U	
2-HEXANONE					2.5	U					2.5	U	
4-METHYL-2-PENTANONE					2.5	U					2.5	U	
ACETONE					2.5	UR	C				2.5	UR	C
BENZENE					2	J	R				0.5	U	
BROMOCHLOROMETHANE					0.5	U					0.5	U	
BROMODICHLOROMETHANE					0.5	U					0.5	U	
BROMOFORM					0.5	UJ	C				0.5	UJ	C
BROMOMETHANE					0.5	U					0.5	U	
CARBON DISULFIDE					0.5	U					0.5	U	
CARBON TETRACHLORIDE					0.5	UJ	C				0.5	UJ	C
CHLOROBENZENE					0.5	U					0.5	U	
CHLORODIBROMOMETHANE					0.5	UJ	C				0.5	UJ	C
CHLOROETHANE					100	J	ER				20	J	E
CHLOROFORM					0.5	U					0.5	U	
CHLOROMETHANE					0.5	U					0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
CYCLOHEXANE					0.5	U					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW414-4347DL			SA-TW415-3337			SA-TW415-3337DL			SA-TW415-3842		
SDG: C2595	LAB_ID	C2595-22DL			C2595-17			C2595-17DL			C2595-18		
FRACTION: OV	SAMP_DATE	6/7/2011			6/7/2011			6/7/2011			6/7/2011		
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	
ETHYLBENZENE					0.5	U					0.5	U	
ISOPROPYLBENZENE					3.4	J	R				0.5	U	
M+P-XYLENES					1	U					1	U	
METHYL ACETATE					0.5	U					0.5	U	
METHYL CYCLOHEXANE					0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U					0.5	U	
METHYLENE CHLORIDE					0.5	U					0.5	U	
O-XYLENE					0.5	U					0.5	U	
STYRENE					0.5	U					0.5	U	
TETRACHLOROETHENE					0.5	U					0.5	U	
TOLUENE					0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
TRICHLOROETHENE					0.5	U					0.5	U	
TRICHLOROFLUOROMETHANE					0.5	UJ	C				0.5	UJ	C
VINYL CHLORIDE					0.5	U					0.5	U	

PROJ_NO: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW415-3842DL			SA-TW415-4347			SA-TW416-3337			SA-TW416-3842		
	LAB_ID	C2595-18DL			C2595-19			C2595-09			C2595-12		
	SAMP_DATE	6/7/2011			6/7/2011			6/6/2011			6/6/2011		
	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		32			120		
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					0.59	J	P	0.5	U		0.5	U	
1,1-DICHLOROETHANE		170			6.9			140					
1,1-DICHLOROETHENE					0.53	J	P	5.9			18		
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		0.77	J	P
1,2-DICHLOROETHANE					0.5	U		0.5	UJ	C	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					10	UR	C	10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	U		2.5	U		2.5	U	
ACETONE					2.5	U		2.5	UR	C	2.5	UR	C
BENZENE					0.5	U		0.5	U		1		
BROMOCHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	U	
BROMOMETHANE					0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U		0.5	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					1			50	J	DE	80	J	E
CHLOROFORM					0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW415-3842DL			SA-TW415-4347			SA-TW416-3337			SA-TW416-3842		
SDG: C2595	LAB_ID	C2595-18DL			C2595-19			C2595-09			C2595-12		
FRACTION: OV	SAMP_DATE	6/7/2011			6/7/2011			6/6/2011			6/6/2011		
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	
ETHYLBENZENE					0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE					0.5	U		0.5	U		0.7	J	P
M+P-XYLENES					1	U		1	U		1	U	
METHYL ACETATE					0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U		0.5	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: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW416-3842DL			SA-TW416-4347			SA-TW416-4347DL			SA-TW416-4852		
	LAB_ID	C2595-12DL			C2595-13			C2595-13DL			C2595-16		
	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/7/2011		
	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					120						0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U					0.71	J	P
1,1-DICHLOROETHANE		440						390			1.9		
1,1-DICHLOROETHENE					17						0.5	U	
1,2,3-TRICHLOROBENZENE					0.5	U					0.5	U	
1,2,4-TRICHLOROBENZENE					0.5	U					0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U					0.5	U	
1,2-DIBROMOETHANE					0.5	U					0.5	U	
1,2-DICHLOROBENZENE					0.74	J	P				0.5	U	
1,2-DICHLOROETHANE					0.5	U					0.5	UJ	C
1,2-DICHLOROPROPANE					0.5	U					0.5	U	
1,3-DICHLOROBENZENE					0.5	U					0.5	U	
1,4-DICHLOROBENZENE					0.5	U					0.5	U	
1,4-DIOXANE					10	UR	C				10	UR	C
2-BUTANONE					2.5	U					2.5	U	
2-HEXANONE					2.5	U					2.5	U	
4-METHYL-2-PENTANONE					2.5	U					2.5	U	
ACETONE					2.5	UR	C				2.5	UR	C
BENZENE					0.5	U					0.5	U	
BROMOCHLOROMETHANE					0.5	U					0.5	U	
BROMODICHLOROMETHANE					0.5	U					0.5	U	
BROMOFORM					0.5	U					0.5	UJ	C
BROMOMETHANE					0.5	U					0.5	U	
CARBON DISULFIDE					0.5	U					0.5	U	
CARBON TETRACHLORIDE					0.5	U					0.5	UJ	C
CHLOROBENZENE					0.5	U					0.5	U	
CHLORODIBROMOMETHANE					0.5	U					0.5	UJ	C
CHLOROETHANE					76	J	E				0.5	U	
CHLOROFORM					0.5	U					0.5	U	
CHLOROMETHANE					0.5	U					0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
CYCLOHEXANE					0.5	U					0.5	U	

PROJ_NO: 02045 SDG: C2595 FRACTION: OV MEDIA: WATER	NSAMPLE	SA-TW416-3842DL			SA-TW416-4347			SA-TW416-4347DL			SA-TW416-4852		
	LAB_ID	C2595-12DL			C2595-13			C2595-13DL			C2595-16		
	SAMP_DATE	6/6/2011			6/6/2011			6/6/2011			6/7/2011		
	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	
ETHYLBENZENE					0.5	U					0.5	U	
ISOPROPYLBENZENE					1.1						0.5	U	
M+P-XYLENES					1	U					1	U	
METHYL ACETATE					0.5	U					0.5	U	
METHYL CYCLOHEXANE					0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U					0.5	U	
METHYLENE CHLORIDE					0.5	U					0.5	U	
O-XYLENE					0.5	U					0.5	U	
STYRENE					0.5	U					0.5	U	
TETRACHLOROETHENE					0.5	U					0.5	U	
TOLUENE					0.5	U					0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U					0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U					0.5	U	
TRICHLOROETHENE					0.5	U					0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U					0.5	UJ	C
VINYL CHLORIDE					0.5	U					0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 17, 2011**
FROM:	**EDWARD SEDLMYER**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – VOC** **NWIRP CALVERTON CTO WE08** **SDG C2596**		

SAMPLES: 13 / Aqueous / VOC

SA-DUP03-20110608	SA-PZ135I-20110607	SA-PZ137I-20110608
SA-SB01-20110608	SA-TW411-3337	SA-TW411-3842
SA-TW411-4347	SA-TW412-3337	SA-TW412-3842
SA-TW412-4347	SA-TW413-3337	SA-TW413-3842
SA-TW413-4347		

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C2596 consists of thirteen (13) aqueous environmental samples. The aqueous samples were analyzed for volatile organic compounds (VOC). The following field duplicate pair was associated with this SDG: SA-TW413-3842 / SA-DUP03-20110608.

The samples were collected by Tetra Tech on June 6 and 7, 2011 and analyzed by CHEMTECH. All analyses were conducted in accordance with EPA Method SW-846 8260B analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
• Initial/continuing calibrations
* • GC/MS Tuning
* • Laboratory Method Blank Results
• Surrogate Recoveries
• Matrix Spike / Matrix Spike Duplicate Recoveries
• Laboratory Control Sample Recoveries
* • Field Duplicate Results
* • Internal Standard Recoveries
* • Compound Quantitation
* • Compound Identification
* • 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.

Volatile Organic Compounds

All initial calibrations and all continuing calibrations relative response factors (RRF) were less than the 0.05 quality control limit for 1,4-dioxane on instrument MSVOAG. The non-detected results for 1,4-dioxane were rejected (UR).

Continuing calibration percent differences (%Ds) were greater than the 20% quality control limit for methyl acetate, bromochloromethane, and tetrachloroethene on instrument MSVOAG, on 06/17/11 at 1:50. The nondetected results for the aforementioned compounds in samples SA-PZ135I-20110607, SA-PZ137I-20110608, SA-SB01-20110608, SA-TW413-3337, SA-TW413-3842, SA-TW413-4347, SA-DUP03-20110608, SA-TW412-3337, and SA-TW412-3842 were qualified as estimated (UJ).

Continuing calibration percent differences (%Ds) were greater than the 20% quality control limit for carbon disulfide, methyl acetate, bromochloromethane, bromomethane, chloroethane, acetone, and 2-buranone on instrument MSVOAG, on 06/17/11 at 17:26. The positive and nondetected results for the aforementioned compounds in samples SA-TW411-3337, SA-TW411-3842, and SA-TW411-4347 were qualified as estimated (J) and (UJ), respectively.

Continuing calibration percent differences (%Ds) were greater than the 20% quality control limit for bromoform on instrument MSVOAG, on 06/21/11 at 11:48. The nondetected result for bromoform in sample SA-TW412-4347 was qualified as estimated (UJ).

The surrogate toluene-d8 had percent recoveries less than the quality control limit for samples SA-SB01-20110608, SA-TW413-3337, SA-TW413-3842, SA-TW413-4347, SA-DUP03-20110608, SA-TW412-3337, SA-TW412-3842, SA-TW411-3337, and SA-TW411-3842. The samples were reanalyzed with similar results. The positive and nondetected results for the aforementioned samples were qualified as estimated (J) and (UJ), respectively.

The surrogates 1,2-dichloroethane-d4 and toluene-d8 had percent recoveries less than the quality control limit for sample SA-TW411-4347 The sample was reanalyzed with similar results. The positive and nondetected results for sample SA-TW411-4347 were qualified as estimated (J) and (UJ), respectively.

The laboratory control sample (LCS), BSG0616W3 had a percent recovery greater than the quality control limit for bromochloromethane. No action was taken on this basis because all bromochloromethane results are nondetect.

The laboratory control sample (LCS), BSG0617W1 had a percent recovery greater than the quality control limit for chloroethane, acetone, methyl acetate, methylene chloride, 2-butanone, and bromochloromethane. The positive acetone and chloroethane results for samples SA-TW411-3337 and SA-TW411-4347 were qualified as estimated (J). No action was taken on the nondetected results.

The VOC matrix spike / matrix spike duplicate (MS/MSD) associated with this sample delivery group (SDG) had a relative percent difference (RPD) for acetone that exceeded the quality control limit. No action was taken on this basis because the matrix spike was not performed on the sample in this SDG.

Additional Comments

The results were reported to the limit of detection (LOD). Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Samples SA-DUP03-20110608, SA-TW413-3337, SA-TW413-3842, and SA-TW413-4347 required dilutions due to 1,1-dichloroethane concentrations greater than the linear calibration range of the instrument. All other results are reported from the undiluted analysis.

The source blank (SA-SB01-20110608) contained positive results for acetone, bromoform, and chlorodibromomethane. No results were qualified because of field quality control blanks. Typically, field quality control blanks are not used to establish blank action levels.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Initial and continuing calibration RRF noncompliance resulted in the rejection of 1,4-dioxane results. Surrogate percent recovery noncompliances resulted in the qualification of results for nine samples. LCS percent recovery noncompliances resulted in the qualification of acetone in two samples.

Other Factors Affecting Data Quality: Positive results below the limit of quantitation (LOQ) and above the detection limit (DL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Standard Operating Procedures for Validating Volatile Organic Compounds by SW-846 Method 8260B HW-24 Revision #2 (August 2008) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

The text of this report has been formulated to address only those problem areas affecting data quality.

Edward Sedlmyer
TetraTech NUS
Edward Sedlmyer
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110608			SA-DUP03-20110608DL			SA-PZ135I-20110607			SA-PZ137I-20110608		
SDG: C2596	LAB_ID	C2596-07			C2596-07DL			C2596-01			C2596-02		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/7/2011			6/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			100.0			0.0			0.0		
	DUP_OF	SA-TW413-3842			SA-TW413-3842								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		53	J	R				5.6			0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1-DICHLOROETHANE					260	J	R	35			1.2		
1,1-DICHLOROETHENE		18	J	R				2.8			0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.84	J	PR				0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R				2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	R				2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R				2.5	U		2.5	U	
ACETONE		4.6	J	PR				4.4	J	P	2.5	U	
BENZENE		0.5	UJ	R				0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	CR				0.5	UJ	C	0.5	UJ	C
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R				0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CARBON DISULFIDE		0.5	UJ	R				0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROETHANE		33	J	R				1.8			0.5	U	
CHLOROFORM		0.5	UJ	R				0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	
CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110608			SA-DUP03-20110608DL			SA-PZ135I-20110607			SA-PZ137I-20110608		
SDG: C2596	LAB_ID	C2596-07			C2596-07DL			C2596-01			C2596-02		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/7/2011			6/8/2011		
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	SA-TW413-3842			SA-TW413-3842								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		53	J	R				5.6			0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1-DICHLOROETHANE					260	J	R	35			1.2		
1,1-DICHLOROETHENE		18	J	R				2.8			0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.84	J	PR				0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R				2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	R				2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R				2.5	U		2.5	U	
ACETONE		4.6	J	PR				4.4	J	P	2.5	U	
BENZENE		0.5	UJ	R				0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	CR				0.5	UJ	C	0.5	UJ	C
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R				0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CARBON DISULFIDE		0.5	UJ	R				0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROETHANE		33	J	R				1.8			0.5	U	
CHLOROFORM		0.5	UJ	R				0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	
CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-SB01-20110608			SA-TW411-3337			SA-TW411-3842			SA-TW411-4347		
SDG: C2596	LAB_ID	C2596-03			C2596-11			C2596-12			C2596-13		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
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	UJ	R	2.5	J	R	0.5	UJ	R	0.5	UJ	R
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1-DICHLOROETHANE		0.5	UJ	R	64	J	R	10	J	R	48	J	R
1,1-DICHLOROETHENE		0.5	UJ	R	2.9	J	R	0.62	J	PR	2.3	J	R
1,2,3-TRICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2,4-TRICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,3-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,4-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R	2.5	UJ	CR	2.5	UJ	CR	2.5	UJ	CR
2-HEXANONE		2.5	UJ	R	2.5	UJ	R	2.5	UJ	R	2.5	UJ	R
4-METHYL-2-PENTANONE		2.5	UJ	R	2.5	UJ	R	2.5	UJ	R	2.5	UJ	R
ACETONE		6.6	J	R	8.2	J	CER	2.5	UJ	CR	7.3	J	CER
BENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
BROMOCHLOROMETHANE		0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
BROMOFORM		3.6	J	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
BROMOMETHANE		0.5	UJ	R	0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR
CARBON DISULFIDE		0.5	UJ	R	0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CHLORODIBROMOMETHANE		1.9	J	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CHLOROETHANE		0.5	UJ	R	10	J	CER	0.5	UJ	CR	7.9	J	CER
CHLOROFORM		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CHLOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CYCLOHEXANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW412-3337			SA-TW412-3842			SA-TW412-4347			SA-TW413-3337		
SDG: C2596	LAB_ID	C2596-08			C2596-09			C2596-10			C2596-04		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
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		5.3	J	R	18	J	R	2.1			75	J	R
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,1,2-TRICHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,1-DICHLOROETHANE		89	J	R	100	J	R	25					
1,1-DICHLOROETHENE		5.4	J	R	7.6	J	R	1.3			27	J	R
1,2,3-TRICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,2,4-TRICHLOROBENZENE		0.74	J	PR	0.9	J	PR	0.5	U		1.8	J	R
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,2-DIBROMOETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,2-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.91	J	PR
1,2-DICHLOROETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,2-DICHLOROPROPANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,3-DICHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
1,4-DICHLOROBENZENE		0.8	J	PR	1.1	J	R	0.5	U		1.7	J	R
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R	7	J	R	2.5	U		2.5	UJ	R
2-HEXANONE		2.5	UJ	R	2.5	UJ	R	2.5	U		2.5	UJ	R
4-METHYL-2-PENTANONE		2.5	UJ	R	2.5	UJ	R	2.5	U		2.5	UJ	R
ACETONE		2.5	UJ	R	8	J	R	2.5	U		11	J	R
BENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.71	J	PR
BROMOCHLOROMETHANE		0.5	UJ	CR	0.5	UJ	CR	0.5	U		0.5	UJ	CR
BROMODICHLOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
BROMOFORM		0.5	UJ	R	0.5	UJ	R	0.5	UJ	C	0.5	UJ	R
BROMOMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CARBON DISULFIDE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CARBON TETRACHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CHLOROBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CHLORODIBROMOMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CHLOROETHANE		15	J	R	16	J	R	1.4			63	J	R
CHLOROFORM		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CHLOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CIS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
CYCLOHEXANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW413-3337DL			SA-TW413-3842			SA-TW413-3842DL			SA-TW413-4347		
SDG: C2596	LAB_ID	C2596-04DL			C2596-05			C2596-05DL			C2596-06		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
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					55	J	R				23	J	R
1,1,2,2-TETRACHLOROETHANE					0.5	UJ	R				0.5	UJ	R
1,1,2-TRICHLOROETHANE					0.5	UJ	R				0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	UJ	R				0.5	UJ	R
1,1-DICHLOROETHANE		360	J	R				280	J	R			
1,1-DICHLOROETHENE					19	J	R				11	J	R
1,2,3-TRICHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
1,2,4-TRICHLOROBENZENE					0.75	J	PR				0.5	UJ	R
1,2-DIBROMO-3-CHLOROPROPANE					0.5	UJ	R				0.5	UJ	R
1,2-DIBROMOETHANE					0.5	UJ	R				0.5	UJ	R
1,2-DICHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
1,2-DICHLOROETHANE					0.5	UJ	R				0.5	UJ	R
1,2-DICHLOROPROPANE					0.5	UJ	R				0.5	UJ	R
1,3-DICHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
1,4-DICHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
1,4-DIOXANE					10	UR	C				10	UR	C
2-BUTANONE					2.5	UJ	R				2.5	UJ	R
2-HEXANONE					2.5	UJ	R				2.5	UJ	R
4-METHYL-2-PENTANONE					2.5	UJ	R				2.5	UJ	R
ACETONE					6.6	J	R				5.2	J	R
BENZENE					0.5	UJ	R				0.5	UJ	R
BROMOCHLOROMETHANE					0.5	UJ	CR				0.5	UJ	CR
BROMODICHLOROMETHANE					0.5	UJ	R				0.5	UJ	R
BROMOFORM					0.5	UJ	R				0.5	UJ	R
BROMOMETHANE					0.5	UJ	R				0.5	UJ	R
CARBON DISULFIDE					0.5	UJ	R				0.5	UJ	R
CARBON TETRACHLORIDE					0.5	UJ	R				0.5	UJ	R
CHLOROBENZENE					0.5	UJ	R				0.5	UJ	R
CHLORODIBROMOMETHANE					0.5	UJ	R				0.5	UJ	R
CHLOROETHANE					30	J	R				19	J	R
CHLOROFORM					0.5	UJ	R				0.5	UJ	R
CHLOROMETHANE					0.5	UJ	R				0.5	UJ	R
CIS-1,2-DICHLOROETHENE					0.5	UJ	R				0.5	UJ	R
CIS-1,3-DICHLOROPROPENE					0.5	UJ	R				0.5	UJ	R
CYCLOHEXANE					0.5	UJ	R				0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW413-4347DL		
SDG: C2596	LAB_ID	C2596-06DL		
FRACTION: OV	SAMP_DATE	6/8/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE				
1,1,2,2-TETRACHLOROETHANE				
1,1,2-TRICHLOROETHANE				
1,1,2-TRICHLOROTRIFLUOROETHANE				
1,1-DICHLOROETHANE		180	J	R
1,1-DICHLOROETHENE				
1,2,3-TRICHLOROBENZENE				
1,2,4-TRICHLOROBENZENE				
1,2-DIBROMO-3-CHLOROPROPANE				
1,2-DIBROMOETHANE				
1,2-DICHLOROBENZENE				
1,2-DICHLOROETHANE				
1,2-DICHLOROPROPANE				
1,3-DICHLOROBENZENE				
1,4-DICHLOROBENZENE				
1,4-DIOXANE				
2-BUTANONE				
2-HEXANONE				
4-METHYL-2-PENTANONE				
ACETONE				
BENZENE				
BROMOCHLOROMETHANE				
BROMODICHLOROMETHANE				
BROMOFORM				
BROMOMETHANE				
CARBON DISULFIDE				
CARBON TETRACHLORIDE				
CHLOROBENZENE				
CHLORODIBROMOMETHANE				
CHLOROETHANE				
CHLOROFORM				
CHLOROMETHANE				
CIS-1,2-DICHLOROETHENE				
CIS-1,3-DICHLOROPROPENE				
CYCLOHEXANE				

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110608			SA-DUP03-20110608DL			SA-PZ135I-20110607			SA-PZ137I-20110608		
SDG: C2596	LAB_ID	C2596-07			C2596-07DL			C2596-01			C2596-02		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/7/2011			6/8/2011		
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	SA-TW413-3842			SA-TW413-3842								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
ETHYLBENZENE		0.5	UJ	R				0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	UJ	R				0.5	U		0.5	U	
M+P-XYLENES		1	UJ	R				1	U		1	U	
METHYL ACETATE		0.5	UJ	CR				0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	UJ	R				0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	R				0.5	U		0.5	U	
O-XYLENE		0.5	UJ	R				0.5	U		0.5	U	
STYRENE		0.5	UJ	R				0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	CR				0.5	UJ	C	0.5	UJ	C
TOLUENE		0.5	UJ	R				0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	
TRICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
VINYL CHLORIDE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-SB01-20110608			SA-TW411-3337			SA-TW411-3842			SA-TW411-4347		
SDG: C2596	LAB_ID	C2596-03			C2596-11			C2596-12			C2596-13		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
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	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
ETHYLBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
ISOPROPYLBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
M+P-XYLENES		1	UJ	R	1	UJ	R	1	UJ	R	1	UJ	R
METHYL ACETATE		0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR	0.5	UJ	CR
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
METHYLENE CHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
O-XYLENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
STYRENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TETRACHLOROETHENE		0.5	UJ	CR	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TOLUENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
VINYL CHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R	0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW412-3337			SA-TW412-3842			SA-TW412-4347			SA-TW413-3337		
SDG: C2596	LAB_ID	C2596-08			C2596-09			C2596-10			C2596-04		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
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	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
ETHYLBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
ISOPROPYLBENZENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
M+P-XYLENES		1	UJ	R	1	UJ	R	1	U		1	UJ	R
METHYL ACETATE		0.5	UJ	CR	0.5	UJ	CR	0.5	U		0.5	UJ	CR
METHYL CYCLOHEXANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
METHYL TERT-BUTYL ETHER		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
METHYLENE CHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
O-XYLENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
STYRENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TETRACHLOROETHENE		0.5	UJ	CR	0.5	UJ	CR	0.5	U		0.5	UJ	CR
TOLUENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TRICHLOROETHENE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R
VINYL CHLORIDE		0.5	UJ	R	0.5	UJ	R	0.5	U		0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW413-3337DL			SA-TW413-3842			SA-TW413-3842DL			SA-TW413-4347		
SDG: C2596	LAB_ID	C2596-04DL			C2596-05			C2596-05DL			C2596-06		
FRACTION: OV	SAMP_DATE	6/8/2011			6/8/2011			6/8/2011			6/8/2011		
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	UJ	R				0.5	UJ	R
ETHYLBENZENE					0.5	UJ	R				0.5	UJ	R
ISOPROPYLBENZENE					0.5	UJ	R				0.5	UJ	R
M+P-XYLENES					1	UJ	R				1	UJ	R
METHYL ACETATE					0.5	UJ	CR				0.5	UJ	CR
METHYL CYCLOHEXANE					0.5	UJ	R				0.5	UJ	R
METHYL TERT-BUTYL ETHER					0.5	UJ	R				0.5	UJ	R
METHYLENE CHLORIDE					0.5	UJ	R				0.5	UJ	R
O-XYLENE					0.5	UJ	R				0.5	UJ	R
STYRENE					0.5	UJ	R				0.5	UJ	R
TETRACHLOROETHENE					0.5	UJ	CR				0.5	UJ	CR
TOLUENE					0.5	UJ	R				0.5	UJ	R
TRANS-1,2-DICHLOROETHENE					0.5	UJ	R				0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE					0.5	UJ	R				0.5	UJ	R
TRICHLOROETHENE					0.5	UJ	R				0.5	UJ	R
TRICHLOROFLUOROMETHANE					0.5	UJ	R				0.5	UJ	R
VINYL CHLORIDE					0.5	UJ	R				0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW413-4347DL		
SDG: C2596	LAB_ID	C2596-06DL		
FRACTION: OV	SAMP_DATE	6/8/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE				
ETHYLBENZENE				
ISOPROPYLBENZENE				
M+P-XYLENES				
METHYL ACETATE				
METHYL CYCLOHEXANE				
METHYL TERT-BUTYL ETHER				
METHYLENE CHLORIDE				
O-XYLENE				
STYRENE				
TETRACHLOROETHENE				
TOLUENE				
TRANS-1,2-DICHLOROETHENE				
TRANS-1,3-DICHLOROPROPENE				
TRICHLOROETHENE				
TRICHLOROFLUOROMETHANE				
VINYL CHLORIDE				

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 18, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – VOC NWIRP CALVERTON CTO WE08 SDG C2634**		

SAMPLES: 14 / Aqueous / VOC

SA-DUP04-20110609	SA-PZ133I-20110609	SA-PZ133I1-20110609
SA-PZ139I-20110610	SA-TB04-20110609	SA-TW408-3337
SA-TW408-3842	SA-TW408-4347	SA-TW409-3337
SA-TW409-3842	SA-TW409-4347	SA-TW410-3337
SA-TW410-3842	SA-TW410-4347	

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C2634 consisted of fourteen (14) aqueous samples including one (1) aqueous trip blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC). One (1) field duplicate sample pair was included in this Sample Delivery Group (SDG); SA-DUP04-20110609 / SA-TW410-3842.

The samples were collected by Tetra Tech on June 9 and 10, 2011 and analyzed by ChemTech laboratory. All analyses were conducted in accordance with EPA Method SW-846 8260B 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
• Laboratory Control Sample Recoveries
• Blank Results
• Surrogate Spike Recoveries
* • Internal Standard Recoveries
* • 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 relative response factor (RRF) was less than the quality control limit of 0.05 for 1,4-dioxane for the instrument MSVOAG on 06/18/11 and the instrument MSVOAH on 06/15/11. Additionally, the continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane. All sample 1,4-dioxane results were non-detected and were qualified rejected, (UR).

The continuing calibration verification (CCV) percent difference (%D) was greater than the 20% quality control limit for dichlorodifluoromethane and tetrachloroethene for instrument MSVOAG on 06/20/11 @ 02:48 affecting sample SA-TW409-4347. The non-detected results for dichlorodifluoromethane and tetrachloroethene for sample SA-TW409-4347 were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for dichlorodifluoromethane, chloromethane, vinyl chloride, acetone, methyl acetate, methylene chloride, and 4-methyl-2-pentanone for instrument MSVOAH on 06/18/11 @ 15:54.

Affecting samples: SA-PZ133I-20110609, SA-TB04-20110609, SA-TW410-3337, SA-TW410-4347, SA-DUP04-20110609, SA-PZ133I1-20110609, SA-TW408-3842, SA-TW408-4347, and SA-TW409-3842

Action: All samples had non-detected results for the aforementioned analytes which were qualified estimated, (UJ).

The CCV %D was greater than the 20% quality control limit for acetone, methyl acetate, methylene chloride, and 4-methyl-2-pentanone for instrument MSVOAH on 06/19/11 @ 11:09.

Affecting samples: SA-PZ133I1-20110609 dilution, SA-PZ139I-20110610, SA-TW409-3337, SA-TB04-20110609 re-analysis, SA-TW410-3842, SA-TW408-3337, SA-TW408-3842 dilution, and SA-PZ139I-20110610 re-analysis

Action: The aforementioned analytes were not reported for samples SA-PZ133I1-20110609 dilution, SA-TB04-20110609 re-analysis, SA-TW408-3842 dilution, and SA-PZ139I-20110610 re-analysis as the undiluted or initial sample analysis results were reported. Samples SA-PZ139I-20110610, SA-TW409-3337, SA-TW410-3842, and SA-TW408-3337 had non-detected results for the aforementioned analytes which were qualified estimated, (UJ).

The surrogate (system monitoring compound) %Rs were greater than the quality control limit for samples as listed below.

Sample	Surrogate(s)
SA-TB04-20110609	1,2-dichloroethane-d4
SA-PZ133I1-20110609	1,2-dichloroethane-d4, 4-bromofluorobenzene
SA-PZ139I-20110610	1,2-dichloroethane-d4
SA-TB04-20110609RE	1,2-dichloroethane-d4
SA-PZ139I-20110610RE	1,2-dichloroethane-d4

Affecting samples: SA-TB04-20110609, SA-PZ133I1-20110609, and SA-PZ139I-20110610

Actions: As the re-analysis samples SA-TB04-20110609RE and SA-PZ139I-20110610RE had no improvement in the surrogate %Rs, the re-analysis sample results were not reported. The non-detected results for samples SA-TB04-20110609, SA-PZ133I1-20110609, and SA-PZ139I-20110610 were not qualified. The positive results for the samples SA-PZ133I1-20110609 and SA-PZ139I-20110610 were qualified estimated, (J).

Positive results below the limit of quantitation (LOQ) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Additional Comments

Methylene chloride was detected in the laboratory method blank VBH0619W1 affecting all samples at the following maximum concentration as indicated below:

Compound	Maximum Conc. (µg/L)	Action Level (µg/L)
Methylene chloride	25	250

An action level of 10X for the common laboratory contaminant methylene chloride was established to evaluate for laboratory contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No samples were qualified for method blank contamination as all samples had non-detected results for methylene chloride.

The laboratory control sample (LCS) percent recovery (%R) was greater than the quality control limit for acetone and methylene chloride for LCS BSH0618W1.

Affecting samples: SA-PZ133I-20110609, SA-TB04-20110609, SA-TW410-3337, SA-TW410-4347, SA-DUP04-20110609, SA-PZ133I1-20110609, SA-TW408-3842, SA-TW408-4347, and SA-TW409-3842

Action: No action as all aforementioned samples had non-detected results for acetone and methylene chloride.

The LCS %R was greater than the quality control limit for chloromethane, acetone, and methylene chloride for LCS BSH0619W1.

Affecting samples: SA-PZ133I1-20110609 dilution, SA-PZ139I-20110610, SA-TW409-3337, SA-TB04-20110609 re-analysis, SA-TW410-3842, SA-TW408-3337, SA-TW408-3842 dilution, and SA-PZ139I-20110610 re-analysis

Action: No action as all aforementioned samples had non-detected results for chloromethane, acetone, and methylene chloride.

The matrix spike (MS) and MS duplicate (MSD) %Rs were greater than the quality control limit for chloromethane for spiked sample SA-TW409-3842.

Affecting sample: SA-TW409-3842

Action: No action as the sample SA-TW409-3842 had a non-detected result for chloromethane.

The matrix spike (MS) and MS duplicate (MSD) %Rs were less than the quality control limit for analytes as listed below for spiked sample SA-TW409-3842.

Analyte	MS	MSD
1,2,4-Trichlorobenzene	62	------
1,4-Dioxane	59	50

Affecting sample: SA-TW409-3842

Action: No action was taken for the 1,2,4-trichlorbenzene result. No action was taken for the non-detected 1,4-dioxane result as it was rejected for the RRF quality control limit non-compliance.

Samples listed below were diluted due to high VOC results in the undiluted sample analysis. Only those VOC results which exceeded the highest calibration level for the undiluted sample analyses were reported from the dilution analyses.

Sample	Dilution
SA-PZ133I1-20110609	1X, 10X
SA-TW408-3842	1X, 10X

Fifty-two (52) analytes were reported for VOCs.

Non-detected sample results were reported to the LOD.

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane VOC non-detected analyte results were rejected due to initial and continuing calibration RRF quality control limit non-compliances. Sample VOC results were qualified for CCV %D and surrogate quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP #HW-24 Revision #2 August 2008, USEPA SW-846 Method 8260B, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
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)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	SA-DUP04-20110609			SA-PZ133I1-20110609			SA-PZ133I1-20110609DL			SA-PZ133I-20110609		
SDG: C2634	LAB_ID	C2634-06			C2634-12			C2634-12DL			C2634-02		
FRACTION: OV	SAMP_DATE	6/9/2011			6/9/2011			6/9/2011			6/9/2011		
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	SA-TW410-3842											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		22	J	R				9.5		
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		10						120			76		
1,1-DICHLOROETHENE		0.76	J	P	13	J	R				4.3		
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		10	UR	C	10	UR	C				10	UR	C
2-BUTANONE		2.5	U		2.5	U					2.5	U	
2-HEXANONE		2.5	U		2.5	U					2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	C	2.5	UJ	C				2.5	UJ	C
ACETONE		2.5	UJ	C	2.5	UJ	C				2.5	UJ	C
BENZENE		0.5	U		0.5	U					0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U					0.5	U	
BROMOFORM		0.5	U		0.5	U					0.5	U	
BROMOMETHANE		0.5	U		0.5	U					0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U					0.5	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		22	J	R				6.7		
CHLOROFORM		0.5	U		0.5	U					0.5	U	
CHLOROMETHANE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
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: 02045	NSAMPLE	SA-DUP04-20110609			SA-PZ133I1-20110609			SA-PZ133I1-20110609DL			SA-PZ133I-20110609		
SDG: C2634	LAB_ID	C2634-06			C2634-12			C2634-12DL			C2634-02		
FRACTION: OV	SAMP_DATE	6/9/2011			6/9/2011			6/9/2011			6/9/2011		
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	SA-TW410-3842											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
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		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U					0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U					0.5	U	
METHYLENE CHLORIDE		0.5	UJ	C	0.5	UJ	C				0.5	UJ	C
O-XYLENE		0.5	U		0.5	U					0.5	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	UJ	C	0.5	UJ	C				0.5	UJ	C

PROJ_NO: 02045	NSAMPLE	SA-PZ139I-20110610			SA-TB04-20110609			SA-TW408-3337			SA-TW408-3842		
SDG: C2634	LAB_ID	C2634-13			C2634-01			C2634-14			C2634-15		
FRACTION: OV	SAMP_DATE	6/10/2011			6/9/2011			6/10/2011			6/10/2011		
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		19		
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		5.9	J	R	0.5	U		34					
1,1-DICHLOROETHENE		0.5	U		0.5	U		3.3			11		
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		1.3			1.4		
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		3.7			4.3		
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		6.4			1.2		
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		4.7			0.64	J	P
1,4-DICHLOROBENZENE		0.5	U		0.5	U		26			2.9		
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
ACETONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.75	J	P	1.1		
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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U		3.8			0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U		46			110		
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	UJ	C	0.5	U		0.5	UJ	C
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.61	J	P	0.6	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	

PROJ_NO: 02045	NSAMPLE	SA-PZ139I-20110610			SA-TB04-20110609			SA-TW408-3337			SA-TW408-3842		
SDG: C2634	LAB_ID	C2634-13			C2634-01			C2634-14			C2634-15		
FRACTION: OV	SAMP_DATE	6/10/2011			6/9/2011			6/10/2011			6/10/2011		
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	UJ	C	0.5	U		0.5	UJ	C
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U		0.62	J	P	0.5	U	
M+P-XYLENES		1	U		1	U		1	U		1	U	
METHYL ACETATE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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	UJ	C	0.5	U		0.5	UJ	C

PROJ_NO: 02045	NSAMPLE	SA-TW408-3842DL			SA-TW408-4347			SA-TW409-3337			SA-TW409-3842		
SDG: C2634	LAB_ID	C2634-15DL			C2634-16			C2634-07			C2634-08		
FRACTION: OV	SAMP_DATE	6/10/2011			6/10/2011			6/9/2011			6/9/2011		
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					11			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		190			50			13			3.7		
1,1-DICHLOROETHENE					3.3			0.83	J	P	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					10	UR	C	10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	U		2.5	U	
2-HEXANONE					2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE					2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
ACETONE					2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE					0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	U	
BROMOMETHANE					0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U		0.5	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					4.7			0.5	U		0.5	U	
CHLOROFORM					0.5	U		0.5	U		0.5	U	
CHLOROMETHANE					0.5	UJ	C	0.5	U		0.5	UJ	C
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: 02045	NSAMPLE	SA-TW408-3842DL			SA-TW408-4347			SA-TW409-3337			SA-TW409-3842		
SDG: C2634	LAB_ID	C2634-15DL			C2634-16			C2634-07			C2634-08		
FRACTION: OV	SAMP_DATE	6/10/2011			6/10/2011			6/9/2011			6/9/2011		
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	UJ	C	0.5	U		0.5	UJ	C
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					0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
O-XYLENE					0.5	U		0.5	U		0.5	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	UJ	C	0.5	U		0.5	UJ	C

PROJ_NO: 02045	NSAMPLE	SA-TW409-4347			SA-TW410-3337			SA-TW410-3842			SA-TW410-4347		
SDG: C2634	LAB_ID	C2634-11			C2634-03			C2634-04			C2634-05		
FRACTION: OV	SAMP_DATE	6/9/2011			6/9/2011			6/9/2011			6/9/2011		
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		7.2			22			11			25		
1,1-DICHLOROETHENE		0.5	U		1.3			0.93	J	P	1.2		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
ACETONE		2.5	U		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		5.2			0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	UJ	C	0.5	U		0.5	UJ	C
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: 02045	NSAMPLE	SA-TW409-4347			SA-TW410-3337			SA-TW410-3842			SA-TW410-4347		
SDG: C2634	LAB_ID	C2634-11			C2634-03			C2634-04			C2634-05		
FRACTION: OV	SAMP_DATE	6/9/2011			6/9/2011			6/9/2011			6/9/2011		
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	UJ	C	0.5	UJ	C	0.5	U		0.5	UJ	C
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		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	C	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	UJ	C	0.5	U		0.5	UJ	C

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**AUGUST 12, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – VOC NWIRP CALVERTON CTO WE08 SDG C2874**		
SAMPLES:	7 / Aqueous / VOC		

CA-PRSC-01-20110629	CA-PRSC-02-01-20110629	
CA-PRSC-02-02-20110629	CA-PRSC-02-03-20110629	
CA-PRSC-03-20110629	CA-PRSC-DUP01	CA-PRSC-TB01

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C2874 consisted of seven (7) aqueous samples including one (1) aqueous trip blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC). One (1) field duplicate sample pair was included in this Sample Delivery Group (SDG); CA-PRSC-DUP01 / CA-PRSC-01-20110629.

The samples were collected by Tetra Tech on June 29, 2011 and analyzed by ChemTech laboratory. All analyses were conducted in accordance with EPA Method SW-846 8260B 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
	•	Laboratory Control Sample Recoveries
*	•	Blank Results
	•	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 initial calibration relative response factor (RRF) was less than the quality control limit of 0.05 for 1,4-dioxane for the instrument MSVOAD on 07/05/11. Additionally, the continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane. All sample 1,4-dioxane results were non-detected and were qualified rejected, (UR).

The continuing calibration verification (CCV) percent difference (%D) was greater than the 20% quality control limit for chloroethane and bromomethane for instrument MSVOAG on 07/07/11 @ 15:15.

Affecting sample: CA-PRSC-02-03-20110629

Action: The samples had non-detected results for the aforementioned analytes which were qualified estimated, (UJ).

The laboratory control sample (LCS) percent recovery (%R) was less than the quality control limit for 1,4-dioxane for batch VBG0705W1 affecting the matrix spike (MS) and MS duplicate (MSD) samples for spiked sample CA-PRSC-03-20110629. No action was taken as no SDG samples were included in this sample batch.

The MS and MSD %Rs for cis-1,3-dichloropropene and trans-1,3-dichloropropene were less than the quality control limit for spike sample CA-PRSC-03-20110629. The sample non-detected results for cis-1,3-dichloropropene and trans-1,3-dichloropropene were qualified estimated, (UJ).

The MS %R for 2-hexanone and the MSD %Rs for chloromethane and chloroethane were greater than the quality control limit for spike sample CA-PRSC-03-20110629. No validation action was taken as the spiked sample had non-detected results for the aforementioned analytes.

The MSD for spiked sample CA-PRSC-03-20110629 had a surrogate %R greater than the quality control limit for the surrogate 1,2-dichloroethane-d4. No action was taken as no SDG samples were affected.

Positive results below the limit of detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Additional Comments

Fifty-two (52) analytes were reported for VOCs.

Sample VOC analyte results were reported to the LOD.

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane VOC non-detected analyte results were rejected due to initial calibration and CCV RRF quality control limit non-compliances. Sample CA-PRSC-02-03-20110629 VOC results were qualified for CCV %D and MS/MSD quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP HW-24 Revision #2 August 2008, USEPA SW-846 Method 8260B, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
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)

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % 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 = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
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 (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% 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 greater than sample activity

PROJ_NO: 02045	NSAMPLE	CA-PRSC-01-20110629			CA-PRSC-02-01-20110629			CA-PRSC-02-02-20110629			CA-PRSC-02-03-20110629		
SDG: C2874	LAB_ID	C2874-06			C2874-01			C2874-02			C2874-03		
FRACTION: OV	SAMP_DATE	6/29/2011			6/29/2011			6/29/2011			6/29/2011		
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		12			0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		3.6			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		10	U		10	U		10	U		10	U	
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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	UJ	C
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		1.4			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: 02045	NSAMPLE	CA-PRSC-03-20110629			CA-PRSC-DUP01			CA-PRSC-TB01		
SDG: C2874	LAB_ID	C2874-07			C2874-05			C2874-04		
FRACTION: OV	SAMP_DATE	6/29/2011			6/29/2011			6/29/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF				CA-PRSC-01-20110629					
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		10	U		10	U		10	U	
2-BUTANONE		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	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	UJ	D	0.5	U		0.5	U	
CYCLOHEXANE		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	CA-PRSC-01-20110629			CA-PRSC-02-01-20110629			CA-PRSC-02-02-20110629			CA-PRSC-02-03-20110629		
SDG: C2874	LAB_ID	C2874-06			C2874-01			C2874-02			C2874-03		
FRACTION: OV	SAMP_DATE	6/29/2011			6/29/2011			6/29/2011			6/29/2011		
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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		0.66	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: 02045	NSAMPLE	CA-PRSC-03-20110629			CA-PRSC-DUP01			CA-PRSC-TB01		
SDG: C2874	LAB_ID	C2874-07			C2874-05			C2874-04		
FRACTION: OV	SAMP_DATE	6/29/2011			6/29/2011			6/29/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF				CA-PRSC-01-20110629					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U	
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		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	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	UJ	D	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	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: D. BRAYACK **DATE:** NOVEMBER 16, 2011

FROM: MICHELLE L. ALLEN **COPIES:** DV FILE

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C3830

SAMPLES: 26/Aqueous/VOC

SA-DUP01-20110919	SA-DUP02-20110920	SA-MW-126D-20110921
SA-MW-126I-20110921	SA-MW-126S-20110920	SA-PZ-118I-20110920
SA-PZ-118S-20110920	SA-PZ-120S-20110920	SA-PZ-122D-20110920
SA-PZ-122S-20110920	SA-PZ-123I-20110920	SA-PZ-123I1-20110920
SA-PZ-123S-20110920	SA-PZ-133I-20110919	SA-PZ-133I1-20110919
SA-PZ-135-20110919	SA-PZ-136I-20110919	SA-PZ-137-20110919
SA-PZ-138I1-20110920	SA-PZ-140-20110921	SA-PZ-142-20110921
SA-PZ-143-20110921	SA-PZ-157I1-20110921	SA-PZ-166I1-20110919
SA-PZ-408-20110920	SA-TB01-20110914	

"I" designators added by JB 2-16-12

16IT

JBB 1-9-11

Overview

16IT

The sample set for NWIRP Calverton SDG C3830 consisted of twenty-five (25) aqueous environmental samples and one (1) trip blank. All twenty-six (26) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). Three field duplicate sample pairs were associated with this sample delivery group (SDG): SA-DUP01-20110919/SA-PZ-166I1-20110919, SA-DUP02-20110920/ SA-PZ-122D-20110920, and SA-DUP03-20110921 (SDG C3831)/SA-PZ-143-20110921.

The samples were collected by Tetra Tech on September 14, 19, 20 and 21, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Method SW-846 8260B 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 Results
	•	Matrix Spike/Matrix Spike Duplicate Sample 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.

Edits made by JB 2-16-12
"I" designators

Volatiles (VOC)

The initial and continuing calibrations performed on instruments MSVOAG had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The continuing calibration performed on 09/26/11 @ 10:55 had a Percent Drift (%Drift) for bromomethane above the 20% quality control limit. Samples SA-TB01-20110914, SA-PZ-133I1-20110919, and SA-PZ-135I-20110919 were affected. The non-detected results reported for bromomethane were qualified as estimated, (UJ).

The continuing calibration performed on 09/27/11 @ 12:14 had %Drifts for bromomethane and acetone and %Ds for 1,2-dichloroethane, 2-chloroethyl vinyl ether, and 1,4-dioxane above the 20% quality control limits. Samples SA-PZ-118I-20110920, SA-PZ-122S-20110920, SA-PZ-133I-20110919, SA-PZ-136I-20110919, and SA-PZ-137I-20110919 were affected. No action was taken for 1,4-dioxane because the affected results were qualified for a more severe calibration noncompliance. The non-detected results reported for the remaining compounds in the affected samples were qualified as estimated, (UJ).

%Drifts for bromomethane and ethylbenzene were above the 20% quality control limit for the continuing calibration performed on 09/29/11 @ 10:29. Only non-detected results were reported for these compounds in the affected samples, SA-DUP02-20110920, SA-MW-126I-20110921, SA-MW-126S-20110920, SA-PZ-118S-20110920, and SA-PZ-123I-20110920, and these non-detects are qualified as estimated, (UJ).

The Percent Recovery (%R) for the surrogate spike compound, dibromofluoromethane, was above the upper quality control limit in sample SA-PZ-122D-20110920. The sample was reanalyzed with a similar result. The initial analysis of this sample was used in the data validation. The positive result reported for 1,1-dichloroethane was qualified as estimated, (J). The non-detected results were not affected.

The %Rs for 2-chloroethyl vinyl ether in the Matrix Spike (MS) and the Matrix Spike Duplicate (MSD) samples was zero. The associated Laboratory Control Sample (LCS) yielded an acceptable %R for this compound. The non-detected result reported for this compound in the parent sample, SA-PZ-118S-20110920, was qualified as rejected, (UR).

Positive results reported below the Limit of Quantitation (LOQ) and above the Method Detection Level (MDL) were qualified as estimated, (J).

Additional Comments

The LCS, BSG0930W1, had a %R for 1,4-dioxane above the upper quality control limit. No action was necessary in the affected samples because no positive results were reported for this compound.

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Chloromethane was detected below the LOQ in the environmental sample, SA-PZ-~~166I1~~-20110919, but not in the field duplicate sample, SA-DUP01-20110919. No action was necessary for field duplicate imprecision because the difference between the results was less than 2X the LOQ.

1,1-Dichloroethane was detected below the LOQ in the environmental sample, SA-PZ-122D-20110920, but not in the field duplicate sample, SA-DUP02-20110920. The difference between the two results was less than 2X the LOQ; therefore, no validation action was necessary.

The following samples were diluted due to target compounds exceeding the instrument's linear calibration range:

Sample	Compound(s)	Dilution
SA-PZ-138I1-20110920	1,1,1-Trichloroethane	20X
	1,1-Dichloroethane	20X
SA-PZ-143-20110921	1,1-Dichloroethane	10X
SA-PZ-157I1-20110921	1,1-Dichloroethane	10X
SA-PZ-408-20110920	1,1-Dichloroethane	10X
	Chloroethane	10X

The diluted results for these compounds were used in the data validation.

Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05. Some continuing calibration %Ds and %Drifts exceeded the 20% quality control limit. A LCS %R for 1,4-dioxane was above the upper quality control limit.

Other Factors Affecting Data Quality: One sample had a high surrogate %R. The MS/MSD %Rs for 2-chloroethyl vinyl ether were zero. Positive results reported below the LOQ but above the MDL were qualified as estimated. Samples were analyzed at dilutions due to a linear calibration range exceedences.

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), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

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Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
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: 02045	NSAMPLE	SA-DUP01-20110919			SA-DUP02-20110920			SA-MW-126D-20110921			SA-MW-126I-20110921		
SDG: C3830	LAB_ID	C3830-08			C3830-22			C3830-25			C3830-23		
FRACTION: OV	SAMP_DATE	9/19/2011			9/20/2011			9/21/2011			9/21/2011		
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	SA-PZ-166I1-20110919			SA-PZ-122D-20110920								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		6.6			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		83			0.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHENE		5.6			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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	UJ	C	0.5	U		0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		8.2			0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-MW-126S-20110920			SA-PZ-118I-20110920			SA-PZ-118S-20110920			SA-PZ-120S-20110920		
SDG: C3830	LAB_ID	C3830-21			C3830-09			C3830-10			C3830-18		
FRACTION: OV	SAMP_DATE	9/20/2011			9/20/2011			9/20/2011			9/20/2011		
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		1.7			0.5	U		3.5			0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.91	J	P	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	UJ	C	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	UJ	C	2.5	UR	D	2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	UJ	C	2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-PZ-122D-20110920			SA-PZ-122S-20110920			SA-PZ-123I1-20110920			SA-PZ-123I-20110920		
SDG: C3830	LAB_ID	C3830-16			C3830-14			C3830-15			C3830-13		
FRACTION: OV	SAMP_DATE	9/20/2011			9/20/2011			9/20/2011			9/20/2011		
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		9.3			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		1.8	J	R	0.5	U		85			37		
1,1-DICHLOROETHENE		0.5	U		0.5	U		7.8			4.7		
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		0.92	J	P	0.64	J	P
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	UJ	C	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		0.54	J	P	0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	UJ	C	2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	UJ	C	2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	UJ	C	0.5	U		0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		2			0.83	J	P
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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	

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PROJ_NO: 02045	NSAMPLE	SA-PZ-123S-20110920			SA-PZ-133I1-20110919			SA-PZ-133I-20110919			SA-PZ-135-20110919		
SDG: C3830	LAB_ID	C3830-17			C3830-02			C3830-04			C3830-03		
FRACTION: OV	SAMP_DATE	9/20/2011			9/19/2011			9/19/2011			9/19/2011		
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		5.8			4.2			14		
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		0.74	J	P
1,1-DICHLOROETHANE		2.6			100			31			53		
1,1-DICHLOROETHENE		0.5	U		6.4			2			3.5		
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.62	J	P	0.89	J	P	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	UJ	C	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	UJ	C	2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	UJ	C	2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		11			1.9			2.8		
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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	

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PROJ_NO: 02045	NSAMPLE	SA-PZ-136I-20110919			SA-PZ-137-20110919			SA-PZ-138I1-20110920			SA-PZ-138I1-20110920DL		
SDG: C3830	LAB_ID	C3830-06			C3830-07			C3830-19			C3830-19DL		
FRACTION: OV	SAMP_DATE	9/19/2011			9/19/2011			9/20/2011			9/20/2011		
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					250		
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		0.65	J	P	0.61	J	P	0.5	U				
1,1-DICHLOROETHANE		1.7			1.2						1100		
1,1-DICHLOROETHENE		0.5	U		0.5	U		65					
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		1.2					
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		4.8					
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		1.9					
1,2-DICHLOROETHANE		0.5	UJ	C	0.5	UJ	C	0.81	J	P			
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		10	UR	C	10	UR	C	10	UR	C			
2-BUTANONE		2.5	U		2.5	U		2.5	U				
2-CHLOROETHYL VINYL ETHER		2.5	UJ	C	2.5	UJ	C	2.5	U				
2-HEXANONE		2.5	U		2.5	U		2.5	U				
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U				
ACETONE		2.5	UJ	C	2.5	UJ	C	2.5	U				
BENZENE		0.5	U		0.5	U		1.6					
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMOFORM		0.5	U		0.5	U		0.5	U				
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	U				
CARBON DISULFIDE		0.5	U		0.5	U		0.5	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		150					
CHLOROFORM		0.5	U		0.5	U		0.5	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				

PROJ_NO: 02045	NSAMPLE	SA-PZ-140-20110921			SA-PZ-142-20110921			SA-PZ-143-20110921			SA-PZ-143-20110921DL		
SDG: C3830	LAB_ID	C3830-28			C3830-27			C3830-26			C3830-26DL		
FRACTION: OV	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
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		8.4			17			84					
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		69			100						530		
1,1-DICHLOROETHENE		5.1			9.4			36					
1,2,3-TRICHLOROBENZENE		0.5	U		0.8	J	P	0.9	J	P			
1,2,4-TRICHLOROBENZENE		0.83	J	P	2.3			3.2					
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		0.62	J	P	0.86	J	P			
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.64	J	P			
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		0.89	J	P	2			0.5	U				
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C			
2-BUTANONE		2.5	U		2.5	U		2.5	U				
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U				
2-HEXANONE		2.5	U		2.5	U		2.5	U				
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U				
ACETONE		2.5	U		2.5	U		2.5	U				
BENZENE		0.5	U		0.5	U		0.97	J	P			
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U				
BROMOFORM		0.5	U		0.5	U		0.5	U				
BROMOMETHANE		0.5	U		0.5	U		0.5	U				
CARBON DISULFIDE		0.5	U		0.5	U		0.5	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		6.8			7.8			40					
CHLOROFORM		0.5	U		0.5	U		0.5	U				
CHLOROMETHANE		0.5	U		0.5	U		0.55	J	P			
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				

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PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110921			SA-PZ-157I1-20110921DL			SA-PZ-~~166I~~ 161I-20110919			SA-PZ-408-20110920		
SDG: C3830	LAB_ID	C3830-24			C3830-24DL			C3830-05			C3830-20		
FRACTION: OV	SAMP_DATE	9/21/2011			9/21/2011			9/19/2011			9/20/2011		
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		46						6.5			60		
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					540			88					
1,1-DICHLOROETHENE		25						5.9			25		
1,2,3-TRICHLOROBENZENE		3.4						0.5	U		2.5		
1,2,4-TRICHLOROBENZENE		9.6						0.5	U		8.6		
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		5.9						0.5	U		2		
1,2-DICHLOROETHANE		0.57	J	P				0.5	U		0.66	J	P
1,2-DICHLOROPROPANE		0.5	U					0.5	U		0.5	U	
1,3-DICHLOROBENZENE		4.5						0.5	U		1.3		
1,4-DICHLOROBENZENE		19						0.5	U		5.2		
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	U					2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U					2.5	U		2.5	U	
2-HEXANONE		2.5	U					2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U					2.5	U		2.5	U	
ACETONE		2.5	U					2.5	U		2.5	U	
BENZENE		2.1						0.5	U		1.6		
BROMOCHLOROMETHANE		0.5	U					0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U					0.5	U		0.5	U	
BROMOFORM		0.5	U					0.5	U		0.5	U	
BROMOMETHANE		0.5	U					0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U					0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U					0.5	U		0.5	U	
CHLOROBENZENE		1.7						0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U					0.5	U		0.5	U	
CHLOROETHANE					430			8					
CHLOROFORM		0.5	U					0.5	U		0.5	U	
CHLOROMETHANE		0.5	U					0.53	J	P	0.5	U	
CIS-1,2-DICHLOROETHENE		1.1						0.5	U		0.98	J	P
CIS-1,3-DICHLOROPROPENE		0.5	U					0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-PZ-408-20110920DL			SA-TB01-20110914		
SDG: C3830	LAB_ID	C3830-20DL			C3830-01		
FRACTION: OV	SAMP_DATE	9/20/2011			9/14/2011		
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
1,1,1-TRICHLOROETHANE					0.5	U	
1,1,2,2-TETRACHLOROETHANE					0.5	U	
1,1,2-TRICHLOROETHANE					0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE					0.5	U	
1,1-DICHLOROETHANE		420			0.5	U	
1,1-DICHLOROETHENE					0.5	U	
1,2,3-TRICHLOROBENZENE					0.5	U	
1,2,4-TRICHLOROBENZENE					0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE					0.5	U	
1,2-DIBROMOETHANE					0.5	U	
1,2-DICHLOROBENZENE					0.5	U	
1,2-DICHLOROETHANE					0.5	U	
1,2-DICHLOROPROPANE					0.5	U	
1,3-DICHLOROBENZENE					0.5	U	
1,4-DICHLOROBENZENE					0.5	U	
1,4-DIOXANE					10	UR	C
2-BUTANONE					2.5	U	
2-CHLOROETHYL VINYL ETHER					2.5	U	
2-HEXANONE					2.5	U	
4-METHYL-2-PENTANONE					2.5	U	
ACETONE					2.5	U	
BENZENE					0.5	U	
BROMOCHLOROMETHANE					0.5	U	
BROMODICHLOROMETHANE					0.5	U	
BROMOFORM					0.5	U	
BROMOMETHANE					0.5	UJ	C
CARBON DISULFIDE					0.5	U	
CARBON TETRACHLORIDE					0.5	U	
CHLOROBENZENE					0.5	U	
CHLORODIBROMOMETHANE					0.5	U	
CHLOROETHANE		230			0.5	U	
CHLOROFORM					0.5	U	
CHLOROMETHANE					0.5	U	
CIS-1,2-DICHLOROETHENE					0.5	U	
CIS-1,3-DICHLOROPROPENE					0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20110919			SA-DUP02-20110920			SA-MW-126D-20110921			SA-MW-126I-20110921		
SDG: C3830	LAB_ID	C3830-08			C3830-22			C3830-25			C3830-23		
FRACTION: OV	SAMP_DATE	9/19/2011			9/20/2011			9/21/2011			9/21/2011		
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	SA-PZ-166I1-20110919			SA-PZ-122D-20110920								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
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	
ETHYLBENZENE		0.5	U		0.5	UJ	C	0.5	U		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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-126S-20110920			SA-PZ-118I-20110920			SA-PZ-118S-20110920			SA-PZ-120S-20110920		
SDG: C3830	LAB_ID	C3830-21			C3830-09			C3830-10			C3830-18		
FRACTION: OV	SAMP_DATE	9/20/2011			9/20/2011			9/20/2011			9/20/2011		
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
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	
ETHYLBENZENE		0.5	UJ	C	0.5	U		0.5	UJ	C	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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-122D-20110920			SA-PZ-122S-20110920			SA-PZ-123I1-20110920			SA-PZ-123I-20110920		
SDG: C3830	LAB_ID	C3830-16			C3830-14			C3830-15			C3830-13		
FRACTION: OV	SAMP_DATE	9/20/2011			9/20/2011			9/20/2011			9/20/2011		
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
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	
ETHYLBENZENE		0.5	U		0.5	U		0.5	U		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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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	

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PROJ_NO: 02045	NSAMPLE	SA-PZ-123S-20110920			SA-PZ-133I1-20110919			SA-PZ-133I-20110919			SA-PZ-135-20110919		
SDG: C3830	LAB_ID	C3830-17			C3830-02			C3830-04			C3830-03		
FRACTION: OV	SAMP_DATE	9/20/2011			9/19/2011			9/19/2011			9/19/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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	

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PROJ_NO: 02045	NSAMPLE	SA-PZ-136I-20110919			SA-PZ-137I-20110919			SA-PZ-138I1-20110920			SA-PZ-138I1-20110920DL		
SDG: C3830	LAB_ID	C3830-06			C3830-07			C3830-19			C3830-19DL		
FRACTION: OV	SAMP_DATE	9/19/2011			9/19/2011			9/20/2011			9/20/2011		
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
CYCLOHEXANE		0.5	U		0.5	U		0.5	U				
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U				
ETHYLBENZENE		0.5	U		0.5	U		0.5	U				
ISOPROPYLBENZENE		0.5	U		0.5	U		2.5					
M+P-XYLENES		1	U		1	U		1	U				
METHYL ACETATE		0.5	U		0.5	U		0.5	U				
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U				
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U				
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U				
O-XYLENE		0.5	U		0.5	U		0.5	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		0.65	J	P			
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U				
VINYL CHLORIDE		0.5	U		0.5	U		0.5	U				

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PROJ_NO: 02045	NSAMPLE	SA-PZ-140-20110921			SA-PZ-142-20110921			SA-PZ-143-20110921			SA-PZ-143-20110921DL		
SDG: C3830	LAB_ID	C3830-28			C3830-27			C3830-26			C3830-26DL		
FRACTION: OV	SAMP_DATE	9/21/2011			9/21/2011			9/21/2011			9/21/2011		
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
CYCLOHEXANE		0.5	U		0.5	U		0.5	U				
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U				
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		0.5	U		0.5	U		0.5	U				
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U				
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U				
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U				
O-XYLENE		0.5	U		0.5	U		0.5	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				

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PROJ_NO: 02045	NSAMPLE	SA-PZ-157I1-20110921			SA-PZ-157I1-20110921DL			SA-PZ-~~166I1~~-20110919			SA-PZ-408-20110920		
SDG: C3830	LAB_ID	C3830-24			C3830-24DL			C3830-05			C3830-20		
FRACTION: OV	SAMP_DATE	9/21/2011			9/21/2011			9/19/2011			9/20/2011		
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
CYCLOHEXANE		0.75	J	P				0.5	U		0.54	J	P
DICHLORODIFLUOROMETHANE		0.5	U					0.5	U		0.5	U	
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		0.5	U					0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U					0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U					0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U					0.5	U		0.5	U	
O-XYLENE		0.5	U					0.5	U		0.5	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		0.58	J	P				0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U					0.5	U		0.5	U	
TRICHLOROETHENE		0.73	J	P				0.5	U		0.58	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: 02045	NSAMPLE	SA-PZ-408-20110920DL			SA-TB01-20110914		
SDG: C3830	LAB_ID	C3830-20DL			C3830-01		
FRACTION: OV	SAMP_DATE	9/20/2011			9/14/2011		
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
CYCLOHEXANE					0.5	U	
DICHLORODIFLUOROMETHANE					0.5	U	
ETHYLBENZENE					0.5	U	
ISOPROPYLBENZENE					0.5	U	
M+P-XYLENES					1	U	
METHYL ACETATE					0.5	U	
METHYL CYCLOHEXANE					0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U	
METHYLENE CHLORIDE					0.5	U	
O-XYLENE					0.5	U	
STYRENE					0.5	U	
TETRACHLOROETHENE					0.5	U	
TOLUENE					0.5	U	
TRANS-1,2-DICHLOROETHENE					0.5	U	
TRANS-1,3-DICHLOROPROPENE					0.5	U	
TRICHLOROETHENE					0.5	U	
TRICHLOROFLUOROMETHANE					0.5	U	
VINYL CHLORIDE					0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**NOVEMBER 2, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C3831

SAMPLES: 19/Aqueous/VOC

SA-DUP03-20110921	SA-DUP04-20110922	SA-FB01-20110921
SA-MW-127D-20110922	SA-MW-127I-20110922	SA-MW-127S-20110922
SA-MW-128D-20110922	SA-MW-128I-20110922	SA-MW-128S-20110922
SA-MW-129D-20110922	SA-MW-129I-20110922	SA-MW-129S-20110922
SA-MW-130I-20110923	SA-MW-130S-20110923	SA-PZ-122I-20110923
SA-PZ-141I-20110921 JB 2-16-12	SA-PZ-144I-20110922	SA-PZ-144S-20110922
SA-RB01-20110921		

Overview

The sample set for NWIRP Calverton SDG C3831 consisted of seventeen (17) aqueous environmental samples, one (1) field blank, and one (1) rinsate blank. All nineteen (19) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). Two field duplicate sample pairs were associated with this sample delivery group (SDG): SA-DUP03-20110921/SA-PZ-143I-20110921 (SDG C3830) and SA-DUP04-20110922/SA-MW-128D-20110922. JB 2-16-12

The samples were collected by Tetra Tech on September 21, 22, and 23, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Method SW-846 8260B 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 Results
- Matrix Spike/Matrix Spike Duplicate Sample 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.

Volatiles (VOC)

The initial and continuing calibrations performed on instruments MSVOAG had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The continuing calibration performed on 10/05/11 @ 12:14 had Percent Differences (%Ds) for bromochloromethane and 1,4-dioxane and a Percent Drift (%Drift) for acetone above the 20% quality control limit. No action was taken for 1,4-dioxane because the affected results were qualified for a more severe calibration noncompliance. The non-detected results reported bromochloromethane and acetone in the affected samples, SA-PZ122I20110923 and SA-DUP04-20110922, were qualified as estimated, (UJ).

The Percent Recoveries (%Rs) for 2-chloroethyl vinyl ether in the Matrix Spike (MS) and the Matrix Spike Duplicate (MSD) samples was zero. The associated Laboratory Control Sample (LCS) yielded an acceptable %R for this compound. The non-detected result reported for this compound in the parent sample, SA-MW-127S-20110922, was qualified as rejected, (UR).

Positive results reported below the Limit of Quantitation (LOQ) and above the Method Detection Level (MDL) were qualified as estimated, (J).

Additional Comments

The LCS, BSG1005W2, had a %R for bromochloromethane above the upper quality control limit. No action was necessary in the affected samples because no positive results were reported for this compound.

The following sample was diluted due to an exceedence of the instrument's linear calibration range:

Sample	Compound	Dilution
SA-DUP03-20110921	1,1-Dichloroethane	10X

The diluted result for this compound was used in the data validation.

Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05. Some continuing calibration %Ds and %Drift exceeded the 20% quality control limit. LCS %R for bromochloromethane was above the upper quality control limit.

Other Factors Affecting Data Quality: The MS/MSD %Rs for 2-chloroethyl vinyl ether were zero. Positive results reported below the LOQ but above the MDL were qualified as estimated. A sample was analyzed at a dilution due to a linear calibration range exceedence.

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), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Michelle L. Allen
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
4. Appendix D - Support Documentation

Appendix A

Qualified Analytical Results

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110921			SA-DUP03-20110921DL			SA-DUP04-20110922			SA-FB01-20110921		
SDG: C3831	LAB_ID	C3831-04			C3831-04DL			C3831-18			C3831-02		
FRACTION: OV	SAMP_DATE	9/21/2011			9/21/2011			9/22/2011			9/21/2011		
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	SA-PZ-143-20110921			SA-PZ-143-20110921			SA-MW-128D-20110922					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		88						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					490			2.7			0.5	U	
1,1-DICHLOROETHENE		40						0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.9	J	P				0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		3						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		0.94	J	P				0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.6	J	P				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		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	U					2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U					2.5	U		2.5	U	
2-HEXANONE		2.5	U					2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U					2.5	U		2.5	U	
ACETONE		2.5	U					2.5	UJ	C	2.5	U	
BENZENE		0.95	J	P				0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U					0.5	UJ	C	0.5	U	
BROMODICHLOROMETHANE		0.5	U					0.5	U		0.5	U	
BROMOFORM		0.5	U					0.5	U		0.5	U	
BROMOMETHANE		0.5	U					0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U					0.5	U		0.5	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		45						0.5	U		0.5	U	
CHLOROFORM		0.5	U					0.5	U		0.5	U	
CHLOROMETHANE		0.53	J	P				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	

PROJ_NO: 02045	NSAMPLE	SA-MW-127D-20110922			SA-MW-127I-20110922			SA-MW-127S-20110922			SA-MW-128D-20110922		
SDG: C3831	LAB_ID	C3831-11			C3831-09			C3831-05			C3831-10		
FRACTION: OV	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
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		4.1			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		71			0.5	U		2.6		
1,1-DICHLOROETHENE		0.5	U		3.8			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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	UR	D	2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		8.5			0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-MW-128I-20110922			SA-MW-128S-20110922			SA-MW-129D-20110922			SA-MW-129I-20110922		
SDG: C3831	LAB_ID	C3831-12			C3831-08			C3831-17			C3831-16		
FRACTION: OV	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
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		5			0.5	U		3			2.2		
1,1-DICHLOROETHENE		0.68	J	P	0.5	U		0.67	J	P	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.45	J	P
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	

PROJ_NO: 02045	NSAMPLE	SA-MW-129S-20110922			SA-MW-130I-20110923			SA-MW-130S-20110923			SA-PZ-122I-20110923		
SDG: C3831	LAB_ID	C3831-15			C3831-21			C3831-20			C3831-19		
FRACTION: OV	SAMP_DATE	9/22/2011			9/23/2011			9/23/2011			9/23/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	UJ	C
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.56	J	P	0.5	U		0.5	U		0.5	J	P
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	

JB 2-16-12

PROJ_NO: 02045	NSAMPLE	SA-PZ-141-20110921			SA-PZ-144I-20110922			SA-PZ-144S-20110922			SA-RB01-20110921		
SDG: C3831	LAB_ID	C3831-01			C3831-14			C3831-13			C3831-03		
FRACTION: OV	SAMP_DATE	9/21/2011			9/22/2011			9/22/2011			9/21/2011		
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		8.6			4.6			0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.8	J	P	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	J	P	0.48	J	P	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	

PROJ_NO: 02045	NSAMPLE	SA-DUP03-20110921			SA-DUP03-20110921DL			SA-DUP04-20110922			SA-FB01-20110921		
SDG: C3831	LAB_ID	C3831-04			C3831-04DL			C3831-18			C3831-02		
FRACTION: OV	SAMP_DATE	9/21/2011			9/21/2011			9/22/2011			9/21/2011		
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	SA-PZ-143-20110921			SA-PZ-143-20110921			SA-MW-128D-20110922					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CYCLOHEXANE		0.5	U					0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U					0.5	U		0.5	U	
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		0.5	U					0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U					0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U					0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U					0.5	U		0.5	U	
O-XYLENE		0.5	U					0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-127D-20110922			SA-MW-127I-20110922			SA-MW-127S-20110922			SA-MW-128D-20110922		
SDG: C3831	LAB_ID	C3831-11			C3831-09			C3831-05			C3831-10		
FRACTION: OV	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-128I-20110922			SA-MW-128S-20110922			SA-MW-129D-20110922			SA-MW-129I-20110922		
SDG: C3831	LAB_ID	C3831-12			C3831-08			C3831-17			C3831-16		
FRACTION: OV	SAMP_DATE	9/22/2011			9/22/2011			9/22/2011			9/22/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-129S-20110922			SA-MW-130I-20110923			SA-MW-130S-20110923			SA-PZ-122I-20110923		
SDG: C3831	LAB_ID	C3831-15			C3831-21			C3831-20			C3831-19		
FRACTION: OV	SAMP_DATE	9/22/2011			9/23/2011			9/23/2011			9/23/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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	

JB 2-16-12

PROJ_NO: 02045	NSAMPLE	SA-PZ-141-20110921			SA-PZ-144I-20110922			SA-PZ-144S-20110922			SA-RB01-20110921		
SDG: C3831	LAB_ID	C3831-01			C3831-14			C3831-13			C3831-03		
FRACTION: OV	SAMP_DATE	9/21/2011			9/22/2011			9/22/2011			9/21/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**DECEMBER 7, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – VOC** **NWIRP CALVERTON CTO WE08** **SDG C3958**		

SAMPLES: 10 / Aqueous / VOC

SA-PZ-124-20110928	SA-PZ-125-20110928	SA-PZ-147-20110928
SA-PZ-148-20110928	SA-PZ-DUP01-20110928	SA-SW-124-20110928
SA-SW-125-20110928	SA-SW-201-20110928	SA-SW-204-20110928
SA-SW-DUP01-20110928		

5 / Sediment / VOC

SA-SD-124-20110928	SA-SD-125-20110928	SA-SD-201-20110928
SA-SD-204-20110928	SA-SD-DUP01-20110928	

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C3958 consisted of ten (10) aqueous samples and five (5) sediment samples. All samples were analyzed for volatile organic compounds (VOC) as listed above. Three (3) field duplicate sample pairs were included in this Sample Delivery Group (SDG); SA-PZ-DUP01-20110928 / SA-PZ-124-20110928, SA-SW-DUP01-20110928 / SA-SW-201-20110928, and SA-SD-DUP01-20110928 / SA-SD-201-20110928.

The samples were collected by Tetra Tech on September 28, 2011 and analyzed by ChemTech laboratory. All analyses were conducted in accordance with EPA Method SW-846 8260B 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
• Laboratory Control Sample Recoveries
* • Laboratory Blank Results
• Surrogate Spike Recoveries
• Internal Standard Recoveries
• Matrix Spike/Matrix Spike Duplicate 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 sample to analysis hold time of 14 days was exceeded for samples as listed below.

Affected samples:

SA-PZ-124-20110928RE re-analysis (16 days)	SA-PZ-147-20110928 (16 days)
SA-PZ-148-20110928 (16 days)	SA-PZ-DUP01-20110928 (16 days)
SA-SW-124-20110928 (16 days)	SA-SW-125-20110928 (16 days)
SA-SW-201-20110928 (16 days)	SA-SW-DUP01-20110928 (16 days)

Action: No validation action was taken for sample SA-PZ-124-20110928RE re-analysis as it was not used for validation. The remainder of the sample non-detected results were qualified rejected, (UR). All positive sample results were qualified estimated, (J).

The initial calibration relative response factor (RRF) was less than the quality control limit of 0.05 for 1,4-dioxane for the instrument MSVOAG on 10/09/11 and on 10/13/11, and for instrument MSVOA_T on 10/06/11. The initial calibration relative standard deviation (RSD) for 1,4-dioxane was greater than the 15% quality control limit for MSVOA_T on 10/06/11. Additionally, all continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane. All sample 1,4-dioxane results were non-detected and were qualified rejected, (UR).

The percent solids for sediment sample SA-SD-204-20110928 was less than the 30% quality control limit (10%). The positive and non-detected results for sample SA-SD-204-20110928 were qualified estimated, (J) and (UJ), respectively, except for the non-detected 1,4-dioxane result which was rejected for the RRF quality control limit non-compliance as previously stated.

The CCV %Ds were greater than the 20% quality control limit for 1,4-dioxane, bromoform and 1,2-dibromo-3-chloropropane for instrument MSVOAG on 10/10/11 @ 10:45.

Affected sample: SA-SW-204-20110928

Action: The sample had non-detected results for 1,4-dioxane, bromoform and 1,2-dibromo-3-chloropropane. The non-detected bromoform and 1,2-dibromo-3-chloropropane sample results were qualified estimated, (UJ). The 1,4-dioxane results were previously rejected for RRF quality control limit non-compliances and no further validation action was necessary.

The CCV %Ds were greater than the 20% quality control limit for chloromethane, vinyl chloride, bromomethane, chloroethane, acetone, methyl acetate, 2-butanone, cyclohexane, 1,4-dioxane, and tetrachloroethene for instrument MSVOAG on 10/09/11 @ 00:39.

Affected sample: SA-PZ-124-20110928

Action: The sample positive and non-detected results for chloromethane, vinyl chloride, bromomethane, chloroethane, acetone, methyl acetate, 2-butanone, cyclohexane, and tetrachloroethene were qualified estimated, (J) and (UJ), respectively. The 1,4-dioxane results were previously rejected for RRF quality control limit non-compliances and no further validation action was necessary.

The CCV %Ds were greater than the 20% quality control limit for chloromethane, acetone, methyl acetate, 2-butanone, 1,4-dioxane, 4-methyl-2-penanone, 2-chloroethyl vinyl ether, 2-hexanone, and ethylbenzene for instrument MSVOAG on 10/10/11 @ 22:14.

Affected sample: SA-PZ-125-20110928

Action: The sample non-detected results for chloromethane, acetone, methyl acetate, 2-butanone, 4-methyl-2-pentanone, 2-chloroethyl vinyl ether, 2-hexanone, and ethyl benzene were qualified estimated, (UJ). The 1,4-dioxane results were previously rejected for RRF quality control limit non-compliances and no further validation action was necessary.

The LCS percent recovery (%R) was greater than the quality control limit for trichloroethene for LCS BSG1013W3.

Affected samples:

SA-PZ-124-20110928RE re-analysis SA-SW-DUP01-20110928 SA-SW-124-20110928
SA-SW-201-20110928 SA-SW-125-20110928

Action: The positive trichloroethene result for sample SA-SW-124-20110928 was qualified estimated, (J). No validation action was necessary for the other samples as they had non-detected results for trichloroethene.

The surrogate (system monitoring compound) %Rs and the internal standard recoveries were less than the quality control limit for samples listed below.

toluene-d8 – TOL / 4-bromofluorobenzene – BFB / 1,4-dichlorobenzene-d4 – IS4

Sample	Surrogate(s)	Internal Standards
SA-PZ-124-20110928RE	TOL	IS4
SA-SD-125-20110928	TOL, BFB	IS4
SA-SD-125-20110928RE	TOL, BFB	IS4
SA-SD-124-20110928	TOL, BFB	IS4
SA-SD-124-20110928RE	TOL, BFB	IS4
SA-SD-204-20110928	TOL, BFB	IS4
SA-SD-204-20110928RE	TOL, BFB	IS4

Actions: No validation action was taken for the sample SA-PZ-124-20110928RE re-analysis results as the re-analysis results were not used for validation. The remainder of the re-analyzed samples had no improvement in surrogate %R or internal standard recoveries and therefore, the initial sample analyses were used for validation. Sample SA-SD-125-20110928, SA-SD-124-20110928, and SA-SD-204-20110928 positive and non-detected analyte results were qualified estimated, (J) and (UJ), respectively, for the surrogate %R quality control limit non-compliances (with the exception of 1,4-dioxane non-detected results). Additionally, sample SA-SD-125-20110928, SA-SD-124-20110928, and SA-SD-204-20110928 internal standard 1,4-dichlorobenzene-d4 associated positive and non-detected analyte results were qualified estimated, (J) and (UJ), respectively. Non-detected sample 1,4-dioxane results were qualified rejected due to RRF quality control limit non-compliances and no further validation action was necessary for the surrogate %R quality control limit non-compliances.

The matrix spike (MS) and MS duplicate (MSD) %Rs were less than the quality control limit for tetrachloroethene, styrene, 1,2,4-trichlorobenzene, and 1,2,3-trichlorobenzene for spiked sample SA-SD-204-20110928.

Action: The positive and non-detected tetrachloroethene, styrene, 1,2,4-trichlorobenzene, and 1,2,3-trichlorobenzene results for the sample were qualified estimated, (J) and (UJ), respectively.

The spiked sample SA-SW-204-20110928 had MS and MSD %Rs less than the quality control limit for 2-chloroethyl vinyl ether. The MS and MSD Forms were missing this information. The information was obtained from the narrative and verified by an examination of the raw sample data. The ChemTech laboratory was informed of the issue and the data result was manually entered on the MS and MSD Forms by the data validation chemist. The sample SA-SW-204-20110928 non-detected 2-chloroethyl vinyl ether result was qualified estimated, (UJ).

The relative percent difference (RPD) was greater than the 30% quality control limit for 1,1,1-trichloroethane sample results for field duplicate pair samples SA-PZ-DUP01-20110928 and SA-PZ-124-20110928. The analyte positive and non-detected results were qualified estimated, (J) and (UJ), for the samples.

Positive results below the limit of quantitation (LOQ) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Additional Comments

Sample SA-PZ-124-20110928 was re-analyzed at a sample to analysis hold time that exceeded the 14 day quality control limit for the VOC analysis. The initial sample SA-PZ-124-20110928 analyte results were reported.

The CCV %D was greater than the 20% quality control limit for acetone for instrument MSVOAG on 10/14/11 @ 03:21 and on 10/14/11 @ 16:02.

Affected samples:

SA-PZ-124-20110928RE re-analysis	SA-SW-DUP01-20110928	
SA-SW-201-20110928	SA-SW-125-20110928	
SA-PZ-148-20110928	SA-PZ-147-20110928	SA-PZ-DUP01-20110928

Action: The non-detected acetone results for the samples were previously qualified rejected for a sample to analysis hold time exceedance and no further action was necessary.

The laboratory control sample (LCS) percent recovery (%R) was greater than the quality control limit for 1,4-dioxane for LCS BSG1010W1. No validation action was necessary as the affected sample had a non-detected result for 1,4-dioxane which was previously rejected due to RRF quality control limit non-compliances.

The LCS %R was greater than the quality control limit for chloromethane and bromochloromethane for LCS BSG1008W3.

Affected sample: SA-PZ-124-20110928

Action: No validation action was necessary as all samples had non-detected results for chloromethane and bromochloromethane.

The MS and MSD %Rs were greater than the quality control limit for 1,1,2,2-tetrachloroethane for spiked sample SA-SD-204-20110928. The MSD %R was greater than the quality control limit for isopropyl benzene for the sample.

Action: No validation action was necessary as sample SA-SD-204-20110928 results were non-detected for 1,1,2,2-tetrachloroethane and isopropyl benzene.

The spiked sample SA-SW-204-20110928 had MS and MSD %Rs, and MS/MSD RPDs greater than the quality control limits for analytes as listed below.

Analyte	%R MS	%R MSD	RPD
1,1,1-trichloroethane	------	------	21
4-methyl-2-pentanone	------	144	------
2-hexanone	------	148	21
1,2-dibromoethane	------	126	------
1,2-dibromo-3-chloropropane	132	146	------
1,4-dioxane	------	150	------

Action: No action was taken as the sample had non-detected results for all VOC analytes and analyte results are not qualified based on RPD quality control limit non-compliances alone.

Fifty-three (53) analytes were reported for VOCs.

Non-detected sample results were reported to the LOD.

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane VOC non-detected analyte results were rejected due to initial and continuing calibration RRF quality control limit non-compliances. Sample results were qualified and rejected for sample to analysis hold time exceedances. Sample VOC results were qualified for CCV %D, surrogate %R, and MS/MSD %R quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit. A VOC sample analyte result was qualified for field duplicate imprecision.

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP #HW-24 Revision #2 August 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
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: 02045	NSAMPLE	SA-PZ-124-20110928			SA-PZ-125-20110928			SA-PZ-147-20110928			SA-PZ-148-20110928		
SDG: C3958	LAB_ID	C3958-05			C3958-01			C3958-08			C3958-04		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
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	UJ	G	0.5	U		0.5	UR	H	0.5	UR	H
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,1-DICHLOROETHANE		79			0.5	U		0.77	J	HP	0.5	UR	H
1,1-DICHLOROETHENE		6.5			0.5	U		0.5	UR	H	0.5	UR	H
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,2-DIBROMOETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,2-DICHLOROBENZENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,2-DICHLOROETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,2-DICHLOROPROPANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,3-DICHLOROBENZENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,4-DICHLOROBENZENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	CH	10	UR	CH
2-BUTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UR	H	2.5	UR	H
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	UJ	C	2.5	UR	H	2.5	UR	H
2-HEXANONE		2.5	U		2.5	UJ	C	2.5	UR	H	2.5	UR	H
4-METHYL-2-PENTANONE		2.5	U		2.5	UJ	C	2.5	UR	H	2.5	UR	H
ACETONE		2.5	UJ	C	2.5	UJ	C	2.5	UR	H	2.5	UR	H
BENZENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
BROMOFORM		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
BROMOMETHANE		0.5	UJ	C	0.5	U		0.5	UR	H	0.5	UR	H
CARBON DISULFIDE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
CARBON TETRACHLORIDE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
CHLOROBENZENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
CHLORODIBROMOMETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
CHLOROETHANE		2.7	J	C	0.5	U		0.5	UR	H	0.5	UR	H
CHLOROFORM		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
CHLOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UR	H	0.5	UR	H
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H

PROJ_NO: 02045	NSAMPLE	SA-PZ-DUP01-20110928			SA-SW-124-20110928			SA-SW-125-20110928			SA-SW-201-20110928		
SDG: C3958	LAB_ID	C3958-17			C3958-06			C3958-02			C3958-09		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
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	SA-PZ-124-20110928											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		2.6	J	GH	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,1,2,2-TETRACHLOROETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,1,2-TRICHLOROETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,1-DICHLOROETHANE		67	J	H	1.8	J	H	0.5	UR	H	0.5	UR	H
1,1-DICHLOROETHENE		5	J	H	1.2	J	H	0.5	UR	H	0.5	UR	H
1,2,3-TRICHLOROBENZENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,2,4-TRICHLOROBENZENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,2-DIBROMOETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,2-DICHLOROBENZENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,2-DICHLOROETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,2-DICHLOROPROPANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,3-DICHLOROBENZENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,4-DICHLOROBENZENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
1,4-DIOXANE		10	UR	CH	10	UR	CH	10	UR	CH	10	UR	CH
2-BUTANONE		2.5	UR	H	2.5	UR	H	2.5	UR	H	2.5	UR	H
2-CHLOROETHYL VINYL ETHER		2.5	UR	H	2.5	UR	H	2.5	UR	H	2.5	UR	H
2-HEXANONE		2.5	UR	H	2.5	UR	H	2.5	UR	H	2.5	UR	H
4-METHYL-2-PENTANONE		2.5	UR	H	2.5	UR	H	2.5	UR	H	2.5	UR	H
ACETONE		2.5	UR	H	2.5	UR	H	2.5	UR	H	2.5	UR	H
BENZENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
BROMOCHLOROMETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
BROMODICHLOROMETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
BROMOFORM		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
BROMOMETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
CARBON DISULFIDE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
CARBON TETRACHLORIDE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
CHLOROBENZENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
CHLORODIBROMOMETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
CHLOROETHANE		2.2	J	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
CHLOROFORM		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
CHLOROMETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
CIS-1,2-DICHLOROETHENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
CIS-1,3-DICHLOROPROPENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H

PROJ_NO: 02045	NSAMPLE	SA-SW-204-20110928			SA-SW-DUP01-20110928		
SDG: C3958	LAB_ID	C3958-11			C3958-18		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF				SA-SW-201-20110928		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.84	J	HP
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	UR	H
1,1,2-TRICHLOROETHANE		0.5	U		0.5	UR	H
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	UR	H
1,1-DICHLOROETHANE		0.5	U		0.5	UR	H
1,1-DICHLOROETHENE		0.5	U		0.5	UR	H
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	UR	H
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	UR	H
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	C	0.5	UR	H
1,2-DIBROMOETHANE		0.5	U		0.5	UR	H
1,2-DICHLOROBENZENE		0.5	U		0.5	UR	H
1,2-DICHLOROETHANE		0.5	U		0.5	UR	H
1,2-DICHLOROPROPANE		0.5	U		0.5	UR	H
1,3-DICHLOROBENZENE		0.5	U		0.5	UR	H
1,4-DICHLOROBENZENE		0.5	U		0.5	UR	H
1,4-DIOXANE		10	UR	C	10	UR	CH
2-BUTANONE		2.5	U		2.5	UR	H
2-CHLOROETHYL VINYL ETHER		2.5	UJ	~~C~~ D	2.5	UR	H
2-HEXANONE		2.5	U		2.5	UR	H
4-METHYL-2-PENTANONE		2.5	U		2.5	UR	H
ACETONE		2.5	U		2.5	UR	H
BENZENE		0.5	U		0.5	UR	H
BROMOCHLOROMETHANE		0.5	U		0.5	UR	H
BROMODICHLOROMETHANE		0.5	U		0.5	UR	H
BROMOFORM		0.5	UJ	C	0.5	UR	H
BROMOMETHANE		0.5	U		0.5	UR	H
CARBON DISULFIDE		0.5	U		0.5	UR	H
CARBON TETRACHLORIDE		0.5	U		0.5	UR	H
CHLOROBENZENE		0.5	U		0.5	UR	H
CHLORODIBROMOMETHANE		0.5	U		0.5	UR	H
CHLOROETHANE		0.5	U		0.5	UR	H
CHLOROFORM		0.5	U		0.5	UR	H
CHLOROMETHANE		0.5	U		0.5	UR	H
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	UR	H
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	UR	H

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PROJ_NO: 02045	NSAMPLE	SA-PZ-124-20110928			SA-PZ-125-20110928			SA-PZ-147-20110928			SA-PZ-148-20110928		
SDG: C3958	LAB_ID	C3958-05			C3958-01			C3958-08			C3958-04		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
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
CYCLOHEXANE		0.5	UJ	C	0.5	U		0.5	UR	H	0.5	UR	H
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
ETHYLBENZENE		0.5	U		0.5	UJ	C	0.5	UR	H	0.5	UR	H
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
M+P-XYLENES		1	U		1	U		1	UR	H	1	UR	H
METHYL ACETATE		0.5	UJ	C	0.5	UJ	C	0.5	UR	H	0.5	UR	H
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
O-XYLENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
STYRENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
TETRACHLOROETHENE		0.5	UJ	C	0.5	U		0.5	UR	H	0.5	UR	H
TOLUENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
TRICHLOROETHENE		0.5	U		0.5	U		1	J	H	1	J	H
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	UR	H	0.5	UR	H
VINYL CHLORIDE		0.5	UJ	C	0.5	U		0.5	UR	H	0.5	UR	H

PROJ_NO: 02045	NSAMPLE	SA-PZ-DUP01-20110928			SA-SW-124-20110928			SA-SW-125-20110928			SA-SW-201-20110928		
SDG: C3958	LAB_ID	C3958-17			C3958-06			C3958-02			C3958-09		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
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	SA-PZ-124-20110928											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CYCLOHEXANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
DICHLORODIFLUOROMETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
ETHYLBENZENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
ISOPROPYLBENZENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
M+P-XYLENES		1	UR	H	1	UR	H	1	UR	H	1	UR	H
METHYL ACETATE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
METHYL CYCLOHEXANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
METHYL TERT-BUTYL ETHER		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
METHYLENE CHLORIDE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
O-XYLENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
STYRENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
TETRACHLOROETHENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
TOLUENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
TRANS-1,2-DICHLOROETHENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
TRANS-1,3-DICHLOROPROPENE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
TRICHLOROETHENE		0.94	J	HP	6.2	J	EH	0.5	UR	H	0.5	UR	H
TRICHLOROFLUOROMETHANE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H
VINYL CHLORIDE		0.5	UR	H	0.5	UR	H	0.5	UR	H	0.5	UR	H

PROJ_NO: 02045	NSAMPLE	SA-SW-204-20110928			SA-SW-DUP01-20110928		
SDG: C3958	LAB_ID	C3958-11			C3958-18		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF				SA-SW-201-20110928		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CYCLOHEXANE		0.5	U		0.5	UR	H
DICHLORODIFLUOROMETHANE		0.5	U		0.5	UR	H
ETHYLBENZENE		0.5	U		0.5	UR	H
ISOPROPYLBENZENE		0.5	U		0.5	UR	H
M+P-XYLENES		1	U		1	UR	H
METHYL ACETATE		0.5	U		0.5	UR	H
METHYL CYCLOHEXANE		0.5	U		0.5	UR	H
METHYL TERT-BUTYL ETHER		0.5	U		0.5	UR	H
METHYLENE CHLORIDE		0.5	U		0.5	UR	H
O-XYLENE		0.5	U		0.5	UR	H
STYRENE		0.5	U		0.5	UR	H
TETRACHLOROETHENE		0.5	U		0.5	UR	H
TOLUENE		0.5	U		0.5	UR	H
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	UR	H
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	UR	H
TRICHLOROETHENE		0.5	U		0.5	UR	H
TRICHLOROFLUOROMETHANE		0.5	U		0.5	UR	H
VINYL CHLORIDE		0.5	U		0.5	UR	H

PROJ_NO: 02045	NSAMPLE	SA-SD-124-20110928			SA-SD-125-20110928			SA-SD-201-20110928			SA-SD-204-20110928		
SDG: C3958	LAB_ID	C3958-07			C3958-03			C3958-10			C3958-14		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.0			60.0			79.0			10.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
1,1,2,2-TETRACHLOROETHANE		3.65	UJ	NR	4.2	UJ	NR	3.15	U		25	UJ	NRY
1,1,2-TRICHLOROETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
1,1,2-TRICHLOROTRIFLUOROETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
1,1-DICHLOROETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
1,1-DICHLOROETHENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
1,2,3-TRICHLOROBENZENE		3.65	UJ	NR	4.2	UJ	NR	3.15	U		25	UJ	DNRY
1,2,4-TRICHLOROBENZENE		3.3	J	NPR	4.2	UJ	NR	3.15	U		25	UJ	DNRY
1,2-DIBROMO-3-CHLOROPROPANE		3.65	UJ	NR	4.2	UJ	NR	3.15	U		25	UJ	NRY
1,2-DIBROMOETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
1,2-DICHLOROBENZENE		3.65	UJ	NR	4.2	UJ	NR	3.15	U		25	UJ	NRY
1,2-DICHLOROETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
1,2-DICHLOROPROPANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
1,3-DICHLOROBENZENE		3.65	UJ	NR	4.2	UJ	NR	3.15	U		25	UJ	NRY
1,4-DICHLOROBENZENE		3.65	UJ	NR	4.2	UJ	NR	3.15	U		25	UJ	NRY
1,4-DIOXANE		75	UR	C	85	UR	C	65	UR	C	500	UR	C
2-BUTANONE		18.5	UJ	R	21	UJ	R	16	U		125	UJ	RY
2-CHLOROETHYL VINYL ETHER		18.5	UJ	R	21	UJ	R	16	U		125	UJ	RY
2-HEXANONE		18.5	UJ	R	21	UJ	R	16	U		125	UJ	RY
4-METHYL-2-PENTANONE		18.5	UJ	R	21	UJ	R	16	U		125	UJ	RY
ACETONE		7.8	J	PR	21	UJ	R	16	U		125	UJ	RY
BENZENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
BROMOCHLOROMETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
BROMODICHLOROMETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
BROMOFORM		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
BROMOMETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
CARBON DISULFIDE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
CARBON TETRACHLORIDE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
CHLOROBENZENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
CHLORODIBROMOMETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
CHLOROETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
CHLOROFORM		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
CHLOROMETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
CIS-1,2-DICHLOROETHENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
CIS-1,3-DICHLOROPROPENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY

PROJ_NO: 02045	NSAMPLE	SA-SD-DUP01-20110928		
SDG: C3958	LAB_ID	C3958-19		
FRACTION: OV	SAMP_DATE	9/28/2011		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	78.0		
	DUP_OF	SA-SD-201-20110928		
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		3.2	U	
1,1,2,2-TETRACHLOROETHANE		3.2	U	
1,1,2-TRICHLOROETHANE		3.2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		3.2	U	
1,1-DICHLOROETHANE		3.2	U	
1,1-DICHLOROETHENE		3.2	U	
1,2,3-TRICHLOROBENZENE		3.2	U	
1,2,4-TRICHLOROBENZENE		3.2	U	
1,2-DIBROMO-3-CHLOROPROPANE		3.2	U	
1,2-DIBROMOETHANE		3.2	U	
1,2-DICHLOROBENZENE		3.2	U	
1,2-DICHLOROETHANE		3.2	U	
1,2-DICHLOROPROPANE		3.2	U	
1,3-DICHLOROBENZENE		3.2	U	
1,4-DICHLOROBENZENE		3.2	U	
1,4-DIOXANE		65	UR	C
2-BUTANONE		16	U	
2-CHLOROETHYL VINYL ETHER		16	U	
2-HEXANONE		16	U	
4-METHYL-2-PENTANONE		16	U	
ACETONE		16	U	
BENZENE		3.2	U	
BROMOCHLOROMETHANE		3.2	U	
BROMODICHLOROMETHANE		3.2	U	
BROMOFORM		3.2	U	
BROMOMETHANE		3.2	U	
CARBON DISULFIDE		3.2	U	
CARBON TETRACHLORIDE		3.2	U	
CHLOROBENZENE		3.2	U	
CHLORODIBROMOMETHANE		3.2	U	
CHLOROETHANE		3.2	U	
CHLOROFORM		3.2	U	
CHLOROMETHANE		3.2	U	
CIS-1,2-DICHLOROETHENE		3.2	U	
CIS-1,3-DICHLOROPROPENE		3.2	U	

PROJ_NO: 02045	NSAMPLE	SA-SD-124-20110928			SA-SD-125-20110928			SA-SD-201-20110928			SA-SD-204-20110928		
SDG: C3958	LAB_ID	C3958-07			C3958-03			C3958-10			C3958-14		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	69.0			60.0			79.0			10.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CYCLOHEXANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
DICHLORODIFLUOROMETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
ETHYLBENZENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
ISOPROPYLBENZENE		3.65	UJ	NR	4.2	UJ	NR	3.15	U		25	UJ	NRY
M+P-XYLENES		7.5	UJ	R	8.5	UJ	R	6.5	U		50	UJ	RY
METHYL ACETATE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
METHYL CYCLOHEXANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
METHYL TERT-BUTYL ETHER		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
METHYLENE CHLORIDE		3.65	UJ	R	4.2	UJ	R	2.8	J	P	25	UJ	RY
O-XYLENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
STYRENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	DRY
TETRACHLOROETHENE		3.65	UJ	R	4.2	UJ	R	3.15	U		30	J	DPRY
TOLUENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
TRANS-1,2-DICHLOROETHENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
TRANS-1,3-DICHLOROPROPENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
TRICHLOROETHENE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
TRICHLOROFLUOROMETHANE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY
VINYL CHLORIDE		3.65	UJ	R	4.2	UJ	R	3.15	U		25	UJ	RY

PROJ_NO: 02045	NSAMPLE	SA-SD-DUP01-20110928		
SDG: C3958	LAB_ID	C3958-19		
FRACTION: OV	SAMP_DATE	9/28/2011		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	78.0		
	DUP_OF	SA-SD-201-20110928		
PARAMETER		RESULT	VQL	QLCD
CYCLOHEXANE		3.2	U	
DICHLORODIFLUOROMETHANE		3.2	U	
ETHYLBENZENE		3.2	U	
ISOPROPYLBENZENE		3.2	U	
M+P-XYLENES		6.5	U	
METHYL ACETATE		3.2	U	
METHYL CYCLOHEXANE		3.2	U	
METHYL TERT-BUTYL ETHER		3.2	U	
METHYLENE CHLORIDE		3.2	U	
O-XYLENE		3.2	U	
STYRENE		3.2	U	
TETRACHLOROETHENE		3.2	U	
TOLUENE		3.2	U	
TRANS-1,2-DICHLOROETHENE		3.2	U	
TRANS-1,3-DICHLOROPROPENE		3.2	U	
TRICHLOROETHENE		3.2	U	
TRICHLOROFLUOROMETHANE		3.2	U	
VINYL CHLORIDE		3.2	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**NOVEMBER 9, 2011**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NWIRP CALVERTON CTO WE08
SDG C3960

SAMPLES: 20 / Aqueous / VOC

ET-DUP05-20110926	ET-MW01S-20110926	ET-MW02S-20110926
ET-MW03S-20110926	FC-DUP06-20110926	FC-MW03SR1-20110926
FC-MW05I-20110926	FC-MW05S-20110926	FC-MW07I-20110926
FC-MW07S-20110926	FC-PZ05I1-20110926	SA-FB02-20110927
SA-MW-131D-20110927	SA-MW-131I-20110927	SA-MW-131S-20110927
SA-MW-132I-20110927	SA-MW-132S-20110927	SA-PZ-145D-20110927
SA-RB02-20110926	SA-TB02-20110914	

Overview

The sample set for NWIRP Calverton, CTO WE08, SDG C3960 consisted of twenty (20) aqueous samples including one (1) aqueous trip blank sample, one (1) aqueous field blank sample, and one (1) aqueous rinse blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC). Two (2) field duplicate sample pairs were included in this Sample Delivery Group (SDG); ET-DUP05-20110926 / ET-MW01S-20110926 and FC-DUP06-20110926 / FC-PZ05I1-20110926.

The samples were collected by Tetra Tech on September 14, 26, 27, and 28, 2011 and analyzed by ChemTech laboratory. All analyses were conducted in accordance with EPA Method SW-846 8260B 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
	• Laboratory Control Sample Recoveries
	• Laboratory Blank Results
	• 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 sample to analysis hold time of 14 days was exceeded for samples as listed below.

Affected samples:

FC-MW07I-20110926RE re-analysis (15 days)	FC-MW03SR1-20110926RE re-analysis (15days)
FC-DUP06-20110926DL dilution (15 days)	FC-PZ05I1-20110926DL dilution (15 days)

Action: The initial sample analyses for samples FC-MW07I-20110926 and FC-MW03SR1-20110926 were reported. The positive results reported from the dilution analyses for samples FC-DUP06-2011092 and FC-PZ05I1-20110926 were qualified estimated, (J).

The initial calibration relative response factor (RRF) was less than the quality control limit of 0.05 for 1,4-dioxane for the instrument MSVOAE on 10/06/11 and the instrument MSVOAG on 09/28/11. Additionally, all continuing calibration verifications (CCV) had RRFs less than the 0.05 quality control limit for 1,4-dioxane. All sample 1,4-dioxane results were non-detected and were qualified rejected, (UR).

The CCV percent difference (%D) was greater than the 20% quality control limit for carbon disulfide for instrument MSVOAE on 10/10/11 @ 17:55.

Affected samples:

FC-MW07I-20110926	FC-MW03SR1-20110926	FC-DUP06-20110926

Action: All samples had non-detected results for carbon disulfide. The non-detected carbon disulfide sample results were qualified estimated, (UJ).

The CCV %Ds were greater than the 20% quality control limit for bromoform and 1,2-dibromo-3-chloropropane for instrument MSVOAG on 10/10/11 @ 10:45.

Affected samples:

SA-TB02-20110914	SA-RB02-20110926	ET-MW03S-20110926
ET-MW02S-20110926	ET-MW01S-20110926	FC-MW05I-20110926
FC-MW07S-20110926	FC-MW05S-20110926	FC-PZ05I1-20110926

Action: All samples had non-detected results for 1,4-dioxane, bromoform and 1,2-dibromo-3-chloropropane. The non-detected bromoform and 1,2-dibromo-3-chloropropane sample results were qualified estimated, (UJ). The 1,4-dioxane results were previously rejected for RRF quality control limit non-compliances and no further validation action was necessary.

The CCV %Ds were greater than the 20% quality control limit for chloromethane, acetone, methyl acetate, 2-butanone, 1,4-dioxane, 4-methyl-2-pentanone, 2-chloroethyl vinyl ether, 2-hexanone, and ethyl benzene for instrument MSVOAG on 10/10/11 @ 22:14.

Affected samples:

ET-DUP05-20110926	FC-PZ05I1-20110926DL dilution	SA-MW-132S-20110927
SA-MW-131D-20110927	SA-MW-132I-20110927	SA-MW-131I-20110927
SA-MW-131S-20110927	SA-PZ-145D-20110927	

Action: The sample positive and non-detected results for chloromethane, acetone, methyl acetate, 2-butanone, 4-methyl-2-pentanone, 2-chloroethyl vinyl ether, 2-hexanone, and ethyl benzene were qualified estimated, (J) and (UJ), respectively. The 1,4-dioxane results were previously rejected for RRF quality control limit non-compliances and no further validation action was necessary.

The CCV %D was greater than the 20% quality control limit for 2-chloroethyl vinyl ether for instrument MSVOAG on 10/11/11 @ 12:42.

Affected samples:

FC-MW07I-20110926RE re-analysis	SA-FB02-20110927
FC-MW03SR1-20110926RE re-analysis	FC-DUP06-20110926DL dilution

Action: The sample non-detected results 2-chloroethyl vinyl ether were qualified estimated, (UJ).

The surrogate (system monitoring compound) percent recoveries (%Rs) were greater than the quality control limit for samples listed below.

Sample	Surrogate(s)
FC-MW03SR1-20110926	4-bromofluorobenzene (BFB)
FC-DUP06-20110926	4-bromofluorobenzene (BFB)

Actions: Sample FC-MW03SR1-20110926 was re-analyzed with a %R for BFB that was within the quality control limits but the sample was re-analyzed greater than the 14 day sample to analysis hold time. The initial sample FC-MW03SR1-20110926 results were reported for the sample. The positive results for sample were qualified estimated, (J), and the non-detected results for the initial undiluted sample analysis were not qualified. Sample FC-DUP06-20110926 was re-analyzed at a 20X dilution only and was not re-analyzed undiluted. The positive results which were within the calibration levels were reported from the initial undiluted sample analysis and were qualified estimated, (J), due to the surrogate %R quality control limit non-compliance. The non-detected results for the initial undiluted sample analysis were not qualified.

The matrix spike (MS) and MS duplicate (MSD) %Rs were less than the quality control limit at 0% for 2-chloroethyl vinyl ether for spiked sample FC-MW07I-20110926. The sample associated LCS had a %R within the quality control limit for 2-chloroethyl vinyl ether.

Action: The sample 2-chloroethyl vinyl ether non-detected result for the sample was qualified as rejected, (UR)..

The relative percent difference (RPD) was greater than the 30% quality control limit for 1,1-dichloroethene and m&p-xylenes sample results for field duplicate pair samples FC-DUP06-20110926 and FC-PZ05I1-20110926. The aforementioned analyte positive results were qualified estimated, (J), for the samples FC-DUP06-20110926 and FC-PZ05I1-20110926.

Positive results below the limit of quantitation (LOQ) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Additional Comments

The following common laboratory contaminant was detected in the method blank VBG1011W1 affecting SDG samples FC-MW07I-20110926RE, SA-FB02-20110927, FC-MW03SR1-20110926RE, and FC-DUP06-20110926DL.

Compound	Maximum Conc. µg/L	Action Level µg/L
Methylene chloride	1.2	12

An action level of 10X the maximum concentration for the common laboratory contaminant methylene chloride was established to evaluate laboratory contamination. Dilution factors and sample aliquots, if applicable, were taken into consideration during the application of all action levels. All samples had non-detected methylene chloride results and no validation action was necessary.

The samples FC-MW03SR1-20110926, FC-MW07I-20110926, and the dilution analysis for sample FC-DUP06-20110926 were analyzed on instrument MSVOAE which had 5ppb as the lowest calibration analyte point. The samples were re-analyzed on instrument MSVOAG which contains a lower level calibration standard of 1 part per billion (ppb). As the re-analysis for the samples exceeded the 14 day quality control limit hold time, the initial results for the samples FC-MW03SR1-20110926 and FC-MW07I-20110926 were reported. The initial analysis for sample FC-DUP06-20110926 which was within the calibration levels was reported because this sample was only analyzed diluted on instrument MSVOAG. The analytes which exceeded the calibration level for the initial analysis were reported from the dilution analysis.

The laboratory control sample (LCS) percent recovery (%R) was greater than the quality control limit for 1,4-dioxane for LCS BSG1010W1. No validation action was necessary as all affected samples had non-detected results for 1,4-dioxane which were previously rejected due to RRF quality control limit non-compliances.

The LCS %R was greater than the quality control limit for chloromethane and bromochloromethane for LCS BSG1011W1.

Affected samples:

FC-MW07I-20110926RE re-analysis	SA-FB02-20110927
FC-MW03SR1-20110926RE re-analysis	FC-DUP06-20110926DL dilution

Action: No validation action was necessary as all samples had non-detected results for chloromethane and bromochloromethane.

The MS/MSD relative percent difference (RPD) was greater than the quality control limit carbon disulfide for spiked sample FC-MW07I-20110926

Action: No action was taken as the both the MS%R and the MSD %R for the sample were within the quality control limits.

Samples listed below were diluted due to high VOC results in the undiluted sample analysis. Only those VOC results which exceeded the highest calibration level for the undiluted sample analyses were reported from the dilution analyses.

Sample	Dilution
FC-DUP06-20110926	1X, 20X
FC-PZ05I1-20110926	1X, 20X

Fifty-three (53) analytes were reported for VOCs.

Non-detected sample results were reported to the LOD.

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane VOC non-detected analyte results were rejected due to initial and continuing calibration RRF quality control limit non-compliances. Sample results were qualified and rejected for sample to analysis hold time exceedances. Sample VOC results were qualified for CCV %D, surrogate %R, and MS/MSD %R quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the

method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit. VOC sample analyte results were qualified for field duplicate imprecision.

The data for these analyses were reviewed with reference to the USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP #HW-24 Revision #2 August 2008, USEPA SW-846 Method 8260B, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Joseph Kalinyak
Chemist/Data Validator

TetraTech NUS
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: 02045	NSAMPLE	ET-DUP05-20110926			ET-MW01S-20110926			ET-MW02S-20110926			ET-MW03S-20110926		
SDG: C3960	LAB_ID	C3960-14			C3960-05			C3960-04			C3960-03		
FRACTION: OV	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
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	ET-MW01S-20110926											
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	UJ	C	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	C	2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	UJ	C	2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	C	2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	C	2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UJ	C	2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.45	J	CP	0.45	J	P	0.5	U		0.49	J	P
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	

PROJ_NO: 02045	NSAMPLE	FC-DUP06-20110926			FC-DUP06-20110926DL			FC-MW03SR1-20110926			FC-MW05I-20110926		
SDG: C3960	LAB_ID	C3960-15			C3960-15DL			C3960-13			C3960-06		
FRACTION: OV	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
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	FC-PZ05I1-20110926			FC-PZ05I1-20110926								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					360	J	H	2.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		2.5	U					2.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		2.5	U					2.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2.5	U					2.5	U		0.5	U	
1,1-DICHLOROETHANE					830	J	H	9.3	J	R	0.5	U	
1,1-DICHLOROETHENE		60	J	GR				2.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		2.5	U					2.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		2.5	U					2.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		2.5	U					2.5	U		0.5	UJ	C
1,2-DIBROMOETHANE		2.5	U					2.5	U		0.5	U	
1,2-DICHLOROBENZENE		3.5	J	PR				2.5	U		0.5	U	
1,2-DICHLOROETHANE		2.5	U					2.5	U		0.5	U	
1,2-DICHLOROPROPANE		2.5	U					2.5	U		0.5	U	
1,3-DICHLOROBENZENE		2.5	U					2.5	U		0.5	U	
1,4-DICHLOROBENZENE		2.5	U					2.5	U		0.5	U	
1,4-DIOXANE		50	UR	C				50	UJ	C	10	UR	C
2-BUTANONE		12.5	U					12.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		12.5	UJ	C				12.5	U		2.5	U	
2-HEXANONE		12.5	U					12.5	U		2.5	U	
4-METHYL-2-PENTANONE		12.5	U					12.5	U		2.5	U	
ACETONE		12.5	U					12.5	U		2.5	U	
BENZENE		2.6	J	PR				2.5	U		0.5	U	
BROMOCHLOROMETHANE		2.5	U					2.5	U		0.5	U	
BROMODICHLOROMETHANE		2.5	U					2.5	U		0.5	U	
BROMOFORM		2.5	U					2.5	U		0.5	UJ	C
BROMOMETHANE		2.5	U					2.5	U		0.5	U	
CARBON DISULFIDE		2.5	UJ	C				2.5	UJ	C	0.5	U	
CARBON TETRACHLORIDE		2.5	U					2.5	U		0.5	U	
CHLOROBENZENE		2.5	U					2.5	U		0.5	U	
CHLORODIBROMOMETHANE		2.5	U					2.5	U		0.5	U	
CHLOROETHANE					250	J	H	5	J	PR	0.5	U	
CHLOROFORM		2.5	U					2.5	U		0.5	U	
CHLOROMETHANE		2.5	U					2.5	U		0.43	J	P
CIS-1,2-DICHLOROETHENE		2.5	U					2.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		2.5	U					2.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-MW05S-20110926			FC-MW07I-20110926			FC-MW07S-20110926			FC-PZ05I1-20110926		
SDG: C3960	LAB_ID	C3960-08			C3960-09			C3960-07			C3960-12		
FRACTION: OV	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
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		2.5	U		0.5	U				
1,1,2,2-TETRACHLOROETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		2.5	U		0.5	U				
1,1-DICHLOROETHENE		0.5	U		2.5	U		0.5	U		42	J	G
1,2,3-TRICHLOROBENZENE		0.5	U		2.5	U		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		2.5	U		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	C	2.5	U		0.5	UJ	C	0.5	UJ	C
1,2-DIBROMOETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		2.5	U		0.5	U		4.5		
1,2-DICHLOROETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		2.5	U		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		2.5	U		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		2.5	U		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	50	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		12.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		12.5	UR	D	2.5	U		2.5	U	
2-HEXANONE		2.5	U		12.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		12.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		12.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		2.5	U		0.5	U		2.3		
BROMOCHLOROMETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	UJ	C	2.5	U		0.5	UJ	C	0.5	UJ	C
BROMOMETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		2.5	UJ	C	0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		2.5	U		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		2.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		2.5	U		0.5	U				
CHLOROFORM		0.5	U		2.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		2.5	U		0.5	U		0.77	J	P
CIS-1,2-DICHLOROETHENE		0.5	U		2.5	U		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		2.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-PZ05I1-20110926DL			SA-FB02-20110927			SA-MW-131D-20110927			SA-MW-131I-20110927		
SDG: C3960	LAB_ID	C3960-12DL			C3960-16			C3960-18			C3960-20		
FRACTION: OV	SAMP_DATE	9/26/2011			9/27/2011			9/27/2011			9/27/2011		
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		320	J	H	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		790	J	H	0.5	U		20			0.5	U	
1,1-DICHLOROETHENE					0.5	U		2.3			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					10	UR	C	10	UR	C	10	UR	C
2-BUTANONE					2.5	U		2.5	UJ	C	2.5	UJ	C
2-CHLOROETHYL VINYL ETHER					2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
2-HEXANONE					2.5	U		2.5	UJ	C	2.5	UJ	C
4-METHYL-2-PENTANONE					2.5	U		2.5	UJ	C	2.5	UJ	C
ACETONE					2.5	U		2.5	UJ	C	2.5	UJ	C
BENZENE					0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE					0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE					1.7			0.5	U		0.5	U	
BROMOFORM					0.5	U		0.5	U		0.5	U	
BROMOMETHANE					0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE					0.5	U		0.5	U		0.5	U	
CARBON TETRACHLORIDE					0.5	U		0.5	U		0.5	U	
CHLOROBENZENE					0.5	U		0.5	U		0.5	U	
CHLORODIBROMOMETHANE					0.95	J	P	0.5	U		0.5	U	
CHLOROETHANE		230	J	H	0.5	U		0.5	U		0.5	U	
CHLOROFORM					2.4			0.5	U		0.5	U	
CHLOROMETHANE					0.5	U		0.5	UJ	C	0.5	UJ	C
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	

PROJ_NO: 02045	NSAMPLE	SA-MW-131S-20110927			SA-MW-132I-20110927			SA-MW-132S-20110927			SA-PZ-145D-20110927		
SDG: C3960	LAB_ID	C3960-21			C3960-19			C3960-17			C3960-22		
FRACTION: OV	SAMP_DATE	9/27/2011			9/27/2011			9/27/2011			9/27/2011		
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		6.9			0.5	U		28		
1,1-DICHLOROETHENE		0.5	U		1.5			0.5	U		1.8		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
2-CHLOROETHYL VINYL ETHER		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
2-HEXANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
4-METHYL-2-PENTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
ACETONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.59	J	CP	0.51	J	CP
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	

PROJ_NO: 02045	NSAMPLE	SA-RB02-20110926			SA-TB02-20110914		
SDG: C3960	LAB_ID	C3960-01			C3960-02		
FRACTION: OV	SAMP_DATE	9/26/2011			9/14/2011		
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
1,1,1-TRICHLOROETHANE		0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	C	0.5	UJ	C
1,2-DIBROMOETHANE		0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	U		0.5	U	
1,4-DICHLOROBENZENE		0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U	
BROMOFORM		0.5	UJ	C	0.5	UJ	C
BROMOMETHANE		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	U		0.5	U	
CHLOROBENZENE		0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	U		0.5	U	
CHLOROETHANE		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	ET-DUP05-20110926			ET-MW01S-20110926			ET-MW02S-20110926			ET-MW03S-20110926		
SDG: C3960	LAB_ID	C3960-14			C3960-05			C3960-04			C3960-03		
FRACTION: OV	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
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	ET-MW01S-20110926											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
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	
ETHYLBENZENE		0.5	UJ	C	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		0.5	UJ	C	0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FC-DUP06-20110926			FC-DUP06-20110926DL			FC-MW03SR1-20110926			FC-MW05I-20110926		
SDG: C3960	LAB_ID	C3960-15			C3960-15DL			C3960-13			C3960-06		
FRACTION: OV	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
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	FC-PZ05I1-20110926			FC-PZ05I1-20110926								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CYCLOHEXANE		2.5	U					2.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		2.5	U					2.5	U		0.5	U	
ETHYLBENZENE		26	J	R				23	J	R	0.5	U	
ISOPROPYLBENZENE		9.2	J	R				10	J	R	0.5	U	
M+P-XYLENES		4	J	GPR				5	U		1	U	
METHYL ACETATE		2.5	U					2.5	U		0.5	U	
METHYL CYCLOHEXANE		2.5	U					2.1	J	PR	0.5	U	
METHYL TERT-BUTYL ETHER		2.5	U					2.5	U		0.5	U	
METHYLENE CHLORIDE		2.5	U					2.5	U		0.5	U	
O-XYLENE		2.5	U					2.5	U		0.5	U	
STYRENE		2.5	U					2.5	U		0.5	U	
TETRACHLOROETHENE		2.5	U					2.5	U		0.5	U	
TOLUENE		2.5	U					2.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		2.5	U					2.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		2.5	U					2.5	U		0.5	U	
TRICHLOROETHENE		2.5	U					2.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		2.5	U					2.5	U		0.5	U	
VINYL CHLORIDE		2.5	U					2.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-MW05S-20110926			FC-MW07I-20110926			FC-MW07S-20110926			FC-PZ05I1-20110926		
SDG: C3960	LAB_ID	C3960-08			C3960-09			C3960-07			C3960-12		
FRACTION: OV	SAMP_DATE	9/26/2011			9/26/2011			9/26/2011			9/26/2011		
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
CYCLOHEXANE		0.5	U		2.5	U		0.5	U		1		
DICHLORODIFLUOROMETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		2.5	U		0.9	J	P	30		
ISOPROPYLBENZENE		0.5	U		2.5	U		0.5	U		11		
M+P-XYLENES		1	U		5	U		1	U		8.2	J	G
METHYL ACETATE		0.5	U		2.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		2.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		2.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		2.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		2.5	U		0.5	U		0.5	U	
STYRENE		0.5	U		2.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		2.5	U		0.5	U		0.5	U	
TOLUENE		0.5	U		2.5	U		0.5	U		0.56	J	P
TRANS-1,2-DICHLOROETHENE		0.5	U		2.5	U		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		2.5	U		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		2.5	U		0.5	U		0.68	J	P
TRICHLOROFLUOROMETHANE		0.5	U		2.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		2.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-PZ05I1-20110926DL			SA-FB02-20110927			SA-MW-131D-20110927			SA-MW-131I-20110927		
SDG: C3960	LAB_ID	C3960-12DL			C3960-16			C3960-18			C3960-20		
FRACTION: OV	SAMP_DATE	9/26/2011			9/27/2011			9/27/2011			9/27/2011		
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
CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE					0.5	U		0.5	U		0.5	U	
ETHYLBENZENE					0.5	U		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					0.5	U		0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE					0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER					0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE					0.5	U		0.5	U		0.5	U	
O-XYLENE					0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-MW-131S-20110927			SA-MW-132I-20110927			SA-MW-132S-20110927			SA-PZ-145D-20110927		
SDG: C3960	LAB_ID	C3960-21			C3960-19			C3960-17			C3960-22		
FRACTION: OV	SAMP_DATE	9/27/2011			9/27/2011			9/27/2011			9/27/2011		
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
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	
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		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-RB02-20110926			SA-TB02-20110914		
SDG: C3960	LAB_ID	C3960-01			C3960-02		
FRACTION: OV	SAMP_DATE	9/26/2011			9/14/2011		
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
CYCLOHEXANE		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U	
METHYL ACETATE		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U	
STYRENE		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U	
TOLUENE		0.74	J	P	0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**DECEMBER 13, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C3961

SAMPLES: 26/Aqueous/VOC

FC-MW01I-20110929	FC-MW01S-20110929	FC-MW02IR1-20110928
FC-MW02SR1-20110928	FC-MW04I-20110928	FC-MW04S-20110928
FC-MW06S-20110928	FC-MW08S-20110928	FT-DUP07-20110929
FT-MW02I-20110929	FT-MW02S-20110929	FT-MW04-20110929
FT-MW05I-20110929	FT-MW05S-20110929	FT-MW06I-20110929
FT-MW06S-20110929	FT-MW07S-20110929	FT-MW08I-20110929
FT-MW08S-20110929	SA-PZ-145I-20110927	SA-PZ-145S-20110927

Overview

The sample set for NWIRP Calverton SDG C3961 consisted of twenty-one (21) aqueous environmental samples. All twenty-one (21) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). One field duplicate sample pair was associated with this sample delivery group (SDG): FT-DUP07-20110929/FT-MW02S-20110929.

The samples were collected by Tetra Tech on September 27, 28 and 29, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Method SW-846 8260B 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 Results
	• Matrix Spike/Matrix Spike Duplicate Sample 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.

Volatiles (VOC)

The initial and continuing calibrations performed on instruments MSVOAG had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The continuing calibration performed on 10/10/11 @ 22:14 had Percent Drifts (%Drifts) for 4-methyl-2-pentanone, 2-hexanone, and ethyl benzene and Percent Differences (%Ds) for chloromethane, methyl acetate, 2-butanone, 1,4-dioxane, and 2-chloroethyl vinyl ether above the 20% quality control limits. Samples FC-MW01S-20110929, FC-MW02IR1-20110928, FC-MW06S-20110928, FC-MW08S-20110928, and FT-MW08S-20110929 were affected. No action was taken for 1,4-dioxane because the affected results were qualified for a more severe calibration noncompliance. Additionally, no action was taken for the non-detected result reported for 2-chloroethyl vinyl ether in sample FC-MW06S-20110928 due to a more severe MS/MSD %R noncompliance. The non-detected results reported for the remaining compounds in the affected samples were qualified as estimated, (UJ).

%Drifts for bromomethane, acetone, bromochloromethane, and ethyl benzene were above the 20% quality control limit for the continuing calibration performed on 10/12/11 @ 01:46. In addition, this continuing calibration had %Ds for chloromethane, methyl acetate, and 2-butanone. The positive and non-detected results were reported for these compounds in the affected samples, FT-DUP07-20110929, FT-MW02I-20110929, FT-MW02S-20110929, FT-MW04-20110929, FT-MW05I-20110929, FT-MW05S-20110929, FT-MW06I-20110929, FT-MW06S-20110929, and FT-MW07S-20110929, were qualified as estimated, (J) and (UJ), respectively.

The Percent Recoveries (%Rs) for 2-chloroethyl vinyl ether in the Matrix Spike (MS) and the Matrix Spike Duplicate (MSD) samples was zero. In addition, the MS/MSD %Rs chloromethane was above the upper quality control limit. The associated Laboratory Control Sample (LCS) yielded an acceptable %Rs for these compounds. The non-detected result reported for this compound in the parent sample, FC-MW06S-20110928, was qualified as rejected, (UR). No action was necessary for the non-detected result reported for chloromethane in the parent sample.

Positive results reported below the Limit of Quantitation (LOQ) and above the Method Detection Level (MDL) were qualified as estimated, (J).

Additional Comments

The following compound was detected in the laboratory method blank, VBG1011W1, at the maximum concentration as indicated below:

Analyte	Maximum Conc. (µg/L)	Action Level (µg/L)
Methylene Chloride [1]	1.2	12

[1] Maximum concentration detected affecting samples FC-MW01S-20110929, FC-MW02IR1-20110928, FC-MW06S-20110928, FC-MW08S-20110928, and FT-MW08S-20110929.

An action level of 10X the maximum concentration was established to evaluate laboratory contamination for the common laboratory contaminant, methylene chloride. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No action was taken because no positive results were

reported for methylene chloride in the affected samples.

The LCSs, BSG1011W1 and BSG1011W3, had a %Rs for bromochloromethane above the upper quality control limit. No action was necessary in the affected samples because no positive results were reported for this compound.

Acetone and trichloroethene were detected in the field duplicate sample, FT-DUP07-20110929, but not in the environmental sample, FT-MW02S-20110929. No action was necessary for field duplicate imprecision because the differences between the results were less than 2X the LOQs.

Samples FT-DUP07-20110929 and FT-MW02S-20110929 were reanalyzed because of an acetone calibration noncompliance. The results from the reanalyses were not used in the data validation.

Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05. Some continuing calibration %Ds and %Drifts exceeded the 20% quality control limit. Methylene chloride was detected in a laboratory method blank. LCS %Rs for bromochloromethane were above the upper quality control limit.

Other Factors Affecting Data Quality: The MS/MSD %Rs for 2-chloroethyl vinyl ether were zero and %Rs for chloromethane were high. Positive results reported below the LOQ but above the MDL were qualified as 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), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Michelle L. Allen
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
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: 02045	NSAMPLE	FC-MW01I-20110929			FC-MW01S-20110929			FC-MW02IR1-20110928			FC-MW02SR1-20110928		
SDG: C3961	LAB_ID	C3961-11			C3961-09			C3961-05			C3961-03		
FRACTION: OV	SAMP_DATE	9/29/2011			9/29/2011			9/28/2011			9/28/2011		
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		1.2			0.5	U		0.5	U		14		
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		0.49	J	P	0.5	U		0.5	U		3.8		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	UJ	C	2.5	UJ	C	2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	UJ	C	2.5	UJ	C	2.5	U	
2-HEXANONE		2.5	U		2.5	UJ	C	2.5	UJ	C	2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	UJ	C	2.5	UJ	C	2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		17		
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		4.4		
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
CIS-1,2-DICHLOROETHENE		0.44	J	P	0.5	U		0.5	U		0.85	J	P
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-MW04I-20110928			FC-MW04S-20110928			FC-MW06S-20110928			FC-MW08S-20110928		
SDG: C3961	LAB_ID	C3961-04			C3961-06			C3961-07			C3961-08		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	UJ	C	2.5	UJ	C
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	UR	D	2.5	UJ	C
2-HEXANONE		2.5	U		2.5	U		2.5	UJ	C	2.5	UJ	C
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	UJ	C	2.5	UJ	C
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.63	J	P	0.5	U		0.5	UJ	C	0.5	UJ	C
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	

PROJ_NO: 02045	NSAMPLE	FT-DUP07-20110929			FT-MW02I-20110929			FT-MW02S-20110929			FT-MW04-20110929		
SDG: C3961	LAB_ID	C3961-23			C3961-21			C3961-22			C3961-20		
FRACTION: OV	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
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		1.3			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		3.7			0.5	U		3.9			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		1.2			0.5	U		1.3			0.5	U	
1,4-DIOXANE		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		6	UJ	C	2.5	UJ	C	6.1	UJ	C	2.5	UJ	C
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		9.5	J	C	2.5	UJ	C	12	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	J	P	0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
CIS-1,2-DICHLOROETHENE		0.88	J	P	0.5	U		0.73	J	P	0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U		0.5	U		0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	FT-MW05I-20110929			FT-MW05S-20110929			FT-MW06I-20110929			FT-MW06S-20110929		
SDG: C3961	LAB_ID	C3961-13			C3961-17			C3961-18			C3961-14		
FRACTION: OV	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	UR	R
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	UJ	C	2.5	UJ	C	2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.79	J	P	0.5	U		0.52	J	P	0.5	U	
CHLOROMETHANE		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
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	

PROJ_NO: 02045	NSAMPLE	FT-MW07S-20110929			FT-MW08I-20110929			FT-MW08S-20110929			SA-PZ-145I-20110927		
SDG: C3961	LAB_ID	C3961-19			C3961-12			C3961-10			C3961-02		
FRACTION: OV	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/27/2011		
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		0.98	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		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U		0.5	U		62		
1,1-DICHLOROETHENE		0.5	U		0.5	U		0.5	U		5.8		
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		1.4		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	C	2.5	U		2.5	UJ	C	2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	UJ	C	2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	UJ	C	2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	UJ	C	2.5	U	
ACETONE		2.5	UJ	C	2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	C	0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOFORM		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	C	0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		3.1		
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	C	0.5	U		0.5	UJ	C	0.65	J	P
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	

PROJ_NO: 02045	NSAMPLE	SA-PZ-145S-20110927		
SDG: C3961	LAB_ID	C3961-01		
FRACTION: OV	SAMP_DATE	9/27/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U	
1,1-DICHLOROETHANE		0.5	U	
1,1-DICHLOROETHENE		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U	
1,2-DIBROMOETHANE		0.5	U	
1,2-DICHLOROBENZENE		0.5	U	
1,2-DICHLOROETHANE		0.5	U	
1,2-DICHLOROPROPANE		0.5	U	
1,3-DICHLOROBENZENE		0.5	U	
1,4-DICHLOROBENZENE		0.5	U	
1,4-DIOXANE		10	UR	C
2-BUTANONE		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U	
2-HEXANONE		2.5	U	
4-METHYL-2-PENTANONE		2.5	U	
ACETONE		2.5	U	
BENZENE		0.5	U	
BROMOCHLOROMETHANE		0.5	U	
BROMODICHLOROMETHANE		0.5	U	
BROMOFORM		0.5	U	
BROMOMETHANE		0.5	U	
CARBON DISULFIDE		0.5	U	
CARBON TETRACHLORIDE		0.5	U	
CHLOROBENZENE		0.5	U	
CHLORODIBROMOMETHANE		0.5	U	
CHLOROETHANE		0.5	U	
CHLOROFORM		0.5	U	
CHLOROMETHANE		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U	

PROJ_NO: 02045	NSAMPLE	FC-MW01I-20110929			FC-MW01S-20110929			FC-MW02IR1-20110928			FC-MW02SR1-20110928		
SDG: C3961	LAB_ID	C3961-11			C3961-09			C3961-05			C3961-03		
FRACTION: OV	SAMP_DATE	9/29/2011			9/29/2011			9/28/2011			9/28/2011		
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
CYCLOHEXANE		0.5	U		0.5	U		0.5	U		2.1		
DICHLORODIFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	UJ	C	0.5	UJ	C	6		
ISOPROPYLBENZENE		0.5	U		0.5	U		0.5	U		4.1		
M+P-XYLENES		1	U		1	U		1	U		25		
METHYL ACETATE		0.5	U		0.5	UJ	C	0.5	UJ	C	0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		11		
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	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: 02045	NSAMPLE	FC-MW04I-20110928			FC-MW04S-20110928			FC-MW06S-20110928			FC-MW08S-20110928		
SDG: C3961	LAB_ID	C3961-04			C3961-06			C3961-07			C3961-08		
FRACTION: OV	SAMP_DATE	9/28/2011			9/28/2011			9/28/2011			9/28/2011		
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
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	
ETHYLBENZENE		0.5	U		0.5	U		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		0.5	U		0.5	U		0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FT-DUP07-20110929			FT-MW02I-20110929			FT-MW02S-20110929			FT-MW04-20110929		
SDG: C3961	LAB_ID	C3961-23			C3961-21			C3961-22			C3961-20		
FRACTION: OV	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
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
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	
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		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		2.8			0.5	U		3			0.5	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		0.74	J	P	0.5	U		0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		1.4			0.5	U		1.8			0.5	U	

PROJ_NO: 02045	NSAMPLE	FT-MW05I-20110929			FT-MW05S-20110929			FT-MW06I-20110929			FT-MW06S-20110929		
SDG: C3961	LAB_ID	C3961-13			C3961-17			C3961-18			C3961-14		
FRACTION: OV	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/29/2011		
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
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	
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		0.5	UJ	C	0.5	UJ	C	0.5	UJ	C	0.5	UJ	C
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	FT-MW07S-20110929			FT-MW08I-20110929			FT-MW08S-20110929			SA-PZ-145I-20110927		
SDG: C3961	LAB_ID	C3961-19			C3961-12			C3961-10			C3961-02		
FRACTION: OV	SAMP_DATE	9/29/2011			9/29/2011			9/29/2011			9/27/2011		
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
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	
ETHYLBENZENE		0.5	UJ	C	0.5	U		0.5	UJ	C	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		0.5	UJ	C	0.5	U		0.5	UJ	C	0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-PZ-145S-20110927		
SDG: C3961	LAB_ID	C3961-01		
FRACTION: OV	SAMP_DATE	9/27/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CYCLOHEXANE		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U	
ETHYLBENZENE		0.5	U	
ISOPROPYLBENZENE		0.5	U	
M+P-XYLENES		1	U	
METHYL ACETATE		0.5	U	
METHYL CYCLOHEXANE		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U	
METHYLENE CHLORIDE		0.5	U	
O-XYLENE		0.5	U	
STYRENE		0.5	U	
TETRACHLOROETHENE		0.5	U	
TOLUENE		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U	
TRICHLOROETHENE		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U	
VINYL CHLORIDE		0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**DECEMBER 7, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE08
SAMPLE DELIVERY GROUP (SDG) C4126

SAMPLES: 25/Aqueous/VOC

SA-DUP01-20111010	SA-DUP02-20111011	SA-FB01-20111012
SA-RB01-20111012	SA-TB01-20111010	SA-TW417-2832
SA-TW417-3337	SA-TW417-3842	SA-TW417-4347
SA-TW417-4852	SA-TW418-2832	SA-TW418-3337
SA-TW418-3842	SA-TW418-4347	SA-TW418-4852
SA-TW419-2832	SA-TW419-3337	SA-TW419-3842
SA-TW419-4347	SA-TW419-4852	SA-TW420-2832
SA-TW420-3337	SA-TW420-3842	SA-TW420-4347
SA-TW420-4852		

Overview

The sample set for NWIRP Calverton SDG C4126 consisted of twenty-two (22) aqueous environmental samples, one (1) field blank, one rinsate blank (1), and one (1) trip blank. All twenty-five (25) aqueous samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOC). Two field duplicate sample pairs were associated with this sample delivery group (SDG): SA-DUP01-20111010/SA-TW417-3337 and SA-DUP02-20111011/SA-TW419-4347.

The samples were collected by Tetra Tech on October 10, 11, and 12, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Method SW-846 8260B 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 Results
- Matrix Spike/Matrix Spike Duplicate Sample 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.

Volatiles (VOC)

The initial and continuing calibrations performed on instruments MSVOAH had Relative Response Factors (RRFs) less than the 0.05 quality control criteria for 1,4-dioxane. All samples were affected. Only non-detected results were reported for 1,4-dioxane in the affected samples and these non-detects were qualified as rejected, (UR).

The continuing calibration performed on 10/21/11 @ 01:05 had a Percent Drift (%Drift) for 2-chloroethyl vinyl ether above the 20% quality control limit. Samples SA-DUP02-20111012, SA-RB01-20111012, SA-TW417-2832, SA-TW418-3337, SA-TW419-3842, SA-TW419-4347, SA-TW420-2832, SA-TW420-4347, and SA-TW420-4852, were affected. The non-detected results reported for this compound with the exception of sample, SA-TW417-2832, were qualified as estimated, (UJ). The result for 2-chloroethyl vinyl ether in sample SA-TW417-2832 was rejected for a more severe noncompliance.

The Percent Recoveries (%Rs) for the surrogate spike compound, toluene-d8, was below the lower quality control limit in samples SA-TW417-3337, SA-TW417-3842, SA-TW417-4347, SA-TW417-4852, SA-TW419-2832, SA-TW419-3337, SA-TW419-4852, SA-TW420-3337, and SA-TW420-3842. In addition, samples SA-TW419-2832, SA-TW419-3337, SA-TW419-485, had %Rs for 1,2-dichloroethane-d4 above the upper quality control limit and sample SA-TW417-3337 had a %R for 4-bromofluorobenzene below the lower quality control limit. The samples were reanalyzed yielding %Rs for 1,2-dichoroethane-d4 above the upper quality control limit. The results from the reanalyses of these samples were used in the data validation because only positive target compound results would be affected. The positive result reported for 1,1-dichloroethane in sample SA-TW419-4852 was qualified as estimated, (J).

The surrogate spike compound, 1,2-dichloroethane-d4, had %Rs above the upper quality control limit in samples SA-DUP02-20111011, SA-TW418-3842, SA-TW419-3842, and SA-TW420-4852. The samples were reanalyzed with a similar result. The initial analyses of the samples were used in the data validation. The positive result reported for carbon disulfide in sample SA-DUP02-20111011 was qualified as estimated, (J). The non-detected results were not affected.

The %Rs for 2-chloroethyl vinyl ether in the Matrix Spike (MS) and the Matrix Spike Duplicate (MSD) samples was zero. The associated Laboratory Control Sample (LCS) yielded an acceptable %R for this compound. The non-detected result reported for this compound in the parent sample, SA-TW417-2832, was qualified as rejected, (UR).

Positive results reported below the Limit of Quantitation (LOQ) and above the Method Detection Level (MDL) were qualified as estimated, (J).

Additional Comments

Chloroform, bromodichloromethane, toluene, dibromochloromethane, and isopropylbenzene were detected in the field blank, SA-FB01-20111012.

Carbon disulfide was detected below the LOQ in the field duplicate sample, SA-DUP02-20111011, but not in the environmental sample, SA-TW419-4347. No action was necessary for field duplicate imprecision because the difference between the results was less than 2X the LOQ.

Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The 1,4-dioxane results were rejected due to initial and continuing calibration RRFs below 0.05. A continuing calibration %Drift exceeded the 20% quality control limit.

Other Factors Affecting Data Quality: Several samples had noncompliant surrogate %Rs. The MS/MSD %Rs for 2-chloroethyl vinyl ether were zero. Positive results reported below the LOQ but above the MDL were qualified as 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), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

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Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
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: 02045	NSAMPLE	SA-DUP01-20111010			SA-DUP02-20111011			SA-FB01-20111012			SA-RB01-20111012		
SDG: C4126	LAB_ID	C4126-09			C4126-17			C4126-18			C4126-22		
FRACTION: OV	SAMP_DATE	10/10/2011			10/11/2011			10/12/2011			10/12/2011		
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	SA-TW417-3337			SA-TW419-4347								
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	UJ	C	2.5	U		2.5	UJ	C
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	U		0.5	U		2.4			0.5	U	
BROMOFORM		0.5	U		0.5	U		7.4			0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.87	J	PR	0.5	U		0.5	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		7.8			0.5	U	
CHLOROETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		1.3			0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-TB01-20111010			SA-TW417-2832			SA-TW417-3337RE			SA-TW417-3842RE		
SDG: C4126	LAB_ID	C4126-01			C4126-06			C4126-05RE			C4126-04RE		
FRACTION: OV	SAMP_DATE	10/10/2011			10/10/2011			10/10/2011			10/10/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	UR	D	2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-TW417-4347RE			SA-TW417-4852RE			SA-TW418-2832			SA-TW418-3337		
SDG: C4126	LAB_ID	C4126-03RE			C4126-02RE			C4126-13			C4126-14		
FRACTION: OV	SAMP_DATE	10/10/2011			10/10/2011			10/11/2011			10/11/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	UJ	C
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		1.1			1.1		
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		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-TW418-3842			SA-TW418-4347			SA-TW418-4852			SA-TW419-2832RE		
SDG: C4126	LAB_ID	C4126-12			C4126-11			C4126-10			C4126-21RE		
FRACTION: OV	SAMP_DATE	10/11/2011			10/11/2011			10/11/2011			10/12/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.89	J	P	0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-TW419-3337RE			SA-TW419-3842			SA-TW419-4347			SA-TW419-4852RE		
SDG: C4126	LAB_ID	C4126-20RE			C4126-19			C4126-15			C4126-16RE		
FRACTION: OV	SAMP_DATE	10/12/2011			10/12/2011			10/11/2011			10/11/2011		
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		1.5	J	R
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	UJ	C	2.5	UJ	C	2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-TW420-2832			SA-TW420-3337RE			SA-TW420-3842RE			SA-TW420-4347		
SDG: C4126	LAB_ID	C4126-27			C4126-26RE			C4126-25RE			C4126-24		
FRACTION: OV	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	UJ	C	2.5	U		2.5	U		2.5	UJ	C
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.74	J	P
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		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-TW420-4852		
SDG: C4126	LAB_ID	C4126-23		
FRACTION: OV	SAMP_DATE	10/12/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	U	
1,1-DICHLOROETHANE		0.5	U	
1,1-DICHLOROETHENE		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	U	
1,2,4-TRICHLOROBENZENE		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	U	
1,2-DIBROMOETHANE		0.5	U	
1,2-DICHLOROBENZENE		0.5	U	
1,2-DICHLOROETHANE		0.5	U	
1,2-DICHLOROPROPANE		0.5	U	
1,3-DICHLOROBENZENE		0.5	U	
1,4-DICHLOROBENZENE		0.5	U	
1,4-DIOXANE		10	UR	C
2-BUTANONE		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	UJ	C
2-HEXANONE		2.5	U	
4-METHYL-2-PENTANONE		2.5	U	
ACETONE		2.5	U	
BENZENE		0.5	U	
BROMOCHLOROMETHANE		0.5	U	
BROMODICHLOROMETHANE		0.5	U	
BROMOFORM		0.5	U	
BROMOMETHANE		0.5	U	
CARBON DISULFIDE		0.5	U	
CARBON TETRACHLORIDE		0.5	U	
CHLOROBENZENE		0.5	U	
CHLORODIBROMOMETHANE		0.5	U	
CHLOROETHANE		0.5	U	
CHLOROFORM		0.5	U	
CHLOROMETHANE		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20111010			SA-DUP02-20111011			SA-FB01-20111012			SA-RB01-20111012		
SDG: C4126	LAB_ID	C4126-09			C4126-17			C4126-18			C4126-22		
FRACTION: OV	SAMP_DATE	10/10/2011			10/11/2011			10/12/2011			10/12/2011		
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	SA-TW417-3337			SA-TW419-4347								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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		3.7			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: 02045	NSAMPLE	SA-TB01-20111010			SA-TW417-2832			SA-TW417-3337RE			SA-TW417-3842RE		
SDG: C4126	LAB_ID	C4126-01			C4126-06			C4126-05RE			C4126-04RE		
FRACTION: OV	SAMP_DATE	10/10/2011			10/10/2011			10/10/2011			10/10/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW417-4347RE			SA-TW417-4852RE			SA-TW418-2832			SA-TW418-3337		
SDG: C4126	LAB_ID	C4126-03RE			C4126-02RE			C4126-13			C4126-14		
FRACTION: OV	SAMP_DATE	10/10/2011			10/10/2011			10/11/2011			10/11/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW418-3842			SA-TW418-4347			SA-TW418-4852			SA-TW419-2832RE		
SDG: C4126	LAB_ID	C4126-12			C4126-11			C4126-10			C4126-21RE		
FRACTION: OV	SAMP_DATE	10/11/2011			10/11/2011			10/11/2011			10/12/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW419-3337RE			SA-TW419-3842			SA-TW419-4347			SA-TW419-4852RE		
SDG: C4126	LAB_ID	C4126-20RE			C4126-19			C4126-15			C4126-16RE		
FRACTION: OV	SAMP_DATE	10/12/2011			10/12/2011			10/11/2011			10/11/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW420-2832			SA-TW420-3337RE			SA-TW420-3842RE			SA-TW420-4347		
SDG: C4126	LAB_ID	C4126-27			C4126-26RE			C4126-25RE			C4126-24		
FRACTION: OV	SAMP_DATE	10/12/2011			10/12/2011			10/12/2011			10/12/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW420-4852		
SDG: C4126	LAB_ID	C4126-23		
FRACTION: OV	SAMP_DATE	10/12/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CYCLOHEXANE		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U	
ETHYLBENZENE		0.5	U	
ISOPROPYLBENZENE		0.5	U	
M+P-XYLENES		1	U	
METHYL ACETATE		0.5	U	
METHYL CYCLOHEXANE		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U	
METHYLENE CHLORIDE		0.5	U	
O-XYLENE		0.5	U	
STYRENE		0.5	U	
TETRACHLOROETHENE		0.5	U	
TOLUENE		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	U	
TRICHLOROETHENE		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U	
VINYL CHLORIDE		0.5	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**DECEMBER 7, 2011**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP), CALVERTON
CTO WE63
SAMPLE DELIVERY GROUP (SDG) C4269

SAMPLES: 10/Aqueous/VOC

FT-GW430-2125	FT-GW430-3135	FT-GW430-4145
FT-GW430-5155	FT-GW430-6165	FT-GW430-7175
FT-MW01I-20111018	FT-MW01S-20111018	FT-MW03S-20111018
FT-TB02-20111007		

Overview

The sample set for NWIRP Calverton SDG C4269 consisted of nine (9) aqueous environmental samples and one (1) trip blank. All ten (10) aqueous samples were analyzed for select volatile organic compounds (VOC). No field duplicate sample pairs were associated with this sample delivery group (SDG).

The samples were collected by Tetra Tech on October 17 and 18, 2011 and analyzed by Chemtech. All analyses were conducted in accordance with EPA Method SW-846 8260B 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 Results
  Matrix Spike/Matrix Spike Duplicate Sample Results
* 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.

Volatiles (VOC)

The continuing calibration performed on instrument MSVOAG on 10/21/11 @ 14:00 had Percent Differences (%Ds) for dichlorodifluoromethane, trichlorofluoromethane, 1,1,1-trichloroethane, and a Percent Drift (%Drift) for acetone above the 20% quality control limits. Sample FT-TB02-20111007 was affected. The non-detected results reported for these compounds were qualified as estimated, (UJ).

The continuing calibration performed on instrument MSVOAG on 10/28/11 @ 18:03 had a %Drift for acetone above the 20% quality control limits. All samples with the exception of FT-TB02-20111007 were affected. The non-detected results reported for acetone in the affected samples were qualified as estimated, (UJ).

The surrogate spike compound, toluene-d8, had %Rs below the lower quality control limit in samples FT-GW430-3135, FT-GW430-4145, FT-GW430-5155, and FT-GW430-7175. The samples were reanalyzed outside of the 14 day holding time with acceptable surrogate recoveries. The initial analyses of the samples were used in the data validation because the samples were reanalyzed outside the holding time. In accordance with Region II guidance, the non-detected results would be rejected for a holding time noncompliance. Only non-detected results were reported for the target compounds in the affected samples and these non-detects were qualified as estimated, (UJ).

Additional Comments

The 14 day analytical holding time was exceeded in reanalyses of samples FT-GW430-3135, FT-GW430-4145, FT-GW430-5155, and FT-GW430-7175. No action was necessary because the results from these analyses were not used in the data validation.

The %Rs for methylene chloride, cis-1,2-dichloroethene, benzene, and trichloroethene in the Matrix Spike (MS) and the Matrix Spike Duplicate (MSD) samples were above the upper quality control limits. No action was taken because the MS/MSD sample was not a sample from this SDG.

Non-detected results are reported to the Limit of Detection (LOD).

EXECUTIVE SUMMARY

Laboratory Performance Issues: Holding times were exceeded for the reanalyses of several samples. Continuing calibration %Ds and %Drifts exceeded the 20% quality control limit.

Other Factors Affecting Data Quality: Several samples had noncompliant surrogate %Rs. The MS/MSD %Rs for some target compounds were high.

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), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech NUS
Michelle L. Allen
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region II Data Validation Forms
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: 02750	NSAMPLE	FT-GW430-2125			FT-GW430-3135			FT-GW430-4145			FT-GW430-5155		
SDG: C4269	LAB_ID	C4269-07			C4269-06			C4269-05			C4269-04		
FRACTION: OV	SAMP_DATE	10/17/2011			10/17/2011			10/17/2011			10/17/2011		
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	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1,2-TRICHLOROETHANE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1-DICHLOROETHANE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,1-DICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
1,2-DICHLOROETHANE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
2-BUTANONE		2.5	U		2.5	UJ	R	2.5	UJ	R	2.5	UJ	R
ACETONE		2.5	UJ	C	2.5	UJ	CR	2.5	UJ	CR	2.5	UJ	CR
BENZENE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
DICHLORODIFLUOROMETHANE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
ETHYLBENZENE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
M+P-XYLENES		1	U		1	UJ	R	1	UJ	R	1	UJ	R
METHYLENE CHLORIDE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
O-XYLENE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TETRACHLOROETHENE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TOLUENE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R
VINYL CHLORIDE		0.5	U		0.5	UJ	R	0.5	UJ	R	0.5	UJ	R

PROJ_NO: 02750	NSAMPLE	FT-GW430-6165			FT-GW430-7175			FT-MW01I-20111018			FT-MW01S-20111018		
SDG: C4269	LAB_ID	C4269-03			C4269-02			C4269-10			C4269-09		
FRACTION: OV	SAMP_DATE	10/17/2011			10/17/2011			10/18/2011			10/18/2011		
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	UJ	R	0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
2-BUTANONE		2.5	U		2.5	UJ	R	2.5	U		2.5	U	
ACETONE		2.5	UJ	C	2.5	UJ	CR	2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
ETHYLBENZENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
M+P-XYLENES		1	U		1	UJ	R	1	U		1	U	
METHYLENE CHLORIDE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TRICHLOROETHENE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	
VINYL CHLORIDE		0.5	U		0.5	UJ	R	0.5	U		0.5	U	

PROJ_NO: 02750	NSAMPLE	FT-MW03S-20111018			FT-TB02-20111007		
SDG: C4269	LAB_ID	C4269-08			C4269-01		
FRACTION: OV	SAMP_DATE	10/18/2011			10/7/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			-900.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.5	U		0.5	UJ	C
1,1,2,2-TETRACHLOROETHANE		0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	U		0.5	U	
1,1-DICHLOROETHANE		0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	U		0.5	U	
2-BUTANONE		2.5	U		2.5	U	
ACETONE		2.5	UJ	C	2.5	UJ	C
BENZENE		0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	U		0.5	UJ	C
ETHYLBENZENE		0.5	U		0.5	U	
M+P-XYLENES		1	U		1	U	
METHYLENE CHLORIDE		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	U		0.5	U	
TOLUENE		0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.5	U	
TRICHLOROETHENE		3.2			0.5	U	
TRICHLOROFLUOROMETHANE		0.5	U		0.5	UJ	C
VINYL CHLORIDE		0.5	U		0.5	U	

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO:	**D. BRAYACK**	**DATE:**	**JANUARY 20, 2012**
FROM:	**JOSEPH KALINYAK**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – VOC NWIRP CALVERTON CTO WE08 SDG C4662**		
SAMPLES:	17 / Aqueous / VOC		

SA-DUP01-20111115	SA-DUP02-20111116	SA-FB01-20111116
SA-RB01-20111116	SA-TB01-20111114	SA-TW365-1418
SA-TW365-2024	SA-TW365-3034	SA-TW365-4044
SA-TW366-1519	SA-TW366-2529	SA-TW366-3539
SA-TW366-4246	SA-TW367-1620	SA-TW367-2630
SA-TW367-3640	SA-TW367-4246	

Overview

The sample set for NWIRP Calverton, CTO WE63, SDG C4662 consisted of seventeen (17) aqueous samples including one (1) aqueous trip blank sample, one (1) aqueous rinse blank sample, and one (1) aqueous field blank sample. All aqueous samples were analyzed for a select list of volatile organic compounds (VOC). Two (2) field duplicate sample pairs were included in this Sample Delivery Group (SDG); SA-DUP01-20111115 / SA-TW367-4246 and SA-DUP02-20111116 / SA-TW365-4044.

The samples were collected by Tetra Tech on November 14, 15, and 16, 2011 and analyzed by ChemTech laboratory. All analyses were conducted in accordance with EPA Method SW-846 8260B 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
* • Laboratory Blank Results
* • Laboratory Control Sample/Laboratory Control Sample Duplicate Recoveries
* • 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 initial calibration average relative response factor (RRF) was less than the 0.05 minimum response criterion for 1,4-dioxane for instrument MSVOA_G on 11/07/11 and 11/22/11, and all continuing calibration verification (CCV) RRFs affecting the samples listed.

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 for acetone, methylene chloride, bromomethane, chloroethane, methyl acetate, bromochloromethane, and tetrachloroethene for instrument MSVOAG on 11/22/11 @ 02:03.

Affected samples:

SA-DUP01-20111115	SA-TW366-3539	SA-TW365-4044 *
SA-TW365-1418 *	SA-DUP02-20111116 *	

Action: The aforementioned sample positive and non-detected results for acetone, methylene chloride, bromomethane, chloroethane, methyl acetate, bromochloromethane, and tetrachloroethene were qualified estimated,(J) and (UJ), respectively.

*Sample results not used from this date.

The CCV %Ds were greater than the 20% quality control limit for carbon tetrachloride for instrument MSVOAG on 11/27/11 @ 01:09.

Affected sample: SA-TW366-3539 dilution re-analysis

Action: No validation action was necessary as the carbon tetrachloride result was reported from the undiluted sample analysis.

The surrogate (system monitoring compound) percent recoveries (%R) for toluene-d8 (TOL) and/or 4-bromofluorobenzene (BFB), or 1,2-dichloroethane-d4 (DCE), were less than the Department of Defense (DOD) quality control limits, 85%-120% and 75%-120%, respectively, for samples as listed below.

Affected samples:

SA-DUP01-20111115 (TOL & BFB)	SA-DUP02-20111116 (TOL & BFB)
SA-FB01-20111116 (TOL)	SA-TW365-1418 (TOL & BFB)
SA-TW365-4044 (TOL & BFB)	***SA-TW366-3539 (TOL & BFB)***
SA-TW367-2630 (TOL & BFB)	***SA-TW367-4246 (TOL)***

Actions: Samples SA-FB01-20111116, SA-TW365-1418, SA-TW365-4044, and SA-DUP02-20111116 were re-analyzed with improved surrogate %Rs and the re-analysis results were reported and validated. The samples (italicized and bolded above) SA-DUP01-20111115, SA-TW366-3539, SA-TW367-2630, and SA-TW367-4246 were diluted and re-analyzed with improved surrogate %Rs, but only the analytes which exceeded the highest calibration level in the undiluted analysis were reported from the sample dilution analyses. The remainder of the positive and non-detected VOC analytes in samples SA-DUP01-20111115, SA-TW366-3539, SA-TW367-2630, and SA-TW367-4246 were qualified estimated, (J) and (UJ), respectively, with the exception of the 1,4-dioxane non-detected results which were rejected for a calibration response non-compliance.

The surrogate %Rs for 1,2-dichloroethane-d4 (DCE) were greater than the quality control limits of 70%-120% for samples as listed below.

Affected samples:

SA-FB01-20111116 re-analysis	SA-TW365-1418 re-analysis
SA-TW365-4044 re-analysis	SA-DUP02-20111116 re-analysis
SA-TW367-2630 dilution re-analysis	

Actions: Sample SA-FB01-20111116 re-analysis, SA-TW365-4044 re-analysis and SA-DUP02-20111116 re-analysis positive results were qualified estimated, (J), and the non-detected sample

results for all of the aforementioned samples were not qualified. As only 1,1-dichloroethane was reported from the dilution analysis of sample SA-TW367-2630, only the positive 1,1-dichloroethane result was qualified estimated, (J).

The relative percent difference (RPD) was greater than the 30% quality control limit for the field duplicate samples SA-DUP02-20111116 and SA-TW365-4044 for 1,1,1-trichloroethane. The positive and non-detected 1,1,1-trichloroethane results for the samples SA-DUP02-20111116 and SA-TW365-4044 were qualified estimated, (J) and (UJ), respectively.

Positive results below the limit of quantitation (LOQ) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit.

Additional Comments

The laboratory control sample (LCS) %Rs were greater than the quality control limit for acetone, methylene acetate, bromochloromethane, and tetrachloroethene for batch VBG1121W2 affecting samples listed below.

Affected samples:

SA-DUP01-20111115	SA-TW366-3539	SA-TW365-4044
SA-TW365-1418	SA-DUP02-20111116	

Actions: No validation action was taken as the VOC analyte acetone, methylene acetate, bromochloromethane, and tetrachloroethene results for the aforementioned samples were non-detected.

Samples were analyzed both undiluted and diluted as listed below. Only the analytes which exceeded the highest calibration level in the undiluted analysis were reported from the sample dilution analyses.

Sample	Dilutions
SA-DUP01-20111115	1X, 10X
SA-TW366-3539	1X, 10X
SA-TW367-2630	1X, 10X
SA-TW367-4246	1X, 10X

Fifty-three (53) analytes were reported for VOCs.

Non-detected sample results were reported to the LOD.

EXECUTIVE SUMMARY

Laboratory Performance Issues: All sample 1,4-dioxane non-detected results were qualified rejected for RRF quality control limit non-compliances. Sample VOC results were qualified for CCV %D and surrogate %R quality control limit non-compliances.

Other Factors Affecting Data Quality: Positive results below the Limit of Detection (LOD) and above the method detection limit were qualified as estimated, (J), due to uncertainty near the detection limit. Field duplicate sample SA-DUP02-20111116 and SA-TW365-4044 1,1,trichloroethene results were qualified for field duplicate imprecision.

The data for these analyses were reviewed with reference to the USEPA SW-846 Method 8260B, USEPA Region II Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B SOP #HW-24 Revision #2 August 2008 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009).

TetraTech
Joseph Kalinyak
Chemist/Data Validator

TetraTech
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 LABORATORY 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: 02045	NSAMPLE	SA-DUP01-20111115			SA-DUP01-20111115DL			SA-DUP02-20111116RE			SA-FB01-20111116RE		
SDG: C4662	LAB_ID	C4662-11			C4662-11DL			C4662-19RE			C4662-14RE		
FRACTION: OV	SAMP_DATE	11/15/2011			11/15/2011			11/16/2011			11/16/2011		
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	SA-TW367-4246			SA-TW367-4246			SA-TW365-4044					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		43	J	R				0.5	UJ	G	0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1-DICHLOROETHANE					500			57	J	R	0.5	U	
1,1-DICHLOROETHENE		26	J	R				3.4	J	R	0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		3.2	J	R				0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROBENZENE		1.3	J	R				0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DICHLOROBENZENE		3.8	J	R				0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R				2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	UJ	R				2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	R				2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R				2.5	U		2.5	U	
ACETONE		2.5	UJ	CR				2.5	U		2.5	U	
BENZENE		0.5	UJ	R				0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	CR				0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R				0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	CR				0.5	U		0.5	U	
CARBON DISULFIDE		0.5	UJ	R				0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U		3.1	J	R
CHLOROETHANE		47	J	CR				11	J	R	0.5	U	
CHLOROFORM		0.5	UJ	R				0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-RB01-20111116			SA-TB01-20111114			SA-TW365-1418RE			SA-TW365-2024		
SDG: C4662	LAB_ID	C4662-13			C4662-01			C4662-16RE			C4662-18		
FRACTION: OV	SAMP_DATE	11/16/2011			11/14/2011			11/16/2011			11/16/2011		
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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-TW365-3034			SA-TW365-4044RE			SA-TW366-1519			SA-TW366-2529		
SDG: C4662	LAB_ID	C4662-17			C4662-15RE			C4662-08			C4662-10		
FRACTION: OV	SAMP_DATE	11/16/2011			11/16/2011			11/15/2011			11/15/2011		
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		3.9	J	GR	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		6.3			53	J	R	0.5	U		0.5	U	
1,1-DICHLOROETHENE		0.5	U		3	J	R	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		10	UR	C	10	UR	C	10	UR	C	10	UR	C
2-BUTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	U		2.5	U		2.5	U		2.5	U	
2-HEXANONE		2.5	U		2.5	U		2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	U		2.5	U		2.5	U		2.5	U	
ACETONE		2.5	U		2.5	U		2.5	U		2.5	U	
BENZENE		0.5	U		0.5	U		0.5	U		0.5	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		0.5	U		0.5	U		0.5	U		0.5	U	
BROMOMETHANE		0.5	U		0.5	U		0.5	U		0.5	U	
CARBON DISULFIDE		0.5	U		0.5	U		0.5	U		0.5	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		10	J	R	0.5	U		0.5	U	
CHLOROFORM		0.5	U		0.5	U		0.5	U		0.5	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	

PROJ_NO: 02045	NSAMPLE	SA-TW366-3539			SA-TW366-3539DL			SA-TW366-4246			SA-TW367-1620		
SDG: C4662	LAB_ID	C4662-12			C4662-12DL			C4662-09			C4662-03		
FRACTION: OV	SAMP_DATE	11/16/2011			11/16/2011			11/15/2011			11/15/2011		
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		17	J	R				0.5	U		0.5	U	
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,1-DICHLOROETHANE					230			0.76	J	P	0.5	U	
1,1-DICHLOROETHENE		13	J	R				0.5	U		0.5	U	
1,2,3-TRICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,2,4-TRICHLOROBENZENE		1.8	J	R				0.5	U		0.5	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROBENZENE		0.96	J	PR				0.5	U		0.5	U	
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	U	
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	U	
1,3-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
1,4-DICHLOROBENZENE		3.9	J	R				0.5	U		0.5	U	
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R				2.5	U		2.5	U	
2-CHLOROETHYL VINYL ETHER		2.5	UJ	R				2.5	U		2.5	U	
2-HEXANONE		2.5	UJ	R				2.5	U		2.5	U	
4-METHYL-2-PENTANONE		2.5	UJ	R				2.5	U		2.5	U	
ACETONE		2.5	UJ	CR				3.3	J	P	2.5	U	
BENZENE		0.5	UJ	R				0.5	U		0.5	U	
BROMOCHLOROMETHANE		0.5	UJ	CR				0.5	U		0.5	U	
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
BROMOFORM		0.5	UJ	R				0.5	U		0.5	U	
BROMOMETHANE		0.5	UJ	CR				0.5	U		0.5	U	
CARBON DISULFIDE		0.5	UJ	R				0.5	U		0.5	U	
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	U	
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CHLOROETHANE		25	J	CR				0.5	U		0.5	U	
CHLOROFORM		0.5	UJ	R				0.5	U		0.5	U	
CHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW367-2630			SA-TW367-2630DL			SA-TW367-3640			SA-TW367-4246		
SDG: C4662	LAB_ID	C4662-07			C4662-07DL			C4662-06			C4662-02		
FRACTION: OV	SAMP_DATE	11/15/2011			11/15/2011			11/15/2011			11/15/2011		
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		11	J	R				0.5	U		43	J	R
1,1,2,2-TETRACHLOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,1,2-TRICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,1,2-TRICHLOROTRIFLUOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,1-DICHLOROETHANE					200	J	R	120					
1,1-DICHLOROETHENE		9.2	J	R				5.2			24	J	R
1,2,3-TRICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,2,4-TRICHLOROBENZENE		0.5	UJ	R				0.5	U		3.7	J	R
1,2-DIBROMO-3-CHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,2-DIBROMOETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,2-DICHLOROBENZENE		0.5	UJ	R				0.5	U		1.5	J	R
1,2-DICHLOROETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,2-DICHLOROPROPANE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,3-DICHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	UJ	R
1,4-DICHLOROBENZENE		0.5	UJ	R				0.5	U		3.7	J	R
1,4-DIOXANE		10	UR	C				10	UR	C	10	UR	C
2-BUTANONE		2.5	UJ	R				2.5	U		2.5	UJ	R
2-CHLOROETHYL VINYL ETHER		2.5	UJ	R				2.5	U		2.5	UJ	R
2-HEXANONE		2.5	UJ	R				2.5	U		2.5	UJ	R
4-METHYL-2-PENTANONE		2.5	UJ	R				2.5	U		2.5	UJ	R
ACETONE		2.5	UJ	R				2.5	U		1.2	J	PR
BENZENE		0.5	UJ	R				0.5	U		0.5	UJ	R
BROMOCHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
BROMODICHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
BROMOFORM		0.5	UJ	R				0.5	U		0.5	UJ	R
BROMOMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
CARBON DISULFIDE		0.5	UJ	R				0.5	U		0.5	UJ	R
CARBON TETRACHLORIDE		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLOROBENZENE		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLORODIBROMOMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLOROETHANE		15	J	R				6.7			44	J	R
CHLOROFORM		0.5	UJ	R				0.5	U		0.5	UJ	R
CHLOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
CIS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	UJ	R
CIS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW367-4246DL		
SDG: C4662	LAB_ID	C4662-02DL		
FRACTION: OV	SAMP_DATE	11/15/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE				
1,1,2,2-TETRACHLOROETHANE				
1,1,2-TRICHLOROETHANE				
1,1,2-TRICHLOROTRIFLUOROETHANE				
1,1-DICHLOROETHANE		420	J	R
1,1-DICHLOROETHENE				
1,2,3-TRICHLOROBENZENE				
1,2,4-TRICHLOROBENZENE				
1,2-DIBROMO-3-CHLOROPROPANE				
1,2-DIBROMOETHANE				
1,2-DICHLOROBENZENE				
1,2-DICHLOROETHANE				
1,2-DICHLOROPROPANE				
1,3-DICHLOROBENZENE				
1,4-DICHLOROBENZENE				
1,4-DIOXANE				
2-BUTANONE				
2-CHLOROETHYL VINYL ETHER				
2-HEXANONE				
4-METHYL-2-PENTANONE				
ACETONE				
BENZENE				
BROMOCHLOROMETHANE				
BROMODICHLOROMETHANE				
BROMOFORM				
BROMOMETHANE				
CARBON DISULFIDE				
CARBON TETRACHLORIDE				
CHLOROBENZENE				
CHLORODIBROMOMETHANE				
CHLOROETHANE				
CHLOROFORM				
CHLOROMETHANE				
CIS-1,2-DICHLOROETHENE				
CIS-1,3-DICHLOROPROPENE				

PROJ_NO: 02045	NSAMPLE	SA-DUP01-20111115			SA-DUP01-20111115DL			SA-DUP02-20111116RE			SA-FB01-20111116RE		
SDG: C4662	LAB_ID	C4662-11			C4662-11DL			C4662-19RE			C4662-14RE		
FRACTION: OV	SAMP_DATE	11/15/2011			11/15/2011			11/16/2011			11/16/2011		
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	SA-TW367-4246			SA-TW367-4246			SA-TW365-4044					
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
ETHYLBENZENE		0.5	UJ	R				0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	UJ	R				0.5	U		0.5	U	
M+P-XYLENES		1	UJ	R				1	U		1	U	
METHYL ACETATE		0.5	UJ	CR				0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	UJ	R				0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	CR				0.5	U		0.5	U	
O-XYLENE		0.5	UJ	R				0.5	U		0.5	U	
STYRENE		0.5	UJ	R				0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	CR				0.5	U		0.5	U	
TOLUENE		0.5	UJ	R				0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	
TRICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
VINYL CHLORIDE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-RB01-20111116			SA-TB01-20111114			SA-TW365-1418RE			SA-TW365-2024		
SDG: C4662	LAB_ID	C4662-13			C4662-01			C4662-16RE			C4662-18		
FRACTION: OV	SAMP_DATE	11/16/2011			11/14/2011			11/16/2011			11/16/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW365-3034			SA-TW365-4044RE			SA-TW366-1519			SA-TW366-2529		
SDG: C4662	LAB_ID	C4662-17			C4662-15RE			C4662-08			C4662-10		
FRACTION: OV	SAMP_DATE	11/16/2011			11/16/2011			11/15/2011			11/15/2011		
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
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	
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		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	U		0.5	U		0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	U		0.5	U		0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	U		0.5	U		0.5	U		0.5	U	
O-XYLENE		0.5	U		0.5	U		0.5	U		0.5	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: 02045	NSAMPLE	SA-TW366-3539			SA-TW366-3539DL			SA-TW366-4246			SA-TW367-1620		
SDG: C4662	LAB_ID	C4662-12			C4662-12DL			C4662-09			C4662-03		
FRACTION: OV	SAMP_DATE	11/16/2011			11/16/2011			11/15/2011			11/15/2011		
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
CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	
DICHLORODIFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
ETHYLBENZENE		0.5	UJ	R				0.5	U		0.5	U	
ISOPROPYLBENZENE		0.5	UJ	R				0.5	U		0.5	U	
M+P-XYLENES		1	UJ	R				1	U		1	U	
METHYL ACETATE		0.5	UJ	CR				0.5	U		0.5	U	
METHYL CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	U	
METHYL TERT-BUTYL ETHER		0.5	UJ	R				0.5	U		0.5	U	
METHYLENE CHLORIDE		0.5	UJ	CR				0.5	U		0.5	U	
O-XYLENE		0.5	UJ	R				0.5	U		0.5	U	
STYRENE		0.5	UJ	R				0.5	U		0.5	U	
TETRACHLOROETHENE		0.5	UJ	CR				0.5	U		0.5	U	
TOLUENE		0.5	UJ	R				0.5	U		0.5	U	
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	U	
TRICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	U	
TRICHLOROFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	U	
VINYL CHLORIDE		0.5	UJ	R				0.5	U		0.5	U	

PROJ_NO: 02045	NSAMPLE	SA-TW367-2630			SA-TW367-2630DL			SA-TW367-3640			SA-TW367-4246		
SDG: C4662	LAB_ID	C4662-07			C4662-07DL			C4662-06			C4662-02		
FRACTION: OV	SAMP_DATE	11/15/2011			11/15/2011			11/15/2011			11/15/2011		
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
CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	UJ	R
DICHLORODIFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
ETHYLBENZENE		0.5	UJ	R				0.5	U		0.5	UJ	R
ISOPROPYLBENZENE		0.5	UJ	R				0.5	U		0.5	UJ	R
M+P-XYLENES		1	UJ	R				1	U		1	UJ	R
METHYL ACETATE		0.5	UJ	R				0.5	U		0.5	UJ	R
METHYL CYCLOHEXANE		0.5	UJ	R				0.5	U		0.5	UJ	R
METHYL TERT-BUTYL ETHER		0.5	UJ	R				0.5	U		0.5	UJ	R
METHYLENE CHLORIDE		0.5	UJ	R				0.5	U		0.5	UJ	R
O-XYLENE		0.5	UJ	R				0.5	U		0.5	UJ	R
STYRENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TETRACHLOROETHENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TOLUENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRANS-1,2-DICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRANS-1,3-DICHLOROPROPENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRICHLOROETHENE		0.5	UJ	R				0.5	U		0.5	UJ	R
TRICHLOROFLUOROMETHANE		0.5	UJ	R				0.5	U		0.5	UJ	R
VINYL CHLORIDE		0.5	UJ	R				0.5	U		0.5	UJ	R

PROJ_NO: 02045	NSAMPLE	SA-TW367-4246DL		
SDG: C4662	LAB_ID	C4662-02DL		
FRACTION: OV	SAMP_DATE	11/15/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CYCLOHEXANE				
DICHLORODIFLUOROMETHANE				
ETHYLBENZENE				
ISOPROPYLBENZENE				
M+P-XYLENES				
METHYL ACETATE				
METHYL CYCLOHEXANE				
METHYL TERT-BUTYL ETHER				
METHYLENE CHLORIDE				
O-XYLENE				
STYRENE				
TETRACHLOROETHENE				
TOLUENE				
TRANS-1,2-DICHLOROETHENE				
TRANS-1,3-DICHLOROPROPENE				
TRICHLOROETHENE				
TRICHLOROFLUOROMETHANE				
VINYL CHLORIDE				