

**2012 BASEWIDE INVESTIGATION DATA SUMMARY
REPORT
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP)
Calverton, NY**

FINAL

Prepared for:



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List of Acronyms and Abbreviations

AS/SVE	Air Sparging/Soil Vapor Extraction
CA	Chloroethane
CFR	Code of Federal Regulations
CLEAN	Comprehensive Long-Term Environmental Action Navy
CTO	Contract Task Order
CY	Cubic Yards
DCA	1,1-dichloroethane
DCE	1,1-dichloroethene
DoD	Department of Defense
DRO	Diesel Range Organics
EE/CA	Engineering Evaluation/Cost Analysis
EPA	Environmental Protection Agency
GRO	Gasoline Range Organics
IDW	Investigation Derived Waste
IR	Installation Restoration
MCL	Maximum Contaminant Level
NTU	Nephelometric Turbidity Units
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NWIRP	Naval Weapons Industrial Reserve Plant
ORC	Oxygen Release Compound
PCE	Tetrachloroethene
QA	Quality Assurance
QC	Quality Control
RCRA	Resource Recovery and Conservation Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SAP	Sampling and Analysis Plan
SCO	Soil Cleanup Objective
SOP	Standard Operating Procedure
SVOC	Semi-volatile Organic Compound
TAGM	Technical and Administrative Guidance Manual
TCA	1,1,1-Trichloroethane
TCE	Trichloroethene
TPH	Total Petroleum Hydrocarbons
U.S.	United States
VOC	Volatile Organic Compound

1.0 INTRODUCTION AND BACKGROUND INFORMATION

This Data Summary Report has been prepared for the Naval Facilities Command (NAVFAC), Mid-Atlantic Division under the Comprehensive Long-Term Environmental Action Navy (CLEAN) contract number N62740-11-D-8013, Contract Task Order (CTO) WE07. This report presents the results of groundwater, surface water and sediment investigations conducted from May through September 2012 at the Naval Weapons Industrial Reserve Plant (NWIRP) in Calverton, New York, as shown in Figures 1-1 and 1-2. Investigation activities were conducted as described in the Unified Federal Policy (UFP) Sampling and Analysis Plan (SAP) (Resolution Consultants 2012) or the previous Work Plan (Tetra Tech 2008a) and subsequent addenda, and 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 NYD003995198.

1.1 Scope and Objectives

This report details the 2012 investigations conducted at the NWIRP Calverton Site 2 – Fire Training Area, Site 6A – Fuel Calibration Area, and Southern Area. Site contamination due to volatile organic compounds (VOCs) occurred as a result of aircraft parts manufacturing, assembly and testing operations undertaken by the Northrup Grumman Corporation (NGC) at NWIRP Calverton from the 1950s through 1996. A removal action at Site 2 in 2008 and 2009 and remedial actions at Sites 6A and 10B in 2009 and 2010 were undertaken to address contaminated soils and continuing sources of groundwater contamination. In addition, a groundwater treatment system under construction and anticipated to start operation in fall 2013 is intended to further address the groundwater contamination plume extending from the source areas. Objectives of the groundwater monitoring program include:

- Further delineating the extent of VOC-contaminated groundwater;
- Monitoring the groundwater quality at the Sites;
- Evaluating temporal trends of site contamination; and
- Providing data to evaluate potential impacts of site contaminants on potential receptors.

The results of the groundwater monitoring program will be used to further evaluate the need for additional corrective actions, and to refine the conceptual site model for transport of contaminants and identification of potential receptors, including off-site properties and the Peconic River.

A detailed description of sample collection activities is presented in Section 3 of this report. Field work associated with data presented in this report was conducted from May 2012 through September 2012, and includes the following items:

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- Semi-annual groundwater, surface water and sediment sampling along the Peconic River in May and September 2012.
 - Annual groundwater sampling at Sites 2, 6A, and the Southern Area in September 2012.
 - Groundwater and surface water elevation gauging in September 2012.

1.2 Report Organization

This Data Summary Report provides general information about NWIRP Calverton and the conduct of the 2012 sampling program. The report is generally organized as follows:

- Section 1 – Introduction and general scope and objectives;
- Section 2 – Facility background, history and environmental setting;
- Section 3 – Summary of field activities;
- Section 4 – Analytical results; and
- Section 5 – Conclusions and recommendations.

2.0 SITE BACKGROUND

The NWIRP Calverton facility is located in the Town of Riverhead in Suffolk County, New York, approximately 70 miles east of New York City (Figures 1-1 and 1-2). As a government-owned, contractor-operated (GOCO) installation leased by the Navy to the Northrop Grumman Corporation (NGC) until 1996, NWIRP Calverton was formerly engaged in the manufacture of aircraft parts and assemblies. Since that time, all of the property contained within the perimeter fence, with the exception of three noncontiguous parcels of land totaling approximately 209 acres that are being retained by the Navy to continue Installation Restoration (IR) Program activities (Site 2, Site 7, and Sites 6A-10B/Southern Area), have been conveyed to the Town of Riverhead (Figure 1-2). Other than environmental investigation and remediation work, there are no continuing operations on the 209 acres remaining under Navy ownership that generate hazardous waste.

2.1 Site Location and Layout

Site 2 – Fire Training Area

Site 2, also known as the Fire Training Area, is located in the south central area of the NWIRP Calverton facility (see Figure 2-1). A 9-acre clearing occupies most of the northwestern portion of the parcel. 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's former south main gate. The pit was removed in 2008. 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 2005). Previously-collected data suggests that contamination may have or is migrating off-site, and the Navy has installed off-property piezometers to investigate this possibility. Therefore, references are made to Site 2 – On-Property or Site 2 – Off-Property where appropriate throughout this report.

Site 6A – Fuel Calibration Area / Site 10B – Engine Test House

Site 6A, also known as the Fuel Calibration Area, is located in Parcel B1 near the south-central portion of the former NWIRP Calverton facility, approximately 1,500 feet north of Grumman Boulevard and 2,000 feet west of the former south main 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. Former underground storage tanks (USTs) located near the old fuel calibration pad (south of Building 231) were removed in the early 1990s by NGC. 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 1980s (Tetra Tech 2007).

Site 10B, or the Engine Test House, is located approximately 1,000 feet southeast of Site 6A (Figure 2-1), also within Parcel B1. The area consisted of a building and surrounding pad. The building and a portion of the pad were 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 upgradient of Site 10B. Surface water runoff 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 2007).

Contamination associated with aircraft fuels 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 (Figure 2-1); the Navy retains ownership of the portion of the Southern Area north of Grumman Boulevard and River Road (referred to as "onsite"), while the remainder of the plume extends under properties owned by others (referred to as "offsite"). 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 downgradient of much of the NWIRP's former industrial complex, including Site 6A and Site 10B. 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 2007).

The Peconic River Sportsman's Club (PRSC) is located in the offsite Southern Area. Water supply wells formerly located on the PRSC property were classified as a Non-Community Public Water Supply under Part 5, Subpart 5-1 of the New York State Sanitary Code. These wells are abandoned as of June 2012, and the PRSC now receives potable water from the municipal system.

From a management perspective Site 6A and the Southern Area constitute a single operable unit, defined in the Record of Decision (NAVFAC MIDLANT 2012) supporting the selection of a groundwater treatment system as the remedy for the contaminant plume (as described in Section 2.3, below). For discussion purposes, however, the portion of the plume in the Southern Area can be further segmented into subareas referred to as the Fence Line Area, Offsite High Concentration Area, Offsite Low Concentration Area, and Peconic River Area (Figure 2-1) based on a combination of location and groundwater chemistry data.

2.2 Environmental Setting

2.2.1 Topography and Drainage

NWIRP Calverton occupies a relatively flat, intermorainal 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 glacially formed lakes and ponds are located south and southwest of the facility. The topographic relief at NWIRP Calverton is 54 feet, with elevations ranging from 30 to 84 feet above mean sea level (msl) (Tetra Tech 2005).

2.2.2 Geology

NWIRP Calverton lies within the Atlantic Coastal Plain Physiographic Province, which is generally characterized as an area of relatively undissected low-lying plains. The surface topography has been created or modified by Pleistocene glaciations (Isbister 1966). The facility is underlain by approximately 1,300 feet of unconsolidated sediments that consist of a sequence of four distinct geologic units. These units, in order of descending elevation, 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 1972).

Previous soil boring and sampling activities reveal that the facility is predominantly underlain by fine to coarse sediments of probable glaciofluvial origin. Three distinct lithofacies were encountered during these previous investigations. The upper lithofacies represents a mixture of soil, fill, and glacial deposits and consists 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 consists of predominantly fine-grained sand with varying amounts of medium- to coarse-grained sand and pebbles, and is probably representative of undisturbed glacial deposits. The lower lithofacies consists of micaceous, silty clay and may represent the Magothy Formation.

A geologic cross-section of the facility was most recently updated following borings in 2010 (Tetra Tech 2012); a plan view of cross-section A-A' is presented as Figure 2-2, and cross-section A-A' itself is shown as Figure 2-3. This cross-section starts at Site 6A (the Fuel Calibration Area) and runs to the southeast through Site 10B (the Engine Test House), onsite Southern Area, offsite Southern Area, and the PRSC, and then proceeds to the south along the Peconic River.

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 near the PRSC. 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 show that there is 100 feet of fine to medium-grained sand overlying a 10-foot thick silty clay layer (Tetra Tech 2012).

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 and all of Sites 2, 6A and 10B, and the Southern Area are located within the Peconic River drainage basin. The eastward-flowing Peconic River is approximately 1,300 feet south of the facility at its closest point and 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 Grumman Boulevard, midway along the southern site border. Northeast Pond is located at the northeast corner of the facility. Several small drainage basins exist near Sites 6A and 10B. All of these surface water features are land-locked with the exception of McKay Lake, which has an intermittent discharge to Swan Pond approximately 1,000 feet to the south. Overflow from these 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 (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 principal 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 1972). The Upper Glacial aquifer and the Magothy aquifer are widely used as a source of groundwater in Suffolk County and, along with the Lloyd Sand aquifer constitute the Nassau-Suffolk Aquifer System, which is designated as a sole source aquifer (meaning more than 50 percent of drinking water for the aquifers' service area is supplied by these aquifers) by the EPA (EPA 1975). The water table beneath the NWIRP Calverton lies within these aquifers. Both aquifers are believed to be hydraulically interconnected and to function as a single unconfined aquifer.

2.2.4 Groundwater Occurrence

Groundwater is encountered under unconfined conditions at shallow depths beneath NWIRP Calverton within the Upper Glacial aquifer, which extends to depths of approximately 14 to 150 feet bgs in the study area and is the aquifer of most concern when investigating groundwater quality issues related to the facility. This aquifer is comprised primarily of highly permeable glacial outwash deposits, with till (unsorted mixtures of sand, silt, clay, and gravel) and glaciolacustrine clayey deposits. This aquifer 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.

Across the study area to the Peconic River, the water table is generally encountered within about 20 feet of the ground surface. Near the Peconic River, the depth to groundwater decreases to less than 10 feet from the ground surface as groundwater appears to be discharging to the river in this area.

2.2.5 Groundwater Flow Directions

NWIRP Calverton straddles a regional groundwater divide. Based on previously published information and data interpretations (Halliburton NUS 1995a), groundwater beneath the northern half of the facility flows to the northeast, with the Long Island Sound as the probable discharge point for groundwater in the shallow aquifer zones. Groundwater beneath the southern half of the facility flows to the southeast, and the Peconic River basin is the presumed discharge point. Groundwater contour maps developed from data collected during previous rounds of sampling over

several years confirm this general flow pattern (Tetra Tech 2012). Groundwater on the divide, the location of which can fluctuate, flows to the east.

Previous investigation activities have identified that groundwater may impact a portion of the Peconic River located southeast of NWIRP Calverton where there is no aquitard present. There is a slight upward gradient in the southeast portion of the Southern Area, which causes groundwater to flow up into the Peconic River (Tetra Tech 2012).

2.3 Previous Environmental Investigations and Remediation

Site 2 – Fire Training Area

Environmental investigations have occurred at Site 2 since at least 1982. Among these investigations were a RCRA Facility investigation (RFI) conducted in 1994 and 1995 (Halliburton NUS 1995a), a Phase 2 Remedial Investigation (RI) conducted in 1997 (Tetra Tech 2001), an Engineering Evaluation/Cost Analysis (EE/CA) in 1998 (Tetra Tech 1998) and monitoring that has occurred on at least an annual basis since 2008 (Tetra Tech 2012). These investigations identified a range of contaminants that have historically exceeded screening criteria at Site 2, including soil contamination due to VOCs, semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides and metals, and groundwater contamination due to VOCs, SVOCs and metals. The RFI identified the fire training pit as the likely primary source of the contamination at Site 2 (Halliburton NUS 1995a).

The earlier investigations identified several VOCs exceeding federal or New York State Department of Health (NYSDOH) maximum contaminant levels (MCLs) for groundwater; for example, the 1994-1995 RFI identified chloroethane (CA) concentrations as high as 1,100 micrograms per liter (µg/L), 1,1-dichloroethane (DCA) concentrations up to 1,200 µg/L, toluene concentrations up to 140 µg/L, and xylene concentrations as high as 230 µg/L. For comparison, the NYSDOH MCL for most VOCs is 5 µg/L. Elevated concentrations of these and other VOCs were also found in soil samples at Site 2.

Several remedial actions have been undertaken at Site 2 to address the contamination identified in the environmental investigations. The primary remedial actions include (Tetra Tech 2005):

- The removal of 327 CY of contaminated soil in 1982.
- The installation and operation of active and passive groundwater recovery systems in 1987. The active system included a groundwater pumping well and oil-water separation system that operated until 1993. The passive system consisted of hydrophobic filters in wells, which remained in place until 1996. Overall, these systems removed approximately 325 gallons of petroleum product.

- The installation and operation of a pilot-scale air sparging/soil vapor extraction (AS/SVE) system operated seasonally from 1995 through 2000. Approximately 80 pounds of target VOCs were removed, and an estimated 30,000 pounds of organics were destroyed through biodegradation. Overall, VOC concentrations in soil and groundwater were reduced by approximately 70 to 95 percent.
- The excavation of contaminated soil, and demolition of the AS/SVE system and circular concrete pad from October 2008 through June 2009. During the removal action, 10,860 tons of shallow (up to 6 feet bgs) petroleum-contaminated soil and 546 tons of surficial coal deposits (up to 2 feet bgs) were excavated and disposed of. Following excavation, 1,100 pounds of calcium oxyhydroxide (Regenesis© ORC [Oxygen Release Compound] Advanced) were applied to the excavation floor prior to backfill, grading and revegetation of the site.

Contaminant concentrations have decreased over time for a variety of reasons, including removal of source areas and groundwater treatment performed during the various remedial actions. Based on recent investigations, the contaminants of concern at Site 2 continue to be fuel- and solvent-related VOCs (particularly xylene and DCA), but at lower concentrations than those observed historically. For example, during the 2011 annual monitoring sampling, DCA, 1,2-dichloroethene, ethylbenzene, xylenes, trichloroethene (TCE) and vinyl chloride were all detected, but none at concentrations greater than 16 µg/L. At several sampling locations, contaminants were either not detected or detected at levels below the NYSDOH MCLs.

Site 6A – Fuel Calibration Area / Site 10B – Engine Test House

The earliest environmental investigation at Site 6A was the 1994-1995 RFI (Halliburton NUS 1995a), while the 1997 Phase 2 RFI was the first investigation at Site 10B (C.F. Braun Engineering Corp. 1998). Subsequent investigations of either or both sites include the 1998 EE/CA (Tetra Tech 1998), a Phase 2 RI (Tetra Tech 2001), two supplemental investigations, and monitoring that has occurred on at least an annual basis since 2009 (Tetra Tech 2012). These investigations identified fuel- and solvent-related VOCs in Site 6A soil and groundwater, and fuel-related VOCs in Site 10B soils and groundwater. Historically, VOC concentrations as much as four orders of magnitude higher than NYSDOH MCLs have been identified in Site 6A groundwater; e.g., in 1994, detected concentrations included 15,000 µg/L of 1,1,1-trichloroethane (TCA), 5,800 µg/L of DCA, 430 µg/L of CA, 300 µg/L of toluene, and 780 µg/L of xylenes. Fuel-related VOC concentrations at Site 10B were lower, but still as much as three orders of magnitude greater than the MCLs; e.g., in 1997, VOC concentrations in groundwater samples from temporary well installations included 1,084 µg/L of ethylbenzene, 337 µg/L of toluene, and 196 µg/L of xylenes.

Remedial actions at Sites 6A and 10B include the operation of a free product recovery system and excavation of contaminated soils. Specifically, the remedial actions include:

- The installation and operation of a product recovery unit at Site 6A in 1987 (Tetra Tech 2006a). The system included a groundwater pumping well, oil recovery well and oil-water separation system that operated until 1993, recovering 1,200 gallons of petroleum product. Passive recovery by hand bailing of wells continued until 1996, capturing an additional 700 gallons of product. Overall, the recovery operation removed approximately 1,900 gallons of petroleum product.
- A removal action at Site 10B from 2008 to 2009, when approximately 2,700 CY of soil were excavated and 1,900 lbs. of dry PermeOx Plus were applied to the excavation floor prior to backfill (Tetra Tech 2012).
- A removal action at Site 6A from 2009 to 2010, when 21,000 tons of PCB-, petroleum-, and solvent-contaminated soil were removed, and 5,200 lbs. of calcium oxyhydroxide were applied to promote biodegradation of remaining contamination (Tetra Tech 2012).

Recent contaminant concentrations at Sites 6A and 10B are notably lower than the historic data. Although several VOCs (including DCA, CA, 1,1-dichloroethene [DCE], ethylbenzene and xylenes) were detected at Site 6A in 2011, at most locations they were not detected or detected at concentrations no more than 46 µg/L. However, at one location in the middle of the plume extending from the source area (FC-PZ05I1), VOC concentrations two to three orders of magnitude greater than the MCLs were observed in 2011 (e.g., 1,000 µg/L of DCA, 530 µg/L of TCA, and 220 µg/L of CA). At Site 10B, no VOCs were detected in excess of MCLs in permanent groundwater monitoring wells installed in 2008 and sampled at least annually from 2008 through 2011.

Southern Area

Groundwater contamination in the Southern Area is believed to be associated with Site 6A, since the majority of other potential source areas have been eliminated, and is believed to be the result of intermittent releases at Site 6A or overland migration through a series of ditches and ponds in the area (including discharges from operation of the Site 6A free product recovery system). From 1992 to 1995, the Site 6A RFI and addendum identified chlorinated solvents in the groundwater at Site 6A, including concentrations of TCA at 15,000 µg/L, DCA at 5,800 µg/L, and CA at 430 µg/L. The investigation did not find evidence that the plume had migrated beyond the immediate vicinity of Site 6A at that time (Halliburton NUS 1995a, Halliburton NUS 1995b, Tetra Tech 2001). The Navy subsequently conducted a series of groundwater investigations in the Southern Area, including in 1997, 2000, 2004/2005, 2006, 2008, 2009, 2010, and 2011. During these investigations, groundwater samples were collected from temporary wells, monitoring wells, piezometers, and

vertical profile borings. Beginning with the 2004/2005 sampling event, surface water and sediment samples were also collected from the Peconic River.

The results of these investigations indicate that contamination consists mainly of the chlorinated solvent TCA and its associated breakdown products DCA, DCE, and CA, and is present in a plume reaching southeast from Site 6A toward the Peconic River. This includes both Navy-owned property within the former NWIRP facility, as well as offsite lands south of Grumman Boulevard and River Road. DCA is the predominant contaminant, representing approximately 80 percent of the total VOCs present. Other VOCs such as benzene, toluene, ethylbenzene, xylene, Freon, and chloroform are periodically identified in groundwater, though they do not appear to form an identifiable plume.

Historically, the highest concentrations of contaminants in groundwater have been observed within the Navy-owned portion of the Southern Area referred to as the Fence Line Area and the immediately-adjacent off-site areas. DCA concentrations in these areas have historically ranged as high as 1,500 µg/L, but have more commonly been found at concentrations one to two orders of magnitude greater than the MCL (i.e., 50 to 500 µg/L). Contaminant concentrations vary based on location and sampling depth, however, and concentrations at specific locations (e.g., SA-PZ13811) have consistently exceeded this range. Further downgradient towards the Peconic River, DCA concentrations are typically lower (e.g., 50 µg/L or lower) – usually less than one order of magnitude greater than the MCL, although some locations have exhibited higher concentrations at times (e.g., DCA concentrations were detected as high as 85 µg/L at SA-PZ12311 and 79 µg/L at SA-PZ124 in 2011).

Site-related contaminants have been occasionally detected in Peconic River surface water, but have not exceeded relevant standards. Surface water has been sampled on a recurring, semiannual basis at four locations since 2008. DCA has been consistently detected at concentrations of 1.8 µg/L or less in samples collected at station SA-SW124 since September 2010. There is no NYSDEC surface water quality standard for DCA in Class C waterbodies such as the Peconic River, but the detected concentrations have also been less than one-half of the most restrictive NYSDEC water quality standard for DCA of 5 µg/L (for Class A waterbodies used for water supply). Excluding VOCs typically considered to be laboratory contaminants (e.g., acetone), TCA, DCE, 1,2,4-trichlorobenzene and tetrachloroethene (PCE) are the only other VOCs to have also been detected. None of these compounds have been identified more than once, and none of the detected concentrations exceeded either the NYSDEC Class C water quality standard or the Oak Ridge National Laboratory (ORNL) toxicological screening benchmark, although a PCE concentration of 6.2 µg/L at SA-SW124 in September 2011 exceeded the Class A water quality standard of 5 µg/L (as compared to the applicable Class C standard of 40 µg/L).

Similarly, site-related contaminants have been occasionally detected in Peconic River sediments (which have also been sampled on a recurring, semiannual basis at four locations since 2008). Excluding typical laboratory contaminants, detected contaminants have included DCA, 1,2,4-trichlorobenzene, PCE and toluene. These contaminants have not been detected in successive sampling events at any location. A PCE concentration of 30 µg/Kg at SA-SD204 in September 2011 nominally exceeded the NYSDEC contaminated sediment screening criterion; however, this criterion is based on organic carbon content of the sediment, which was not available for this sample; a screening criterion of 8 µg/Kg was calculated based on assumption of 1 percent organic carbon content. The detected concentration of 30 µg/Kg was lower (by an order of magnitude) than other relevant screening criteria, including a toxicological guideline from ORNL (410 µg/Kg) and the NYSDEC Unrestricted Use Soil Cleanup Objective (SCO) (1,300 µg/Kg).

An initial remedial action in the Southern Area was a pilot-scale bioremediation test conducted in 2010 and 2011, in the area north of the intersection of Grumman Boulevard and River Road. A groundwater treatment system including extraction, treatment for VOCs by air stripping, and reinjection of treated groundwater was selected as the remedy for the Southern Area plume in 2012 (NAVFAC MIDLANT 2012). Construction of the system, located along the perimeter fence adjacent to the intersection of Grumman Boulevard and River Road, began in September 2012 and it is expected to be operational in fall 2013.

3.0 FIELD INVESTIGATION

The 2012 sampling program at NWIRP Calverton was conducted as a continuation of annual or semi-annual monitoring programs conducted in 2009, 2010, and 2011. As described in the UFP-SAP (Resolution Consultants 2012), the purpose of the monitoring program is to collect data that will address: 1) the nature and extent of contamination migrating via groundwater, 2) determine if unacceptable human health or ecological risks are present at off-site locations due to migration of contaminated groundwater, and 3) determine if additional unknown source areas could be contributing to groundwater contamination.

Field activities related to annual and semi-annual monitoring at NWIRP Calverton in 2012 included sampling and analysis of surface water, sediment and groundwater for VOCs along the Peconic River at four locations in May and September, sampling and analysis of groundwater from 65 wells and piezometers for VOCs across Site 2, Site 6A and the Southern Area in September (in addition to the Peconic River sampling), and collection of groundwater elevation data from 90 wells and piezometers located across Site 2, Site 6A, and the Southern Area in September. The following subsections provide details on sampling activities, including locations and types of samples. Backup documentation, including field notes, chain of custody forms, and data validation memoranda, are provided in the Appendices.

Details regarding targeted investigations conducted by others from November 2011 through 2012 (such as the installation and sampling of off-property piezometers to investigate potential migration of contamination from Site 2) are provided in reports specific to those investigations. However, relevant analytical data, where available, are incorporated into this Data Summary Report for context and are presented as appropriate in Sections 4 and 5 of this report, and in related tables and figures.

3.1 Field and Sampling Activities

3.1.1 Monitoring Well and Piezometer Sampling

Groundwater sampling was conducted at Site 2, Site 6A, and the Southern Area in September 2012. The sampling program included the observation of groundwater levels in 90 monitoring wells and piezometers, surface water elevation observations at seven staff gauges, and the collection of groundwater samples for laboratory analysis from 65 of these wells and piezometers. The locations of monitoring wells and piezometers (including those used for water level measurement only) included in the program are shown in Figures 3-1 through 3-3, and the locations of the staff gauges are shown in Figures 3-3 and 3-4.

Prior to sampling, the existing depth of each well and piezometer was checked for purposes of evaluating whether siltation had occurred (in which case redevelopment of the well or piezometer

would be necessary). Construction and measurement details for all monitoring wells and piezometers, including depth, diameter, screen interval, construction date, elevation, and current depth, are included in Table 3-1 for Site 2, Table 3-2 for Site 6A, and Table 3-3 for the Southern Area. Also included in these tables are groundwater depths recorded during a round of synoptic water level measurements conducted on September 14, 2012. Construction and measurement details for the seven staff gauges, also measured during the round of synoptic water level measurements conducted on September 14, 2012, are included in Table 3-4.

Groundwater samples were collected from the piezometers and wells in accordance with the standard operating procedures (SOPs) identified in the UFP-SAP, using U.S. EPA low-flow (low-stress) purging and sampling techniques. Groundwater sampling occurred from September 10-13 and September 17-20, 2012. During purging, field parameters were monitored on a regular basis (every two to five minutes) with water quality sondes and turbidity meters that were calibrated on a daily basis. Purging was considered complete when field parameters including dissolved oxygen, pH, specific conductance and temperature had stabilized to within 10 percent, and turbidity was either at or below 10 nephelometric turbidity units (NTU) or varied less than 10 percent, for three consecutive readings. Low-flow groundwater sample collection logs are included Appendix A. Purge water was contained within 5-gallon buckets at each sampling location, and later transferred to 55-gallon metal drums for longer-term storage prior to disposal as investigation-derived waste (IDW). Groundwater samples were collected directly into laboratory-preserved sample containers, sealed, stored in accordance with SOPs in the UFP-SAP (e.g., cooled to 4°C), and shipped via common carrier to Katahdin Analytical Services of Scarborough, ME for analysis. Chain of custody forms for all samples are included in Appendix B. All groundwater samples were analyzed for VOCs by EPA Method 8260. At four locations, additional sample volume was collected for further analysis of specific VOCs (1,2-dibromoethane and 1,2-dibromo-3-chloropropane) with lower detection limits by EPA Method 504.1. At three locations, additional sample volume was collected for analysis of arsenic, iron and manganese by EPA Method 6010.

Quality assurance and quality control (QA/QC) groundwater samples were collected during sampling in accordance with the requirements of the UFP-SAP, and included matrix spike/matrix spike duplicate (MS/MSD) samples, field duplicate samples, trip blanks, and equipment rinsate blanks. QA/QC sample information for MS/MSD and field duplicate samples are included in the sampling logs in Appendix A, and logged in the field notebooks (included in Appendix C). Trip and equipment blanks were logged on chain of custody forms and in the field notebooks, included in Appendices B and C, respectively. Full analytical results tables are included in Appendix D, and summaries of the data validation process are included in Appendix E.

3.1.2 Peconic River Piezometer, Surface Water and Sediment Sampling

Sampling of piezometers, surface water and sediment in and along the Peconic River took place on May 17 and September 21, 2012. The sampling program included the collection of co-located surface water and sediment at four locations, and the collection of shallow groundwater from piezometers on the bank of the Peconic River at four locations (two of which were adjacent to surface water/sediment sampling locations). The sampling locations are along a section of the Peconic River starting at the Connecticut Avenue crossing of the river and reaching approximately 2,100 feet downstream (Figure 3-3). Sampling in May 2012 was conducted in accordance with the previous Work Plan (Tetra Tech 2008a), and sampling in September 2012 was conducted in accordance with the UFP-SAP (Resolution Consultants 2012).

Groundwater samples were collected from the Peconic River piezometers in accordance with the SOPs identified in the Work Plan or UFP-SAP using U.S. EPA low-flow (low-stress) purging and sampling techniques. Low-flow groundwater sample collection logs are included Appendix A. Surface water samples were collected from the northern edge of the sandy bottom portion of the Peconic River at each location, directly into laboratory-preserved sample containers. Samples of fine-grained river sediments were collected from the upper six inches of the riverbed at the same locations as the surface water samples, and transferred to laboratory-provided glassware. All Peconic River piezometer, surface water and sediment samples were sealed, stored in accordance with SOPs in the Work Plan or UFP-SAP (e.g., cooled to 4°C), and shipped via common carrier to the laboratory for analysis. Samples collected in May 2012 were analyzed by Chemtech of Mountainside, New Jersey, and samples collected in September 2012 were analyzed by Katahdin Analytical Services of Scarborough, Maine. Chain of custody forms for all Peconic River samples are included in Appendix B. All samples were analyzed for VOCs by EPA Method 8260. Sediment samples were also analyzed for total organic carbon (TOC).

3.2 Field Observations

Several notable field observations were recorded during the field activities conducted in May and September 2012. These are summarized as follows:

- Soft bottoms were identified in several monitoring wells and piezometers, indicative of silt or sand accumulation. However, based on the available construction records, the depths of these accumulations were not significant and did not impact the ability to successfully collect groundwater samples at these locations.
- A 0.03-foot thick layer of free product was observed in Site 2 monitoring well FT-MW02S.
- The SCDHS collected split samples at several locations during the September 2012 sampling event. In addition to VOC analyses, SCDHS also collected samples for metals and other inorganic (e.g., nitrates) analyses.

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- At Site 6A piezometer FC-PZ05I1, the tubing had shifted and obstructed the riser after sampling, and could not be readily extracted on the day of the synoptic measurements due to time constraints. The groundwater level measured during sampling at FC-PZ05I1 on September 10, 2012 was consistent with those measured nearby at FC-MW05S and FC-MW05I during sampling on the same day, and with the levels observed at these locations during the synoptic well measurements.
 - In the Southern Area, the casing of SA-PZ135I was broken below the ground surface. At SA-PZ163I, the casing was bent approximately 6 inches below the ground surface. In both cases it was not possible to lower a water level meter past the obstructions. Dedicated flexible tubing was still in place and intact at both locations, permitting groundwater samples to be collected by peristaltic pumps.
 - Site 2 piezometer FT-PZ452S was inadvertently omitted during the round of synoptic water level measurements performed on September 14, 2012. When measured during sampling on September 17, 2012 the groundwater elevation at this location was consistent with water elevations at nearby locations measured during the synoptic well measurements.
 - In the Southern Area, the casing of monitoring well SA-MW130I was infested with wasps, precluding the measurement of water level during the round of synoptic water level measurements in the September 2012 sampling event. This well was not scheduled for groundwater sampling.
 - At Southern Area piezometer SA-PZ149I1, the tubing had shifted and obstructed the riser after sampling, and could not be readily extracted on the day of the synoptic measurements due to time constraints. The groundwater level measured during sampling at SA-PZ149I on September 13, 2012 was consistent with those measured nearby during the synoptic well measurements the following day at SA-PZ138I1 and SA-PZ157I.
 - The water surface elevation could not be established at staff gauge FT-11 in September 2012 as the water level did not reach the bottom of the gauge.

4.0 ANALYTICAL RESULTS AND FINDINGS

This section presents results for the groundwater, surface water and sediment sampling program conducted at NWIRP Calverton as part of annual and semi-annual monitoring performed in May and September 2012, including both analytical laboratory results for water and sediment chemistry and groundwater elevation mapping based on a round of synoptic well, piezometer and staff gauge measurements. Samples collected for laboratory analyses were shipped to Chemtech of Mountainside, New Jersey (in May 2012) or Katahdin Analytical Services of Scarborough, Maine (in September 2012). All samples (groundwater, surface water and sediment) were analyzed for VOCs by EPA Method 8260. Four groundwater samples collected in September were also analyzed for 1,2-dibromoethane and 1,2-dibromo-3-chloropropane by EPA Method 504.1 in order to achieve lower analytical detection limits because these compounds have MCLs below the detection limits typically achieved by Method 8260. In addition, three groundwater samples collected in September 2012 were also analyzed for arsenic, iron and manganese by EPA Method 6010 for monitoring purposes near the 2010 bioremediation pilot. At several locations, groundwater samples were collected by others in February 2012 as part of targeted investigations; additional background information on these results (including data validation memoranda) are presented under a separate cover, but results are presented in this report for additional context.

Groundwater, surface water and sediment chemistry results were screened against several guidance values or criteria. Multiple criteria were employed for comparison, based on sample media. Because the U.S. EPA has designated the groundwater as a sole source aquifer, groundwater chemistry data were compared to drinking water standards. Surface water and sediment data were compared to various criteria and guidance/screening values for the protection of ecological resources or remedial cleanup objectives. The relevant criteria include:

- Groundwater:
 - NYSDOH MCLs: Title 10 New York Code of Rules and Regulations (NYCRR) Part 5, Subpart 5-1, Public Water Systems
 - Table 1 – Inorganic Chemicals and Physical Characteristics MCLs.
 - Table 3 – Organic Chemicals, MCL Determination.
 - Table 9D – Principal Organic Contaminants.
 - Federal MCLs: National Primary Drinking Water Regulations, Title 40 Code of Federal Regulations (CFR) Part 141.
- Surface Water:
 - NYSDEC Surface Water Quality Standards: 6 NYCRR Part 703.5, Table 1 – Water Quality Standards, Surface Waters and Groundwater. The Peconic River is classified as a Class C

surface water, indicating that its best use is for fishing, and that it should also be suitable for fish, shellfish, and wildlife propagation and survival, as well as primary- and secondary-contact recreation.

- Oak Ridge National Laboratory (ORNL) Surface Water Values: Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision (Suter 1996), Table 1 – Secondary Chronic Values.
- Sediment:
 - ORNL Sediment Values: Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Sediment-Associated Biota: 1997 Revision (Jones 1997), Table 3 – Secondary Chronic Values.
 - NYSDEC Technical Guidance for Screening Contaminated Sediments: 1999 Revision (NYSDEC 1999), Table 1 – Sediment Criteria for Non-Polar Organic Compounds
 - NYSDEC Soil Clean-up Objectives (SCOs): 6 NYCRR Part 375.6, Table 375-6.8(a) – Unrestricted Use.

The primary contaminants identified at NWIRP Calverton are chlorinated and fuel-related VOCs. Chlorinated VOC contaminants include CA, DCA, DCE, PCE, and TCA, while fuel-related contaminants include ethylbenzene, isopropylbenzene, toluene, and xylenes. Discussion about the types and concentrations of contaminants in specific areas throughout NWIRP Calverton follows below. In addition to data collected specifically for the semi-annual and annual monitoring programs during 2012 and to provide context as to history and trends, tables and figures accompanying the discussion generally include analytical results at each location for samples collected from 2010 through 2012.

4.1 Site 2 – Fire Training Area Results

Sampling at Site 2 for the annual groundwater monitoring program included the collection of groundwater samples from a total of 21 monitoring wells and piezometers, and a round of synoptic water level measurements at 29 monitoring wells and piezometers. Twelve monitoring wells and two piezometers are located within the boundaries of Site 2 (i.e., on-property), of which the Navy retains ownership. Groundwater samples and synoptic water level measurements were collected from all of these monitoring wells and piezometers in September 2012. Synoptic water level observations were also made at 15 piezometers located outside Site 2 (i.e., off-property) but installed for the purpose of monitoring the potential migration of contamination from Site 2; groundwater samples were collected from seven of these piezometers in September 2012. Table 4-1 summarizes concentrations of VOCs detected at the Site 2 monitoring wells and piezometers (on- and off-property) from 2008 through 2012; full analytical results for samples collected in 2012 are

included in Appendix D. Figure 4-1 presents a summary of notable VOC detections (including exceedances of any MCL, as well as detections of site-related contaminants previously identified) from 2010 through 2012. Mapping of groundwater elevation contours, based on the data collected during synoptic water depth measurements, is presented in Figure 4-2.

The on-property monitoring wells and piezometers were sampled in September 2012. A total of 13 VOCs were detected in seven of the 14 samples collected; however, none of the detected VOCs exceeded an MCL at any of the on-property monitoring wells in 2012. Except for a TCE concentration of 3.2 µg/L detected at FT-MW03S, all detections of VOCs at Site 2 were less than half of the corresponding MCL. Historically, contamination at the on-property portion of Site 2 has consisted of chlorinated solvents (primarily DCA and TCE) and fuel-related compounds (primarily xylenes and ethylbenzene). A 0.03-foot thick layer of floating free product was observed at monitoring well FT-MW02S.

Eleven of the off-property piezometers were sampled in February 2012 following installation, and seven were sampled in September 2012 (including three that had been sampled in February). A total of 11 VOCs (primarily chlorinated VOCs) were detected in the off-property piezometers, of which five exceeded an MCL. The MCL exceedances were limited to three piezometers (FT-PZ458I, FT-PZ460I, and FT-PZ461I), all of which were sampled in both February and September 2012 and are located on the southeast side of Swan Pond (opposite Site 2 proper). TCE concentrations exceeded the MCL at all three locations in both February and September 2012, with the highest concentrations at FT-PZ460I (440 µg/L in February, 380 µg/L in September) and lower concentrations (by an order of magnitude) at FT-PZ458I and FT-PZ461I. Concentrations of DCA, DCE, 1,2-dichloroethene and PCE also exceeded MCLs at FT-PZ460I in both February and September 2012.

At the four locations where samples were analyzed for 1,2-dibromoethane and 1,2-dibromo-3-chloropropane by EPA Method 504.1 (in addition to Method 8260) in order to achieve lower analytical detection limits, neither compound was detected by either analysis method. The detection limits provided by the Method 504.1 analyses were sufficient to permit evaluation of these compounds concentrations against their MCLs.

4.2 Site 6A – Fuel Calibration Area Results

Sampling at Site 6A included the collection of groundwater samples from six monitoring wells and piezometers, and a round of synoptic water level measurements at nine monitoring wells and piezometers in September 2012. Table 4-2 summarizes concentrations of VOCs detected at the Site 6A monitoring wells and piezometers from 2008 through 2012; full analytical results for samples collected in 2012 are included in Appendix D. Figure 4-3 presents a summary of notable VOC detections from 2010 through 2012. Isoconcentration lines shown in Figure 4-3 have been updated

based on the 2012 data, where warranted, from the previous delineations (Tetra Tech 2012) that include aggregated monitoring well, piezometer and temporary well data. Mapping of groundwater elevation contours, based on the data collected during synoptic water depth measurements, is presented in Figure 4-4.

Two of the locations sampled in September (FC-MW02IR1 and FC-PZ05I1) were also sampled in February 2012, in connection with a separate site-specific investigation. Detectable concentrations of 18 different VOCs were identified at four locations (FC-MW02SR1, FC-MW03SR1, FC-MW05S, and FC-PZ05I1) in 2012, and at least one VOC exceeded an MCL at three of these locations (FC-MW02SR1, FC-MW03SR1, and FC-PZ05I1). Monitoring wells FC-MW02SR1 and FC-MW03SR1 are both located in the source area previously excavated in 2009-2010. DCA was found at a concentration of 8.4 µg/L in FC-MW02SR1 in February, though this decreased to 0.94 µg/L (below the MCL) by September. MCLs were still exceeded at FC-MW02SR1 in September for 1,2-dichlorobenzene, and in both sampling events for ethylbenzene, isopropylbenzene, and xylenes. Concentrations of ethylbenzene and isopropylbenzene also exceeded MCLs at FC-MW03SR1.

Piezometer FC-PZ05I1 is located approximately 600 feet downgradient of monitoring wells FC-MW02SR1 and FC-MW02IR1, and about 400 feet from the downgradient extent of the excavation. Three VOCs (TCA, DCA, and ethylbenzene) exceeded their MCLs in February, though by September isopropylbenzene was the only VOC to exceed its MCL at FC-PZ05I1. Concentrations at FC-PZ05I1, nominally in the center of the plume extending from the source area, were observed at notably (an order of magnitude) lower levels in 2012 as compared to 2010 and 2011.

4.3 Southern Area Results

Sampling in the Southern Area consisted of two rounds of sampling in 2012. The first round of sampling in May 2012 included collection of groundwater samples from four piezometers along the Peconic River, and surface water and sediment samples at four locations along a 2,100-foot section of the river stretching downstream from the Connecticut Avenue overpass. Sampling in September 2012 included the collection of four groundwater, surface water and sediment samples from the same locations sampled in May, as well as the collection of groundwater samples from 38 other monitoring wells and piezometers and a round of synoptic water level measurements at 52 monitoring wells and piezometers. Mapping of groundwater elevation contours, based on the data collected during synoptic water depth measurements, is presented in Figure 4-4.

As previously noted, although the Southern Area is considered part of a single operable unit for management purposes, for discussion purposes the plume in the Southern Area can be further segmented into subareas referred to as the Fence Line Area, Offsite High Concentration Area, Offsite Low Concentration Area, and Peconic River Area based on a combination of location and groundwater chemistry data. For ease of reference, concentrations of VOCs and metals detected in

all Southern Area monitoring wells and piezometers from 2008 through 2012 are consolidated in Table 4-3, organized by station identification, and full analytical results for all groundwater, surface water and sediment samples collected in 2012 are included in Appendix D. However, for clarity, further discussion of results is segregated into the various subareas as shown in Figures 4-5 (Fence Line Area), 4-6 (Offsite High Concentration Area), 4-7 (Offsite Low Concentration Area) and 4-8 (Peconic River Area). Tables 4-4 and 4-5 summarize concentrations of VOCs detected in Peconic River surface water and sediment, respectively. Isoconcentration lines shown in Figures 4-5 through 4-8 have been updated based on the 2012 data, where warranted, from the previous delineations (Tetra Tech 2012) that include aggregated monitoring well, piezometer and temporary well data.

Fence Line Area Results

Groundwater samples were collected in September 2012 from 12 monitoring wells and piezometers in the Fence Line Area, downgradient of Sites 6A and 10B. One location (SA-PZ138I1) was also sampled in February 2012. Seventeen VOCs, most of them chlorinated, were found at detectable concentrations in nine of the wells sampled in the Fence Line Area. Five chlorinated VOCs exceeded an MCL in at least one sample (DCA, TCA, CA, DCE, and 1,4-dichlorobenzene), and all of the MCLs were exceeded at three locations (SA-PZ138I1, SA-PZ149I1, and SA-PZ157I1). The highest overall concentrations were also detected at these locations. SA-PZ138I1 had the highest concentration of DCA at 690 µg/L in February. In addition, DCA was also detected in SA-PZ157I at 550 µg/L and SA-PZ149I1 at 520 µg/L. CA was detected in SA-PZ138I1 at concentrations of 150 µg/L in February and 54 µg/L in September, in SA-PZ157I1 at 270 µg/L in September, and in SA-PZ149I1 at 180 µg/L in September. Detected concentrations of these and other chlorinated VOCs were about one order of magnitude lower at the Fence Line Area monitoring wells and piezometers other than SA-PZ138I1, SA-PZ149I1 and SA-PZ157I1. Notable VOC MCL exceedances and detections for the Fence Line Area are presented in Figure 4-5.

Samples from piezometers SA-PZ157I, SA-PZ157I1 and SA-PZ161I were also analyzed for arsenic, iron and manganese, for monitoring purposes following the 2010 bioremediation pilot. MCLs were exceeded at SA-PZ161I, at concentrations of 22.2 µg/L for arsenic, 9,630 µg/L for iron, and 1,410 µg/L for manganese. Manganese also exceeded its MCL at SA-PZ157I (325 µg/L) and SA-PZ157I1 (5,200 µg/L), and iron exceeded its MCL at SA-PZ157I (519 µg/L). Arsenic had a concentration of 1.6 µg/L at SA-PZ157I and was not detected at SA-PZ157I1.

Offsite High Concentration Area Results

Groundwater samples were collected from five piezometers in September 2012 from the Offsite High Concentration Area, which was delineated based on prior monitoring well, piezometer and

temporary well data as the area where DCA concentrations may exceed 500 µg/L. Detectable concentrations of VOCs were found at all five piezometers, and four VOCs (all chlorinated) exceeded MCLs. The MCL for DCA was exceeded at all five locations, with concentrations ranging from 28 µg/L (SA-PZ145D) to 430 µg/L (SA-PZ143). In addition, groundwater at SA-PZ142 and SA-PZ143 also exceeded MCLs for TCA, DCE, and CA. Notable VOC MCL exceedances and detections for the Offsite High Concentration Area are presented in Figure 4-6.

Offsite Low Concentration Area Results

Groundwater samples were collected from 18 monitoring wells and piezometers in September 2012 from the Offsite Low Concentration Area, which was delineated based on prior monitoring well, piezometer and temporary well data as the area where DCA concentrations were expected to be less than 500 µg/L. Samples were also collected from two of these wells (SA-PZ171I and SA-PZ172I) in February 2012. Detectable concentrations of 15 VOCs, primarily chlorinated, were found at 13 of the piezometers (including detections in both February and September 2012 at SA-PZ171I and SA-PZ172I), and concentrations of four of these chlorinated VOCs (DCA, TCA, DCE and CA) exceeded their MCLs in at least one sample. Overall, at least one VOC MCL was exceeded at six locations in the Offsite Low Concentration Area.

At SA-MW132I, SA-PZ171I and SA-PZ172I, MCLs were exceeded for DCA, TCA, DCE and CA, with DCA concentrations ranging from 150 to 470 µg/L, TCA from 22 to 66 µg/L, DCE from 5.3 to 40 µg/L, and CA from 12 to 37 µg/L. These three locations are all located in the western side of the Offsite Low Concentration Area, closest to the High Concentration Area. In addition, DCA exceeded its MCL at SA-PZ123I, SA-PZ123I1, and SA-MW131D, DCE also exceeded its MCL at SA-PZ123I and SA-PZ123I1, and TCE also exceeded its MCL at SA-PZ-123I1. Notable VOC MCL exceedances and detections for the Offsite Low Concentration Area are presented in Figure 4-7.

Peconic River Area Results

Groundwater samples were collected from four piezometers located along the banks of the Peconic River, and surface water and sediment samples were collected from four locations along the river in an area extending 2,100 feet downstream from Connecticut Avenue in May and September 2012. In addition, three other piezometers in areas where groundwater may be influenced by the Peconic River (SA-PZ118I, SA-PZ118S, and SA-PZ166I) were also sampled in September 2012. Collectively, these sampling locations comprise the Peconic River Area. Notable exceedances and detections of groundwater MCLs, surface water standards and sediment quality guidance values for the Peconic River Area are presented in Figure 4-8.

Detectable concentrations of ten VOCs were identified across four of the seven Peconic River Area piezometers (SA-PZ118S, SA-PZ124, SA-PZ147, SA-PZ148). DCA exceeded its MCL at all four of

these locations (21 µg/L in September at SA-PZ118S, 74 µg/L in May and 130 µg/L in September at SA-PZ124, 12 µg/L in September at SA-PZ147, and 18 µg/L in May at SA-PZ148). DCE concentrations also exceeded the MCL at SA-PZ124; DCE was found at a concentration of 6.4 µg/L in May and 13 µg/L in September. TCE also exceeded its MCL at SA-PZ124 in September, with a concentration of 7.8 µg/L.

Two VOCs (DCA and acetone) were identified at detectable concentrations at three of the four surface water sampling stations in 2012 (SA-SW124, SA-SW201, and SA-SW204); however, acetone is typically considered to be a laboratory contaminant in the absence of historic analytic or other data that suggest a release has occurred. DCA was observed at two of the surface water sampling stations: SA-SW124 in May (1.1 µg/L) and September 2012 (1.8 µg/L), and SA-SW204 in September 2012 (0.57 µg/L). The Peconic River is designated by the NYSDEC as a Class C waterbody for entire length of the river included within the monitoring program; while there are no Class C ambient water quality standards for DCA or acetone, the concentrations of these VOCs observed in the Peconic River did not exceed the more restrictive Class A water supply standards or the NYSDOH drinking water MCL, both of which were established for the purposes of protection of water supplies.

Sediment samples were collected from four locations in May and September 2012, and detectable concentrations of three VOCs (DCA, CA and acetone) were identified. However, acetone is likely a laboratory contaminant (as discussed previously). DCA and CA were detected at only one location, SA-SD124, in May 2012 at concentrations of 20 and 4.3 µg/Kg, respectively. These detections did not exceed any relevant sediment quality guidance values. Non-detect analytical results for the sample collected at SA-SD125 in September 2012 were rejected because of insufficient total solids content.

5.0 CONCLUSIONS

Conclusions based on groundwater, surface water and sediment sampling conducted at NWIRP Calverton in 2012 are as follows:

5.1 Site 2 – Fire Training Area

1. No MCL exceedances were identified on-property at Site 2 at any of the 14 monitoring wells and piezometers sampled in September 2012 and, with one exception at FT-MW03S, all VOCs that were detected were found at concentrations less than half of their respective MCLs.
2. Since 2009, VOC concentrations have exceeded MCLs on-property at Site 2 only at FT-MW02S, while at the remaining locations contaminant concentrations have all been below MCLs, and in most cases not detected over this same time period. Concentrations of DCA, ethylbenzene, xylenes and TCE at FT-MW02S have exceeded MCLs as recently as 2011, and most of these contaminants continue to be found at detectable concentrations. Although somewhat variable, contaminant concentrations at FT-MW02S have been decreasing over time.
3. A 0.03-foot thick layer of free product was observed in monitoring well FT-MW02S during sampling in September 2012.
4. Elevated levels of chlorinated VOCs were identified at several off-property locations, southeast of Swan Pond. Five chlorinated VOCs were found to exceed MCLs at FT-PZ460I, with TCE concentrations as high as 440 µg/L in February and 380 µg/L in September 2012. TCE concentrations at FT-PZ458I and FT-PZ461I also exceeded the MCL. Further study of this area to investigate potential sources of what otherwise appears as an isolated pocket of chlorinated VOCs is ongoing.

5.2 Site 6A – Fuel Calibration Area

1. VOC concentrations exceeded MCLs at three locations (FC-MW02SR1, FC-MW03SR1, and FC-PZ05I1). The highest concentrations were found at FC-MW02SR1, which is located in the previously-excavated source area. Concentrations at FC-PZ05I1, downgradient of the source area and nominally in the center of the plume extending from Site 6A, were observed at notably lower concentrations in 2012 as compared to 2010 and 2011. The installation of additional monitoring wells cross-gradient to FC-PZ05I1 is planned for 2013, which will allow for evaluation of potential lateral shifting of the plume through this area.

5.3 Southern Area

1. Analytical data collected in 2012 generally confirm the overall extent of the groundwater plume in the Southern Area, which extends roughly in a southeasterly direction from the Sites 6A/10B source area.
2. Contaminant concentrations continue to fluctuate in some areas, particularly in the Fence Line Area (e.g., SA-PZ149I1, SA-PZ138I1, SA-PZ161I, SA-PZ157I1). These fluctuations are likely the result of variable groundwater flow, driven by precipitation events and local surface water bodies. This fluctuation will continue to be monitored using the existing monitoring well and piezometer network, and will be augmented by the installation of new monitoring wells (e.g., near FC-PZ05I1) to monitor changes in flow from the source area.
3. Groundwater flow models will continue to be refined based on data from piezometers recently installed on Suffolk County Department of Parks, Recreation and Conservation property around the Swan Lake and Donohue Pond areas.
4. Limited detections of VOCs in Peconic River surface water continue to be noted, but are below standards or screening values. DCA was detected at SA-SW124 at concentrations of 1.1 µg/L and 1.8 µg/L in May and September 2012, respectively, and at SA-SW204 at a concentration of 0.57 µg/L in September 2012. Over the course of at least nine rounds of surface water sampling at four locations, a VOC was detected in excess of screening values only once (a 6.2 µg/L concentration of TCE at SA-SW124 in September 2011).
5. Similarly, detections of VOCs in Peconic River surface sediments are limited. DCA and CA were detected at SA-SD124 in May 2012 at concentrations of 20 and 4.3 µg/Kg, respectively, but not in excess of screening criteria. Excluding detections of acetone (a common laboratory contaminant), the only detection of a VOC in excess of screening criteria over the course of at least eight rounds of sampling at each of the four sediment sampling locations was a concentration of 3.4 µg/Kg of carbon disulfide at SA-SD124 in July 2010.

5.4 General Conclusions

1. The primary contaminants identified across NWIRP Calverton and offsite areas are chlorinated VOCs such as DCA, TCA, DCE and CA. Other VOCs that have historically been detected above MCLs (though not necessarily in 2012) include isopropylbenzene, ethylbenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, naphthalene, xylenes, and vinyl chloride.
2. The monitoring well network will continue to be evaluated for data gaps, as well as surplus monitoring wells and piezometers. The installation of additional monitoring wells near FC-

PZ05I1 is already planned to evaluate lateral variability in the groundwater plume, and other wells and piezometers will be considered for abandonment.

3. Semi-annual surface water and in-river piezometer sampling on the Peconic River will continue, and results will be used to establish trends and support additional remedial actions as necessary, as provided for in the Southern Area Record of Decision (NAVFAC MIDLANT 2012).

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Tables

Table 3-1
Site 2 - Fire Training Area
Well Construction Details and Measurements
NWIRP Calverton, New York
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Depth Unit	Well	Installation Date	Total Depth (ft bgs)	Screened Interval Depth (ft bgs)	Top of Casing Elevation (ft MSL)	Ground Surface Elevation (ft MSL)	Total Depth (ft BTOC)	Sept. 2012 Measured Depth (ft BTOC)	Well Bottom Elevation (ft MSL)	Sept 2012 Water Level (ft BTOC)	Sept 2012 Water Elevation (ft MSL)	Sept 2011 Water Elevation (ft MSL)
On-Property												
Shallow	FT-MW01S	6/30/1994	28.5	18.5 - 28.5	62.98	62.12	30.10	30.20	32.78	23.43	39.55	41.04
	FT-MW02S	7/5/1994	20.5	10.5 - 20.5	54.45	53.34	NA	22.60	NA	15.34	39.11	40.71
	FT-MW03S	6/30/1994	31.5	21.5 - 31.5	65.68	64.38	32.54	32.57	34.33	26.11	39.57	41.32
	FT-MW05S	7/7/1994	17.5	7.5 - 17.5	50.39	49.37	19.71	19.90	31.77	11.84	38.55	40.12
	FT-MW06S	7/7/1994	27	17 - 27	60.13	59.44	28.83	29.10	32.45	21.25	38.88	40.54
	FT-MW07S	7/7/1994	35	25 - 35	69.17	68.33	36.44	36.80	33.86	29.96	39.21	40.87
	FT-MW08S	6/7/1997	14	3 - 14	46.40	NA	16.08	16.30	31.84	8.30	38.10	40.10
	FT-PZ452S	12/12/2011	16	6 - 16	49.33	NA	NA	NM	NA	10.95 ¹	38.38 ¹	NM
Intermediate	FT-MW01I	7/13/1994	78	68 - 78	62.62	62.11	79.70	79.80	-15.54	23.14	39.48	41.64
	FT-MW02I	7/20/1994	80	70 - 80	54.31	53.26	70.47	70.60	-14.90	15.17	39.14	40.96
	FT-MW05I	7/19/1994	58	48 - 58	51.37	49.87	59.90	60.10	-7.98	12.26	39.11	40.15
	FT-MW06I	7/14/1994	75	65 - 75	61.18	60.38	75.71	76.00	-13.72	22.25	38.93	40.24
Off-Property												
Shallow	FT-PZ451S	12/12/2011	15	5 - 15	48.84	NA	NA	17.40	NA	10.18	38.66	NA
	FT-PZ453S	12/12/2011	13	3 - 13	45.53	NA	NA	15.70	NA	7.87	37.66	NA
	FT-PZ454S	12/12/2011	13	3 - 13	46.01	NA	NA	15.15	NA	8.58	37.43	NA
	FT-PZ455S	12/6/2011	35	25 - 35	67.97	NA	NA	NA	NA	29.32	38.65	NA
	FT-PZ456S	12/9/2011	13	3 - 13	44.24	NA	NA	15.40	NA	8.65	35.59	NA
	FT-PZ457S	12/2/2011	14	4 - 14	44.40	NA	NA	16.60	NA	10.31	34.09	NA
	FT-PZ458S	11/29/2011	13	3 - 13	39.52	NA	NA	16.50	NA	5.35	34.17	NA
	FT-PZ459S	11/18/2011	17	7 - 17	44.50	NA	NA	19.60	NA	11.51	32.99	NA
Intermediate	FT-PZ462S	12/7/2011	13	3 - 13	41.76	NA	NA	NM	NA	5.14	36.62	NA
	FT-PZ455I	12/6/2011	73	68 - 73	67.65	NA	NA	75.70	NA	28.88	38.77	NA
	FT-PZ456I	12/9/2011	52	47 - 52	44.32	NA	NA	54.60	NA	8.81	35.51	NA
	FT-PZ458I	12/2/2011	45	40 - 45	38.56	NA	NA	47.10	NA	5.30	33.26	NA
	FT-PZ459I	11/18/2011	46	41 - 46	44.92	NA	NA	48.60	NA	11.82	33.10	NA
	FT-PZ460I	12/1/2011	50	45 - 50	42.35	NA	NA	52.50	NA	10.18	32.17	NA
	FT-PZ461I	11/30/2011	59	54 - 59	49.92	NA	NA	61.60	NA	19.19	30.73	NA
	FT-PZ462I	12/7/2011	49	44 - 49	42.17	NA	NA	51.10	NA	5.57	36.60	NA

Notes:

bgs = Feet below ground surface

BTOC = Below top of casing

MSL = Feet Mean Sea Level

NA = Not available

NM = Not measured

Italics = Identifies monitoring well/piezometer used for water level measurement only (i.e., no groundwater sample collected)

¹ - Water level as measured during sampling, not during synoptic well measurements; result not considered for purposes of groundwater contour mapping

Table 3-2
Site 6A - Fuel Calibration Area
Well Construction Details and Measurements
NWIRP Calverton, New York
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Depth Unit	Well	Installation Date	Total Depth (ft bgs)	Screened Interval Depth (ft bgs)	Top of Casing Elevation (ft MSL)	Ground Surface Elevation (ft MSL)	Total Depth (ft BTOC)	Sept. 2012 Measured Depth (ft BTOC)	Well Bottom Elevation (ft MSL)	Sept 2012 Water Level (ft BTOC)	Sept 2012 Water Elevation (ft MSL)	Sept 2011 Water Elevation (ft MSL)
Shallow	FC-MW02SR1	5/24/2010	14.5	NA	46.33	NA	NA	16.80	NA	8.62	37.71	38.71
	FC-MW03SR1	5/24/2010	14.5	NA	45.83	NA	NA	16.50	NA	8.27	37.56	38.58
	FC-MW04S	7/22/1994	13	3 - 13	45.40	44.46*	15.10	15.03	30.30	7.94	37.46	38.49
	FC-MW05S	7/15/1994	16	6 - 16	48.03	45.50*	17.74	18.00	30.29	10.97	37.06	38.06
	FC-MW06S	7/20/1994	19	9 - 19	50.66	48.48	20.98	21.10	29.68	12.98	37.68	38.62
Intermediate	FC-MW02IR1	5/24/2010	52.5	NA	46.40	NA	NA	54.00	NA	8.61	37.79	38.81
	FC-MW04I	7/26/1994	50	40-50	45.32	44.37*	51.38	44.71	-6.06	7.87	37.45	38.50
	FC-MW05I	7/21/1994	58	48-58	47.35	45.43*	59.37	59.70	-12.02	10.26	37.09	38.03
	FC-PZ05I1	12/16/2010	30	20-30	47.85	NA	NA	NM	NA	10.74 ¹	37.11 ¹	NA

Notes:

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BTOC = Below top of casing

MSL = Feet Mean Sea Level

NA = Not available

NM = Not measured

Italics = Identifies monitoring well/piezometer used for water level measurement only (i.e., no groundwater sample collected)

* = Estimated

¹ - Water level as measured during sampling, not during synoptic well measurements; result not considered for purposes of groundwater contour mapping

Table 3-3
Southern Area
Well Construction Details and Measurements
NWIRP Calverton, New York
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Depth Unit	Well	Installation Date	Total Depth (ft bgs)	Screened Interval Depth (ft bgs)	Top of Casing Elevation (ft MSL)	Ground Surface Elevation (ft MSL)	Total Depth (ft BTOC)	Sept. 2012 Measured Depth (ft BTOC)	Well Bottom Elevation (ft MSL)	Sept 2012 Water Level (ft BTOC)	Sept 2012 Water Elevation (ft MSL)	Sept 2011 Water Elevation (ft MSL)
Offsite High Concentration Area												
Shallow	SA-PZ145S	6/20/2010	15	5 - 15	40.95	37.95	17.79	18.00	23.16	10.66	30.29	31.27
Intermediate	SA-PZ140I	6/14/2010	49.5	44.5 - 49.5	46.40	43.32	52.21	52.50	-5.81	14.35	32.05	32.48
	SA-PZ142I	6/16/2010	45.5	40.5 - 45.5	47.26	44.47	48.32	48.60	-1.06	15.78	31.48	32.05
	SA-PZ143I	6/17/2010	46	41 - 46	46.39	43.95	48.24	48.60	-1.85	15.21	31.18	31.65
	SA-PZ145I	6/21/2010	35	30 - 35	41.11	38.11	37.72	38.00	3.39	10.44	30.67	31.26
Deep	SA-PZ145D	6/22/2010	55	50 - 55	40.98	37.84	57.80	58.00	-16.82	10.63	30.35	30.78
Offsite Low Concentration Area												
Shallow	SA-MW128S	12/14/2007	17	7 - 17	40.54	38.19	18.81	19.19	21.73	9.96	30.58	31.46
	SA-MW129S	12/19/2007	29.5	19.5 - 29.5	51.92	49.75	31.32	31.60	20.60	23.16	28.76	29.69
	SA-MW131S	9/2/2009	14	4 - 14	38.59	36.20	16.31	16.50	22.28	9.19	29.40	30.03
	SA-MW132S	9/8/2009	14	4 - 14	36.75	34.09	16.90	17.10	19.85	6.24	30.51	30.88
	SA-PZ122S	12/21/2007	22	12 - 22	43.75	41.11	24.68	24.90	19.07	15.56	28.19	28.79
	SA-PZ123S	1/2/2008	17	7 - 17	36.96	34.47	19.07	19.40	17.89	9.66	27.30	27.74
	SA-PZ144S	6/18/2010	15	5 - 15	41.50	38.82	17.42	17.80	24.08	9.42	32.08	32.45
	SA-MW128I	12/13/2007	40	30 - 40	40.96	38.62	42.20	NM	-1.24	10.42	30.54	31.42
Intermediate	SA-MW129I	12/19/2007	60	50 - 60	52.16	49.92	62.42	62.60	-10.26	23.31	28.85	29.66
	SA-MW131I	9/2/2009	40	30 - 40	38.24	36.03	41.55	41.80	-3.31	8.85	29.39	30.02
	SA-MW132I	9/3/2009	37	27 - 37	36.76	34.02	40.08	40.30	-3.32	6.26	30.50	30.88
	SA-PZ122I	12/20/2007	49	39 - 49	43.57	41.20	51.22	51.50	-7.65	15.32	28.25	28.85
	SA-PZ1231I	1/2/2008	42	32 - 42	37.51	34.75	44.40	44.70	-6.89	10.17	27.34	27.77
Deep	SA-PZ134I	3/24/2010	44	39 - 44	39.62	NA	46.75	44.80	-7.13	7.41	32.21	33.27
	SA-PZ144I	6/19/2010	50	45 - 50	41.76	38.93	52.07	52.40	-10.31	9.35	32.41	32.81
	SA-PZ171I	11/17/2011	46.5	41.5 - 46.5	46.31	NA	48.79	49.00	-2.48	15.76	30.55	NA
	SA-PZ172I	11/17/2011	48.5	43.5 - 48.5	45.92	NA	49.62	50.80	-3.70	15.81	30.11	NA
	SA-MW128D	12/12/2007	68	58 - 68	40.64	38.34	70.24	70.50	-29.60	10.74	29.90	30.79
Deep	SA-MW129D	12/18/2007	90	80 - 90	52.19	49.92	92.01	92.20	-39.82	23.27	28.92	29.74
	SA-MW131D	9/1/2009	70	60 - 70	37.82	35.84	71.85	81.30	-34.03	8.59	29.23	29.95
	SA-PZ122D	12/21/2007	132	122 - 132	43.47	41.31	134.49	134.80	-91.02	14.99	28.48	29.23
	SA-PZ123I	1/3/2008	80	70 - 80	38.02	35.16	83.66	83.90	-45.64	10.78	27.24	27.65

Notes:

bgs = Feet below ground surface

BTOC = Below top of casing

MSL = Feet Mean Sea Level

NA = Not available

NM = Not measured

Italics = Identifies monitoring well/piezometer used for water level measurement only (i.e., no groundwater sample collected)

* = Estimated

1 - Water level as measured during sampling, not during synoptic well measurements; result not considered for purposes of groundwater contour mapping

Table 3-3
Southern Area
Well Construction Details and Measurements
NWIRP Calverton, New York
Page 2 of 2

Depth Unit	Well	Installation Date	Total Depth (ft bgs)	Screened Interval Depth (ft bgs)	Top of Casing Elevation (ft MSL)	Ground Surface Elevation (ft MSL)	Total Depth (ft BTOC)	Sept. 2012 Measured Depth (ft BTOC)	Well Bottom Elevation (ft MSL)	Sept 2012 Water Level (ft BTOC)	Sept 2012 Water Elevation (ft MSL)	Sept 2011 Water Elevation (ft MSL)
Fence Line Area												
Shallow	SA-MW126S	12/6/2007	15	5 - 15	39.79	37.36	17.57	17.50	22.22	5.67	34.12	34.72
	SA-MW127S	12/11/2007	15	5 - 15	40.57	38.26	17.15	17.40	23.42	7.63	32.94	33.67
	SA-MW130S	9/10/2009	19	9 - 19	48.60	45.83	21.64	21.65	26.96	14.31	34.29	35.27
	SA-MW126I	12/6/2007	50	40 - 50	39.97	37.52	52.18	52.27	-12.21	5.71	34.26	34.78
	SA-MW127I	12/11/2007	46	36 - 46	40.79	38.43	48.20	48.40	-7.41	7.81	32.98	33.70
Intermediate	SA-MW130I	9/9/2009	50	36 - 46	48.33	45.91	48.16	NM	0.17	NM	NM	35.23
	SA-PZ133I	3/23/2010	47	42 - 47	41.55	39.51	49.25	49.30	-7.70	8.58	32.97	33.68
	SA-PZ135I	3/23/2010	47	41.5 - 46.5	38.75	36.69	48.14	47.90	-9.39	NM	NM	34.01
	SA-PZ136I	3/22/2010	53	44 - 49	39.55	37.42	50.59	50.50	-11.04	6.03	33.52	34.10
	SA-PZ137I	3/23/2010	54	49 - 54	41.67	39.25	56.22	56.30	-14.55	8.00	33.67	34.27
	SA-PZ138I	6/10/2010	42	37 - 42	39.80	37.20	44.62	44.66	-4.82	5.87	33.93	34.70
	SA-PZ139I	3/25/2010	48	42.5 - 47.5	42.28	39.95	49.42	45.53	-7.14	8.85	33.43	34.15
	SA-PZ149I	6/9/2010	37	32 - 37	44.73	42.24	39.13	NM	5.60	10.51 ¹	34.22 ¹	34.94
	SA-PZ157I	6/7/2010	46	41 - 46	39.51	NA	NA	48.20	NA	5.69	33.82	NA
	SA-PZ157I	6/7/2010	38	33 - 38	39.76	37.30	NA	40.65	NA	5.83	33.93	NA
Deep	SA-PZ160I	6/8/2010	46	41 - 46	39.29	NA	NA	48.03	NA	5.74	33.55	NA
	SA-PZ161I	6/10/2010	46	41 - 46	40.59	38.21	47.98	45.60	-7.39	4.18	36.41	34.15
	SA-PZ163I	6/10/2010	42	32 - 42	40.17	NA	44.49	NM	-4.32	NM	NM	33.49
	SA-MW126D	12/4/2007	84	74 - 84	40.04	37.37	86.87	86.98	-46.83	8.18	31.86	32.68
	SA-MW127D	12/10/2007	78	68 - 78	40.57	38.46	77.14	77.40	-36.57	9.97	30.60	31.77
Peconic River Area												
Shallow	SA-PZ118S	5/3/2007	16	6 - 16	31.13	29.23	18.48	18.80	12.65	8.43	22.70	25.93
	SA-PZ120S	5/4/2007	18	8 - 18	32.48	30.34*	21.11	21.06	11.37	3.85	28.63	26.01
	SA-PZ124	10/10/2006	6	3 - 6	NA	NA	NA	NA	NA	NA	NM	NA
	SA-PZ125	10/10/2006	6	3 - 6	NA	NA	NA	NA	NA	NA	NM	NA
	SA-PZ147	7/20/2010	6	3 - 6	NA	NA	NA	NA	NA	NA	NM	NA
Intermediate	SA-PZ148	7/20/2010	6	3 - 6	NA	NA	NA	NA	NA	NA	NM	NA
	SA-PZ118I	5/3/2007	60	50 - 60	31.68	29.22	61.24	61.50	-29.56	9.10	22.58	25.87
	SA-PZ166I	6/25/2010	80	60 - 80	33.03	NA	NA	83.20	NA	6.81	26.22	26.52

Notes:

bgs = Feet below ground surface

BTOC = Below top of casing

MSL = Feet Mean Sea Level

NA = Not available

NM = Not measured

Italics = Identifies monitoring well/piezometer used for water level measurement only (i.e., no groundwater sample collected)

* = Estimated

¹ - Water level as measured during sampling, not during synoptic well measurements; result not considered for purposes of groundwater contour mapping

Table 3-4
Staff Gauge Details and Measurements
NWIRP Calverton, New York
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Gauge	Location	Installation Date	Top of Gauge Elevation (ft MSL)	Sept 2012 Water Level Reading	Sept 2012 Water Elevation (ft MSL)	Sept 2011 Water Elevation (ft MSL)
Staff Gauge #1 WS PRSC	Donahue Pond, West Side	9/29/2009	32.24	1.20	30.11	30.52
Staff Gauge #2 ES PRSC	Donahue Pond, East Side	9/29/2009	32.45	1.30	30.42	30.74
BM ES Connecticut Ave. Headwall	Peconic River at Connecticut Ave.	NA	30.44	5.39	25.05	25.11
FT-10	McKay Lake	12/15/2011	40.85	0.68	38.20	NM
FT-11	Southern Area Intermittent Stream	12/15/2011	38.65	Dry	--	NM
FT-12	Swan Pond, West Side	12/15/2011	39.05	1.04	36.76	NM
FT-13	Swan Pond, West Side	12/15/2011	38.39	1.04	36.10	NM

Notes:

BM = Benchmark
ES = East side
MSL = Feet Mean Sea Level
NA = Not available
NM = Not measured
PRSC = Peconic River Sportsman's Club
WS = West side
-- = Could not be calculated; water level outside of gauge limits

Table 4-1
Site 2 - Fire Training Area
Groundwater Analytical Detections Summary
NWIIP Calverton, New York
Page 1 of 7

Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FT-MW01I 1/10/08	FT-MW01I 9/1/09	FT-MW01I 9/14/10	FT-MW01I 3/14/11	FT-MW01I 10/18/11	FT-MW01I 9/17/12	FT-MW01S 1/10/08	FT-MW01S 9/1/09	FT-MW01S 9/14/10	FT-MW01S 3/14/11	FT-MW01S 10/18/11	FT-MW01S 9/17/12	FT-MW01S 18.5 - 28.5	FT-MW01S 18.5 - 28.5	FT-MW01S 18.5 - 28.5	FT-MW02I 1/10/08	FT-MW02I 9/1/09	FT-MW02I 9/14/10
Screened Interval (feet bgs)				68 - 78	68 - 78	68 - 78	68 - 78	68 - 78	68 - 78	18.5 - 28.5	18.5 - 28.5	18.5 - 28.5	18.5 - 28.5	18.5 - 28.5	18.5 - 28.5	18.5 - 28.5	18.5 - 28.5	70 - 80	70 - 80	70 - 80	
Volatile Organic Compounds (µg/L)																					
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
1,2-DICHLOROBENZENE, TOTAL	540-59-0		5	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
ACETONE*	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	-	0.38 J	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
CHLOROBENZENE	108-90-7	100	5	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
CHLOROFORM	67-66-3	80	5	0.7 J	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND	ND	0.5 J	ND	ND	ND	
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	71	ND	
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
ETHYLBENZENE	100-41-4	700	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
M- AND P-XYLENE	108-38-3/106-42-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
NAPHTHALENE	91-20-3		50	-	ND	ND	4.2 J	-	ND	ND	ND	ND	ND	-	ND	-	-	ND	ND	ND	
O-XYLENE	95-47-6		5	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
TETRACHLOROETHENE	127-18-4		5	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
XYLENES, TOTAL	1330-20-7	10000	5	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	

Notes:

bgs = Below ground surface
CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
ND = Not detected above report detection limit
NC = No criteria
J = Estimated value
R = rejected value not reported
µg/L = Micrograms per liter
ND = Indicates exceedance of an MCL
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* Acetone was detected in some samples, but is generally considered a laboratory contaminant.
¹ National Primary Drinking Water Regulations, 40 CFR Part 141, as summarized on the USEPA website at <http://water.epa.gov/drink/contaminants/index.cfm>.
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Table 4-1
Site 2 - Fire Training Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FT-MW021 3/15/11	FT-MW021 9/29/11	FT-MW021 9/17/12	FT-MW02S 1/10/08	FT-MW02S 9/1/09	FT-MW02S 9/1/09 (DUP)	FT-MW02S 9/14/10	FT-MW02S 9/14/10 (DUP)	FT-MW02S 9/14/10 (DUP)	FT-MW02S 3/15/11	FT-MW02S 3/15/11 (DUP)	FT-MW02S 9/29/11	FT-MW02S 9/29/11 (DUP)	FT-MW02S 9/17/12	FT-MW03S 1/9/08	FT-MW03S 9/1/09
Screened Interval (feet bgs)																			
Volatile Organic Compounds (µg/L)																			
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	17	5.7 J	5.9 J	15	11	11	ND	0.81 J	1.2	1.3	0.90 J	ND	ND
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROETHANE	120-82-1		5	ND	ND	ND	ND	2.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE	95-50-1	600	5	ND	ND	ND	21	5.2 J	5.3 J	4.3 J	4.2 J	4.2 J	ND	0.58 J	3.9	3.7	1.3	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	ND
1,4-DICHLOROETHENE	106-46-7	75	5	ND	ND	ND	8	2 J	1.6 J	1.6 J	ND	ND	ND	ND	1.3	1.2	0.60 J	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	6	10 J	8.1 J	15	12 J	12 J	ND	13 J	6.1 J	6 J	ND	ND	ND
ACETONE*	67-64-1		50	ND	ND	ND	12	ND	ND	64	55	55	27 J	R	12 J	9.5 J	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	0.31 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	2.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	108-90-7	100	5	ND	ND	ND	3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	9	ND	ND	ND	ND	ND	4.1 J	2.8 J	0.73 J	0.88 J	2.2	ND	ND
CYCLOXANE	110-82-7		50	ND	ND	ND	1 J	1.7 J	1.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	100-41-4	700	5	ND	ND	ND	24	14 J	15 J	6.2	5.3	5.3	ND	4.7	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	8	4.8 J	5 J	2.5 J	1.8 J	1.8 J	0.89 J	0.8 J	ND	ND	0.44 J	ND	ND
M- AND P-XYLENE	108-38-3/106-42-3		50	ND	ND	ND	120	18 J	20 J	8.6 J	6.3 J	6.3 J	7.8	7.6	ND	ND	0.45 J	ND	ND
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	3 J	2.5 J	2.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	ND	ND	41 J	41 J	26	20	20	ND	ND	ND	ND	ND	ND	ND
O-XYLENE	95-47-6		5	ND	ND	ND	47	4.7 J	5.2 J	13	10	10	16	16	3	2.8	0.70 J	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.91 J	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	46	ND	ND	ND	ND	ND	4.5	4.4	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	0.6 J	ND	ND	2.8 J	2.8 J	2.8 J	11	12	ND	0.74 J	0.54 J	ND	2.2 J
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	3 J	1.4 J	1.4 J	ND	ND	ND	ND	ND	1.8	1.4	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000	5	-	-	ND	170	23 J	25 J	22 J	16 J	16 J	-	-	-	-	0.70 J	ND	ND

Notes:

bgs = Below ground surface

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µg/L = Micrograms per liter

bold = Indicates exceedance of an MCL

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Table 4-1
Site 2 - Fire Training Area
Groundwater Analytical Detections Summary
NWIIP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FT-MW03S 9/14/10	FT-MW03S 3/14/11	FT-MW03S 10/18/11	FT-MW03S 9/17/12	FT-MW04S 1/9/08	FT-MW04S 9/2/08	FT-MW04S 9/14/10	FT-MW04S 3/14/11	FT-MW04S 9/29/11	FT-MW05I 1/8/08	FT-MW05I 8/31/09	FT-MW05I 9/14/10	FT-MW05I 3/14/11	FT-MW05I 9/29/11	FT-MW05I 9/17/12
Screened Interval (feet bgs)				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	48 - 58	48 - 58	48 - 58	48 - 58	48 - 58	48 - 58
Volatiles Organic Compounds (µg/L)																		
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	0.36 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROETHANE	120-82-1		5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	95-50-1	600	5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE, TOTAL	940-59-0		5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROETHANE	106-46-7	75	5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE*	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	108-90-7	100	5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	0.52 J	ND	0.79 J	0.68 J
CHLOROMETHANE	74-87-3		5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	100-41-4	700	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M- AND P-XYLENE	108-38-3/106-42-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	1.8 J	ND	ND	ND	ND
O-XYLENE	95-47-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	3.2	3.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000	5	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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CAS = Chemical Abstracts Service
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Table 4-1
Site 2 - Fire Training Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FT-MW051 9/17/12 (DUP)	FT-MW055 1/8/08	FT-MW055 8/31/09	FT-MW055 9/14/10	FT-MW055 3/14/11	FT-MW055 9/29/11	FT-MW055 9/17/12	FT-MW061 1/8/08	FT-MW061 9/1/09	FT-MW061 9/14/10	FT-MW061 3/14/11	FT-MW061 9/29/11	FT-MW061 9/18/12	FT-MW06S 1/8/08	FT-MW06S 9/1/09
Screened Interval (feet bgs)				48 - 58	7.5 - 17.5	7.5 - 17.5	7.5 - 17.5	7.5 - 17.5	7.5 - 17.5	7.5 - 17.5	65 - 75	65 - 75	65 - 75	65 - 75	65 - 75	17 - 27	17 - 27	
Volatile Organic Compounds (µg/L)																		
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	75-35-4	7			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	ND	-	-	ND	ND	ND	ND	-	-	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE*	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.30 J	ND	ND
CHLOROBENZENE	108-90-7	100			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80		0.66 J	ND	ND	ND	ND	ND	ND	0.6 J	ND	0.51 J	0.63 J	0.52 J	0.44 J	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	100-41-4	700		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M- AND P-XYLENE	108-38-3/106-42-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	ND
O-XYLENE	95-47-6		5	ND	ND	ND	ND	-	-	ND	-	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000		ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

bgs = Below ground surface
CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
ND = Not detected above report detection limit
NC = No criteria
J = Estimated value
R = rejected value not reported
µg/L = Micrograms per liter
Bold = Indicates exceedance of an MCL
- (hyphen) = Indicates Not Analyzed
* Acetone was detected in some samples, but is generally considered a laboratory contaminant.
¹ National Primary Drinking Water Regulations, 40 CFR Part 141, as summarized on the USEPA website at <http://water.epa.gov/drink/contaminants/index.cfm>.
² New York State Department of Health (NYSDOH) Drinking Water Regulations, 10 NYCRR Part 5, Subpart 5-1 as summarized on the NYSDOH website at http://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm.

Table 4-1
Site 2 - Fire Training Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FT-MW06S 9/14/10	FT-MW06S 3/14/11	FT-MW06S 9/29/11	FT-MW06S 9/18/12	FT-MW07S 1/9/08	FT-MW07S 1/9/08 (DUP)	FT-MW07S 25-35	FT-MW07S 9/1/09	FT-MW07S 25-35	FT-MW07S 9/14/10	FT-MW07S 25-35	FT-MW07S 3/15/11	FT-MW07S 9/29/11	FT-MW07S 25-35	FT-MW08I 1/8/08	FT-MW08I 9/1/09	FT-MW08I 9/14/10	FT-MW08I 23-33	FT-MW08I 3/14/11
Screened Interval (feet bags)																						
Volatile Organic Compounds (µg/L)																						
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2 J	1.2	
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5 J	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	-	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE*	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	50	ND	ND	ND	0.31 J	ND	ND	ND	ND	ND	0.16 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	108-90-7	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.54 J	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	100-41-4	700	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYL BENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.66 J	ND	ND
M- AND P-XYLENE	108-38-3/106-42-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O-XYLENE	95-47-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9 J	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000	5	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	0.9 J	-

Notes:

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* Acetone was detected in some samples, but is generally considered a laboratory contaminant.

¹ National Primary Drinking Water Regulations, 40 CFR Part 141, as summarized on the USEPA website at <http://water.epa.gov/drink/contaminants/index.cfm>.
² New York State Department of Health (NYSDOH) Drinking Water Regulations, 10 NYCRR Part 5, Subpart 5-1 as summarized on the NYSDOH website at http://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm.

Table 4-1
Site 2 - Fire Training Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FT-MW081 9/29/11	FT-MW081 9/18/12	FT-MW081 1/8/08	FT-MW081 9/1/09	FT-MW081 9/14/10	FT-MW081 3/14/11	FT-MW081 9/29/11	FT-MW081 9/18/12	FT-PZ451S 9/20/12	FT-PZ452S 9/17/12	FT-PZ453 2/21/12	FT-PZ454S 9/20/12	FT-PZ455I 2/21/12	FT-PZ455S 9/13/12	FT-PZ456I 2/21/12
Screened Interval (feet bgs)				23 - 33	23 - 33	3 - 14	3 - 14	3 - 14	3 - 14	3 - 14	3 - 14	5 - 15	6 - 16	3 - 13	3 - 13	68 - 73	25 - 35	47 - 52
Volatile Organic Compounds (µg/L)																		
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	1.2	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROETHANE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE	95-50-1	600	5	ND	ND	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROETHENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE*	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	0.33 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHENE	108-90-7	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.83 J	0.38 J	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	100-41-4	700	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M- AND P-XYLENE	108-38-3/106-42-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O-XYLENE	95-47-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000	5	-	ND	ND	ND	ND	-	-	-	ND	ND	-	ND	-	ND	-

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Table 4-1

Site 2 - Fire Training Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FT-P2456S 9/12/12	FT-P2457S 2/21/12	FT-P2458S 2/22/12	FT-P2458I 2/22/12	FT-P2458I 9/13/12	FT-P2458S 2/22/12	FT-P2459I 2/22/12	FT-P2459I 2/22/12 (DUP)	FT-P2459S 2/22/12	FT-P2460I 2/23/12	FT-P2460I 9/18/12	FT-P2461I 2/23/12	FT-P2462I 2/23/12	FT-P2462S 9/13/12	FT-P2462S 9/13/12 (DUP)
Screened Interval (feet bgs)				3 - 13	4 - 14	3 - 13	40 - 45	40 - 45	3 - 13	41 - 46	41 - 46	7 - 17	45 - 50	45 - 50	54 - 59	44 - 49	3 - 13	3 - 13
Volatiles Organic Compounds (µg/L)																		
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	0.8 J	0.8 J	ND	ND	ND	ND	14	19	ND	ND	ND	ND
1,1,2-DICHLOROETHANE	75-35-4	7	5	ND	ND	ND	0.7 J	0.7 J	ND	0.6 J	0.6 J	ND	21	42	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	-	-	2.0	-	-	-	-	7.7	-	-	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE*	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	108-90-7	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	0.5 J	ND	ND	ND	1.3	ND	ND
CHLOROMETHANE	74-87-3		5	ND	0.56 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.61 J	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	4.1	2.0	ND	ND	ND	ND	7.8	7.7	4.2	3.8	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	0.53 J	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	100-41-4	700	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M- AND P-XYLENE	108-38-3/106-42-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	ND	ND	ND	ND	0.68 J	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O-XYLENE	95-47-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	0.89 J	0.89 J	ND	ND	ND	ND	7.7	9.4	0.88 J	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	0.65 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	24	16	ND	ND	ND	ND	440	380	69	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.43 J	0.54 J	ND	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000	5	ND	-	-	-	ND	-	-	-	-	-	ND	-	-	ND	ND

Notes:

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Table 4-2
Site 6A - Fuel Calibration Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCL ⁵	NYSDOH MCL ⁵	FC-MW021 1/16/08	FC-MW021 7/29/08	FC-MW021 9/15/10	FC-MW021R1 3/14/11	FC-MW021R1 9/28/11	FC-MW021R1 9/10/12	FC-MW02S 1/16/08	FC-MW02S 7/29/08	FC-MW02S 9/15/10	FC-MW02SR1 9/15/10 (DUP)	FC-MW02SR1 3/14/11	FC-MW02SR1 9/28/11	FC-MW02SR1 2/20/12	FC-MW02SR1 9/10/12
Screened Interval (test bgs)																	
Volatile Organic Compounds (ug/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	2 J	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	79-00-5	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	0.7 J	ND	ND	ND	ND	ND	6	3	11	11	16	14	8.4	0.66 J
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	0.7 J	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	1.5 J	1.4 J	1.5	3.8	3	10 J
1,2-DICHLOROBENZENE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4 J
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.43 J
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	1 J	18 J	33 J	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	2 J	ND	ND	ND	ND	16	32	ND	R	ND	17	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	0.36 J	ND	ND	ND	ND	ND	1 J	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	4 J	3	ND	ND	7.3	4.4	4.6	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.85 J	1.6	1.4 J
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	1.2	4.3 J
ETHYL BENZENE	100-41-4	700	5	ND	ND	ND	ND	ND	ND	0.4 J	0.5 J	ND	ND	6.8	6	11	14 J
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	4.7 J	4 J	5.6	4.1	7.6	10 J
M- AND P-XYLENE	106-38-3/106-42-3		5	ND	ND	ND	ND	ND	ND	4 J	5 J	ND	13 J	17	25	29	52 J
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	ND	ND	1 J	0.4 J	ND	1.7 J	1.9	ND	3.5	5.2 J
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	16 J	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	ND	ND	ND	ND	ND	ND	18	17	ND	ND	ND	ND
O-XYLENE	95-47-6		5	ND	ND	ND	ND	ND	ND	5	0.4 J	17 J	12 J	11	11	9	0.90 J
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.45 J	0.55 J
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	3 J	0.5 J	ND	12 J	0.98 J	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5 J	0.82 J	0.57 J
XYLENES, TOTAL	1330-20-7	10000	5	ND	ND	ND	ND	ND	ND	9 J	10 J	39 J	25 J	ND	ND	ND	53 J

Notes:
bgs = Below ground surface
CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
ND = Not detected above report detection limit
NC = No criteria
J = Estimated value
R = Rejected value not reported
µg/L = Micrograms per liter
Bold = Indicates exceedance of an MCL
- (hyphen) = Indicates Not Analyzed
* Acetone and methylene chloride were detected in some samples, but are generally considered laboratory contaminants.
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Table 4-2
Site 6A - Fuel Calibration Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FC-MW03S 1/15/08	FC-MW03S 7/28/08	FC-MW03S 9/15/10	FC-MW03SR1 3/13/11	FC-MW03SR1 9/26/11	FC-MW03SR1 9/11/12	FC-MW04I 1/15/08	FC-MW04I 7/28/08	FC-MW04I 9/10/09 (DUP)	FC-MW04I 9/15/10	FC-MW04I 3/13/11	FC-MW04I 9/28/11	FC-MW04S 1/15/08	FC-MW04S 7/28/08
Screened Interval (feet bgs)				3 - 13	3 - 13	3 - 13	3 - 13	3 - 13	3 - 13	40 - 50	40 - 50	40 - 50	40 - 50	40 - 50	40 - 50	3 - 13	3 - 13
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	0.4 J	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	79-00-5	5	5	ND	ND	ND	ND	ND	1.9 J	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	1.3 J	1.1	9.3 J	3.0 J	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	ND	3.8 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	1.8 J	2.9	-	2.8 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	0.73 J	ND	ND	ND	ND	ND	-	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	R	ND	ND	6.3	ND	ND	ND	ND	R	ND	ND	ND
ACETONE	67-64-1		5	ND	ND	ND	ND	ND	0.77 J	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	5 J	4.1 J	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	0.57 J	ND	ND	ND	ND	ND	ND	ND	0.63 J	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	0.73 J	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	3.0 J	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	100-41-4	700	5	ND	ND	23	46	23 J	38 J	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	13	21	10 J	17 J	ND	ND	ND	ND	ND	ND	ND	ND
M- AND P-XYLENE	108-38-3/106-42-3		5	ND	ND	15	19	15 J	0.61 J	ND	ND	ND	ND	ND	ND	ND	ND
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	2.1 J	7.1 J	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	ND	-	-	-	-	-	ND	ND	-	-	-	ND
O-XYLENE	95-47-6		5	ND	ND	ND	0.55 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	0.53 J	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000	5	ND	ND	15	-	-	0.61 J	ND	ND	ND	ND	-	-	ND	ND

Notes:

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CAS = Chemical Abstracts Services
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Table 4-2
Site 6A - Fuel Calibration Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FC-MW04S 9/10/09	FC-MW04S 9/15/10	FC-MW04S 3/13/11	FC-MW04S 9/28/11	FC-MW05I 1/15/08	FC-MW05I 7/29/08	FC-MW05I 9/9/09	FC-MW05I 9/15/10	FC-MW05I 3/13/11	FC-MW05I 6/2/11	FC-MW05I 9/26/11	FC-MW05I 9/10/12	FC-MW05S 1/15/08	FC-MW05S 7/29/08	FC-MW05S 9/9/09
Screened Interval (feet bgs)																		
Volatile Organic Compounds (µg/L)																		
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	1 J	ND	ND	ND	0.61 J	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	79-00-5	5	5	ND	ND	ND	ND	0.8 J	ND	ND	0.5 J	ND	0.55 J	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	0.71 J	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	3 J	ND	ND	ND	R	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	0.8 J	ND	ND	ND	ND	ND	0.43 J	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-83-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	100-41-4	700	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PI- AND P-XYLENE	108-38-3/106-42-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O-XYLENE	95-47-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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Table 4-2
Site 6A - Fuel Calibration Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	FC-MW05S 9/9/09 (DUP)	FC-MW05S 9/15/10	FC-MW05S 3/13/11	FC-MW05S 6/3/11	FC-MW05S 9/26/11	FC-MW05S 9/10/12	FC-MW06S 1/15/08	FC-MW06S 7/29/08	FC-MW06S 9/9/09	FC-MW06S 9/15/10	FC-MW06S 3/13/11	FC-MW06S 9/28/11	FC-P20511 12/16/10	FC-P20511 3/13/11	FC-P20511 3/13/11 (DUP)
Screened Interval (feet bgs)				6 - 16	6 - 16	6 - 16	6 - 16	6 - 16	6 - 16	9 - 19	9 - 19	9 - 19	9 - 19	9 - 19	9 - 19	20 - 30	20 - 30	20 - 30
Volatile Organic Compounds (µg/L)																		
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130	47	51
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	79-00-5	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	470	73	86
1,1-DICHLOROETHANE	75-34-3		5	ND	0.89 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	4.1 J	7.7 J
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	0.98 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.54 J
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	5.2 J	ND	R	ND	ND	3 J	5.4 J	ND	ND	R	ND	ND	R	R	ND
BENZENE	71-43-2	5	5	ND	0.84 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3 J	9	11
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140	29	31
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52 J
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	100-41-4	700	5	ND	6.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	52	63	73
ISOPROPYLBENZENE	98-82-8		5	ND	8.2 J	ND	2.9	ND	ND	ND	ND	ND	ND	ND	ND	21	30	36
M- AND P-XYLENE	108-38-3/106-42-3		5	ND	2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1 J	2.9	2.6
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9 J	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7 J	ND	ND
NAPHTHALENE	91-20-3		50	ND	37 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND
O-XYLENE	95-47-6		5	ND	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	0.46 J	12	0.9 J	ND	2.5 J	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000	5	ND	2.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1 J	ND	ND

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Table 4-2
Site 6A - Fuel Calibration Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCL ¹	NYSDOH MCL ²	FC-P20511 6/2/11	FC-P20511 9/26/11	FC-P20511 9/26/11 (DUP)	FC-P20511 2/20/12	FC-P20511 2/20/12 (DUP)	FC-P20511 9/10/12
Screened Interval (feet bgs)									
Volatile Organic Compounds (µg/L)									
1,1,1-TRICHLOROETHANE	71-55-6	200	5	530	320 J	360 J	7.1	8	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	79-00-5	5	5	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	1000	790 J	830 J	16	18	3.4
1,1-DICHLOROETHENE	75-35-4	7	5	75	42 J	60 J	1	1.3	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	2	4.5	3.5 J	1.4	1.2	0.99 J
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	-	-	-	-	-	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	18	2.3	2.6 J	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	220	230 J	250 J	3	3.5	ND
CHLOROMETHANE	74-87-3		5	2.2	0.77 J	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	5	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	2.3	1	ND	ND	ND	ND
ETHYLBENZENE	100-41-4	700	5	78	30	26 J	8.5	8.2	0.55 J
ISOPROPYLBENZENE	98-82-8		5	38	11	9.2 J	3.3	3.4	6.4
M- AND P-XYLENE	108-38-3/106-42-3		5	21	8.2 J	4 J	ND	ND	ND
METHYL CYCLOHEXANE	108-87-2		50	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	-	-	-	-
O-XYLENE	95-47-6		5	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	0.7 J	0.56 J	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	0.92 J	0.68 J	ND	ND	ND	ND
XYLENES, TOTAL	1330-20-7	10000	5	-	-	-	-	-	ND

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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA- MW126D 2/5/08	SA- MW126D 7/30/08	SA- MW126D 9/3/09	SA- MW126D 9/16/10	SA- MW126D 3/10/11	SA- MW126D 9/21/11	SA- MW126I 3/10/11	SA- MW126I 9/21/11	SA- MW126I 9/19/12
Screened Interval (feet bgs)												
Volatile Organic Compounds (µg/L)												
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	87-61-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	2 J	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)												
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-

Notes:

bgs = Below ground surface
CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
ND = Not detected above report detection limit
NC = No criteria
J = Estimated value
R = Rejected value not reported
µg/L = Micrograms per liter
Bold = Indicates exceedance of an MCL
- (hyphen) = Indicates Not Analyzed
* Acetone and methylene chloride were detected in some samples, but are generally considered laboratory contaminants.

¹ National Primary Drinking Water Regulations, 40 CFR Part 141, as summarized on the USEPA website at <http://water.epa.gov/drink/contaminants/index.cfm>.
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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-MW126S 1/31/08	SA-MW126S 7/29/08	SA-MW126S 9/3/09	SA-MW126S 9/16/10	SA-MW126S 3/10/11	SA-MW126S 9/20/11	SA-MW126S 9/19/12	SA-MW127D 1/31/08	SA-MW127D 7/30/08	SA-MW127D 9/3/09	SA-MW127D 9/16/10	SA-MW127D 3/10/11	SA-MW127D 9/22/11	SA-MW127D 1/31/08
Screened Interval (feet bgs)				5 - 15	5 - 15	5 - 15	5 - 15	5 - 15	5 - 15	5 - 15	68 - 78	68 - 78	68 - 78	68 - 78	68 - 78	68 - 78	36 - 46
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	94
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3	5	5	1.1	ND	ND	ND	ND	1.7	ND	0.6 J	ND	ND	ND	ND	ND	410
1,1-DICHLOROTHENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7 J
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	0.6 J
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7 J
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	3.1	ND	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9 J
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	51
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	ND	ND	-	-	-	-	-	ND	ND	ND	-	-
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	0.5 J	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 4-3
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Groundwater Analytical Detections Summary
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA- MW127I 7/30/08	SA- MW127I 9/3/09	SA- MW127I 11/19/09	SA- MW127I 9/16/10	SA- MW127I 9/16/10 (DUP)	SA- MW127I 3/10/11	SA- MW127I 9/22/11	SA- MW127I 9/13/12	SA- MW127I 1/31/08	SA- MW127I 5 - 15	SA- MW127I 9/3/09	SA- MW127I 7/30/08	SA- MW127I 1/31/08 (DUP)	SA- MW127I 5 - 15	SA- MW127I 9/16/10	SA- MW127I 3/10/11
Screened Interval (feet bgs)																			
Volatile Organic Compounds (µg/L)																			
1,1,1-TRICHLOROETHANE	71-55-6	200	5	94	61	41	1.2 J	1.1 J	8.1	4.1	1.2	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	470	270 J	200	9.1 J	9.3 J	93	71	13	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	75-35-4	7	5	27	20	9	ND	ND	5.6	3.8	0.99 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	87-61-6		5						ND	ND									
1,2,4-TRICHLOROBENZENE	120-82-1		5	4	2.7 J	2 J			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	0.3 J	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	3	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	13	3.8 J	2.4 J	ND	ND	ND	ND	0.25 J	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	63	29	23	ND	ND	26	8.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	1.4 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50		ND	ND	ND												
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	0.69 J	ND	ND	ND	2 J	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																			
ARSENIC	7440-38-2		10																
IRON	7439-89-6		300																
MANGANESE	7439-96-5		300			1920													

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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-MW127S 9/22/11	SA-MW128D 1/31/08	SA-MW128D 7/30/08	SA-MW128D 9/3/09	SA-MW128D 9/3/09	SA-MW128D 11/19/09	SA-MW128D 3/10/11	SA-MW128D 9/22/11	SA-MW128D 9/22/11 (DUP)	SA-MW128D 9/13/12	SA-MW128I 1/30/08	SA-MW128I 7/30/08	SA-MW128I 9/4/09
Screened Interval (feet bgs)				5 - 15	58 - 68	58 - 68	58 - 68	58 - 68	58 - 68	58 - 68	58 - 68	58 - 68	58 - 68	30 - 40	30 - 40	30 - 40
Volatile Organic Compounds (µg/L)																
1,1,1-TRICHLOROETHANE	71-55-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	48	35	2.4 J
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	200	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	5	7	3.1 J	2.9 J	2.5 J	2.1	2.6	2.7	2.0	160	170	33
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	0.4 J	ND	ND	ND	ND	ND	ND	ND	18	12	2.5 J
1,2,3-TRICHLOROBENZENE	87-61-6		5	ND	-	-	-	-	-	-	ND	ND	-	-	-	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	1	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	-	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9 J	0.7 J	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	2.8 J	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND	6	6	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	81-20-3		50	-	-	-	-	-	-	-	-	-	-	-	-	-
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	3780	-	-	-	-	-	-	-

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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA- MW128I 9/17/10	SA- MW128I 3/10/11	SA- MW128S 9/22/11	SA- MW128I 9/13/12	SA- MW128S 1/31/08	SA- MW128S 7/30/08	SA- MW128S 9/3/09	SA- MW128S 9/16/10	SA- MW128S 3/10/11	SA- MW128S 9/22/11	SA- MW129D 1/17/08	SA- MW129D 1/30/08	SA- MW129D 7/30/08	SA- MW129D 9/18/09
Screened Interval (feet bgs)				30 - 40	30 - 40	30 - 40	30 - 40	7 - 17	7 - 17	7 - 17	7 - 17	7 - 17	7 - 17	80 - 90	80 - 90	80 - 90	80 - 90
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	1.1 J	ND	ND	0.59 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	10 J	5.1	5	2.1	ND	ND	ND	ND	ND	ND	2 J	0.9 J	3	ND
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	0.68 J	0.44 J	ND	ND	ND	ND	ND	ND	ND	0.5 J	0.4 J	ND
1,2,3-TRICHLOROBENZENE	87-61-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8 J	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	1.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	-	-	-	-	-	-	-	-	-	-	-	-	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	0.65 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

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- R = Rejected value not reported
- µg/L = Micrograms per liter
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- (hyphen) = Indicates Not Analyzed
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- ² New York State Department of Health (NYSDOH) Drinking Water Regulations, 10 NYCRR Part 5, Subpart 5-1 as summarized on the NYSDOH website at http://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm.

Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIIP Calverton, New York
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Chemical	CAS No.	Federal MCL ⁵	NYSDOH MCL ⁵	SA-MW129D 9/16/10	SA-MW129D 3/10/11	SA-MW129D 9/22/11	SA-MW129D 9/12/12	SA-MW129I 7/30/08	SA-MW129I 9/4/09	SA-MW129I 9/17/10	SA-MW129I 3/10/11	SA-MW129I 9/22/11	SA-MW129I 50 - 60	SA-MW129S 1/17/08	SA-MW129S 7/30/08	SA-MW129S 7/30/08 (DUP)	SA-MW129S 9/3/09
Screened Interval (feet bgs)																	
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	2.7	3	ND	4	2.3 J	1.4 J	7	2.2	ND	ND	ND	ND	1.4 J
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	0.67 J	0.56 J	ND	ND	0.64 J	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	-	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	550-59-0		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	6.9 J	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	5.8 J	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	0.45 J	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	2.8 J	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	81-20-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	0.61 J	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
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J = Estimated value
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µg/L = Micrograms per liter
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1 National Primary Drinking Water Regulations, 40 CFR Part 141, as summarized on the USEPA website at <http://water.epa.gov/drink/contaminants/index.cfm>.
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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWTRP Calverton, New York
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Notes:

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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA- MW132I 9/14/09	SA- MW132I 9/14/09 (DUP)	SA- MW132I 9/21/10	SA- MW132I 3/9/11	SA- MW132I 9/27/11	SA- MW132I 9/27/11	SA- MW132S 3/9/11	SA- MW132S 9/21/10	SA- MW132S 9/14/09	SA- MW132S 9/27/11	SA- MW132S 9/18/12	SA-PZ118I 1/16/08	SA-PZ118I 7/31/08	SA-PZ118I 9/2/09
Screened Interval (feet bgs)				27 - 37	27 - 37	27 - 37	27 - 37	27 - 37	27 - 37	4 - 14	4 - 14	4 - 14	4 - 14	4 - 14	50 - 60	50 - 60	50 - 60
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	5.4	5.1	3.1	4.6	6.9	150	ND	1.1	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	75-35-4	7	5	1.1	1.1	ND	0.94	1.5	16	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	-	-	ND	ND	0.57	ND	-	-	ND	-	-	-	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE, TOTAL	540-59-0		5	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	0.80	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	0.34	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	0.50	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	75-10-3		5	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	2.9	ND	ND	2.9	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.59	ND	ND	3	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	ND	-	ND	-	ND	ND	ND	ND	-	-	-	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	0.45	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ1181 9/20/10	SA-PZ1181 3/11/11	SA-PZ1181 9/20/11	SA-PZ1181 9/11/12	SA-PZ1181 1/16/08	SA-PZ1181 7/31/08	SA-PZ1181 9/2/09	SA-PZ1181 11/19/09	SA-PZ1181 9/20/10	SA-PZ1181 3/11/11	SA-PZ1181 3/11/11 (DUP)	SA-PZ1181 9/20/11	SA-PZ1181 9/11/12
Screened Interval (feet bgs)																
Volatile Organic Compounds (µg/L)																
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	ND	4 J	17	2.5 J	5.5	ND	6.1	5.8	3.5	21
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	1 J	4	0.98 J	ND	ND	1.1	1.1	0.91 J	4.5
1,2,3-TRICHLOROBENZENE	87-61-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.21 J
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-86-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
bgs = Below ground surface
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NC = No criteria
J = Estimated value
R = rejected value not reported
µg/L = Micrograms per liter
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Table 4-3
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ120S 1/17/08	SA-PZ120S 7/31/08	SA-PZ120S 9/9/09	SA-PZ120S 9/20/10	SA-PZ120S 3/9/11	SA-PZ120S 9/20/11	SA-PZ120S 1/17/08	SA-PZ120S 7/31/08	SA-PZ120S 9/3/09	SA-PZ120S 9/20/10	SA-PZ120S 3/12/11	SA-PZ120S 9/20/11	SA-PZ120S 122 - 132 (DUP)	SA-PZ120S 9/12/12
Screened Interval (feet bgs)				8 - 18	8 - 18	8 - 18	8 - 18	8 - 18	8 - 18	122 - 132	122 - 132	122 - 132	122 - 132	122 - 132	122 - 132	122 - 132	122 - 132
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	ND	ND	ND	2 J	2	1.8 J	1.3 J	1.4	1.8 J	ND	ND
1,1-DICHLOROETHYLENE	75-35-4	7	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE, TOTAL	540-59-0		5	ND	ND	ND	ND	-	-	ND	ND	ND	ND	-	-	-	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	0.93 J	0.93 J	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	0.49 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ1221 7/31/08	SA-PZ1221 9/2/09	SA-PZ1221 9/20/10	SA-PZ1221 3/12/11	SA-PZ1221 9/23/11	SA-PZ1221 9/12/12	SA-PZ1225 7/31/08	SA-PZ1225 9/2/09	SA-PZ1225 9/20/10	SA-PZ1225 3/12/11	SA-PZ1225 9/20/11	SA-PZ1231 9/2/09	SA-PZ1231 9/20/10	SA-PZ1231 3/12/11
Screened Interval (feet bgs)				39 - 49	39 - 49	39 - 49	39 - 49	39 - 49	39 - 49	12 - 22	12 - 22	12 - 22	12 - 22	12 - 22	70 - 80	70 - 80	70 - 80
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.59 J	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	9.7 J	ND	ND	ND	ND	ND	ND	ND	ND	54	42 J	37
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	6.9 J	6.9 J	4.9
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	-	-	ND	ND	-	-	-	-	ND	ND	-	-	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.66 J	0.7 J
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	-	-	ND	ND	ND	ND	-	ND	ND	ND	-
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	R	ND	ND	ND	ND	ND	R	ND	ND	ND	R
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.51 J
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	ND	-
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	0.51 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 4-3
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Groundwater Analytical Detections Summary
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ12311 9/20/11	SA-PZ12311 9/11/12	SA- PZ12311 1/16/08	SA- PZ12311 1/12/08	SA- PZ12311 7/31/08	SA- PZ12311 7/31/08	SA- PZ12311 7/31/08 (DUP)	SA- PZ12311 9/2/09	SA- PZ12311 11/19/09	SA- PZ12311 9/20/10	SA- PZ12311 9/20/10 (DUP)	SA- PZ12311 3/11/11	SA- PZ12311 9/20/11	SA- PZ12311 9/11/12
Screened Interval (feet bgs)				70 - 80	70 - 80	32 - 42	32 - 42	32 - 42	32 - 42	32 - 42	32 - 42	32 - 42	32 - 42	32 - 42	32 - 42	32 - 42	32 - 42
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	1.1	1 J	4 J	1	2	2	ND	ND	ND	ND	ND	9.3	22
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	37	44	55	23	63	13	13	6.3	11	ND	ND	11	85	150
1,1-DICHLOROETHYLENE	75-35-4	7	5	4.7	5.3	7	3 J	10	2	2	ND	ND	ND	ND	ND	7.8	14
1,2,3-TRICHLOROBENZENE	87-61-6		5	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	0.64 J	0.48 J	0.7 J	1 J	ND	1	1 J	ND	ND	ND	ND	ND	0.92 J	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26 J
1,2-DICHLOROBENZENE	107-06-2	5	5	ND	ND	ND	ND	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE, TOTAL	540-59-0		5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	0.6 J	0.5 J	0.6 J	0.5 J	0.5 J	ND	ND	ND	ND	ND	0.54 J	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4 J
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	0.83 J	0.86 J	0.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	1.1 J
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	3	3	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NIETHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TETRACHLOROETHENE	127-18-4		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 4-3
Southern Area
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ123S 1/16/08	SA-PZ123S 7/31/08	SA-PZ123S 9/2/09	SA-PZ123S 9/20/10	SA-PZ123S 3/11/11	SA-PZ123S 9/20/11	SA-PZ123S 9/11/12	SA-PZ124 8/5/08	SA-PZ124 9/17/09	SA-PZ124 7/21/10	SA-PZ124 9/22/10	SA-PZ124 3/15/11	SA-PZ124 3/15/11 (DUP)	SA-PZ124 9/28/11
Screened Interval (test bgs)																	
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.6	3.6 J	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3	7	5	0.5 J	0.7 J	ND	ND	ND	2.6	1.0	4	17	15	22	54	58 J	79
1,2-DICHLOROETHANE	75-35-4		5	ND	ND	ND	ND	ND	ND	ND	ND	1.7 J	2.1 J	5.2	4.7	4.8 J	6.5
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE, TOTAL	107-06-2	5	5	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	-	-	-
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		5	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	ND	ND	8	ND
BENZENE	71-43-2	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3	2.7 J	2.7 J
CHLOROFORM	67-66-3	80	5	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYL BENZENE	96-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-3	5	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
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CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
ND = Not detected above report detection limit
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* Acetone and methylene chloride were detected in some samples, but are generally considered laboratory contaminants.
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2. New York State Department of Health (NYSDOH) Drinking Water Regulations, 10 NYCRR Part 5, Subpart 5-1 as summarized on the NYSDOH website at http://www.health.ny.gov/regulations/nycr/title_10/part_5/subpart_5-1_tables.htm.

Table 4-3
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ124 9/28/11 (DUP)	SA-PZ124 5/17/12 3-6	SA-PZ124 9/21/12 3-6	SA-PZ124 9/21/12 (DUP)	SA-PZ125 8/5/08 3-6	SA-PZ125 9/17/09 3-6	SA-PZ125 7/21/10 3-6	SA-PZ125 7/21/10 (DUP)	SA-PZ125 9/22/10 3-6	SA-PZ125 3/15/11 3-6	SA-PZ125 9/28/11 3-6	SA-PZ125 5/17/12 (DUP)	SA-PZ125 9/21/12 3-6
Screened Interval (feet bgs)																
Volatile Organic Compounds (µg/L)																
1,1,1-TRICHLOROETHANE	71-55-6	200	5	2.6 J	3.6	7.8	7.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	67 J	74	130	130	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	75-35-4	7	5	5 J	6.4	13	13	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	87-61-6		5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	R	ND	0.48 J	0.65 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	R	ND	0.39 J	0.39 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHYLENE, TOTAL	540-59-0		5	-	-	ND	ND	ND	ND	ND	ND	ND	-	-	-	ND
1,3-DICHLOROBENZENE	541-73-1		5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	R	ND	0.94 J	0.94 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	2.2 J	1.6	2.2	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYL BENZENE	98-82-8		5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	0.94 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-

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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ1331 3/31/10	SA-PZ1331 7/8/10	SA-PZ1331 10/12/10	SA-PZ1331 12/15/10	SA-PZ1331 12/15/10 (DUP)	SA-PZ1331 3/8/11	SA-PZ1331 6/9/11	SA-PZ1331 6/21/11	SA-PZ1331 9/19/11	SA-PZ1331 3/31/10	SA-PZ1331 9/20/12	SA-PZ1331 3/31/10	SA-PZ1331 12/14/10	SA-PZ1335 3/8/11
Screened Interval (feet bgs)				42 - 47	42 - 47	42 - 47	42 - 47	42 - 47	42 - 47	42 - 47	42 - 47	42 - 47	39 - 44	39 - 44	41.5 - 46.5	41.5 - 46.5	41.5 - 46.5
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	-	24	14	18	17	11	9.5	10 J	4.2	5.3	0.22 J	-	12	7.3
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3	7	5	460	130	98	130	130	63	76	90 J	31	31	3.7	260	54	34
1,1-DICHLOROETHENE	75-35-4		5	-	7.8	4.9 J	6.9	6.7	3.9	4.3	4.2 J	2	2.6 J	ND	-	3.3 J	2.6
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	-	0.98 J	ND	ND	ND	0.84 J	ND	ND	0.89 J	1.5 J	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	0.91 J	ND	ND	ND	ND	ND	ND	ND	ND	0.43 J	ND	0.91 J	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	-	-	-	-	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	940-59-0		5	ND	ND	ND	ND	ND	-	-	-	-	ND	ND	ND	ND	-
1,3-DICHLOROBENZENE	541-73-1		5	0.65 J	0.7 J	ND	ND	ND	ND	ND	ND	ND	0.42 J	ND	0.38 J	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	-	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	R	R	R	ND	ND	ND	ND	ND	ND	ND	R	ND
BENZENE	71-43-2	5	5	-	ND	ND	0.35 J	ND	ND	ND	ND	ND	ND	ND	0.35 J	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	-	9.6	17	33	34	5.2	6.7	7.4 J	1.9	ND	ND	ND	5.4	1.2
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	ND	ND	ND	-	-	-	-	1.5 J	-	ND	ND	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	0.32 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 4-3
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ135 6/7/11	SA-PZ135 6/21/11	SA-PZ135 9/13/12	SA-PZ135I 8/3/11	SA-PZ135I 8/3/11	SA-PZ135I 8/4/11	SA-PZ135I 9/19/11	SA-PZ136 12/14/10	SA-PZ136 3/8/11	SA-PZ136 6/7/11	SA-PZ136 6/21/11	SA-PZ136 8/3/11	SA-PZ136 8/3/11
Screened Interval (feet bgs)				41.5 - 46.5	41.5 - 46.5	41.5 - 46.5	41.5 - 46.5	41.5 - 46.5	41.5 - 46.5	41.5 - 46.5	44 - 49	44 - 49	44 - 49	44 - 49	44 - 49	44 - 49
Volatiles Organic Compounds (µg/L)																
1,1,1-TRICHLOROETHANE	71-55-6	200	5	5.6	4.6	1.4	4.8 J	6.3	4	14	ND	ND	ND	ND	21	21 J
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	0.69 J	ND	ND	0.86 J	0.67 J	0.74 J	ND	ND	ND	0.65 J	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	35	27	6.9	26 J	31	29	53	1.5 J	1.8	ND	1.5	140	150 J
1,1-DICHLOROETHENE	75-35-4	7	5	2.8	1.9	0.68 J	1.9 J	2	1.8	3.5	ND	ND	ND	ND	10	10 J
1,2,3-TRICHLOROBENZENE	87-61-6		5	ND	ND	-	ND	ND	ND	ND	-	-	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	-	-	ND	-	-	-	-	ND	-	-	-	-	-
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	4.4 J	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND
CARBON DISULFIDE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORODIBENZENE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLORODIBROMOETHANE	75-00-3		5	1.8	2.1	ND	ND	1.3	2.8	2.8	ND	ND	ND	ND	14 J	14 J
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	-	-	-	-	-	ND	-	-	-	-	-
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	26.7 J	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	927	-	-	-	-	-	-	-	-	-	-	-

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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ136 8/4/11	SA-PZ137 3/31/10	SA-PZ137 6/8/11	SA-PZ13811 7/6/10	SA-PZ13811 10/12/10	SA-PZ13811 12/15/10	SA-PZ13811 3/8/11	SA-PZ13811 6/21/11	SA-PZ13811 6/21/11 (DUP)	SA-PZ13811 2/21/11	SA-PZ13811 9/20/12	SA-PZ139 4/1/10	SA-PZ139 7/8/10	SA-PZ139 10/12/10
Screened Interval (feet bgs)																	
Volatile Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	23	ND	ND	220	170 J	260	340	320	300	150	43 J	35	23 J	0.92 J
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	130	ND	1.2	980	970	1100	1200	1500	1500	690	260	160 J	17	7.6
1,1-DICHLOROETHANE	75-35-4	7	5	8.6	ND	ND	65	60 J	63	86	100	85	47	14 J	11	0.94 J	ND
1,2,3-TRICHLOROBENZENE	87-61-6		5	ND	-	ND	-	-	-	-	-	-	-	-	-	-	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	5.7 J	14 J	ND	9.9	ND	ND	2.9	0.49 J	0.84 J	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	6.4 J	6.3 J	ND	3.7	ND	ND	2.4	0.64 J	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	0.91 J	ND	1	-	-	0.54 J	ND	ND	ND	ND
1,2-DICHLOROETHANE, TOTAL	940-59-0		5	-	ND	-	ND	1 J	ND	-	-	-	-	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	3.1 J	4 J	ND	1.6	ND	ND	1.4	ND	0.89 J	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	13 J	16 J	ND	7.2	ND	ND	5.8	0.89 J	0.41 J	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	R	R	ND	ND	ND	ND	ND	ND	ND	R
BENZENE	71-43-2	5	5	ND	ND	ND	3.4 J	4.4 J	ND	2.6	ND	ND	1.3	ND	0.35 J	ND	ND
CARBON DISULFIDE	75-13-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	12	ND	ND	210	230	320	240	250	280	150	54 J	22 J	1.8 J	ND
CHLOROPHM	67-66-3	80		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	0.84 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70		ND	ND	ND	ND	1 J	ND	ND	ND	ND	0.44 J	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	6.5 J	11 J	8.3 J	8.2	ND	ND	2	0.61 J	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	ND	-	ND	ND	ND	-	-	-	-	-	-	-	ND
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	0.88 J	ND	0.97 J	ND	ND	0.49 J	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
bgs = Below ground surface
CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
ND = Not detected above report detection limit
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* Acetone and methylene chloride were detected in some samples, but are generally considered laboratory contaminants.
¹ National Primary Drinking Water Regulations, 40 CFR Part 141, as summarized on the USEPA website at <http://water.epa.gov/drink/contaminants/index.cfm>.
² New York State Department of Health (NYSDOH) Drinking Water Regulations, 10 NYCRR Part 5, Subpart 5-1 as summarized on the NYSDOH website at http://www.health.ny.gov/regulations/hycrr/title_10/part_5/subpart_5-1_tables.htm.

Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	Screened Interval (feet bgs)	SA-PZ139 12/15/10	SA-PZ139 3/8/11	SA-PZ139 6/10/11	SA-PZ139 6/20/11	SA-PZ139 9/20/11	SA-PZ139 6/30/10	SA-PZ140 9/21/10	SA-PZ140 3/12/11	SA-PZ140 9/21/11	SA-PZ140 9/11/12	SA-PZ142 6/29/10	SA-PZ142 3/12/11	SA-PZ142 3/12/11 (DUP)
Volatiles Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	1.3 J	ND	ND	ND	ND	0.86 J	17	9	10 J	4.8	8.4	60	40 J	35
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	9.2	6.5	5.9 J	ND	4.6	11	140	93	100 J	41	69	410	200	210
1,1-DICHLOROETHENE	75-35-4	7	5	ND	ND	ND	ND	ND	0.43 J	8.5	6.7	7.8 J	3.1	5.1	21	17 J	15
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	-	ND	ND	ND	-	ND	1.9 J	1.4 J	1	0.83 J	ND	1.7 J	1.5
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	ND	ND	0.64 J	0.47 J	ND	ND	ND	0.88 J	0.79 J
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE, TOTAL	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.55 J	ND	ND
1,2-DICHLOROETHANE	540-59-0		5	ND	-	-	-	-	ND	ND	ND	ND	-	ND	ND	-	-
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	1.2 J	0.62 J	0.51	ND	ND	ND	0.63 J	0.62 J
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	4.1 J	2.3 J	2.1 J	1.3	0.89 J	0.57 J	1.5 J	2.8
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	2.1 J	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	R	ND	ND	ND	ND	ND	ND	ND	ND	R	ND	ND	R	R
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.42 J	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	19	14	15 J	5.7	6.8	36	28 J	27
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	0.64 J	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	-	-	-	-	-	ND	ND	ND	-	-	ND	-	-
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	0.6 J	ND	ND	ND	ND	1.7 J	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	40.7 J	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ142 9/21/11 40.5 - 45.5	SA-PZ142 9/11/12 40.5 - 45.5	SA-PZ143 6/29/10 41 - 46	SA-PZ143 9/20/10 41 - 46	SA-PZ143 3/12/11 41 - 46	SA-PZ143 9/11/12 41 - 46	SA-PZ144 6/29/10 45 - 50	SA-PZ144 3/11/11 45 - 50	SA-PZ144 9/11/11 (DUP) 45 - 50	SA-PZ144 9/12/12 45 - 50	SA-PZ144S 6/29/10 5 - 15	SA-PZ144S 3/11/11 5 - 15	SA-PZ144S 9/22/11 5 - 15
Screened Interval (feet bgs)																
Volatile Organic Compounds (µg/L)																
1,1,1-TRICHLOROETHANE	71-55-6	200	5	37	66 J	110	110 J	62	66	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3	7	5	100	290	590	600 J	390	430	3.7 J	4.4	4.2	4.6	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	9.4	28 J	39	52 J	30	35	0.6 J	0.6 J	0.52 J	0.8 J	ND	ND	ND
1,2,3-TRICHLOROBENZENE	87-61-6		5	0.8 J	-	-	-	0.94 J	-	ND	ND	ND	-	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	2.3	0.59 J	ND	7.1 J	3	3.2	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1		5	0.62 J	0.81 J	1.6 J	ND	0.66 J	1.1	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2		5	-	ND	0.83 J	ND	0.7 J	ND	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	0.68 J	0.69 J	ND	ND	0.51 J	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	2	3.3 J	3.1 J	ND	1.3	2.4	ND	ND	ND	0.30 J	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	0.36 J	0.87 J	ND	0.55 J	0.59 J	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	7.8	48 J	44	ND	47	36	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.48 J	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	0.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	0.56 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	ND	ND	-	-	ND	-	-	-	ND	-	-
TETRACHLOROETHENE	127-18-4		5	ND	ND	ND	ND	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	2.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	0.29 J	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	2.4 J	ND	ND	0.51 J	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-86-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ²	NYSDOH MCLs ²	SA-PZ1455 9/21/10	SA-PZ1455 3/9/11	SA-PZ1455 9/27/11	SA-PZ147 7/21/10	SA-PZ147 9/22/10	SA-PZ147 3/15/11	SA-PZ147 9/28/11	SA-PZ147 5/17/12	SA-PZ147 9/21/12	SA-PZ148 7/21/10	SA-PZ148 9/22/10	SA-PZ148 9/22/10 (DUP)	SA-PZ148 3/15/11	SA-PZ148 9/28/11
Screened Interval (test bgs)				5-15	5-15	5-15	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	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	0.77 J	ND	ND	ND	ND	ND	ND	R
1,1-DICHLOROETHANE	75-34-3		5	ND	ND	ND	ND	4.4 J	17	0.77 J	ND	12	ND	ND	ND	ND	R
1,1-DICHLOROETHANE	75-35-4	7	5	ND	ND	ND	ND	ND	3	R	0.84 J	ND	ND	ND	ND	ND	R
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	ND	ND	-	-	ND	R	-	-	-	-	-	ND	R
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	0.87 J	R	ND	ND	ND	ND	ND	ND	R
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
1,2-DICHLOROETHANE, TOTAL	550-59-0		5	ND	-	-	ND	ND	-	-	ND	ND	ND	ND	ND	-	-
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
CHLOROMETHANE	74-87-3		5	ND	0.62 J	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
ISOPROPYL BENZENE	96-82-8		5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
NAPHTHALENE	91-20-3		50	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	-
TETRACHLOROETHENE	127-18-4		5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	1 J	ND	ND	ND	ND	ND	ND	1 J
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND	R
Metals (µg/L)																	
ARSENIC	7440-38-2		10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ148 5/17/12	SA-PZ148 9/21/12	SA-PZ148 7/8/10	SA-PZ14911 10/12/10	SA-PZ14911 12/15/10	SA-PZ14911 3/8/11	SA-PZ14911 6/20/11	SA-PZ14911 9/13/12	SA-PZ1571 7/8/10	SA-PZ1571 10/11/10	SA-PZ1571 12/14/10	SA-PZ1571 3/7/11	SA-PZ1571 5/9/11	SA-PZ1571 6/21/11
Screened Interval (feet bgs)				3 - 6	3 - 6	32 - 37	32 - 37	32 - 37	32 - 37	32 - 37	32 - 37	41 - 46	41 - 46	41 - 46	41 - 46	41 - 46	41 - 46
Volatiles Organic Compounds (µg/L)																	
1,1,1-TRICHLOROETHANE	71-55-6	200	5	ND	ND	6.6	ND	ND	ND	ND	84	46	15	17	21	31.3	9.7
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7 J
1,1-DICHLOROETHANE	75-34-3		5	18	ND	40	3.6 J	6.7	18	12.3	570	180	65	75	71	280 J	45
1,1-DICHLOROETHYLENE	75-35-4	7	5	1	ND	2.6 J	ND	0.82 J	1.7	1.3 J	36	13	4.2 J	4.1 J	5.2	17.3	3.4
1,2,3-TRICHLOROBENZENE	87-81-6		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7 J	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	ND	1.9	ND	3.7	ND	ND	ND	ND	ND	0.85 J
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	1.6 J	1.2 J	3.3	7.8	3.2 J	3.2	ND	ND	ND	ND	1.9 J	ND
1,2-DICHLOROBENZENE, TOTAL	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	ND	ND	0.51 J	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	1.1 J	1.1	2.7 J	6	2.5 J	2.2	ND	ND	ND	ND	1.4 J	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	5.4	4.7 J	13	28	12.3	11	ND	ND	ND	ND	6.6 J	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	ND	1.4	0.43 J	ND	ND	ND	1.7 J	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	9.8	ND	10	18	14.3	180	24	5.7	7.6	3.3	200 J	3.4 J
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	0.51 J	ND	ND	ND	ND	0.62 J	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	0.38 J	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	0.42 J	ND	0.39 J	1.8	ND	4.4	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																	
ARSENIC	7440-38-2		10											2.97 J			ND
IRON	7439-89-6		300							112		275	460 J	10600	3090 J		978
MANGANESE	7439-96-5		300							1630		293	889	1400	533		1050

Notes:

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CAS = Chemical Abstracts Service
MCL = Maximum contaminant level
ND = Not detected above report detection limit
NC = No criteria
J = Estimated value

R = rejected value not reported

µg/L = Micrograms per liter

Bold = Indicates exceedance of an MCL

(n/phen) = Indicates Not Analyzed

* Acetone and methylene chloride were detected in some samples, but are generally considered laboratory contaminants.

¹ National Primary Drinking Water Regulations, 40 CFR Part 141, as summarized on the USEPA website at <http://water.epa.gov/drink/contaminants/index.cfm>.

² New York State Department of Health (NYSDOH) Drinking Water Regulations, 10 NYCRR Part 5, Subpart 5-1 as summarized on the NYSDOH website at http://www.health.ny.gov/regulations/nyocr/title_10/part_5/subpart_5-1_tables.htm.

Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ1571 9/19/12	SA-PZ1571 7/7/10	SA-PZ1571 10/11/10	SA-PZ1571 12/14/10	SA-PZ1571 3/7/11	SA-PZ1571 5/9/11	SA-PZ1571 6/21/11	SA-PZ1571 9/21/11	SA-PZ1571 9/19/12	SA-PZ1601 7/7/10	SA-PZ1601 10/12/10	SA-PZ1601 12/16/10	SA-PZ1601 3/8/11
Screened Interval (feet bgs)				41 - 46	33 - 38	33 - 38	33 - 38	33 - 38	33 - 38	33 - 38	33 - 38	33 - 38	41 - 46	41 - 46	41 - 46	41 - 46
Volatile Organic Compounds (µg/L)																
1,1,1-TRICHLOROETHANE	71-55-6	200	5	4.5	73	48 J	20	21	16 J	23	46	130 J	53	37	41	30 J
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	28	340	220	100	190	140	280	540	550	210 J	150 J	160	130
1-DICHLOROETHENE	75-35-4	7	5	1.6	23	17 J	7.6	14 J	13 J	19	25	40 J	17	11	11	9.3 J
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	-	-	-	-	2.7 J	ND	3.4	-	-	-	-	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	9.4 J	8.6 J	6.3 J	9.6	4.4 J	1.9 J	ND	ND	0.63 J
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	2.3 J	2.1 J	2.2 J	9.8 J	7.4 J	5.9	4.6 J	ND	ND	ND	ND
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	0.57 J	0.55 J	ND	ND	ND	ND
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	-	-	-	0.47 J	ND	ND	ND	-
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	1.3 J	1.4 J	5.6 J	7.3 J	5.9 J	4.5	4.1 J	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	0.37 J	ND	6.1 J	7.3	7.4	37 J	26	19	16 J	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	8.1 J	7.3 J	7.3 J	ND	ND	ND	ND	ND	R	22 J	7 J
BENZENE	71-42-2	5	5	ND	0.84 J	ND	ND	1.7 J	1.9 J	ND	2.1	1.0 J	0.48 J	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	2.2 J	57	57 J	49	160	130	200	430	270	26	13 J	21	11 J
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	0.59 J	0.96 J	ND	1.1	0.47 J	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	0.75 J	1.2 J	ND	ND	ND	ND
ISOPROPYL BENZENE	96-82-8		5	ND	ND	ND	ND	1.7 J	3 J	ND	ND	1.8 J	ND	ND	ND	ND
METHYLENE CHLORIDE	75-08-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	ND	ND	ND	ND	-	ND	ND	ND	4.5 J	ND	ND	ND
TETRACHLOROETHENE	127-18-4		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	0.58 J	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	0.73 J	0.34 J	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)																
ARSENIC	7440-38-2		10	ND	-	-	5.32 J	3.63 J	-	ND	-	1.6 J	-	-	7.42 J	-
IRON	7439-89-6		300	519	93.4 J	82.4 J	2610	2580	-	776	-	207	1520	387 J	3340	8060 J
MANGANESE	7439-96-5		300	325	4430	5710	5540	5510	-	5200	-	5200	571	516	662	1070

Notes:
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R = rejected value not reported
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* Acetone and methylene chloride were detected in some samples, but are generally considered laboratory contaminants.
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2 New York State Department of Health (NYSDOH) Drinking Water Regulations, 10 NYCRR Part 5, Subpart 5-1 as summarized on the NYSDOH website at http://www.health.ny.gov/regulations/nycrr/title_10/part_5/subpart_5-1_tables.htm.

Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWIIRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ1601 6/21/11	SA-PZ1601 7/6/10	SA-PZ1601 10/12/10	SA-PZ1601 12/13/10	SA-PZ1601 3/8/11	SA-PZ1601 6/21/11	SA-PZ1611 7/7/10	SA-PZ1611 10/12/10	SA-PZ1611 12/14/10	SA-PZ1611 3/8/11	SA-PZ1611 6/21/11	SA-PZ1611 9/19/11
Screened Interval (feet bgs)				41 - 46	41 - 46	41 - 46	41 - 46	41 - 46	41 - 46	41 - 46	41 - 46	41 - 46	41 - 46	41 - 46	41 - 46
Volatiles Organic Compounds (ug/L)															
1,1,1-TRICHLOROETHANE	71-55-6	200	5	14	43	40 J	39	47	16	100	18	16	26	30	6.6
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	85	250	200	180	210	190	530	110	97	140	290 J	88
1,1-DICHLOROETHYLENE	75-35-4	7	5	4.8	17	15 J	13	17	13	31	6.9	5.9	10	13 J	5.6
1,2,3-TRICHLOROBENZENE	87-61-6		5	ND	-	-	-	-	ND	-	-	-	-	-	ND
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	ND	ND	2.7	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	2.2	5.2 J	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE, TOTAL	107-06-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	540-59-0		5	-	ND	ND	ND	-	-	ND	ND	ND	-	-	-
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	ND	ND	ND	5.2	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	1.5 J	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	0.5 J	0.5 J	R	0.82 J	ND	ND	R	R	ND	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	75-10-3		5	6	34	42 J	33	55	140	51	9.5	8	9.5	11	8.2
CHLOROFORM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	ND	ND	ND	-	-	ND	ND	ND	-	-	-
TETRACHLOROETHENE	127-18-4	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	ND	ND	ND	ND	0.4 J	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5		5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (ug/L)															
ARSENIC	7440-38-2		10	19.4	-	-	-	-	-	-	-	-	-	-	-
IRON	7439-89-6		300	11800	-	-	-	-	2300	-	-	-	-	11800	-
MANGANESE	7439-96-5		300	660	-	-	-	-	3900	-	-	-	-	2770	-

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* Acetone and methylene chloride were detected in some samples, but are generally considered laboratory contaminants.

¹ National Primary Drinking Water Regulations, 40 CFR Part 141, as summarized on the USEPA website at <http://water.epa.gov/drink/contaminants/index.cfm>.
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Table 4-3
Southern Area
Groundwater Analytical Detections Summary
NWRP Calverton, New York
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Chemical	CAS No.	Federal MCLs ¹	NYSDOH MCLs ²	SA-PZ1611 9/19/12	SA-PZ1611 9/19/12 (DUP)	SA-PZ1631 9/19/12	SA-PZ1661 9/17/10	SA-PZ1661 9/12/12	SA-PZ1711 2/20/12	SA-PZ1711 9/11/12	SA-PZ1721 2/20/12	SA-PZ1721 9/11/12
Screened Interval (feet bgs)				41 - 46	41 - 46	32 - 42	60 - 80	60 - 80	41.5 - 46.5	41.5 - 46.5	43.5 - 48.5	43.5 - 48.5
Volatile Organic Compounds (µg/L)												
1,1,1-TRICHLOROETHANE	71-55-6	200	5	2.0	2.0	1.3	ND	ND	48	66	28	22 J
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3		5	26	27	26	ND	ND	390	470	230	190
1,1-DICHLOROETHENE	75-35-4	7	5	1.7	1.8	1.7	ND	ND	27	40	17	16 J
1,2,3-TRICHLOROBENZENE	87-61-6		5	-	-	-	-	-	1.4	-	0.78 J	-
1,2,4-TRICHLOROBENZENE	120-82-1		5	ND	ND	0.41 J	ND	ND	4	2.9	2.3	0.67 J
1,2-DICHLOROBENZENE	95-50-1	600	5	ND	ND	ND	ND	ND	1.3	0.88 J	0.72 J	0.64 J
1,2-DICHLOROETHANE	107-06-2	5	5	ND	ND	ND	ND	ND	-	0.28 J	-	0.22 J
1,2-DICHLOROETHENE, TOTAL	540-59-0		5	ND	ND	ND	ND	ND	0.66 J	0.32 J	0.51 J	0.71 J
1,3-DICHLOROBENZENE	541-73-1		5	ND	ND	ND	ND	ND	2.9	1.6	2	3.5 J
1,4-DICHLOROBENZENE	106-46-7	75	5	ND	0.26 J	0.28 J	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	591-78-6		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	67-64-1		50	2.2 J	ND	ND	ND	ND	ND	ND	ND	ND
BENZENE	71-43-2	5	5	ND	ND	ND	ND	ND	ND	0.48 J	ND	ND
CARBON DISULFIDE	75-15-0		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3		5	ND	ND	ND	ND	ND	25	37	24	29 J
CHLOROPYRIM	67-66-3	80	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	74-87-3		5	ND	ND	ND	ND	ND	0.54 J	ND	0.5 J	ND
CIS-1,2-DICHLOROETHENE	156-59-2	70	5	ND	ND	ND	ND	ND	ND	0.28 J	ND	0.22 J
CYCLOHEXANE	110-82-7		50	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	98-82-8		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	5	ND	ND	2.7 J	ND	ND	ND	ND	ND	ND
NAPHTHALENE	91-20-3		50	-	-	-	-	-	-	-	-	-
TETRACHLOROETHENE	117-18-4		5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	1000	5	ND	ND	ND	0.64 J	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	156-60-5	100	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	75-01-4	2	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (µg/L)												
ARSENIC	7440-38-2		10	22.2	22.2	-	-	-	-	-	-	-
IRON	7439-89-6		300	9630	9770	-	-	-	-	-	-	-
MANGANESE	7439-96-5		300	1410	1420	-	-	-	-	-	-	-

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Table 4-4
Southern Area
Surface Water Analytical Detections Summary
NWIRP Calverton, New York
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Chemical	CAS No.	NYSDEC Class A AWQS Values ^{1,2}	NYSDEC Class C AWQS Values ^{1,2}	ORNL Surface Water Values ³	SA-SW124 8/5/08	SA-SW124 3/24/09	SA-SW124 9/17/09	SA-SW124 7/21/10	SA-SW124 9/22/10	SA-SW124 9/22/10 (DUP)	SA-SW124 3/15/11	SA-SW124 3/15/11 (DUP)	SA-SW124 9/28/11	SA-SW124 5/17/12	SA-SW124 9/21/12	SA-SW124 9/21/12 (DUP)
Volatile Organic Compounds (µg/L)																
1,1,1-TRICHLOROETHANE	71-55-6	5		11	ND	ND	ND	ND	ND	ND	ND	ND	R	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3	5		47	ND	ND	ND	ND	0.46 J	0.56 J	0.61 J	0.76 J	1.8 J	1.1	1.8	1.7
1,1-DICHLOROETHENE	75-35-4	0.7 ⁴		25	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1	5	5	110	ND	4.9 J	ND	ND	ND	ND	ND	ND	R	ND	ND	ND
ACETONE*	67-64-1	50 ⁴		1500	4 J	ND	ND	ND	ND	3.5 J	R	R	R	ND	3.0 J	3.4 J
METHYLENE CHLORIDE	75-09-2	5	200	2200	ND	0.88 J	ND	ND	ND	ND	ND	ND	R	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	40	47	ND	ND	ND	ND	ND	ND	ND	ND	6.2 J	ND	ND	ND

Notes:

- AWQS = Ambient Water Quality Standards
 bgs = Below ground surface
 CAS = Chemical Abstracts Service
 MCL = Maximum contaminant level
 ND = Not detected above report detection limit
 NC = No criteria
 J = Estimated value
 R = Rejected value not reported
 µg/L = Micrograms per liter
Bold = Indicates exceedance of an MCL
 - (hyphen) = Indicates Not Analyzed
 ORNL = Oak Ridge National Laboratory
 NYSDEC = New York State Department of Environmental Conservation
 * Acetone was detected in some samples, but is generally considered a laboratory contaminant.
¹ NYSDEC Technical and Operational Guidance Series 1.1.1 - Ambient Water Quality Standards and Effluent Limitations, June 1998 Issue (NYSDEC 1998, as amended January 1999).
http://www.dec.ny.gov/docs/water_pdf/err111.pdf
² The Peconic River is classified as a Class C water body in the study area (Title 6, New York Codes, Rules and Regulations Part 921); Class A water supply standards are provided for context since Class C standards do not exist for all contaminants.
³ ORNL Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota, 1996 Revision (Suter, G.W. and C.L. Tsao 1996). Table 1, Secondary Chronic Values.
⁴ Denotes NYSDEC has not promulgated a standard, but has provided a guidance value; exceedances of non-statutory guidance values are not bolded.

Table 4-4
Southern Area
Surface Water Analytical Detections Summary
NWIRP Calverton, New York
Page 2 of 4

Chemical	CAS No.	NYSDEC Class A AWQS Values ^{1,2}	NYSDEC Class C AWQS Values ^{1,2}	ORNL Surface Water Values ³	SA-SW125 8/5/08	SA-SW125 3/24/09 (DUP)	SA-SW125 9/17/09	SA-SW125 7/21/10	SA-SW125 9/22/10	SA-SW125 3/15/11	SA-SW125 9/28/11	SA-SW125 5/17/12	SA-SW125 9/21/12	SA-SW201 8/5/08	SA-SW201 8/5/08 (DUP)
Volatile Organic Compounds (µg/L)															
1,1,1-TRICHLOROETHANE	71-55-6	5		11	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-34-3	5		47	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND
1,1-DICHLOROETHENE	75-35-4	0.7 ⁴		25	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1	5	5	110	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND
ACETONE*	67-64-1	50 ⁴		1500	4.1	ND	ND	ND	ND	R	R	ND	ND	2.1	3.1
METHYLENE CHLORIDE	75-09-2	5	200	2200	ND	1.1	1.3.1	ND	ND	ND	R	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	40	47	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND

Notes:

AWQS = Ambient Water Quality Standards

bgs = Below ground surface

CAS = Chemical Abstracts Service

MCL = Maximum contaminant level

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Bold = Indicates exceedance of an MCL

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ORNL = Oak Ridge National Laboratory

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* Acetone was detected in some samples, but is generally considered a laboratory contaminant.

¹ NYSDEC Technical and Operational Guidance Series 1.1.1 - Ambient Water Quality Standards and Effluent Limitations, June 1998 Issue

(NYSDEC 1998, as amended January 1999).

http://www.dec.ny.gov/docs/water_pdf/togs111.pdf

http://www.dec.ny.gov/docs/water_pdf/err111.pdf

² The Peconic River is classified as a Class C water body in the study area (Title 6, New York Codes, Rules and Regulations Part 921); Class A

water supply standards are provided for context since Class C standards do not exist for all contaminants.

³ ORNL Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota, 1996 Revision (Suter, G.W.

and C.L. Tsao 1996); Table 1, Secondary Chronic Values.

<http://www.esd.onr.gov/programs/ecorisk/documents/tm96r2.pdf>

⁴ Denotes NYSDEC has not promulgated a standard, but has provided a guidance value; exceedances of non-statutory guidance values are not

bolded.

Table 4-4
Southern Area
Surface Water Analytical Detections Summary
NWIRP Calverton, New York
Page 3 of 4

Chemical	CAS No.	NYSDEC Class A AWQS Values ^{1,2}	NYSDEC Class C AWQS Values ^{1,2}	ORNL Surface Water Values ³	SA-SW201 3/24/09	SA-SW201 9/17/09	SA-SW201 9/17/09 (DUP)	SA-SW201 7/21/10	SA-SW201 7/21/10 (DUP)	SA-SW201 9/22/10	SA-SW201 3/15/11	SA-SW201 9/28/11	SA-SW201 9/28/11 (DUP)	SA-SW201 5/17/12 (DUP)	SA-SW201 9/21/12
Volatile Organic Compounds (µg/L)															
1,1,1-TRICHLOROETHANE	71-55-6	5		11	ND	ND	ND	ND	ND	ND	ND	R	0.84 J	ND	ND
1,1,1-DICHLOROETHANE	75-34-3	5		47	ND	ND	ND	ND	ND	ND	ND	R	R	ND	ND
1,1,2-DICHLOROETHANE	75-35-4	0.7 ⁴		25	ND	ND	ND	ND	ND	ND	ND	R	R	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1	5	5	110	ND	ND	ND	ND	ND	ND	ND	R	R	ND	ND
ACETONE*	67-64-1	50 ⁴		1500	ND	ND	ND	ND	ND	4.2 J	R	R	R	ND	3.4 J
METHYLENE CHLORIDE	75-09-2	5	200	2200	1 J	ND	ND	ND	ND	ND	ND	R	R	ND	ND
TRICHLOROETHENE	79-01-6	5	40	47	ND	ND	ND	ND	ND	ND	ND	R	R	ND	ND

Notes:

AWQS = Ambient Water Quality Standards
 bgs = Below ground surface
 CAS = Chemical Abstracts Service
 MCL = Maximum contaminant level
 ND = Not detected above report detection limit
 NC = No criteria
 J = Estimated value

R = Rejected value not reported
 µg/L = Micrograms per liter

Bold = Indicates exceedance of an MCL
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 ORNL = Oak Ridge National Laboratory

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* Acetone was detected in some samples, but is generally considered a laboratory contaminant.

¹ NYSDEC Technical and Operational Guidance Series 1.1.1 - Ambient Water Quality Standards and Effluent Limitations, June 1998 Issue (NYSDEC 1998, as amended January 1999).

² http://www.dec.ny.gov/docs/water_pdf/err111.pdf

³ The Pecos River is classified as a Class C water body in the study area (Title 6, New York Codes, Rules and Regulations Part 921); Class A water supply standards are provided for context since Class C standards do not exist for all contaminants.

⁴ ORNL Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota, 1996 Revision (Suter, G.W. and C.L. Tsao 1996), Table 1, Secondary Chronic Values.

⁵ <http://www.esd.ornl.gov/programs/ecorisk/documents/tm962.pdf>
⁶ Denotes NYSDEC has not promulgated a standard, but has provided a guidance value; exceedances of non-statutory guidance values are not bolded.

Table 4-4
Southern Area
Surface Water Analytical Detections Summary
NWIRP Calverton, New York
Page 4 of 4

Chemical	CAS No.	NYSDEC Class A AWQS Values ^{1,2}	NYSDEC Class C AWQS Values ^{1,2}	ORNL Surface Water Values ³	SA-SW204 8/5/08	SA-SW204 8/5/08 (DJP)	SA-SW204 3/24/09	SA-SW204 9/17/09	SA-SW204 7/21/10	SA-SW204 9/22/10	SA-SW204 9/28/11	SA-SW204 5/17/12	SA-SW204 9/21/12
Volatile Organic Compounds (µg/L)													
1,1,1-TRICHLOROETHANE	71-55-6	5		11	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	75-35-3	5		47	ND	ND	ND	ND	ND	ND	ND	0.57 J	ND
1,1-DICHLOROETHENE	75-35-4	0.7 ⁴		25	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-92-1	5	5	110	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE*	67-64-1	50 ⁴		1500	4 J	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	5	200	2200	ND	ND	1.9 J	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	79-01-6	5	40	47	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

AWQS = Ambient Water Quality Standards

bgs = Below ground surface

CAS = Chemical Abstracts Service

MCL = Maximum Contaminant Level

ND = Not detected above report detection limit

NC = No criteria

J = Estimated value

R = Rejected value not reported

µg/L = Micrograms per liter

Bold = Indicates exceedance of an MCL

- (hyphen) = Indicates Not Analyzed

ORNL = Oak Ridge National Laboratory

NYSDEC = New York State Department of Environmental Conservation

* Acetone was detected in some samples, but is generally considered a laboratory contaminant.

¹ NYSDEC Technical and Operational Guidance Series 1.1.1 - Ambient Water Quality Standards and Effluent Limitations, June 1998 Issue

(NYSDEC 1998, as amended January 1999).

http://www.dec.ny.gov/docs/water_pdf/rogs111.pdf

² The Peconic River is classified as a Class C water body in the study area (Title 6, New York Codes, Rules and Regulations Part 921); Class A

water supply standards are provided for context since Class C standards do not exist for all contaminants.

³ ORNL Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota, 1996 Revision (Suter, G.W.

and C.L. Tsao 1996); Table 1, Secondary Chronic Values.

⁴ <http://www.esd.onr.gov/programs/ecorisk/documents/tm962.pdf>

Denotes NYSDEC has not promulgated a standard, but has provided a guidance value; exceedances of non-statutory guidance values are not

bolded.

Table 4-5
Southern Area
Sediment Analytical Detections Summary
NWIRP Calverton, New York
Page 1 of 3

Chemical	CAS No.	NYSDEC Unrestricted SCOs ¹	NYSDEC Technical Guidance ²	ORNL ³	SA-SD124 8/5/08	SA-SD124 3/24/09	SA-SD124 9/17/09	SA-SD124 9/22/10	SA-SD124 3/15/11 (DUP)	SA-SD124 9/28/11	SA-SD124 5/17/12	SA-SD124 9/21/12 (DUP)	SA-SD125 8/5/08	SA-SD125 3/24/09
Volatile Organic Compounds (µg/kg)														
1,1-DICHLOROETHANE	75-34-3	270	910	27	ND	7.5	ND	7.6 J	ND	ND	20	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-92-1			9600	ND	ND	ND	9.7 J	ND	3.3 J	ND	ND	ND	ND
2-BUTANONE	78-93-3	120		270	ND	-	ND	23 J	ND	ND	ND	ND	ND	ND
ACETONE*	67-64-1	50		8.7	35	ND	310 J	130 J	46	7.8 J	150	11 J	65	360 J
CHLOROETHANE	75-00-3				ND	-	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	50		370	ND	ND	ND	ND	3.5 J	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	1300	8	410	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	106-88-3	700	490	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Physical Parameters (%)														
TOTAL SOLIDS														
CARBON, TOTAL ORGANIC	7440-44-0				70	-	-	-	-	-	-	78	55	-
												0.16	-	-

Notes:

CAS = Chemical Abstracts Service

MCL = Maximum contaminant level

ND = Not detected above report detection limit

NC = No criteria

J = Estimated value

R = rejected value not reported

µg/Kg = Micrograms per kilogram

Bold = Indicates exceedance of an MCL

- (hyphen) = Indicates Not Analyzed

ORNL = Oak Ridge National Laboratory

NYSDEC = New York State Department of Environmental Conservation

* Acetone was detected in some samples, but is generally considered a laboratory contaminant.

¹ NYSDEC Remedial Program Soil Cleanup Objectives, Table 375-6.8(c) (Title 6 New York Codes, Rules and Regulations, Part 375-6).

² <http://www.dec.ny.gov/regs/15507.html>

³ NYSDEC Technical Guidance for Screening Contaminated Sediment (NYSDEC 1999), Table 1, assuming 1 percent total organic carbon.

⁴ http://www.dec.ny.gov/docs/wildlife_pdf/ssedoc.pdf

⁵ ORNL Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Sediment-Associated Biota, 1997 Revision (Jones, D.S., G.W. Suter and R.N. Hull 1997); Table 3, Secondary Chronic Values.

<http://www.esd.ornl.gov/programs/ecorisk/documents/tm95f4.pdf>

Table 4-5
Southern Area
Sediment Analytical Detections Summary
NWIRP Calverton, New York
Page 2 of 3

Chemical	CAS No.	NYSDEC Unrestricted SCOs ¹	NYSDEC Technical Guidance ²	ORNL ³	SA-SD125 3/24/09 (DUP)	SA-SD125 9/17/09	SA-SD125 9/22/10	SA-SD125 3/15/11	SA-SD125 9/28/11	SA-SD125 5/17/12	SA-SD125 9/21/12	SA-SD201 8/5/08	SA-SD201 3/24/09	SA-SD201 9/17/09	SA-SD201 9/17/09 (DUP)	SA-SD201 9/22/10	SA-SD201 3/15/11
Volatiles Organic Compounds (µg/kg)																	
1,1-DICHLOROETHANE	75-34-3	270	910	27	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1			9600	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3	120		270	-	ND	ND	ND	ND	ND	R	ND	-	ND	ND	ND	ND
ACETONE*	67-64-1	50		8.7	400 J	ND	ND	ND	ND	110	160 J	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3				-	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	50		370	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	2 J
TETRACHLOROETHENE	127-18-4	1300	8	410	ND	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	700	490	50	39 J	ND	ND	ND	ND	ND	R	ND	ND	ND	ND	ND	ND
Physical Parameters (%)																	
TOTAL SOLIDS					-	-	-	-	-	-	8.9	77	-	-	-	-	-
CARBON, TOTAL ORGANIC	7440-44-0				-	-	-	-	-	-	27 J	-	-	-	-	-	-

Notes:

CAS = Chemical Abstracts Service

MCL = Maximum contaminant level

ND = Not detected above report detection limit

NC = No criteria

J = Estimated value

R = rejected value not reported

µg/Kg = Micrograms per Kilogram

Bold = Indicates exceedance of an MCL

- (hyphen) = Indicates Not Analyzed

ORNL = Oak Ridge National Laboratory

NYSDEC = New York State Department of Environmental Conservation

* Acetone was detected in some samples, but is generally considered a laboratory contaminant.

¹ NYSDEC Remedial Program Soil Cleanup Objectives, Table 375-6.8(a) (Title 6 New York Codes, Rules and Regulations, Part 375-6).

² <http://www.dec.ny.gov/regs/15507.html>

³ NYSDEC Technical Guidance for Screening Contaminated Sediment (NYSDEC 1999), Table 1, assuming 1 percent total organic carbon.

http://www.dec.ny.gov/docs/wildlife_pdf/seddoc.pdf

⁴ ORNL Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Sediment-Associated Biota, 1997 Revision (Jones, D.S., G.W. Suter and R.N. Hull 1997); Table 3. Secondary Chronic Values.

<http://www.esd.ornl.gov/programs/ecorisk/documents/tm954.pdf>

Table 4-5
Southern Area
Sediment Analytical Detections Summary
NWIRP Calverton, New York
Page 3 of 3

Chemical	CAS No.	NYSDEC Unrestricted SCOs ¹	NYSDEC Technical Guidance ²	ORNL ³	SA-SD201 9/28/11	SA-SD201 9/28/11 (DUP)	SA-SD201 5/17/12	SA-SD201 5/17/12 (DUP)	SA-SD201 5/17/12 (DUP)	SA-SD204 8/5/08	SA-SD204 3/24/09	SA-SD204 9/17/09	SA-SD204 9/22/10	SA-SD204 3/15/11	SA-SD204 9/28/11	SA-SD204 5/17/12	SA-SD204 9/21/12
Volatile Organic Compounds (µg/Kg)																	
1,1-DICHLOROETHANE	75-34-3	270	910	27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	120-82-1			9600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-BUTANONE	78-93-3	120		270	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND
ACETONE*	67-64-1	50		8.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	75-00-3				ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	75-09-2	50		370	2.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	127-18-4	1300	8	410	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	108-88-3	700	450	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Physical Parameters (%)																	
TOTAL SOLIDS					-	-	-	-	-	-	-	-	-	-	-	-	81
CARBON, TOTAL ORGANIC	7440-44-0				-	-	-	-	-	-	-	-	-	-	-	-	0.20

Notes:

CAS = Chemical Abstracts Service

MCL = Maximum contaminant level

ND = Not detected above report detection limit

NC = No criteria

J = Estimated value

R = Rejected value not reported

µg/Kg = Micrograms per kilogram

Bold = Indicates exceedance of an MCL

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ORNL = Oak Ridge National Laboratory

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¹ NYSDEC Remedial Program Soil Cleanup Objectives, Table 375-6.8(a) (Title 6 New York Codes, Rules and Regulations, Part 375-6).

² NYSDEC Technical Guidance for Screening Contaminated Sediment (NYSDEC 1999), Table 1, assuming 1 percent total organic carbon.

³ ORNL Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Sediment-Associated Biota, 1997 Revision (Jones, D.S., G.W. Suter and R.N. Hull 1997); Table 3, Secondary Chronic Values.

<http://www.esd.ornl.gov/programs/ecorisk/documents/tm95f4.pdf>

<http://www.dec.ny.gov/regs/15507.html>

http://www.dec.ny.gov/docs/wildlife_pdf/sseddoc.pdf

<http://www.esd.ornl.gov/programs/ecorisk/documents/tm95f4.pdf>

Figures

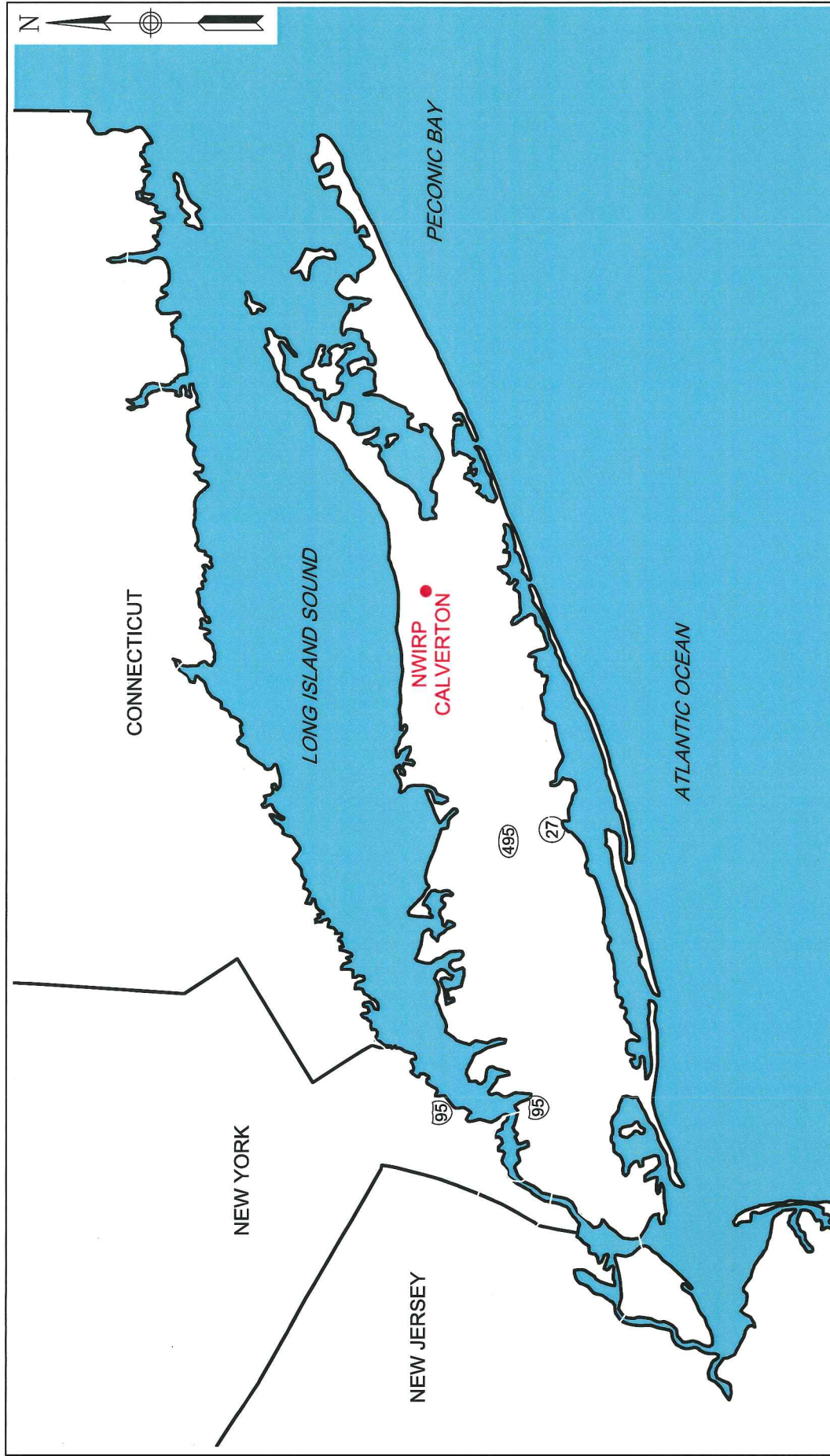


Figure 1 - 1

Date: 2/6/2014

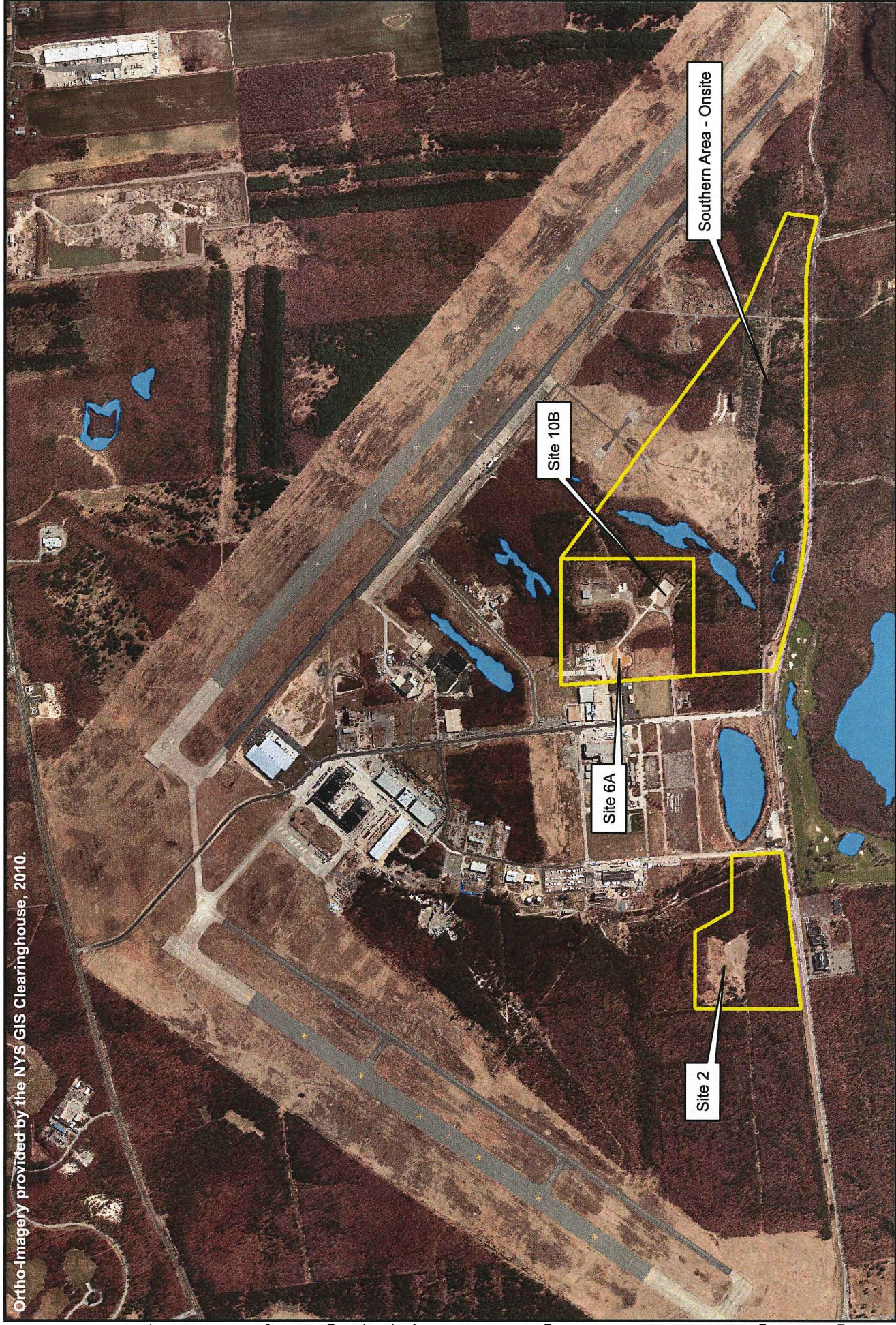
Project #: 60264489



General Location Map
NWRP Calverton
Calverton, New York



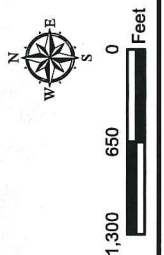
Ortho-Imagery provided by the NYS GIS Clearinghouse, 2010.





Legend

- Pond
- Property Line

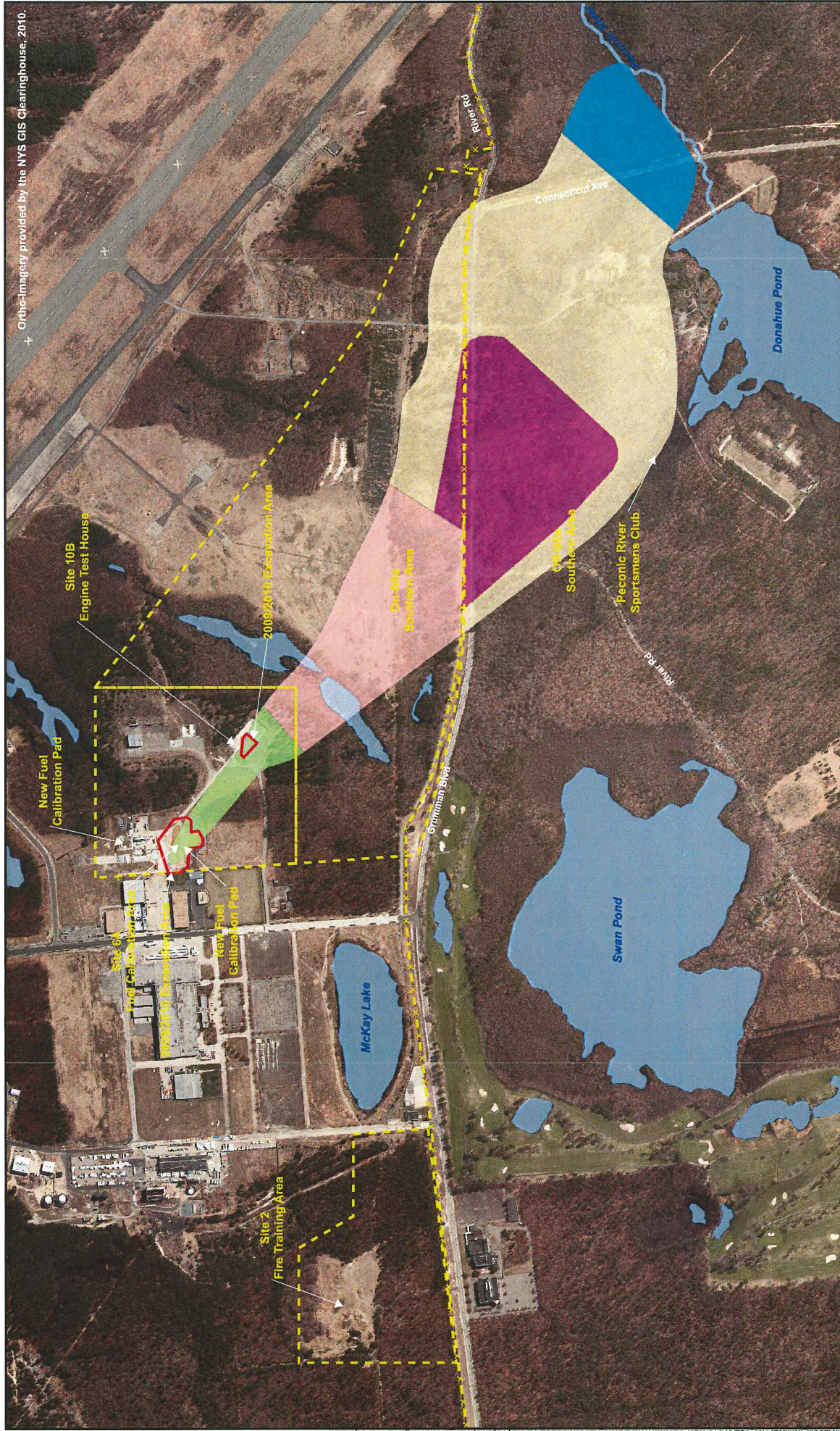


0 650 1,300 Feet

Site Location Map
NWIRP Calverton
Calverton, New York



Figure 1 - 2
Date: 2/6/2014
Project #:
60264489



Legend

- Property Line
- Fence Line
- Offsite Low Concentration Area
- Offsite High Concentration Area
- Source Area
- Water
- 2009/2010 Excavation Area

Figure 2-1

Site Layout
Site 2, Site 6A, Site 10B
and Southern Area
NWIRP Calverton
Calverton, New York

Data Source: TetraTech, 2011

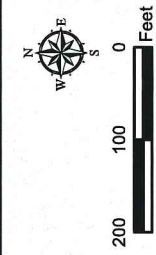
Date: 2/6/2014

Project #: 60264489

Ortho-imagery provided by the NYS Clearinghouse, 2010.



- Legend**
- Monitoring Well
 - Site Boundary
 - Property Line
 - Fence Line
 - Former Fire Training Ring



Site 2 - Fire Training Area
Monitoring Well Location Map
NWIRP Calverton
Calverton, New York



Figure 3-1
 Date: 2/6/2014
 Project #: 60264489

Ortho-Imagery provided by the NY's GIS Clearinghouse, 2010.



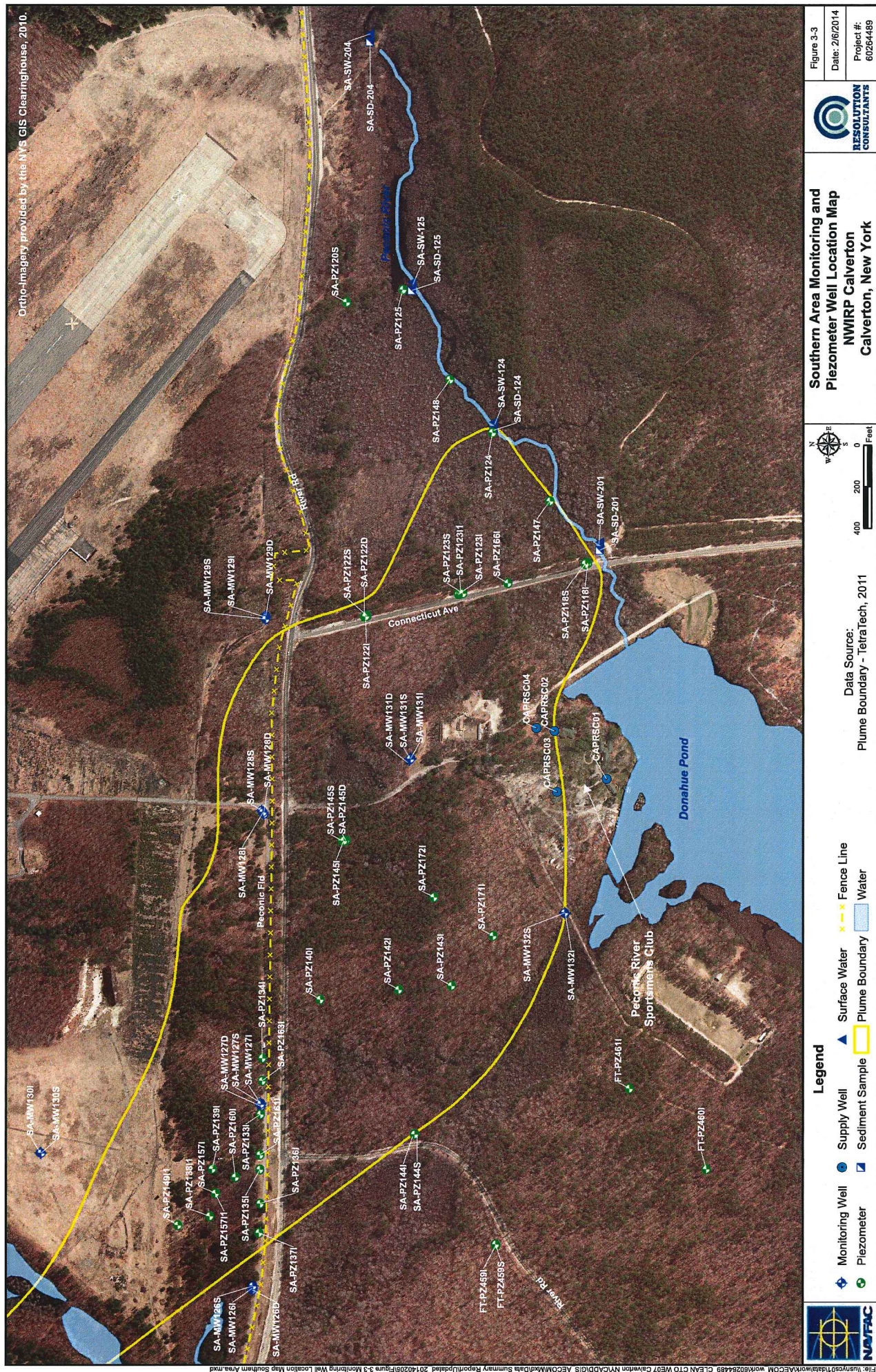


Legend

- Monitoring Well 
- Piezometer 
- Site Boundary 
- Property Line 

Site 6A - Fuel Calibration Area
Monitoring Well Location Map
NWIRP Calverton
Calverton, New York

Figure 3-2
Date: 2/6/2014
Project #:
60264489





Legend

- + Staff Gauge
- Water
- - - Fence Line

Figure 3-4

Staff Gauge Location Map

NWIRP Calverton

Calverton, New York

Date: 2/6/2014

Project #: 60264469

RESOLUTION CONSULTANTS



Legend

- Monitoring Well/Piezometer
- + Staff Gauge
- Site Boundary
- Former Fire Training Ring
- Fence Line
- Water
- Groundwater Contour (Feet MSL)
- 36.82 Groundwater Elevation (Feet MSL)
- Flow Direction

Figure 4-2

Date: 2/6/2014

Project #: 6026489

Groundwater Contours
September 14, 2012
Site 2 - Fire Training Area
NWIRP Calverton
Calverton, New York

NAFAC

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