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FINAL OPERABLE UNIT 1 (OU 1) CENTRAL GROUNDWATER PLUME IN SITU ENHANCED BIOREMEDIATION PILOT STUDY IMPLEMENTATION REPORT MCAS CHERRY POINT NC

1/1/2012

CH2M HILL

Final

Operable Unit 1
Central Groundwater Plume
In-Situ Enhanced Bioremediation
Pilot Study Implementation Report

Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Contract Task Order 0144

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Acronyms and Abbreviations

bgs	below ground surface
cells/L	cells per liter
CLEAN	Comprehensive Long-term Environmental Action—Navy
COC	constituent of concern
CTO	Contract Task Order
DCA	dichloroethane
DCE	dichloroethene
DHC	*Dehalococcoides*
DNAPL	dense non-aqueous phase liquid
DO	dissolved oxygen
DRMO	Defense Reutilization and Marketing Office
DWQ	Division of Water Quality
ERD	enhanced reductive dechlorination
EVO	emulsified vegetable oil
FFA	Federal Facilities Agreement
FRCE	Fleet Readiness Center
FS	Feasibility Study
ft/day	feet per day
ft/ft	foot per foot
gpm	gallons per minute
ID	inner diameter
IR	Installation Restoration
ISEB	in-situ enhanced bioremediation
IWTP	Industrial Wastewater Treatment Plan
µg/L	micrograms per liter
MCAS	Marine Corps Air Station
MCL	maximum contaminant level
MEE	methane, ethane, ethene
MFSP	Master Field Sampling Plan
mg/L	milligrams per liter
MNA	monitored natural attenuation
mV	millivolt
NAD	North American Datum
NADEP	Naval Aviation Depot
NAIP	natural attenuation indication parameters
NAVD	North American Vertical Datum
NAVFAC	Naval Facilities Engineering Command

NC 2L Standards	North Carolina Administrative Code Title 15A, Subchapter 2L Groundwater Quality Standards
NCDENR	North Carolina Department of Environment and Natural Resources
ORP	oxidation-reduction potential
OU	operable unit
PCA	tetrachloroethane
PCE	tetrachloroethene
psi	pounds per square inch
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
RD	Remedial Design
RI	Remedial Investigation
ROI	radius of influence
SAP	Sampling and Analysis Plan
SPCS	State Plane Coordinate System
SRS	Slow Release Emulsified Vegetable Oil Substrate
TCA	trichloroethane
TCE	trichloroethene
TOC	total organic carbon
ULOCO	North Carolina One Call Center
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VFA	volatile fatty acid
VOC	volatile organic compound

SECTION 1

Introduction

This document presents the Pilot Study Implementation Report for Operable Unit (OU) 1 at Marine Corps Air Station (MCAS) Cherry Point, North Carolina, specifically the portion of OU1 that has been designated the Central Groundwater Plume (**Figures 1-1** and **1-2**). This Pilot Study Implementation Report was prepared under the Naval Facilities Engineering Command (NAVFAC)—Mid-Atlantic, Comprehensive Long-term Environmental Action—Navy (CLEAN) 1000 Contract N62470-08-D-1000, Contract Task Order (CTO) 144.

This Pilot Study Implementation Report is organized as follows:

- **Section 1, Introduction—**Presents an overview of the project, the rationale for technology selection, the Pilot Study objectives and goals, site background, and a description of the Pilot Study area.
- **Section 2, Pilot Study Implementation—** Discusses how the pre-implementation and substrate injection portions of the Pilot Study were conducted.
- **Section 3, Pilot Study Current Observations and Post-Injection Monitoring —**Presents an overview of the Pilot Study observations to-date and discusses how the post-injection Pilot Study performance monitoring will be conducted.
- **Section 4, References—**Provides the references used in this document.

Tables and figures are included at the end of each section.

1.1 Rationale for Technology Selection

The *Final Feasibility Study, Operable Unit 1, Central Groundwater Plume, Marine Corps Air Station, Cherry Point, North Carolina* (CH2M HILL, 2011a) (2011 Feasibility Study [FS]) evaluated potential remedial alternatives to address groundwater impacts identified at OU1 (**Figure 1-2**). In-situ enhanced bioremediation (ISEB) was evaluated in the FS for the treatment of site-related constituents of concern (COCs) in groundwater, primarily trichloroethene (TCE), 1,2-dichloroethene (DCE), and vinyl chloride (VC). In August 2010, the MCAS Cherry Point Partnering Team agreed to conduct a field-scale Pilot Study at OU1 to evaluate the site-specific effectiveness of ISEB in a barrier type approach and to gather data for potential optimization of full-scale implementation during the Remedial Design (RD) phase.

1.1.1 Technology Description

This section presents a brief technical overview of the technology, the substrates selected, and the implementation approach for the OU1 Central Groundwater Plume ISEB Pilot Study.

Technology

ISEB is a technology used to promote enhanced reductive dechlorination (ERD) for treatment of chlorinated ethenes (tetrachloroethene [PCE], TCE, cis-1,2-DCE, and VC) with the addition of organic compounds (electron donors) such as molasses, lactate, vegetable oil, and other commercially-available carbon sources. ERD accelerates the naturally-occurring process of reductive dechlorination in two steps:

- Anaerobic microorganisms take electrons from the added ERD substrate and produce hydrogen (fermentation), depleting competing electron acceptors and creating strongly reducing conditions in the process.
- Dechlorinating microorganisms use the electrons in the hydrogen produced during fermentation of the ERD substrate to replace a chlorine atom with a hydrogen atom in the chlorinated ethenes.

These substrates also provide a carbon source for microbial growth, further stimulating dechlorination. The principal anaerobic biodegradation pathway for reductive dechlorination of chlorinated ethenes is:

$$\text{PCE} \rightarrow \text{TCE} \rightarrow \text{cis-1,2-DCE} \rightarrow \text{VC} \rightarrow \text{ethene}$$

The transformation rates for each step vary but tend to become slower with progress along the breakdown sequence, often resulting in accumulation of cis-1,2-DCE and VC. Further breakdown from cis-1,2-DCE and VC to ethene varies and is based on site-specific conditions.

For the Pilot Study, an emulsified vegetable oil (EVO) combined with a bioaugmentation culture (dechlorinating microorganisms) for ERD was selected. The ERD substrate and bioaugmentation culture are discussed further below.

Substrates

Emulsified Vegetable Oil—SRS

Slow Release Emulsified Vegetable Oil Substrate (SRS) is a common EVO substrate utilized for ERD and provided by Terra Systems, Inc. (Terra Systems). SRS degrades to fatty acids, which are then fermented to hydrogen, the electron donor required for reductive dechlorination. SRS contains mostly food-grade soy bean oil with some sodium lactate, emulsifiers, and a proprietary nutrient package containing nitrogen, phosphorus, and vitamin B12 (Terra Systems, 2006a). It is a combination of slow and fast release electron donors (soybean oil and sodium lactate, respectively), is overall relatively insoluble, and is designed to release bio-available hydrogen over a period of up to 3 to 5 years, depending on the applied dosage and site conditions (Terra Systems, 2006a). SRS has a low viscosity, which makes it readily injectible into an aquifer, allowing for more uniform distribution in the aquifer.

Bioaugmentation Culture—TSI-DC

Bioaugmentation is the introduction of microorganisms into the subsurface for the treatment of contaminated soil or groundwater. Bioaugmentation is used to accelerate the biodegradation of contaminants, particularly chlorinated ethenes, to the non-harmful end product ethene. The TSI-DC bioaugmentation culture, provided by Terra Systems, was selected for the Pilot Study. TSI-DC is an enriched natural bacteria culture that contains

Dehalococcoides (DHC) species, the only known organisms capable of dechlorination of PCE to ethene (Terra Systems, 2006b). Without a sufficient DHC population, dechlorination of PCE typically only progresses to cis-1,2-DCE. Bioaugmentation has been demonstrated to work with most commonly used electron donors, including lactate, vegetable oils, and slow-release compounds.

Implementation Approach

Due to building operations, small size of the workshop areas, low ceilings, abundance of equipment, and the presence of multiple subsurface utilities in the vicinity of the source area in and around Building 133 (CH2M HILL, 2011a), a barrier or biobarrier type approach was chosen for the Pilot Study implementation. Additionally, the effectiveness of injections beneath Building 133 were considered to have a high level of uncertainty because the exact area of suspected DNAPL is not well-defined and nearly impossible to define given the access restrictions, and degradation products (i.e., VC) could generate potential vapor intrusion risks within the building (CH2M HILL, 2011a). A barrier formation is typically oriented perpendicular to groundwater flow and relies on natural gradients to bring chlorinated ethenes into the treatment zone. Substrate injection within the biobarrier promotes ISEB of chlorinated ethenes, thus reducing contaminant mass and reducing COC concentrations exiting the barrier. Therefore, the ISEB injection wells provide a wall for plume remediation, or biobarrier, to restore groundwater concentrations to the North Carolina Administrative Code Title 15A, Subchapter 2L Groundwater Quality Standards (NC 2L Standards) and Maximum Contaminant Limits (MCLs), to prevent human exposure to groundwater above levels that would cause unacceptable risks, and to prevent migration or discharge of COCs in groundwater to sediment and surface water in East Prong Slocum Creek and Sandy Branch at levels that would cause unacceptable risks to human or ecological receptors.

The injection of bioenhancing substrate was conducted through 14 permanent injection wells (seven clustered pairs, each consisting of one upper surficial and one lower surficial aquifer well). Each pair of injection wells were installed approximately 25 feet apart. Due to subsurface obstacles encountered during well installation, the orientation of the biobarrier was offset approximately 45 degrees to the assumed westerly groundwater flow direction, from southwest to the northeast.

1.2 Pilot Study Objectives and Goals

1.2.1 Pilot Study Overview

The 2011 FS identified ISEB as a potentially viable treatment for TCE and its daughter products in groundwater within the Central Groundwater Plume at OU1 (CH2M HILL, 2011a). The MCAS Cherry Point Partnering Team agreed in August 2010 to conduct an ISEB Pilot Study over a 2-year period.

Key tasks associated with the Pilot Study are summarized below.

- Installation and development of 14 injection wells (seven clustered pairs, each consisting of one upper surficial and one lower surficial aquifer well).

- Installation and development of five monitoring wells (two upper surficial and three lower surficial aquifer wells).
- Baseline groundwater sampling (14 injection wells, five proposed monitoring wells, and two existing monitoring wells).
- Injection of reagents (e.g., EVO, bioaugmentation culture).
- Post-injection performance monitoring by groundwater sampling and analysis (five proposed monitoring wells and two existing monitoring wells at 3 months, 6 months, 9 months, 12 months, and 24 months after injection).

1.2.2 Pilot Study Objectives and Goals

The purpose of the Pilot Study is to assess the potential effectiveness of the ISEB barrier and for potential optimization of full-scale implementation during a future RD of the permanent remedy. The goal of the Pilot Study is to achieve 90 percent reduction of TCE concentrations in the monitoring wells downgradient of the biobarrier and 75 percent reduction of overall VOC concentrations. Additionally, a goal of the biobarrier will be to reduce the potential for migration of impacted groundwater into either East Prong Slocum Creek or Sandy Branch at levels that would cause unacceptable risks to human or ecological receptors. As previously noted, the biobarrier was installed downgradient of the source area due to inaccessibility and access restrictions in the source area. Since source area contaminant mass is not being treated, it is possible that over time, contaminant and geochemical parameter concentrations within the Pilot Study area will rebound to baseline levels without additional substrate application.

The new injection wells and new and existing monitoring wells within the Pilot Study area were gauged and sampled prior to initiation of the Pilot Study injections. The resulting laboratory and analytical data and field geochemical data have provided the baseline conditions for the Pilot Study area. Subsequent data will be compared to the baseline conditions to evaluate long-term performance against the Pilot Study goals.

1.3 Site Background

Comprehensive information concerning site history, contaminant concentrations, plume distribution, and subsurface geology/hydrogeology was presented in several documents, including the *Final Remedial Investigation for Operable Unit 1 (OU1)* for the results of historical site investigations performed at OU1 from 1983 to 2000 (TetraTech NUS, 2002), the *Final OU1 Remedial Investigation Addendum* (2009 RI Addendum) for the results of historical site investigations performed at OU1 from 2000 to 2008 (CH2M HILL, 2009), and in the 2011 FS for results of additional investigation activities conducted in 2009. An overview of historical information relevant to the site and the Pilot Study area is summarized below.

1.3.1 Site Description

MCAS Cherry Point is a 13,164-acre military reservation located adjacent to the city of Havelock in southeastern Craven County, North Carolina (**Figure 1-1**). MCAS Cherry Point was commissioned in 1942 and provides support facilities and services for the Second Marine Aircraft Wing, the Fleet Readiness Center-East (FRCE, formerly Naval Aviation Depot [NADEP]), Combat Service Support Detachment 21 of the Second Marine Logistics

Group, the Naval Air Maintenance Training Group Detachment, and the Defense Reutilization and Marketing Office (DRMO). MCAS Cherry Point maintains facilities for training and for supporting the Atlantic Fleet Marine Force aviation units and is designated as a primary aviation supply point.

OU1 is an industrial area approximately 565 acres in size, located in the southwestern portion of MCAS Cherry Point (**Figure 1-2**). OU1 is bounded by C Street and Sandy Branch to the northwest, portions of the MCAS Cherry Point flightline and runway to the northeast and southeast, and East Prong Slocum Creek to the southwest (**Figure 1-3**).

On May 12, 2005, the Navy, United States Environmental Protection Agency (USEPA), and North Carolina Department of Environment and Natural Resources (NCDENR) executed a Federal Facilities Agreement (FFA) for MCAS Cherry Point. Under the FFA, all past and future work at Installation Restoration (IR) Program sites, solid waste management units, and areas of concern are to be reviewed, and a course of action for future work requirements at each site is to be developed. Eleven sites at OU1 were initially identified in the FFA as requiring additional investigation, and a twelfth site, Site 98, was discovered by MCAS Cherry Point during an investigation of USTs at Building 4032 and identified as a new site for inclusion in the FFA in 1999 (NAVFAC, 2005). These OU1 sites are shown on **Figure 1-3** and are listed as follows:

- Site 14 - Motor Transportation
- Site 15 - Ditch and Area Behind FRCE
- Site 16 - Landfill at Sandy Branch
- Site 17 - DRMO Drainage Ditch
- Site 18 - Facilities Maintenance Compound
- Site 42 - Industrial Wastewater Treatment Plant (IWTP)
- Site 47 - Industrial Area Sewer System
- Site 51 - Building 137 Plating Shop
- Site 52 - Building 133 Plating Shop and Ditch
- Site 83 - Building 96 Former Pesticide Mixing Area
- Site 92 – Volatile Organic Compounds (VOCs) in Groundwater near the Stripper Barn
- Site 98 - VOCs in Groundwater near Building 4032

Of the 12 sites identified in the FFA to be investigated as part of the 2002 RI (**Figure 1-3**), six sites were identified as potential source areas contributing to the OU1 Central Groundwater Plume as described in the 2009 RI Addendum (CH2M HILL, 2009). These sites consist of Sites 42, 47, 51, 52, 92, and 98, and each is summarized in **Table 1-1**.

1.4 Description of Pilot Study Area

Figure 1-4 presents a graphical representation of the conceptual site model for the OU1 Central Groundwater Plume and supports the discussion in this section. The Pilot Study area location is shown on **Figure 1-5**.

1.4.1 Hydrostratigraphy

The Pilot Study is being conducted within the surficial aquifer above the Yorktown confining unit. A physical description of the surficial aquifer is provided below.

Surficial Aquifer

The surficial aquifer consists of the Holocene (Quaternary) undifferentiated sands and Pleistocene (Quaternary) Flanner Beach Formation. The aquifer consists of unconsolidated, interfingered beds of fine-grained sand, silt, clay, shell, and peat beds, and scattered deposits of coarse-grained material as part of relic beach ridges and alluvium (USGS, 1996; TetraTech, 2002).

The surficial aquifer is the first-encountered groundwater beneath OU1 and is unconfined. The saturated thickness ranges from approximately 30 to 45 feet beneath OU1, and is controlled by the fine-grained Yorktown confining unit at the base of the aquifer. Recharge is by the infiltration of precipitation. No groundwater production from the surficial aquifer occurs in the area.

The surficial aquifer has been evaluated as two different groundwater zones due to minor differences in aquifer properties and in order to more precisely delineate the vertical distribution of contamination: the upper and lower surficial aquifers. The upper surficial aquifer is defined as the upper 10 to 15 feet of saturated thickness, and is generally monitored by wells installed just below or across the water table. The lower surficial aquifer is defined as the lower 20 to 30 feet of the aquifer and monitored by wells installed just above the Yorktown confining unit. The upper surficial aquifer generally contains more finer-grained materials than the lower surficial aquifer. However, the upper and lower surficial aquifers are in direct hydraulic communication.

1.4.2 Aquifer Properties

Aquifer properties were estimated by conducting aquifer hydraulic conductivity ("slug") testing at various monitoring wells within the upper and lower surficial aquifer. The hydraulic conductivity values were estimated to range between 0.23 to 14.1 feet per day (ft/day) and 6.9 to 78.9 ft/day for the upper and lower surficial aquifers, respectively, in the areas nearest the Pilot Study area in the vicinity of Building 133 (CH2M HILL, 2009).

1.4.3 Groundwater Flow

Groundwater flows generally westward in the upper and lower surficial aquifers towards East Prong Slocum Creek and Sandy Branch, with an average horizontal hydraulic gradient of approximately 0.004 feet per foot (ft/ft) (CH2M HILL, 2010). Groundwater flow appears to have minimal discharge to Sandy Branch Tributaries #1 and #2 and follows along their same general direction. The average linear horizontal groundwater velocity in the upper and lower surficial aquifers is estimated at approximately 0.1 to 0.2 ft/day (CH2M HILL, 2010).

1.4.4 Nature and Extent of Impacts

Groundwater sampling activities have been conducted during numerous previous investigations and were also conducted prior to initiation of the Pilot Study injections to determine baseline site conditions. The following section describes the historical VOC-related impacts at OU1. The nature and extent of VOC impacts observed in the Pilot Study area during the baseline groundwater monitoring event is discussed in Section 2.1.4.

Historical OU1 Groundwater VOC-Related Impacts

The most prevalent VOCs detected above regulatory standards within the Central Groundwater Plume (in order based on the greatest frequency of exceedances) included TCE, 1,2-DCE, VC, 1,1-dichloroethane (1,1-DCA), and 1,1-DCE. These chemicals generally exceeded the regulatory standards on a frequency of greater than 10 percent. Other VOCs related to chlorinated solvents detected above regulatory standards, but less frequently, included PCE, 1,1,1-trichloroethane (1,1,1-TCA), 1,1,2,2-tetrachloroethane (1,1,2,2-PCA), and 1,2-DCA.

The most-elevated historical concentrations of TCE (**Figures 1-6** and **1-7**) have been observed beneath Building 133, at concentrations that may be indicative of the presence of dense non-aqueous phase liquid (DNAPL) (maximum concentration of 62,000 micrograms per liter [µg/L], as reported in the 2009 RI Addendum [CH2M HILL, 2009]). Beneath Building 133, TCE generally occurs only within the upper surficial aquifer and was not observed in the lower surficial aquifer directly beneath the building. TCE extends vertically from the upper surficial aquifer into the lower surficial aquifer at locations downgradient of Building 133, and the plume extends laterally from the western portion of the building over 3,000 feet in a southwesterly direction to East Prong Slocum Creek and Sandy Branch.

Detections of 1,2-DCE and VC generally occurred at monitoring wells that also registered exceedances of the NC 2L Standard for TCE. The most-elevated concentration of cis-1,2-DCE (maximum concentration of 33,000 µg/L, as reported in the 2009 RI Addendum [CH2M HILL, 2009]) was detected within the upper surficial aquifer beneath Building 133. However, the most-elevated concentration of VC (maximum concentration of 8,000 µg/L, as reported in the RI Addendum) was detected beneath the IWTP within the upper surficial aquifer. Similar to TCE, 1,2-DCE and VC contamination extends vertically from the upper surficial aquifer beneath Building 133 to the lower surficial aquifer downgradient of the building, and laterally to Sandy Branch and East Prong Slocum Creek.

TABLE 1-1
Summary of Potential Source Areas
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Site	Description
Site 42: Industrial Wastewater Treatment Plant (IWTP)	Originally constructed in 1957 to treat wastes from industrial sources such as metal plating, painting, aircraft maintenance, vehicle maintenance, and stormwater. A groundwater extraction and treatment system operated at the site from 1998-2005 to remediate the groundwater VOC plume in the vicinity of FRCE.
Site 47: Industrial Area Sewer System	Construction began in 1942 and was expanded over time for a system of underground pipes and aboveground drains to transfer industrial wastewater from various parts of FRCE and OU1 to the IWTP from processes such as metal plating, metal finishing, solvent degreasing, paint stripping, painting, fuel storage, fueling, aircraft washing, and general maintenance. Site 47 only includes the industrial sewers within OU1 that currently discharge to the IWTP. Concentrated wastes are now containerized and transported to the IWTP. Leaks were detected at several locations within the sewer system in the past and have been repaired. Inspections and repairs are conducted as part of the facility's ongoing maintenance process.
Site 51: Building 137 Former Plating Shop	Former Plating Shop that operated from 1942 to 1990, was located within Building 137, and consisted of approximately 4,000 square feet (ft^2) that included a 3-foot-deep sump for containment of spillage and tank overflows. The wastes generated in the plating shop consisted of plating solution overflow and rinse water containing zinc and chromium that were discharged to the sump. The sump discharged to the industrial sewer system (Site 47) until 1987, when the sump was plugged and the plating shop converted to a closed-loop system. From then until the Plating Shop was moved in 1990, wastes were transported to the IWTP (Site 42) in containers for batch treatment.
Site 52: Building 133 Former Plating Shop and Ditch	Former Plating Shop that operated from 1942 to 1990, was located in Building 133, and consisted of approximately 2,000 ft^2 that included a 2.5-ft-deep sump for containment of spillage and tank overflows. Former employees indicated that a ditch was formerly present behind Building 133 that received stormwater and industrial wastewater discharge from the Plating Shop and other areas within Building 133. This former ditch was covered in the 1970s by an addition to Building 133. The plating shop area was cleaned and renovated in 1996 and is currently used to process and store non-hazardous parts and supplies. The wastes generated in the plating shop consisted of plating solution overflow and rinse water that discharged to the sump. The sump wastes likely discharged to the former ditch behind Building 133 prior to the installation of the industrial sewer system (Site 47). An addition constructed on the southeastern side of the building subsequently covered this ditch. The sump then discharged to the industrial sewer system (Site 47) until 1987, when the sump was plugged and the plating shop converted to a closed-loop system. From then until the plating shop was moved in 1990, wastes were transported to the IWTP (Site 42) in containers for batch treatment.
Site 92: VOCs in Groundwater near the Stripper Barn	Site 92 is a plume of VOC-contaminated groundwater near the Stripper Barn portion of Building 137, where paint is removed from aircraft. The area around the site is covered with buildings and concrete, and portions of the industrial sewer system (Site 47) are located beneath and around the Stripper Barn. In the past, large quantities of solvent were used to remove paint; during the paint removal process, spent solvent flowed into the industrial sewer system. The current paint removal method requires approximately 90 percent less solvent, and spent solvent is captured for proper disposal. Any historical spills that occurred outside the building may have flowed toward storm drains located northeast of the Stripper Barn.
Site 98: VOCs in Groundwater near Building 4032	Site 98 is a plume of VOC-contaminated groundwater near Building 4032, located southeast of the IWTP in the central portion of OU1. Site 98 was discovered by MCAS Cherry Point during an investigation of underground storage tanks (USTs) at Building 4032 in 1994, and was identified as a new site in 1999.

Legend

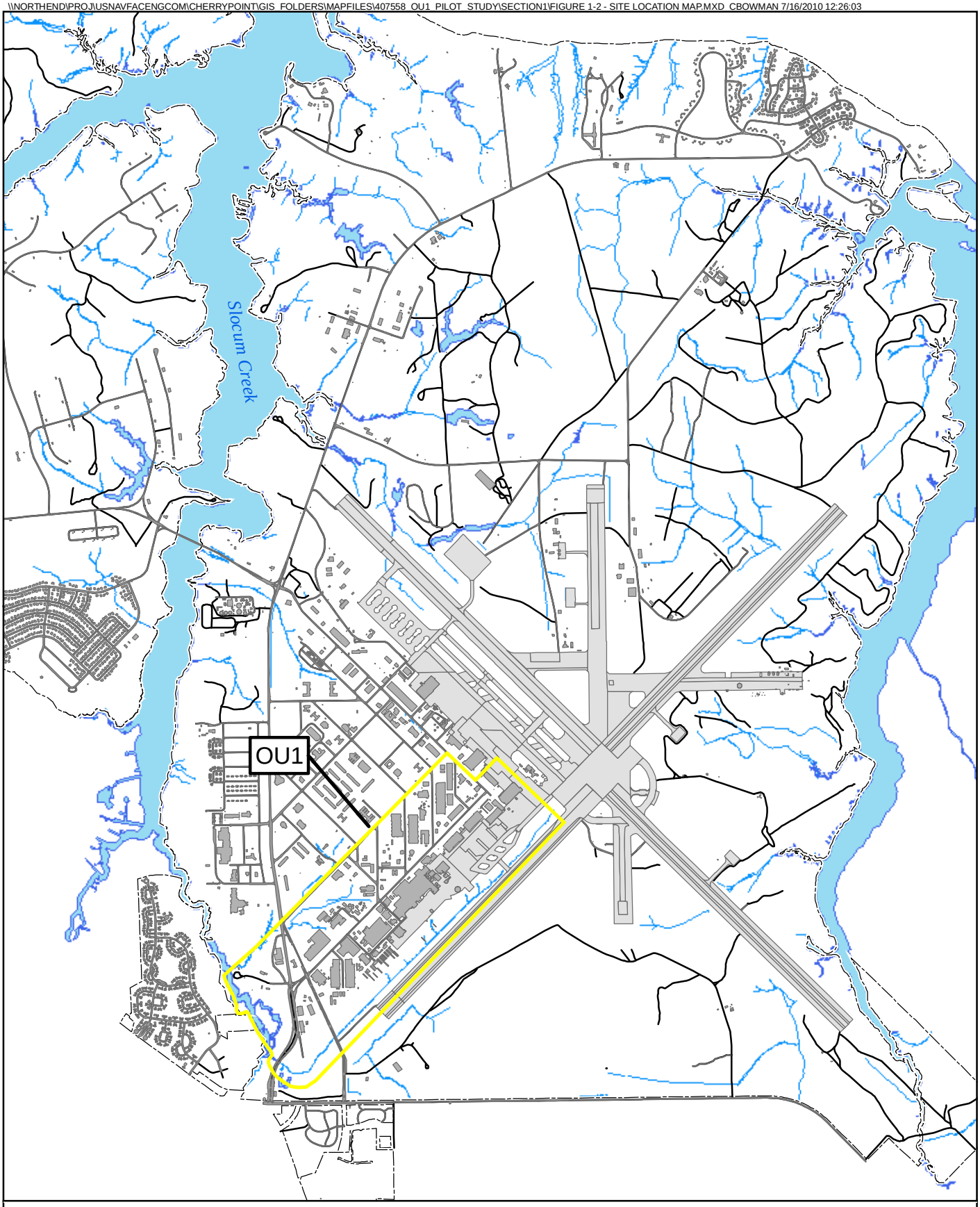
- Cities
- Rivers and Streams
- Military Installation
- County Boundary

N
W E
S

0 20,000 40,000
Feet

Figure 1-1
Base Location Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.



Legend

- OU Boundary
- Base Boundary
- Buildings
- Runway
- Road
- Surface Water

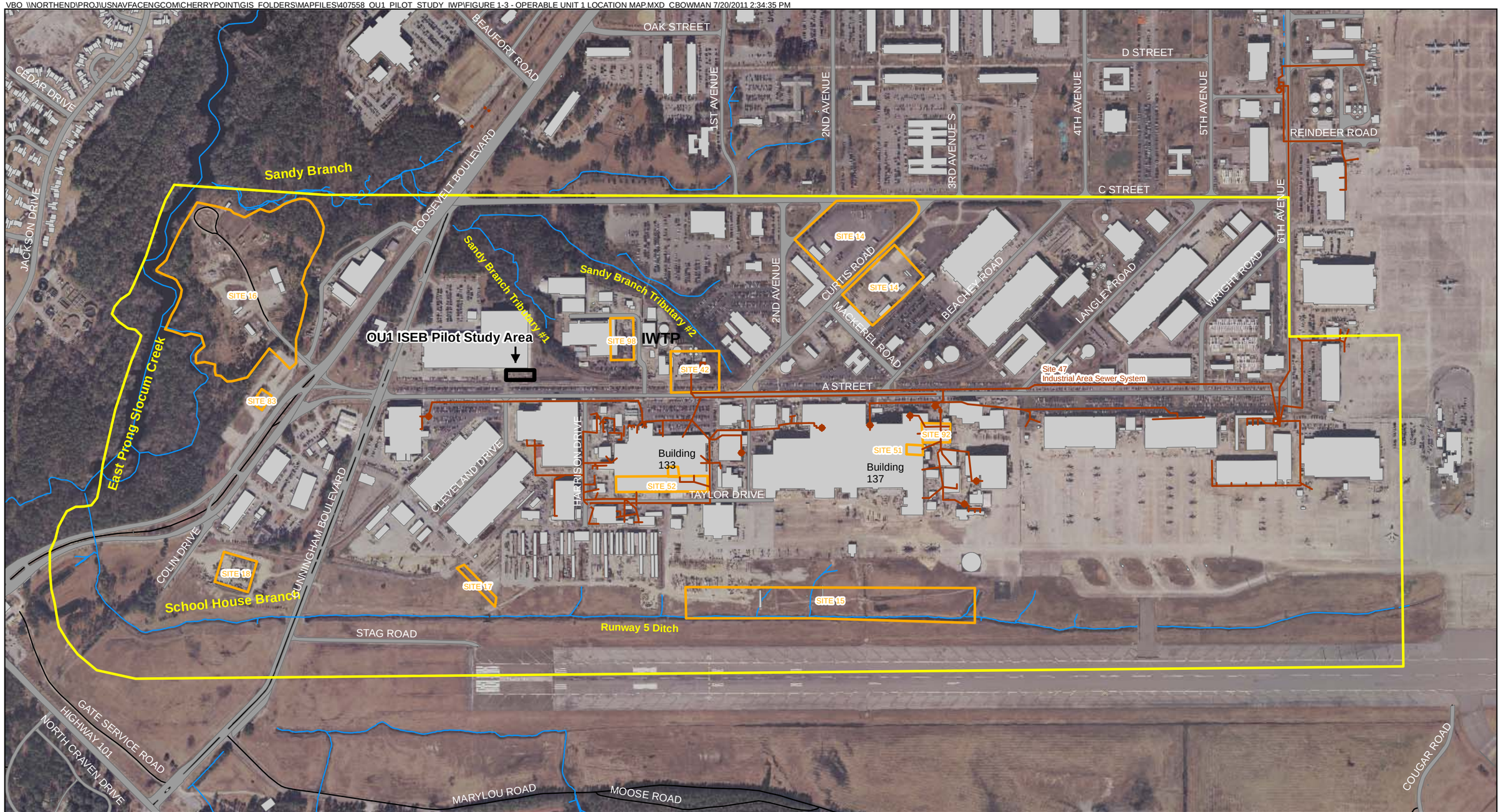
N
W E
S

0 1,500 3,000
Feet

Figure 1-2
OU1 Location Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 1-3 - OPERABLE UNIT 1 LOCATION MAP.MXD CBOWMAN 7/20/2011 2:34:35 PM



Legend

- Surface Water
- Industrial Area Sewer System
- Near Source In-Situ Enhanced Bioremediation Pilot Study Area
- Site Boundary
- OU1 Boundary
- Existing Buildings

IWTP - Industrial Wastewater Treatment Plant

N W E S

0 600 1,200 Feet

Figure 1-3
Sites Within OU1
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.

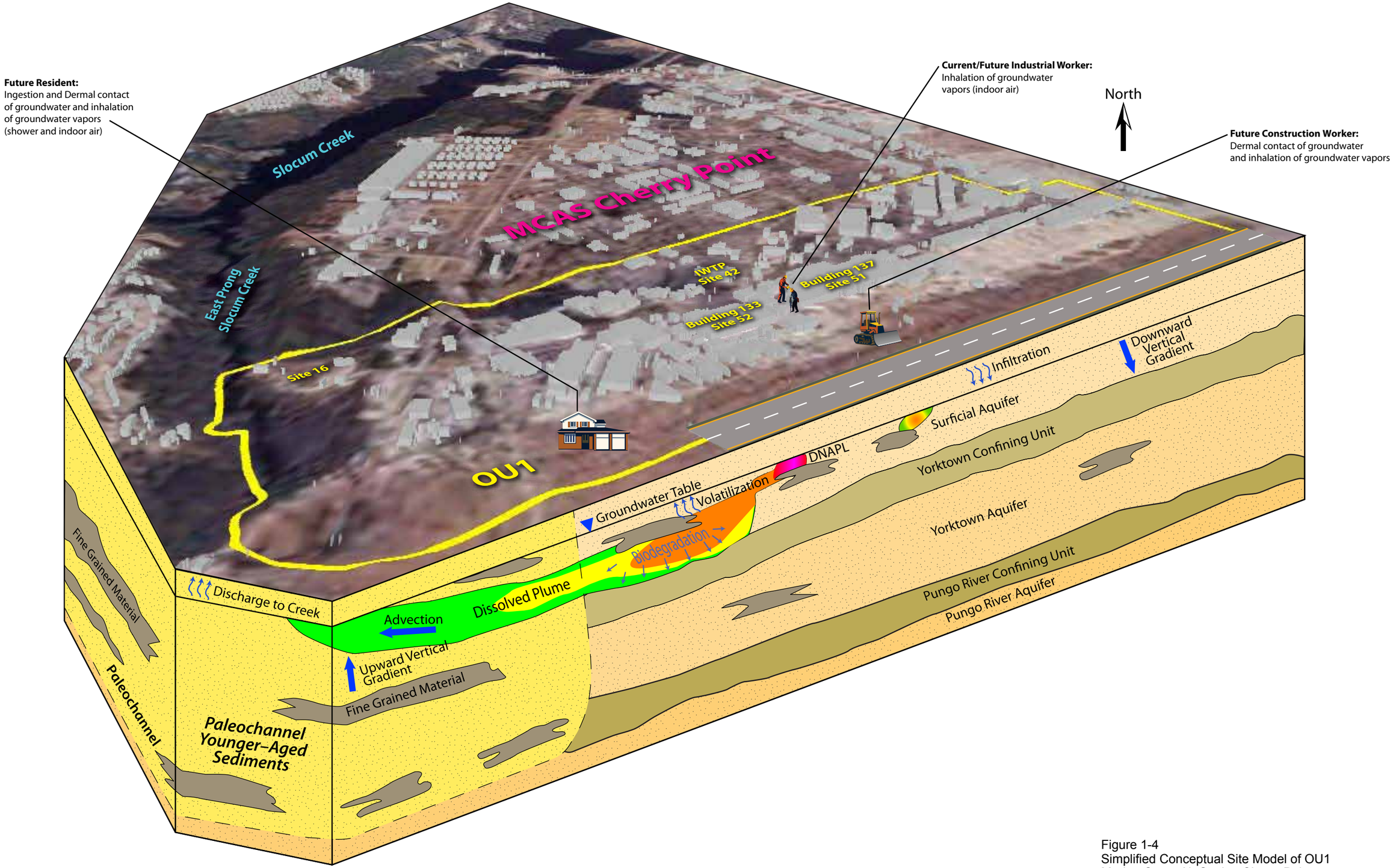


Figure 1-4
Simplified Conceptual Site Model of OU1
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 1-5 - OPERABLE UNIT 1 PILOT STUDY LOCATION MAP.MXD CBOWMAN 7/20/2011 3:24:01 PM

Legend

- Monitoring Well - Lower Surficial Aquifer
- Monitoring Well - Upper Surficial Aquifer
- Pilot Study Injection Well - Lower Surficial Aquifer
- Pilot Study Injection Well - Upper Surficial Aquifer
- Fire Hydrant
- Near Source In-Situ Enhanced Bioremediation Pilot Study Area
- Pilot Study Staging Area
- OU1 Boundary
- Site Boundary
- Existing Buildings
- Surface Water
- Industrial Area Sewer System

N S E

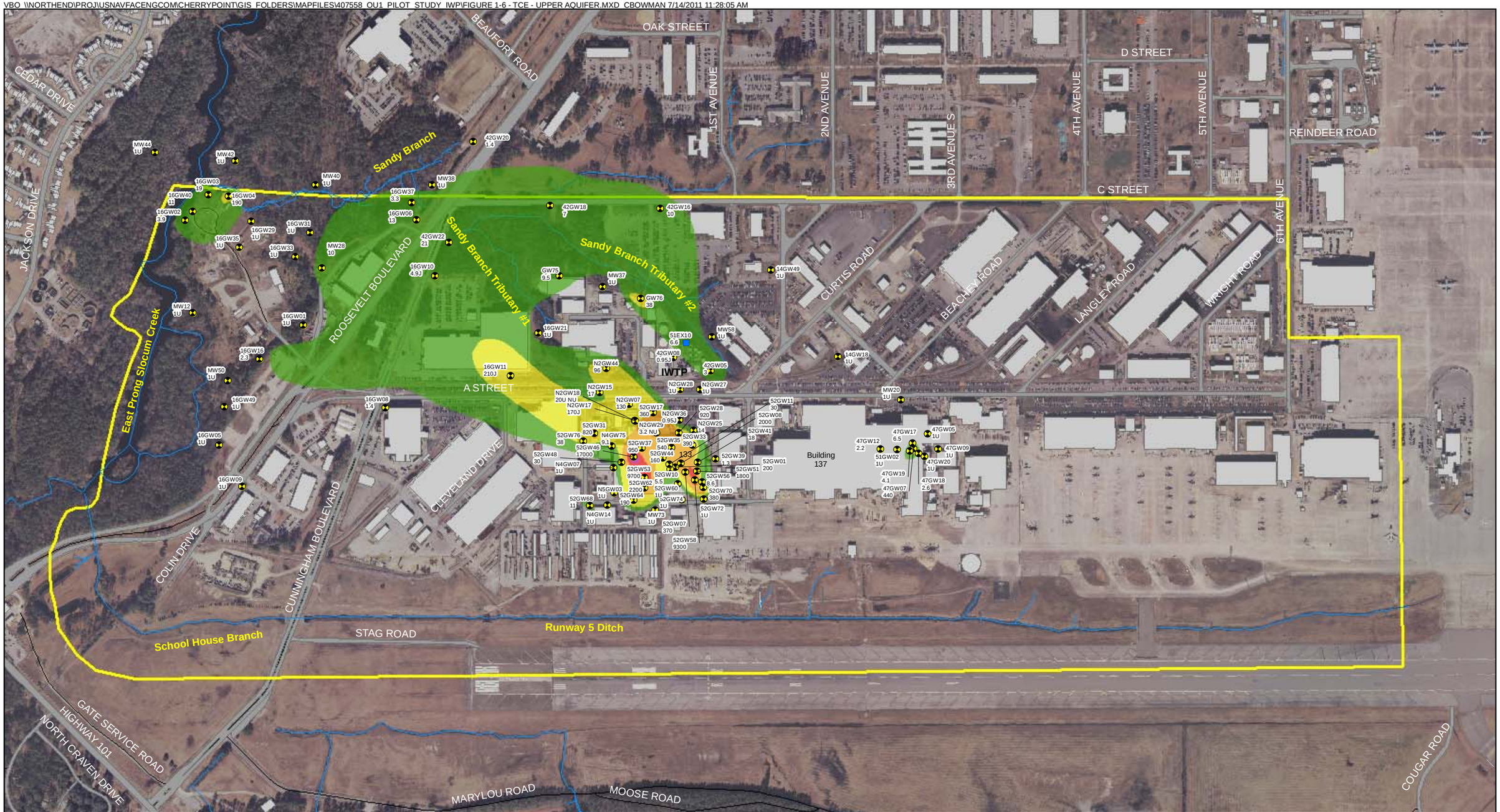
0 120 240 Feet

IWTP - Industrial Wastewater Treatment Plant

Figure 1-5
OU1 ISEB Pilot Study Area Location Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 1-6 - TCE - UPPER AQUIFER.MXD CBOWMAN 7/14/2011 11:28:05 AM



Legend

- Extraction Well
- Monitoring Well - Upper Aquifer
- Surface Water
- OU1 Boundary
- Existing Buildings
- 3 - 30 µg/L
- 30 - 300 µg/L
- 300 - 3,000 µg/L
- 3,000 - 11,000 µg/L
- > 11,000 µg/L

IWTP - Industrial Wastewater Treatment Plant

Notes:
NC2L - North Carolina Groundwater Standard
NC2L = 3 µg/L (Jan 2010)
NU = Not Used
Concentrations are from the Spring 2009 sampling event
µg/L = micrograms per liter
U - analyte not detected above detection limit
J - concentration is estimated

N W E S

0 600 1,200 Feet

Figure 1-6
Trichloroethene (TCE) Isoconcentrations Map (2009)
Upper Surficial Aquifer
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 1-7 - TCE - LOWER AQUIFER.MXD CBOWMAN 7/14/2011 11:50:20 AM

Legend

- Extraction Well
- Monitoring Well - Lower Aquifer
- Surface Water
- OU1 Boundary
- Existing Buildings
- 3 - 30 µg/L
- 30 - 300 µg/L
- 300 - 3,000 µg/L

Notes:
NC2L - North Carolina Groundwater Standard
NC2L = 3 µg/L (Jan 2010)
NU = Not Used
Concentrations are from Spring 2009 sampling event
µg/L = micrograms per liter
U - analyte not detected above detection limit
J - concentration is estimated

N W E S

0 600 1,200 Feet

Figure 1-7
Trichloroethene (TCE) Isoconcentrations Map (2009)
Lower Surficial Aquifer
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

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IWTP - Industrial Wastewater Treatment Plant

SECTION 2

Pilot Study Implementation

This section specifies the activities conducted for the OU1 Central Groundwater Plume ISEB Pilot Study implementation.

2.1 Pre-Implementation Activities

2.1.1 Utility Location

Prior to initiating drilling activities, the North Carolina One Call Center (ULOCO) was called to identify and mark subsurface utilities. In addition to the ULOCO utility markout, CH2M HILL subcontracted utility locating through a third-party subcontractor to define all subsurface structures that could be impacted by drilling activity in the immediate area of the Pilot Study. The private utility locator marked out all utilities within a 20-foot radius of each well location prior to commencement of drilling activities. Also prior to drilling activities, a 3.5-inch diameter hand auger was used to clear each boring location, advanced to 5 feet below ground surface (bgs) in a triangular pattern with the drilling location centered in this triangulation. During this process, several injection and monitoring well locations had to be modified slightly due to the presence of subsurface obstructions not identified with the utility locating instrumentation. The final injection and monitoring well locations are shown on **Figure 2-1**.

2.1.2 Well Installation

All of the wells were constructed and developed in accordance with the MCAS Cherry Point Master Field Sampling Plans (MFSPs) (AGVIQ/CH2M HILL, 2004a) by Tri-State Drilling, Inc. For the installation of each lower surficial injection well, cores were logged for lithological characterization on a boring log and final well installation information has been indicated on a well construction diagram. Well construction diagrams and well construction records can be found in **Appendix A**. The Pilot Study area cross section location map is shown on **Figure 2-2** and the Pilot Study area cross section, which includes a lithological description of the Pilot Study area, is included on **Figure 2-3**.

Injection Wells

Fourteen new 4-inch diameter injection wells (OU1-52IW01 through OU1-52IW14) were installed as clustered pairs using rotosonic drilling techniques within the Pilot Study area as shown on **Figure 2-1** with well construction data included in **Table 2-1**:

- Seven injection wells screened in the upper surficial aquifer (20 to 35 feet bgs)
- Seven injection wells screened in the lower surficial aquifer (approximately 35 to 50 feet bgs)

Final well construction screen interval depths for targeted injection zones were modified slightly in the field on the northeastern end as site-specific geologic information became

available during lithological classification of soil cores. Well construction diagrams and well construction records can be found in **Appendix A**.

The 14 injection wells were installed in a biobarrier formation, parallel to A Street on the northwest side of the railroad tracks, with approximately 25 feet between each clustered well pair. Each injection well was installed using a 15-foot section of 4-inch inner diameter (ID) 0.020-inch slot Vee-wire polyvinyl chloride (PVC) screen.

Monitoring Wells

To monitor for the effectiveness of ERD substrate distribution into the subsurface and ISEB treatment performance, five monitoring wells were installed using rotosonic drilling techniques within the study area (OU1-52GW77 to OU1-52GW81), as shown on **Figure 2-1**. Well construction details are provided in **Table 2-1**. Monitoring wells were installed hydraulically downgradient, or west, of the injection well clustered pairs at varying distances, to monitor for ERD substrate distribution, as listed below. The locations of several injection and monitoring wells were modified slightly due to the presence of subsurface obstructions (i.e. construction debris). The final well locations do not affect the ability to monitor effectiveness of the Pilot Study.

- OU1-52GW77 – upper surficial aquifer
- OU1-52GW78 – lower surficial aquifer
- OU1-52GW79 – lower surficial aquifer
- OU1-52GW80 – upper surficial aquifer
- OU1-52GW81 – lower surficial aquifer

Each new monitoring well was installed using a 10-foot section of 2-inch ID 0.010-inch slot PVC screen to coincide with the screened interval depth of the closest injection well. **Table 2-1** includes the screened intervals of each monitoring and injection well.

Additionally, two existing monitoring wells were proposed to monitor for ERD substrate distribution and effectiveness. However, due to site constraints on injection well locations, these existing monitoring wells were located either side gradient of upgradient of the nearest injection wells. Well construction details for these wells are also provided in **Table 2-1** and were located at varying distances from injection wells on the northwestern end of the biobarrier, as follows:

- 16GW11 – upper surficial aquifer
- MW53 – lower surficial aquifer

Survey

Following well installation, the newly-installed injection and monitoring wells were surveyed. The surveyor provided coordinates of all horizontal and vertical points to the nearest 0.01 foot (0.1 foot for unpaved ground surfaces). Coordinates were also provided in the appropriate State Plane Coordinate System (SPCS) and zone (latest adjustment) for the area. North American Datum (NAD) 83 (latest adjustment) was used as the horizontal datum and North American Vertical Datum (NAVD) 88 was used for the vertical datum.

2.1.3 Groundwater Gauging

Following installation, all newly-installed injection and monitoring wells were gauged for depth to groundwater and depth to bottom. Existing wells 16GW11 and MW53 were also gauged. The results of the baseline gauging event are summarized in **Table 2-2**. Potentiometric surface water contour maps for the upper surficial and lower surficial aquifers within the Pilot Study area are shown on **Figures 2-4** and **2-5**, respectively.

2.1.4 Baseline Groundwater Monitoring

Prior to Pilot Study injections, groundwater samples were collected to ascertain baseline groundwater conditions. Samples were collected from the 14 newly-installed injection wells (OU1-52IW01 through OU1-52IW14), five newly-installed monitoring wells (OU1-52GW77 to OU1-52GW81), and two existing monitoring wells (16GW11 and MW53), as shown on **Figure 2-1**. The injection and monitoring wells were sampled and analyzed for site-specific target VOC analytes (SW-846 USEPA Method 8260B) and field parameters. The newly-installed and existing monitoring wells were also sampled for the natural attenuation indication parameters (NAIPs):

- Select VOCs: SW-846 USEPA Method 8260B (all wells):
  - 1,1,1-TCA
  - 1,1,2,2-PCA
  - 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)
  - 1,1,2-TCA
  - 1,1-DCA
  - 1,1-DCE
  - 1,2-DCA
  - cis-1,2-DCE
  - trans-1,2-DCE
  - Bromodichloromethane
  - Bromoform
  - Chloromethane
  - Dichlorodifluoromethane (Freon-12)
  - Methylene chloride
  - PCE
  - TCE
  - VC

- Field Parameters (all wells):
  - Ferrous Iron (Hach kit – Phenanthroline Method)
  - Nitrate/Nitrite (Hach kit – Cadmium Reduction/Diazotization Method)
  - Dissolved Oxygen (DO) (Chemetrics kit – Rhodazine D Method)
  - Conductivity (In-Site Troll 9500 Water Quality Meter – Methods 2510; USEPA 120.1)
  - pH/Oxidation-Reduction Potential (ORP) (In-Site Troll 9500 Water Quality Meter – Method 2580)
  - Temperature (In-Site Troll 9500 Water Quality Meter – USEPA 170.1)
  - Turbidity (HANNA HI 98703 – USEPA Method 180.1)

- Laboratory Analyzed NAIPs (monitoring wells only):
  - Methane, ethane, ethene (MEE): RSK-175
  - Total organic carbon (TOC): SW846 USEPA Method 9060A
  - Sulfate: USEPA Method 375.4
  - Sulfide: USEPA Method SM4500S2-E
  - Volatile Fatty Acids (VFAs): Method AM23G
  - Microbial Analysis for DHC spp. (1) and functional genes qPCR/*DNA-qPCR*

Sample handling and analyses, as wells as quality assurance (QA) and quality control (QC) sampling, were conducted in accordance with the Master Quality Assurance Plan (AGVIQ/CH2M HILL, 2004b) and the *Groundwater Treatment Pilot Study Sampling and Analysis Plan, Operable Unit 1* (OU1 Sampling and Analysis Plan [SAP]) (CH2M HILL, 2011b).

As defined in the SAP, concentrations of groundwater contaminants identified in the investigation were compared to the lowest of the NC 2L Standards and USEPA maximum contaminant levels (MCLs). For all COCs, the NC 2L Standard is the more conservative criterion, with the exception of 1,1,2-TCA, which does not have a defined NC 2L Standard; therefore, the MCL standard was used for comparison for this analyte. Results for monitored natural attenuation (MNA) indicator parameters (MEE, TOC, ferrous iron, VFAs, sulfate, sulfide, DHC, and ferrous iron) were not compared to a defined action limit, but instead will be evaluated qualitatively following each sampling event to assess the efficacy and progress of ISEB in the Pilot Study area over time.

The following section discusses the results from the baseline groundwater sampling event that was conducted prior to initiation of Pilot Study activities. All post-Pilot Study sampling events will be compared to the following results to evaluate long-term performance of the Pilot Study against the Pilot Study goals.

Pilot Study Area Baseline Groundwater VOC-Related Impacts

All injection and monitoring wells were sampled for the site-specific VOCs by SW-846 USEPA Method 8260B, as listed above. The baseline groundwater sampling results are presented in **Table 2-3**, and are shown on **Figures 2-6** and **2-7**, for both upper surficial or lower surficial aquifer wells, respectively. All laboratory analytical data can also be found in **Appendix B**.

Upper Surficial Aquifer

In general, constituent concentrations detected in the samples collected from the upper surficial aquifer have fluctuated slightly when compared to the 2006 and the most recent 2009 comprehensive sampling events. As shown in **Table 2-3** and on **Figure 2-6**, TCE was detected above the NC 2L Standard (3 micrograms per liter [µg/L]) in eight of 10 samples, ranging from 0.94 J µg/L to 31 µg/L. TCE concentrations at 16GW11 have shown a decrease in concentration from a groundwater sample collected in 2009 at 210 J µg/L to non-detect (less than 1.2 µg/L) (CH2M HILL, 2009). Both cis-1,2-DCE and trans-1,2-DCE were detected in each of the groundwater samples collected. Cis-1,2-DCE ranged from 7.7 µg/L to 150 µg/L, exceeding the NC 2L Standard (70 µg/L) in three of 10 upper surficial groundwater samples, while trans-1,2-DCE ranged from 0.29 J µg/L to 8.30 µg/L and did not exceed the NC 2L Standard (100 µg/L) in the upper surficial aquifer. VC ranged from 1.2 J µg/L to 59 µg/L, exceeding the NC 2L Standard (0.03 µg/L) in the 10 upper surficial groundwater samples. Detections of 1,1-DCA (three of 10 samples collected) and 1,1-DCE (two of 10 samples collected) did not exceed the NC 2L Standards.

There were no detections of the other site-specific VOC analytes in the upper surficial aquifer during the baseline Pilot Study groundwater sampling event.

Lower Surficial Aquifer

Constituent concentrations detected in the lower surficial aquifer during the 2011 sampling event were also similar to those detected in 2009. 1,1,2,2-PCA, 1,1-DCA, 1,1-DCE, TCE cis-1,2-DCE, trans-1,2-DCE, and VC were the only analytes observed in the lower surficial aquifer, with no observed detections of other site-specific VOC analytes in the Pilot Study area. The lower surficial aquifer VOC concentrations are presented in **Table 2-3** and on **Figure 2-7**.

In the lower surficial aquifer, TCE exceeded the NC 2L Standard (3 µg/L) in groundwater samples collected from each of the 11 sampling locations, ranging from 62 µg/L to 770 µg/L. Cis-1,2-DCE exceeded the NC 2L Standard (70 µg/L) in each of the 11 samples collected, ranging from 240 µg/L to 3,500 µg/L. Trans-1,2-DCE ranged from 6.6 µg/L to 760 µg/L and exceeded the NC 2L Standard (100 µg/L) in 4 of 11 sample locations. VC ranged from 1.5 J µg/L to 110 µg/L and exceeded the NC 2L Standard (0.03 µg/L) in all 11 lower surficial groundwater samples. Analytes 1,1-DCA and 1,1-DCE were observed in 10 of 11 groundwater samples, but no detections exceeded NC 2L Standards. One detection of 1,1,2,2-PCA was noted in OU1-52IW02 at a concentration of 0.5 µg/L, exceeding the NC 2L Standard of 0.2 µg/L.

Pilot Study Area Baseline Groundwater ERD Evaluation

Only groundwater samples for new and existing monitoring wells were analyzed for the entire suite of NAIPs, as listed above with results summarized in **Table 2-3**. The laboratory analytical data can also be found in **Appendix B**. All injection and monitoring wells were field tested for the NAIPs ferrous iron, nitrate and nitrite using Hach kits, and DO using a Chemetrics kit (**Table 2-4)**. These data are also shown on **Figures 2-8** and **2-9**, for both upper surficial or lower surficial aquifer wells, respectively. An evaluation of the NAIP data for the ERD process is summarized in **Table 2-5**. Further discussion of the ERD evaluation conducted for the Pilot Study area is broken out between the upper and lower surficial aquifers below.

Upper Surficial Aquifer

As shown in **Table 2-5** and **Figure 2-8**, baseline NAIPs in the upper surficial aquifer provide many lines of evidence indicating favorable conditions for ERD of chlorinated VOCs. Results for pH, ORP, nitrate, ferrous iron, and sulfate were all within acceptable limits for ERD requirements. DO was not detected above the method detection limit of 0.025 mg/L in 7 of 10 upper surficial groundwater samples and was detected at a concentration of less than 0.2 milligrams per liter (mg/L) in two of the remaining groundwater samples. The groundwater sample collected from monitoring well 16GW11, screened at a shallower interval than the other sample locations (12 to 27 feet bgs), indicated aerobic conditions with a DO concentration of 5.02 mg/L.

Other lines of evidence, such as trends for MEE, TOC, VFAs, and DHC, will require longer term monitoring, with comparison of the baseline results with post-injection data to determine if ERD processes are occurring.

Lower Surficial

Table 2-3 and **Figure 2-9** also provide the baseline NAIP data observed in the lower surficial aquifer within the OU1 ISEB Pilot Study area. Lines of evidence for pH, ORP, DO, nitrate,

and ferrous iron were observed within the favorable ranges needed for ERD conditions (**Table 2-5**). Background concentrations of MEE, TOC, VFAs, and DHC detected in all samples collected from the lower surficial aquifer provide strong evidence that biodegradation of chlorinated VOCs is already taking place and could possibly be accelerated with the Pilot Study substrate injections. Longer term monitoring of these parameters will be required to ensure that ERD processes are occurring.

2.2 Substrate Injections

EVO and bioaugmentation culture injections were conducted with concurrence from the NCDENR Division of Water Quality (DWQ), Underground Injection Control (UIC) Program, Aquifer Protection Section. Raw data gathered during the monitoring event to evaluate SRS breakthrough has been included in **Appendix C** and a copy of the NCDENR concurrence letter for this work has been included in **Appendix D**. The following sections discuss the details of the ERD substrate injections.

2.2.1 SRS Substrate Injection

SRS Dosage

The SRS dosage used was based on an estimated oil retention coefficient of 0.002 grams of SRS per gram of dry soil in the Pilot Study treatment area. This estimation resulted in requiring approximately 1,694 pounds of SRS per injection well. To achieve a conservative 12.5-foot radius of influence (ROI) or distribution beyond the injection well, approximately 220 gallons of concentrated SRS was mixed with approximately 8,050 gallons of water to achieve 8,270 gallons of a 2.66 percent (24,541 mg/L) solution of dilute SRS.

SRS Mixing and Delivery

The SRS was supplied to the site in twelve 275-gallon graduated totes, each filled with approximately 255 to 260 gallons of concentrated SRS, which were staged onsite within a spill containment berm. The SRS concentrate was pumped out of the totes into a 4,900-gallon mixing tank by means of a diaphragm pump. Water was then obtained from a fire hydrant located approximately 250 feet north of the Pilot Study area, as shown on **Figure 2-1**. The fire hydrant was equipped with a backflow preventer and certified prior to use. A flow meter/flow totalizer was also placed in-line from the hydrant feeding the mixing tank to ensure the appropriate volume of dilution water was added for each batch of dilute SRS prepared. The dilute SRS solution was then pumped into each injection well through a series of hoses connected to an injection manifold. Each manifold leg included a flow meter/flow totalizer, pressure gauge, and a ball valve connected to a barb with some additional hose to bleed off pressure during start-up and to avoid injecting any air into the injection well. Two 4,025 batches of dilute SRS were prepared and injected into each monitoring well a rate of approximately 25 to 30 gallons per minute (gpm).

SRS Distribution Monitoring

Depth to water and groundwater quality parameters such as temperature, pH, DO, ORP, and conductivity, were monitored in select monitoring wells during injections using downhole water level and water quality meters. Raw data gathered during the monitoring event have been included in **Appendix C**.

Within one week of SRS injection activities, groundwater samples were collected from each of the monitoring wells and analyzed for TOC. A comparison of the baseline and post-injection TOC results are included in **Table 2-6**. In addition, visible evidence of SRS was observed in the groundwater samples collected from several monitoring wells: OU1-52MW78, located 12.3 feet from the closest injection well OU1-52IW08 (**Table C.29** and **Figure C.22** of **Appendix C**); OU1-52MW80, located 12.7 feet from the closest injection well OU1-52IW09 (**Table C.33** and **Figure C.26** of **Appendix C**); and OU1-52MW81, located 11.0 feet from the closest injection well OU1-52IW12 (**Table C.45** and **Figure C.34** of **Appendix C**). TOC results in groundwater samples collected from these monitoring wells increased by approximately three orders of magnitude over baseline conditions.

There were also slight increases in TOC in samples collected from other monitoring wells, but it cannot be stated with certainty that these are the result of SRS breakthrough. Additionally, SRS was not observed in existing monitoring wells 16GW11 (11.4 feet from injection well OU1-52IW03 [**Table C.9** and **Figure C.7** of **Appendix C**]) or MW53 (10.5 feet from injection well IW04 [**Table C.13** and **Figure C.10** of **Appendix C**]). It is possible that the screened intervals of these monitoring wells were either too shallow or deep, respectively, relative to the closest upper surficial or lower surficial injection wells.

2.2.2 Bioaugmentation Injection

The TSI-DC bioaugmentation injections were completed approximately two weeks following completion of the SRS injections to allow the aquifer to stabilize to anaerobic conditions.

Bioaugmentation Culture Dosage

Approximately 1.0 liter of a 5×10^{10} cells per liter (cells/L) microorganism solution was injected with 1,000 gallons of anaerobic chase water per injection well. This amendment dosage provides an initial estimated TSI DC culture concentration of approximately 1×10^{6} cells/L in the Pilot Study area, which is comparable to concentrations referenced in literature that have been shown to accelerate the ERD process (Major et al., 2002). The anaerobic chase water was generated onsite by dosing with 0.0025 pounds per gallon of sodium sulfite to remove the oxygen and reduce the ORP to less than -100 millivolts (mV).

Bioaugmentation Delivery

The TSI-DC bioaugmentation culture was supplied in an airtight keg that was pressurized to 15 pounds per square inch (psi) with nitrogen. The culture keg was supplied with hosing, valves, and a measuring cylinder for proper dosing. The measuring cylinder and all hoses used for application were purged with nitrogen, using a pressure regulator set to 15 psi, for 1 to 2 minutes prior to measuring out the culture in the measuring cylinder. Once the appropriate volume of culture was added to the measuring cylinder, the nitrogen gas was then used to inject the culture into the well, targeting the center of the screened interval.

Following injection of the bioaugmentation culture, the well head was reattached and anaerobic sodium sulfite chase water was injected to aid in the distribution of the culture into the aquifer.

TABLE 2-1
Well Construction Details
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Pilot Study	Well ID	Date Completed	Northing	Easting	Surficial Aquifer Zone	Top of Casing Elevation (feet msl)	Ground Surface Elevation (feet msl)	Well Diameter (inches)	Total Well Depth (ft bgs)	Screen[a,b] Length (ft)	Screen Interval (ft bgs)
Injection Well Pairs	OU1-52IW01	5/15/2011	3862743.688	326230.968	Upper	20.39	20.70	4	36	15	20 - 35
	OU1-52IW02	5/14/2011	3862745.076	326229.680	Lower	20.38	20.46	4	51	15	35 - 50
	OU1-52IW03	5/17/2011	3862749.134	326236.353	Upper	20.17	20.22	4	36	15	20 - 35
	OU1-52IW04	5/14/2011	3862749.576	326233.982	Lower	20.11	20.24	4	51	15	35 - 50
	OU1-52IW05	5/17/2011	3862756.694	326240.692	Upper	19.53	19.84	4	36	15	20 - 35
	OU1-52IW06	5/13/2011	3862756.034	326239.665	Lower	19.61	19.86	4	51	15	35 - 50
	OU1-52IW07	5/17/2011	3862761.628	326246.330	Upper	19.44	19.63	4	36	15	21 - 36
	OU1-52IW08	5/13/2011	3862760.836	326245.546	Lower	19.40	19.59	4	46	15	30 - 45
	OU1-52IW09	5/16/2011	3862766.680	326252.026	Upper	19.31	19.52	4	36	15	20 - 35
	OU1-52IW10	5/15/2011	3862765.945	326251.310	Lower	19.32	19.46	4	48	15	32 - 47
	OU1-52IW11	5/15/2011	3862770.105	326257.316	Upper	18.95	19.16	4	36	15	20 - 35
	OU1-52IW12	5/12/2011	3862771.007	326256.755	Lower	19.28	19.35	4	46	15	30 - 45
	OU1-52IW13	5/16/2011	3862775.419	326262.673	Upper	18.60	18.60	4	36	15	20 - 35
	OU1-52IW14	5/12/2011	3862776.424	326261.822	Lower	19.00	19.04	4	46	15	30 - 45
Newly Installed Monitoring Wells	OU1-52MW77	5/19/2011	3862755.713	326235.243	Upper	19.66	20.06	2	33	10	22 - 32
	OU1-52MW78	5/19/2011	3862760.899	326241.829	Lower	19.57	19.86	2	49	10	38 - 48
	OU1-52MW79	5/18/2011	3862766.085	326246.641	Lower	19.72	19.86	2	49	10	38 - 48
	OU1-52MW80	5/19/2011	3862766.080	326248.257	Upper	19.64	19.75	2	33	10	22 - 32
	OU1-52MW81	5/18/2011	3862770.882	326253.464	Lower	19.67	19.65	2	49	10	38 - 48
Existing Monitoring Wells	16GW11	6/26/2000	3862745.987	326237.797	Upper	22.64	21.17	2	27	15	12 - 27
	MW53	11/7/1990	3862746.443	326234.394	Lower	22.40	20.54	2	54	10	44 - 54

Notes:
[a] 4-inch diameter with 0.020-inch slot Vee-wire Schedule (Sch.) 40 PVC screen for injection wells
[b] 2-inch diameter 0.010-inch machine slot Sch. 40 PVC screen for monitoring wells
ft - feet
ft bgs - feet below ground surface
ft btoc - feet below top of casing
ft msl - feet mean sea level

TABLE 2-2
Groundwater Elevation Data
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Pilot Study	Well ID	Surficial Aquifer Zone	Total Well Depth (ft bgs)	Screen Interval (ft bgs)	Top of Casing Elevation (feet msl)	Ground Surface Elevation (feet msl)	Depth to Water (ft btoc)	Depth to Water (ft msl)
Injection Well Pairs	OU1-52IW01	Upper	36	20 - 35	20.39	20.70	12.55	7.84
	OU1-52IW02	Lower	51	35 - 50	20.38	20.46	12.75	7.63
	OU1-52IW03	Upper	36	20 - 35	20.17	20.22	12.35	7.82
	OU1-52IW04	Lower	51	35 - 50	20.11	20.24	12.45	7.66
	OU1-52IW05	Upper	36	20 - 35	19.53	19.84	11.64	7.89
	OU1-52IW06	Lower	51	35 - 50	19.61	19.86	11.91	7.70
	OU1-52IW07	Upper	36	21 - 36	19.44	19.63	11.36	8.08
	OU1-52IW08	Lower	46	30 - 45	19.40	19.59	11.67	7.73
	OU1-52IW09	Upper	36	20 - 35	19.31	19.52	11.04	8.27
	OU1-52IW10	Lower	48	32 - 47	19.32	19.46	11.55	7.77
	OU1-52IW11	Upper	36	20 - 35	18.95	19.16	10.90	8.05
	OU1-52IW12	Lower	46	30 - 45	19.28	19.35	11.47	7.81
	OU1-52IW13	Upper	36	20 - 35	18.60	18.60	10.53	8.07
	OU1-52IW14	Lower	46	30 - 45	19.00	19.04	11.16	7.84
Newly Installed Monitoring Wells	OU1-52MW77	Upper	33	22 - 32	19.66	20.06	11.86	7.80
	OU1-52MW78	Lower	49	38 - 48	19.57	19.86	11.85	7.72
	OU1-52MW79	Lower	49	38 - 48	19.72	19.86	11.98	7.74
	OU1-52MW80	Upper	33	22 - 32	19.64	19.75	11.56	8.08
	OU1-52MW81	Lower	49	38 - 48	19.67	19.65	11.90	7.77
Existing Monitoring Wells	16GW11	Upper	27	12 - 27	22.64	21.17	13.95	8.69
	MW53	Lower	54	44 - 54	22.40	20.54	14.84	7.56

Notes:
ft - feet
ft bgs - feet below ground surface
ft btoc - feet below top of casing
ft msl - feet mean sea level

TABLE 2-3
Baseline Groundwater VOC and NAIP Detections
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Sample ID	Screening	16GW11-052511	16GW11-060911	MW53-052511	MW53-060911	OU1-52GW77-052511	OU1-52GW77-061011	OU1-52GW77D-052511	OU1-52GW78-052511	OU1-52GW78-060911	OU1-52GW79-052511	OU1-52GW79-061011
Sample Date	Criteria*	5/25/11	6/9/11	5/25/11	6/9/11	5/25/11	6/10/11	5/25/11	5/25/11	6/9/11	5/25/11	6/10/11
Chemical Name												
Volatile Organic Compounds (UG/L)												
1,1,2,2-Tetrachloroethane	0.2	0.5 U	NS	0.5 U	NS	0.5 U	NS	0.5 U	0.5 U	NS	0.5 U	NS
1,1-Dichloroethane	6	0.5 U	NS	0.5 U	NS	**0.53 J**	NS	**0.29 J**	**1.3**	NS	**1.2**	NS
1,1-Dichloroethene	7	0.5 U	NS	**0.93 J**	NS	**0.43 J**	NS	**0.44 J**	**2.5**	NS	**2.3**	NS
1,2-Dichloroethene (total)	70	**8.4**	NS	**510**	NS	**100**	NS	**110**	**1,300**	NS	**1,300**	NS
cis-1,2-Dichloroethene	70	**7.7**	NS	**400**	NS	**93**	NS	**100**	**1,200**	NS	**1,200**	NS
trans-1,2-Dichloroethene	100	**0.72 J**	NS	**120**	NS	**7.7**	NS	**8.3**	**110**	NS	**80**	NS
Trichloroethene	3	1.2 U	NS	**610**	NS	**29**	NS	**31**	**720**	NS	**480**	NS
Vinyl chloride	0.03	**1.2 J**	NS	**1.5 J**	NS	**20**	NS	**20**	**23**	NS	**20**	NS
Wet Chemistry (UG/L)												
Ethane	--	2 U	NS	**3.9 J**	NS	2 U	NS	NS	**4.1 J**	NS	**3.2 J**	NS
Ethene	--	2 U	NS	2 U	NS	**2.5 J**	NS	NS	2 U	NS	**1.1 J**	NS
Methane	--	**8.2 J**	NS	**52**	NS	**700**	NS	NS	**180**	NS	**130**	NS
Sulfate (mg/L)	250	**14**	NS	**1.3**	NS	**13**	NS	NS	**35**	NS	**28**	NS
Sulfide (mg/L)	--	0.75 U	NS	**1**	NS	0.75 U	NS	NS	0.75 U	NS	0.75 U	NS
Total organic carbon (TOC) (mg/L)	--	**1.4**	**7.1**	**1.6**	**2.4**	**5.2**	**10**	NS	**2.3**	**3,100**	**1.7**	**22**
Volatile Fatty Acids (MG/L)												
Formic Acid	--	**0.061 J**	NS	**0.066 J**	NS	**0.099 J**	NS	NS	**0.11**	NS	**0.17**	NS
Lactic Acid	--	**0.12**	NS	**0.15**	NS	**0.25**	NS	NS	**0.28**	NS	**0.16**	NS
Propionic Acid	--	**0.052**	NS	**0.07**	NS	0.05 U	NS	NS	0.05 U	NS	**0.064**	NS
General Microbial Analyses (CELLS/ML)												
Dehalobacter	--	**9,330**	NS	**3,290**	NS	**96,100**	NS	NS	**10,500**	NS	**19,300**	NS
Dehalococcoides	--	**14.2**	NS	**196**	NS	**1,780**	NS	NS	**39.7**	NS	**861**	NS
Desulfuromonas	--	**2.8**	NS	**4,100**	NS	**20**	NS	NS	**12.2**	NS	**215**	NS

Notes:

Shading indicates exceedance

Bold indicates detection

J - Analyte present. Value may or may not be accurate or precise

NS - Not sampled

U - The material was analyzed for, but not detected

CELLS/ML - Cells per milliliter

MG/L - Milligrams per liter

UG/L - Micrograms per liter

* - Screening critieria values are the more conservative between MCLs and NC 2L Standards

TABLE 2-3
Baseline Groundwater VOC and NAIP Detections
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Sample ID	Screening	OU1-52GW80-052511	OU1-52GW80-061011	OU1-52GW81-052511	OU1-52GW81-061011	OU1-52IW01-052411	OU1-52IW01D-052411	OU1-52IW02-052511	OU1-52IW03-052411	OU1-52IW04-052311	OU1-52IW05-052311	OU1-52IW06-052311
Sample Date	Criteria*	5/25/11	6/10/11	5/25/11	6/10/11	5/24/11	5/24/11	5/25/11	5/24/11	5/23/11	5/23/11	5/23/11
Chemical Name												
Volatile Organic Compounds (UG/L)												
1,1,2,2-Tetrachloroethane	0.2	0.5 U	NS	0.5 U	NS	0.5 U	0.5 U	**0.5**	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	6	0.5 U	NS	**1.2**	NS	**2.9**	**3.1**	**0.42 J**	**0.75 J**	**1**	0.5 U	**0.24 J**
1,1-Dichloroethene	7	0.5 U	NS	**3.7**	NS	**0.67 J**	**0.6 J**	**1.2**	0.5 U	**1.8**	0.5 U	**0.7 J**
1,2-Dichloroethene (total)	70	**31**	NS	**1,600**	NS	**100**	**110**	**620**	**70**	**910**	**44**	**250**
cis-1,2-Dichloroethene	70	**30**	NS	**1,500**	NS	**96**	**100**	**510**	**64**	**870**	**41**	**240**
trans-1,2-Dichloroethene	100	**1.6**	NS	**34**	NS	**7.5**	**7.8**	**110**	**6.2**	**38**	**3.2**	**8.4**
Trichloroethene	3	**9.6**	NS	**440**	NS	**15**	**14**	**770**	**5.1**	**330**	**5.3**	**130**
Vinyl chloride	0.03	**3.1**	NS	**28**	NS	**20**	**20**	**3.1**	**12**	**22**	**11**	**16**
Wet Chemistry (UG/L)												
Ethane	--	2 U	NS	**3.1 J**	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	--	2 U	NS	**2.6 J**	NS	NS	NS	NS	NS	NS	NS	NS
Methane	--	**700**	NS	**610**	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate (mg/L)	250	**9.2**	NS	**27**	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide (mg/L)	--	0.75 U	NS	0.75 U	NS	NS	NS	NS	NS	NS	NS	NS
Total organic carbon (TOC) (mg/L)	--	**3.4**	**1,800**	**4.5**	**1,600**	NS	NS	NS	NS	NS	NS	NS
Volatile Fatty Acids (MG/L)												
Formic Acid	--	**0.094 J**	NS	**0.19**	NS	NS	NS	NS	NS	NS	NS	NS
Lactic Acid	--	0.1 U	NS	**0.21**	NS	NS	NS	NS	NS	NS	NS	NS
Propionic Acid	--	**0.08**	NS	**0.06**	NS	NS	NS	NS	NS	NS	NS	NS
General Microbial Analyses (CELLS/ML)												
Dehalobacter	--	**561**	NS	**464,000**	NS	NS	NS	NS	NS	NS	NS	NS
Dehalococcoides	--	**2,200**	NS	**672**	NS	NS	NS	NS	NS	NS	NS	NS
Desulfuromonas	--	**4.4**	NS	**65.9**	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Shading indicates exceedance

Bold indicates detection

J - Analyte present. Value may or may not be accurate or precise

NS - Not sampled

U - The material was analyzed for, but not detected

CELLS/ML - Cells per milliliter

MG/L - Milligrams per liter

UG/L - Micrograms per liter

* - Screening critieria values are the more conservative between MCLs and NC 2L Standards

TABLE 2-3
Baseline Groundwater VOC and NAIP Detections
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Sample ID	Screening Criteria*	OU1-52IW07-052411	OU1-52IW08-052311	OU1-52IW09-052411	OU1-52IW10-052311	OU1-52IW11-052411	OU1-52IW12-052211	OU1-52IW13-052411	OU1-52IW14-052211
Sample Date		5/24/11	5/23/11	5/24/11	5/23/11	5/24/11	5/22/11	5/24/11	5/22/11
Chemical Name									
Volatile Organic Compounds (UG/L)									
1,1,2,2-Tetrachloroethane	0.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	6	0.5 U	**0.7 J**	0.5 U	**2.1**	0.5 U	**0.32 J**	0.5 U	**0.96 J**
1,1-Dichloroethene	7	0.5 U	**1.3**	0.5 U	0.5 U	0.5 U	**0.93 J**	0.5 U	**2.2**
1,2-Dichloroethene (total)	70	**23**	**420**	**8.5**	**3,600**	**25**	**480**	**160**	**760**
cis-1,2-Dichloroethene	70	**22**	**400**	**8.2**	**3,500**	**25**	**480**	**150**	**750**
trans-1,2-Dichloroethene	100	**1.3**	**11**	**0.29 J**	**56**	**0.83 J**	**6.6**	**5.4**	**760**
Trichloroethene	3	**4.4**	**62**	**0.94 J**	**540**	**5.4**	**140**	**12**	**750**
Vinyl chloride	0.03	**6.1**	**24**	**1.7 J**	**110**	**3**	**8.4**	**59**	**64**
Wet Chemistry (UG/L)									
Ethane	--	NS	NS	NS	NS	NS	NS	NS	NS
Ethene	--	NS	NS	NS	NS	NS	NS	NS	NS
Methane	--	NS	NS	NS	NS	NS	NS	NS	NS
Sulfate (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS
Sulfide (mg/L)	--	NS	NS	NS	NS	NS	NS	NS	NS
Total organic carbon (TOC) (mg/L)	--	NS	NS	NS	NS	NS	NS	NS	NS
Volatile Fatty Acids (MG/L)									
Formic Acid	--	NS	NS	NS	NS	NS	NS	NS	NS
Lactic Acid	--	NS	NS	NS	NS	NS	NS	NS	NS
Propionic Acid	--	NS	NS	NS	NS	NS	NS	NS	NS
General Microbial Analyses (CELLS/ML)									
Dehalobacter	--	NS	NS	NS	NS	NS	NS	NS	NS
Dehalococcoides	--	NS	NS	NS	NS	NS	NS	NS	NS
Desulfuromonas	--	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Shading indicates exceedance

Bold indicates detection

J - Analyte present. Value may or may not be accurate or precise

NS - Not sampled

U - The material was analyzed for, but not detected

CELLS/ML - Cells per milliliter

MG/L - Milligrams per liter

UG/L - Micrograms per liter

* - Screening critieria values are the more conservative between MCLs and NC 2L Standards

TABLE 2-4
Baseline Natural Attenuation Indication Parameters
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Pilot Study Well Type	Well ID	Surficial Aquifer Zone	Screen Interval (ft bgs)	Temperature (°C)	Conductivity (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Ferous Iron (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
Injection Well Pairs	OU1-52IW01	Upper	20 - 35	20.62	0.42	0.05	5.88	44	11.8	2.2	<1.0	<0.01
	OU1-52IW02	Lower	35 - 50	24.00	0.46	<0.025	6.96	-58	7.00	2.6	<1.0	<0.01
	OU1-52IW03	Upper	20 - 35	19.81	0.45	0.19	6.12	-40	14.6	4.2	<1.0	<0.01
	OU1-52IW04	Lower	35 - 50	22.47	0.47	<0.025	6.11	-7.0	8.83	1.8	<1.0	0.23
	OU1-52IW05	Upper	20 - 35	20.12	0.62	<0.025	6.48	-114	3.02	4.9	<1.0	<0.01
	OU1-52IW06	Lower	35 - 50	20.62	0.72	<0.025	6.55	-109	41.9	4.0	<1.0	<0.01
	OU1-52IW07	Upper	21 - 36	20.31	0.39	<0.025	6.37	-92	18.9	5.1	<1.0	<0.01
	OU1-52IW08	Lower	30 - 45	20.84	0.51	<0.025	6.27	-35	4.85	2.0	<1.0	0.17
	OU1-52IW09	Upper	20 - 35	21.45	0.51	<0.025	6.35	-45	7.22	3.6	<1.0	0.33
	OU1-52IW10	Lower	32 - 47	20.59	0.40	<0.025	6.16	-23	14.6	<0.2	4.4	<0.01
	OU1-52IW11	Upper	20 - 35	19.41	0.41	<0.025	6.36	-81	22.6	5.0	<1.0	<0.01
	OU1-52IW12	Lower	30 - 45	19.58	0.39	<0.025	6.28	-54	1.25	2.0	<1.0	0.20
	OU1-52IW13	Upper	20 - 35	20.45	1.53	<0.025	6.40	-48	6.85	3.6	<1.0	0.20
	OU1-52IW14	Lower	30 - 45	20.41	0.49	<0.025	6.35	-37	8.70	3.6	<1.0	<0.01
Newly Installed Monitoring Wells	OU1-52MW77	Upper	22 - 32	20.07	2.38	<0.025	6.38	-57	17.6	3.2	<1.0	0.23
	OU1-52MW78	Lower	38 - 48	23.53	2.41	<0.025	6.46	-13	24.0	2.6	13.2	0.10
	OU1-52MW79	Lower	38 - 48	21.80	0.42	<0.025	6.65	-71	13.5	1.5	<1.0	<0.01
	OU1-52MW80	Upper	22 - 32	19.86	3.88	<0.025	6.29	-40	8.97	2.8	<1.0	0.23
	OU1-52MW81	Lower	38 - 48	22.98	0.57	0.05	6.62	4.0	24.0	3.0	<1.0	<0.01
Existing Monitoring Wells	16GW11	Upper	12 - 27	20.96	0.28	5.02	6.43	47	36.0	0.1	<1.0	<0.01
	MW53	Lower	44 - 54	22.46	0.46	0.20	6.99	-95	21.8	2.0	<1.0	<0.01

Notes:
ft bgs - feet below ground surface
°C - degrees Celcius
mS/cm - milliSiemens per centimeter
mg/L - milligrams per liter
SU - scientfic units
mV - milliVolts
NTUs - nephelometric turbidity units
Ferrous Iron - Hach kit - Phenanthroline Method
Nitrate/Nitrite - Hach kit - Cadmium Reduction/Diazotization Method
Dissolved Oxygen - Chemetrics kit - Rhodazine Method

TABLE 2-5
ERD Data Evaluation - Baseline Sample Summary
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Upper Surficial Aquifer						
Natural Attenuation Indicator Parameter	**Lines of Evidence for Enhanced Reductive Dechlorination**	**Minimum Value**	**Minimum Value Location**	**Maximum Value**	**Maximum Value Location**	**Favorable/ Unfavorable**
pH	Greater than 5; Less than 9	5.88	OU1-52IW01	6.48	OU1-52IW05	Favorable
ORP (mV)	Less than +50 mV (favorable) Less than -100 mV (ideal)	-114	OU1-52IW05	47	16GW11	Favorable to Ideal
DO (mg/L)	Less than 1.0 mg/L	<0.025	7 of 10 Locations	5.02	16GW11	Favorable
Nitrate (mg/L)	Less than 1.0 mg/L	<1.0	10 of 10 Locations	0	10 of 10 Locations	Favorable
Ferrous Iron (Fe^{2+}) (mg/L)	Measurable Levels	0.1	16GW11	5.1	OU1-52IW07	Favorable
Sulfate (mg/L)	Concentrations decrease below background over time	9.2	OU1-52MW80	14	16GW11	Favorable
Methane (μg/L)	Concentrations increase above background over time	8.2 J	16GW11	700	OU1-52MW77	Favorable
Ethane (μg/L)		ND	3 of 3 Locations	ND	3 of 3 Locations	--
Ethene (μg/L)		ND	2 of 3 Locations	2.5 J	OU1-52MW77	Favorable
TOC (mg/L)	Increase above baseline	1.4	16GW11	5.2	OU1-52GW77	Favorable
VFAs (sum of all VFAs; mg/L)	Initial increase above baseline then decrease over time as substrate is utilized by microbes	0.174 J	OU1-52MW80	0.349 J	OU1-52GW77	Favorable
Dehalococcoides Population (cells per mL)	Increase above baseline over time as ERD substrate and VOCs are utilized; cells per mL	14.2	16GW11	2,200	OU1-52MW80	Favorable

Lower Surficial Aquifer						
Natural Attenuation Indicator Parameter	**Lines of Evidence for Enhanced Reductive Dechlorination**	**Minimum Value**	**Minimum Value Location**	**Maximum Value**	**Maximum Value Location**	**Favorable/ Unfavorable**
pH	Greater than 5; Less than 9	6.11	OU1-52IW04	6.99	MW53	Favorable
ORP (mV)	Less than +50 mV (favorable) Less than -100 mV (ideal)	-109	OU1-52IW06	4.0	OU1-52MW81	Favorable to Ideal
DO (mg/L)	Less than 1.0 mg/L	<0.025	9 of 11 Locations	0.2	MW53	Favorable
Nitrate (mg/L)	Less than 1.0 mg/L	<1.0	9 of 11 Locations	13.2	OU1-52MW78	Favorable
Ferrous Iron (Fe^{2+}) (mg/L)	Measurable Levels	<0.2	OU1-52IW10	4	OU1-52IW06	Favorable
Sulfate (mg/L)	Concentrations decrease below background over time	1.3	MW53	35	OU1-52MW78	Favorable to Unfavorable
Methane (μg/L)	Concentrations increase above background over time	52	MW53	610	OU1-52MW81	Favorable
Ethane (μg/L)		3.1 J	OU1-52GW81	4.1 J	OU1-52GW78	--
Ethene (μg/L)		ND	2 of 4 locations	2.6 J	OU1-52GW81	Favorable
TOC (mg/L)	Increase above baseline	1.6	MW53	4.5	OU1-52GW81	Favorable
VFAs (sum of all VFAs; mg/L)	Initial increase above baseline then decrease over time as substrate is utilized by microbes	0.286 J	MW53	0.460	OU1-52GW81	Favorable
Dehalococcoides Population (cells per mL)	Increase above baseline over time as ERD substrate and VOCs are utilized; cells per mL	39.7	OU1-52GW78	861	OU1-52GW79	Favorable

Notes:

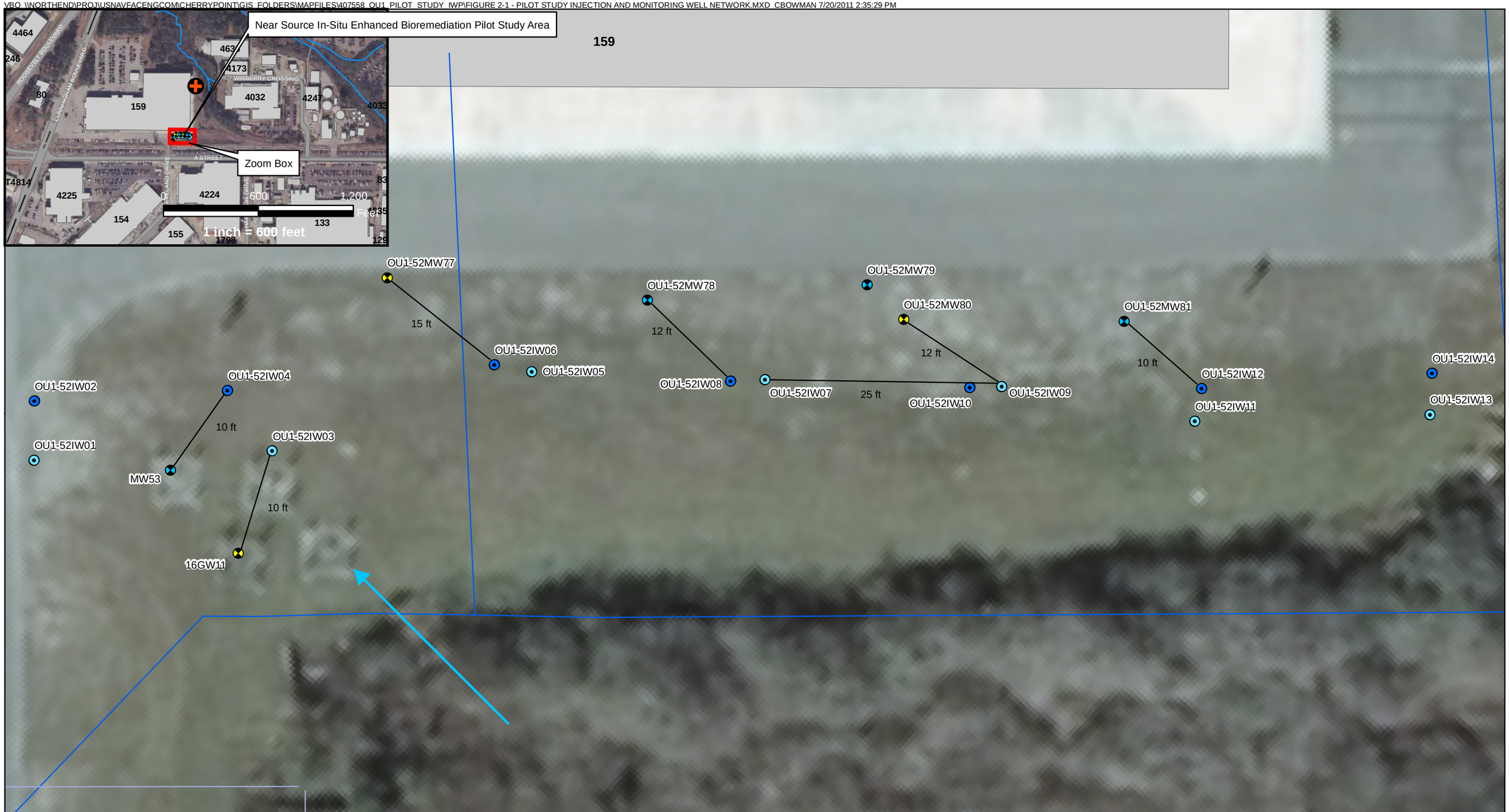
μg/L - micrograms per liter
mg/L - milligrams per liter
mL - milliliters
mV - milliVolts
ND - Not detected
NTUs - nephelometric turbidity units
SU - scientfic units
VFAs - volatile fatty acids

TABLE 2-6
TOC Data Evaluation
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

Pilot Study Well Type	Well ID	Surficial Aquifer Zone	Screen Interval (ft bgs)	Closest Injection Well*	Distance to Closest Injection Well (ft)	Baseline TOC (mg/L)	Post Injection TOC (mg/L)
Newly Installed Monitoring Wells	OU1-52MW77	Upper	22 - 32	OU1-52IW05	18.4	5.2	10
	OU1-52MW78	Lower	38 - 48	OU1-52IW08	12.3	2.3	**3,100**
	OU1-52MW79	Lower	38 - 48	OU1-52IW10	15.5	1.7	22
	OU1-52MW80	Upper	22 - 32	OU1-52IW09	12.7	3.4	**1,800**
	OU1-52MW81	Lower	38 - 48	OU1-52IW12	11.0	4.5	**1,600**
Existing Monitoring Wells	16GW11	Upper	12 - 27	OU1-52IW03	11.4	1.4	7.1
	MW53	Lower	44 - 54	OU1-52IW04	10.5	1.6	2.4

Notes:
*Closest injection well screened in same aquifer as monitoring well
ft - feet
bgs - below ground surface
mg/L - milligrams per liter

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 2-1 - PILOT STUDY INJECTION AND MONITORING WELL NETWORK.MXD CBOWMAN 7/20/2011 2:35:29 PM



Legend

- Monitoring Well - Lower Surficial Aquifer
- Monitoring Well - Upper Surficial Aquifer
- Pilot Study Injection Well - Lower Surficial Aquifer
- Pilot Study Injection Well - Upper Surficial Aquifer
- Fire Hydrant
- Electrical Cable Line
- Industrial Waste Line
- Storm Sewer Line
- Water Line
- Groundwater Flow Direction
- Existing Buildings

N S E W

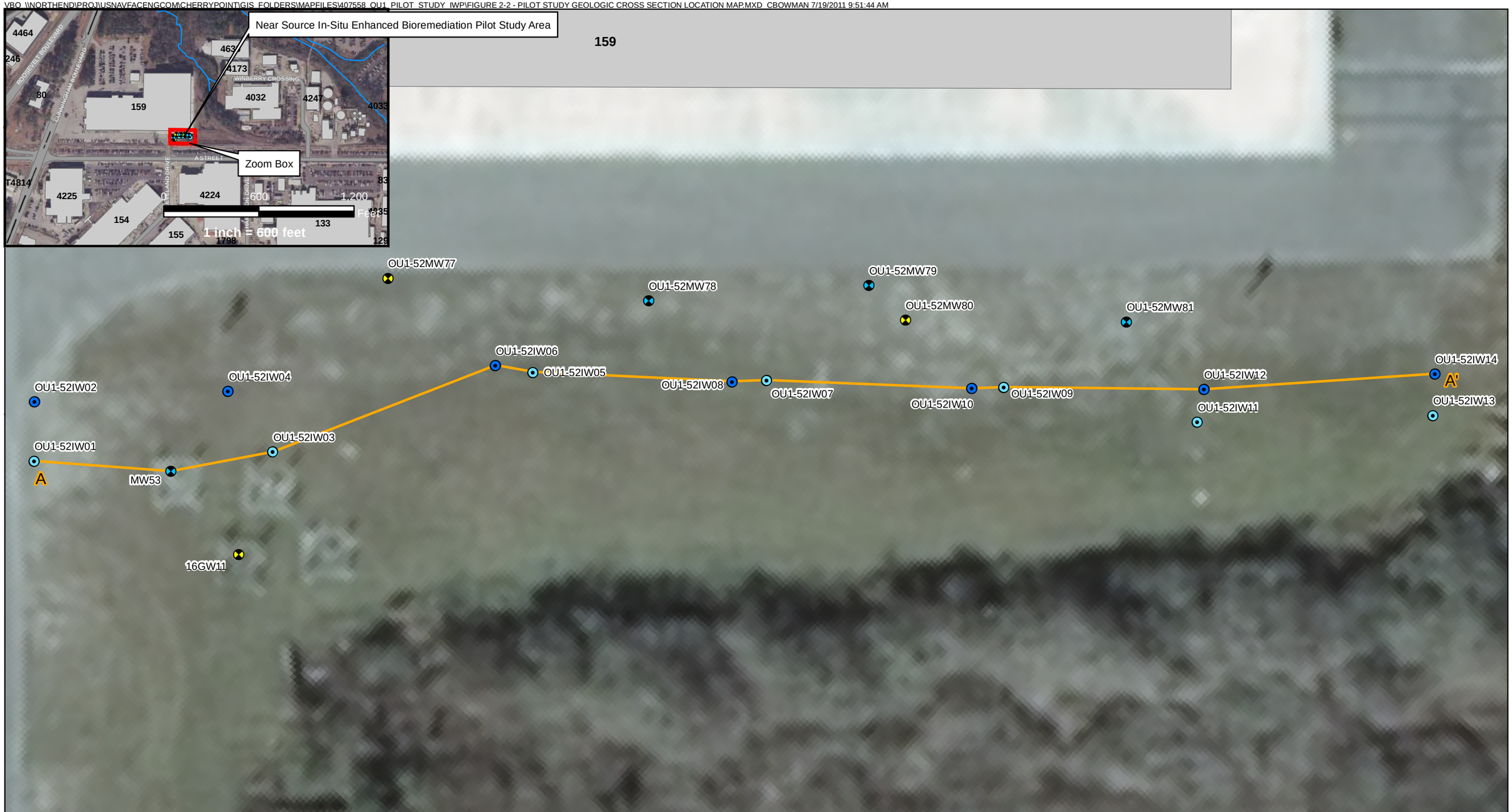
0 10 20 Feet

1 inch = 10 feet

Figure 2-1
OU1 ISEB Pilot Study Injection and Monitoring Well Network
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 2-2 - PILOT STUDY GEOLOGIC CROSS SECTION LOCATION MAP.MXD CBOWMAN 7/19/2011 9:51:44 AM



Legend

- Monitoring Well - Lower Surficial Aquifer
- Monitoring Well - Upper Surficial Aquifer
- Pilot Study Injection Well - Lower Surficial Aquifer
- Pilot Study Injection Well - Upper Surficial Aquifer
- Cross Section Transect
- Existing Buildings

N S E W

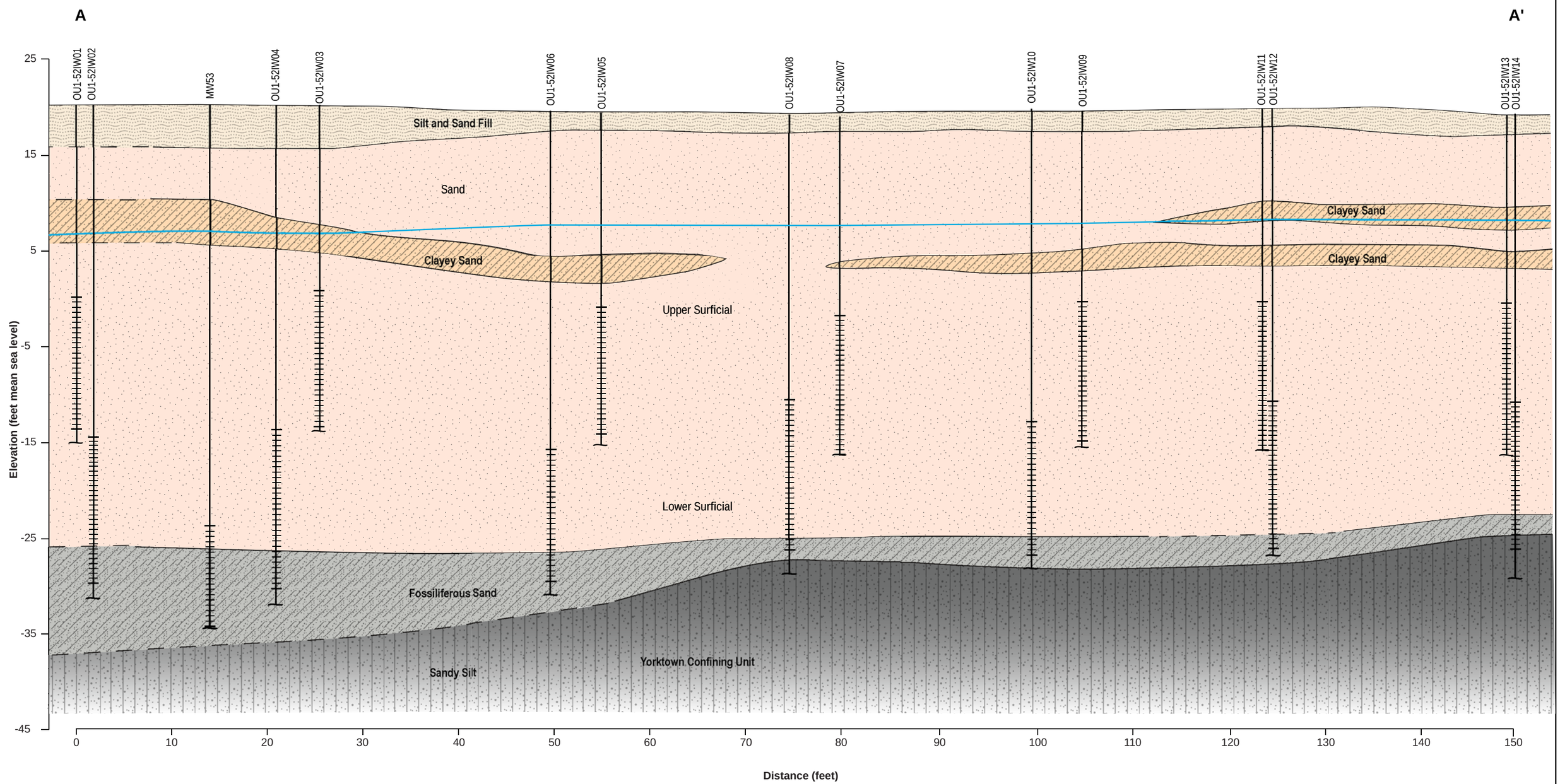
0 10 20 Feet

1 inch = 10 feet

Figure 2-2
OU1 ISEB Pilot Study Geologic Cross Section Location Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.

ES071911153617MKE



LEGEND

- Silt and Sand Fill
- Sand
- Clayey Sand
- Fossiliferous Sand
- Sandy Silt
- Screened Interval
- Boring Depth
- Lithologic Contact (Dashed where Inferred)
- Water Level Elevation

Horizontal : 1" = 10'
Vertical: 1" = 10'

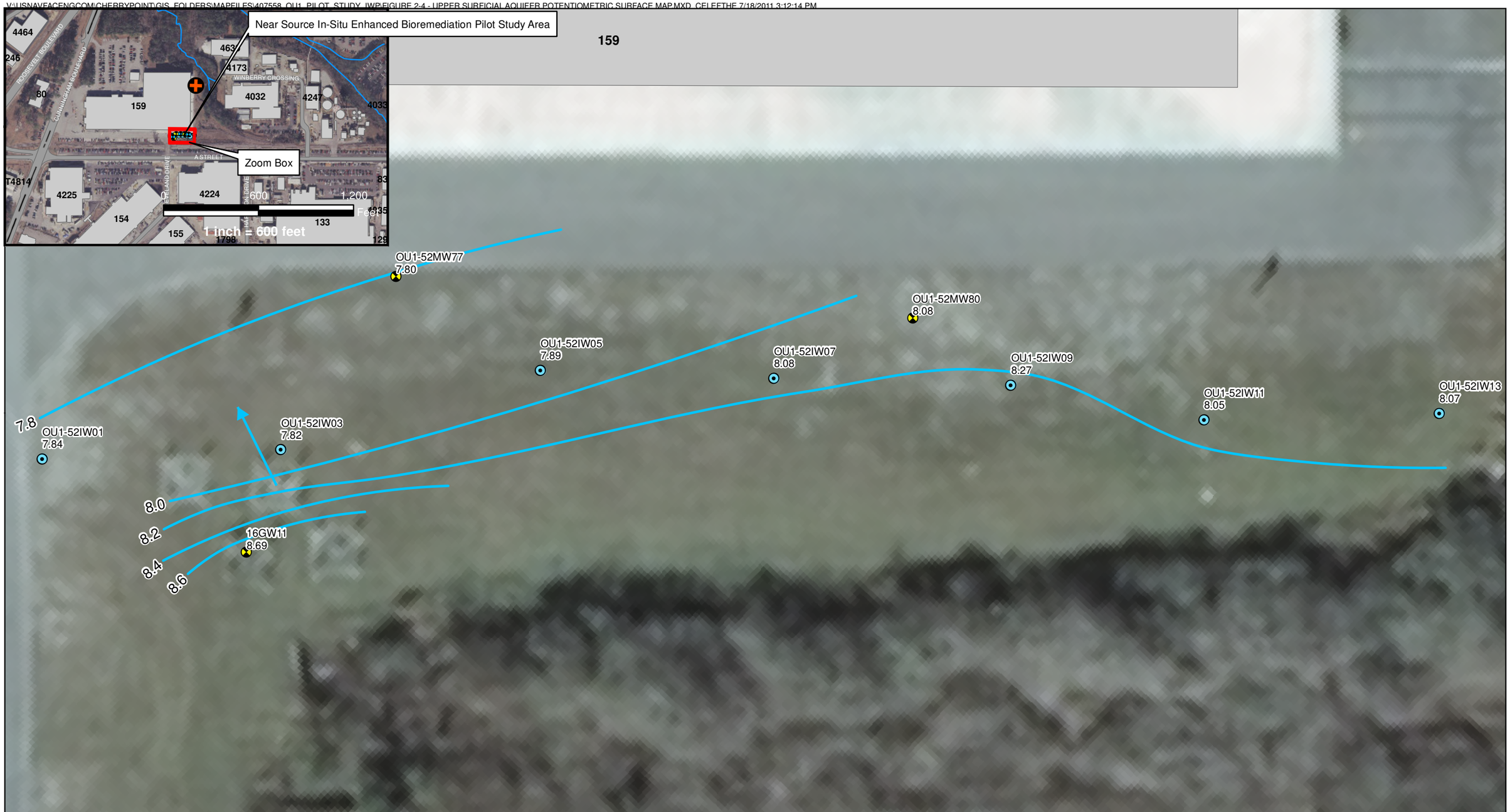
Notes

1) The depth and thickness of the subsurface strata indicated on this profile were generalized between test locations.
2) Sand (SP): Yellowish-brown to tan, damp, loose, fine grained with trace silt (Upper and Lower Surficial Aquifer)
3) Clayey Sand (SC): Reddish-brown, moist, low density, fine grained sand with clay (Upper Surficial Aquifer)
4) Fossiliferous Sand (SP): Dark gray, moist, loose, very fine to fine grained with some shell fragments (Lower Surficial Aquifer)
5) Sandy Silt (SM): Dark greeish-gray, damp, medium dense (Yorktown Confining Unit)

Figure 2-3
OU1 ISEB Pilot Study Area Geologic Cross Section
Marine Corp Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL

V:\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 2-4 - UPPER SURFICIAL AQUIFER POTENTIOMETRIC SURFACE MAP.MXD, CFLEETHE 7/18/2011 3:12:14 PM



Legend

- Monitoring Well - Upper Surficial Aquifer
- Pilot Study Injection Well - Upper Surficial Aquifer
- Fire Hydrant
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Existing Buildings

7.82 - Groundwater Elevation

Notes:
All groundwater elevation measurements are in feet mean sea level.

N W E S

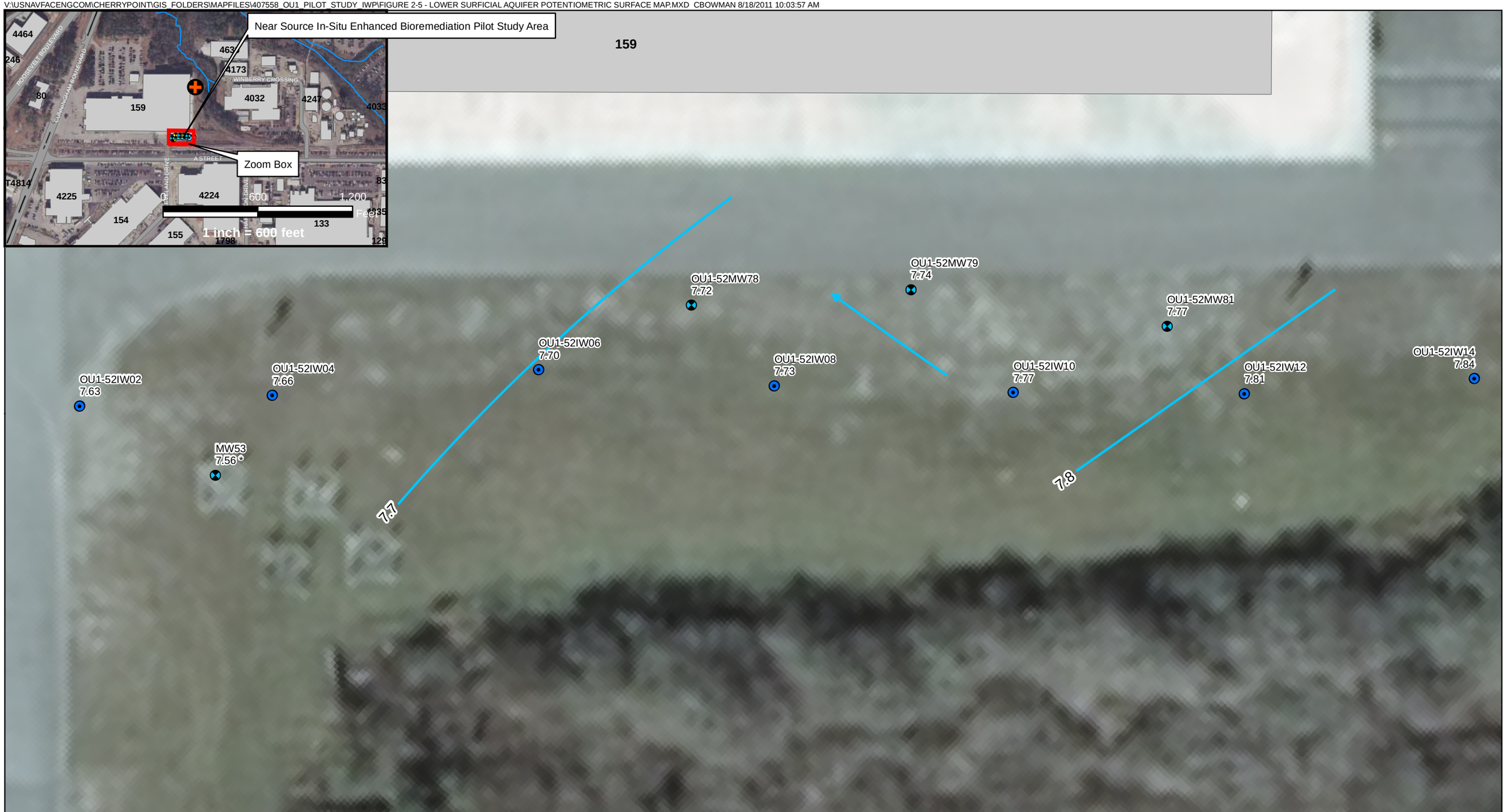
0 10 20 Feet

1 inch = 10 feet

Figure 2-4
Upper Surficial Aquifer Potentiometric Surface Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.

V:\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 2-5 - LOWER SURFICIAL AQUIFER POTENTIOMETRIC SURFACE MAP.MXD CBOWMAN 8/18/2011 10:03:57 AM



Legend

- Monitoring Well - Lower Surficial Aquifer
- Pilot Study Injection Well - Lower Surficial Aquifer
- Fire Hydrant
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Existing Buildings

7.77 - Groundwater Elevation Measurement

Notes:
All groundwater elevation measurements are in feet mean sea level.
* Not used during contour development

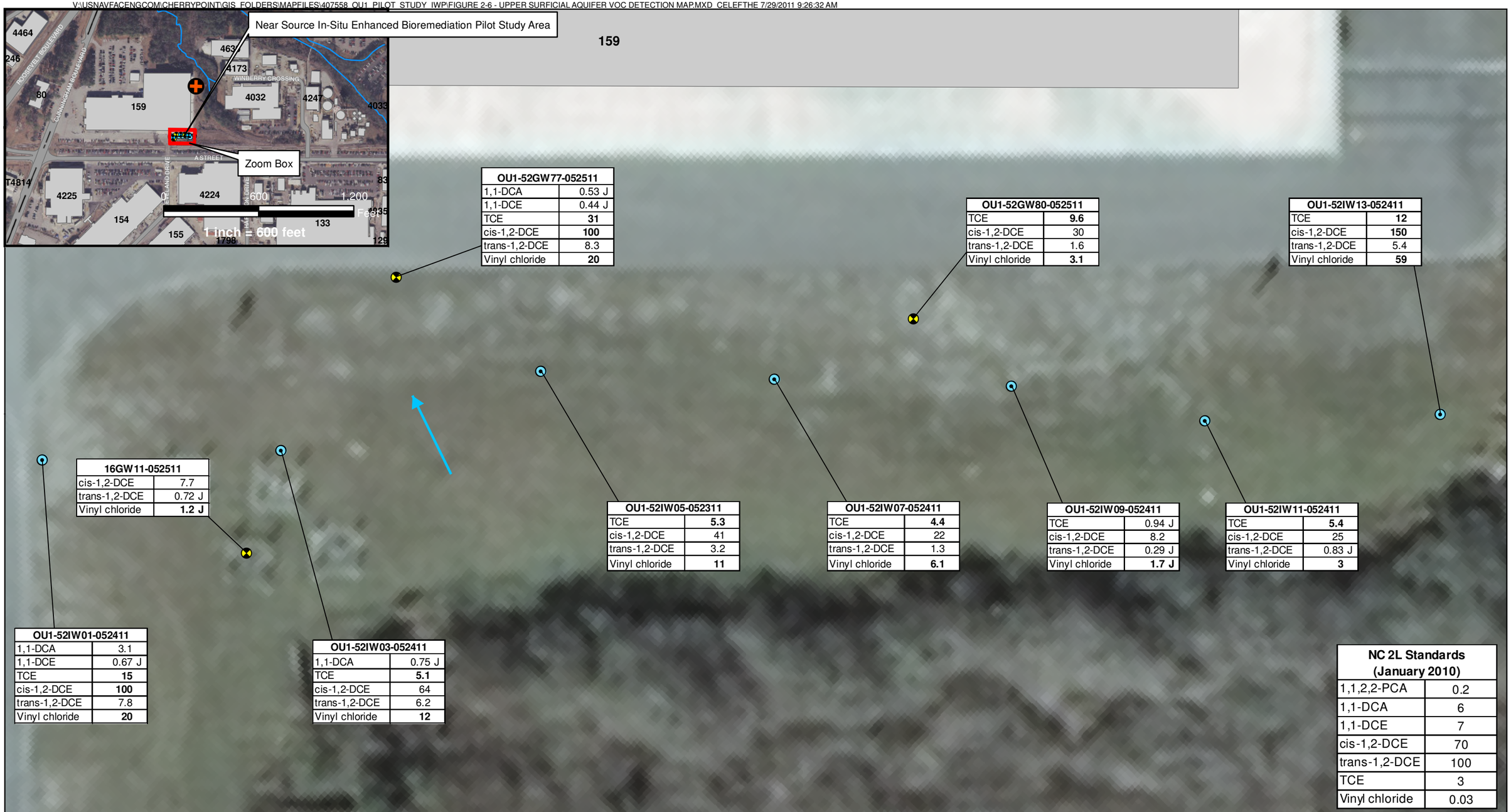
0 10 20 Feet

1 inch = 10 feet

Figure 2-5
Lower Surficial Aquifer Potentiometric Surface Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.

V:\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 2-6 - UPPER SURFICIAL AQUIFER VOC DETECTION MAP.MXD CELEFTHE 7/29/2011 9:26:32 AM



Legend

- Monitoring Well - Upper Surficial Aquifer
- Pilot Study Injection Well - Upper Surficial Aquifer
- Fire Hydrant
- Groundwater Flow Direction
- Existing Buildings

Notes:
All VOC concentrations given in micrograms per liter (µg/L)
All VOC exceedances of NC 2L Standards are in **bold** text
1,1,2,2-PCA - 1,1,2,2-Tetrachloroethane
1,1-DCA - 1,1-Dichloroethane
1,1-DCE - 1,1-Dichloroethene
cis-1,2-DCE - cis-1,2-Dichloroethene
trans-1,2-DCE - trans-1,2-Dichloroethene
TCE - Trichloroethene

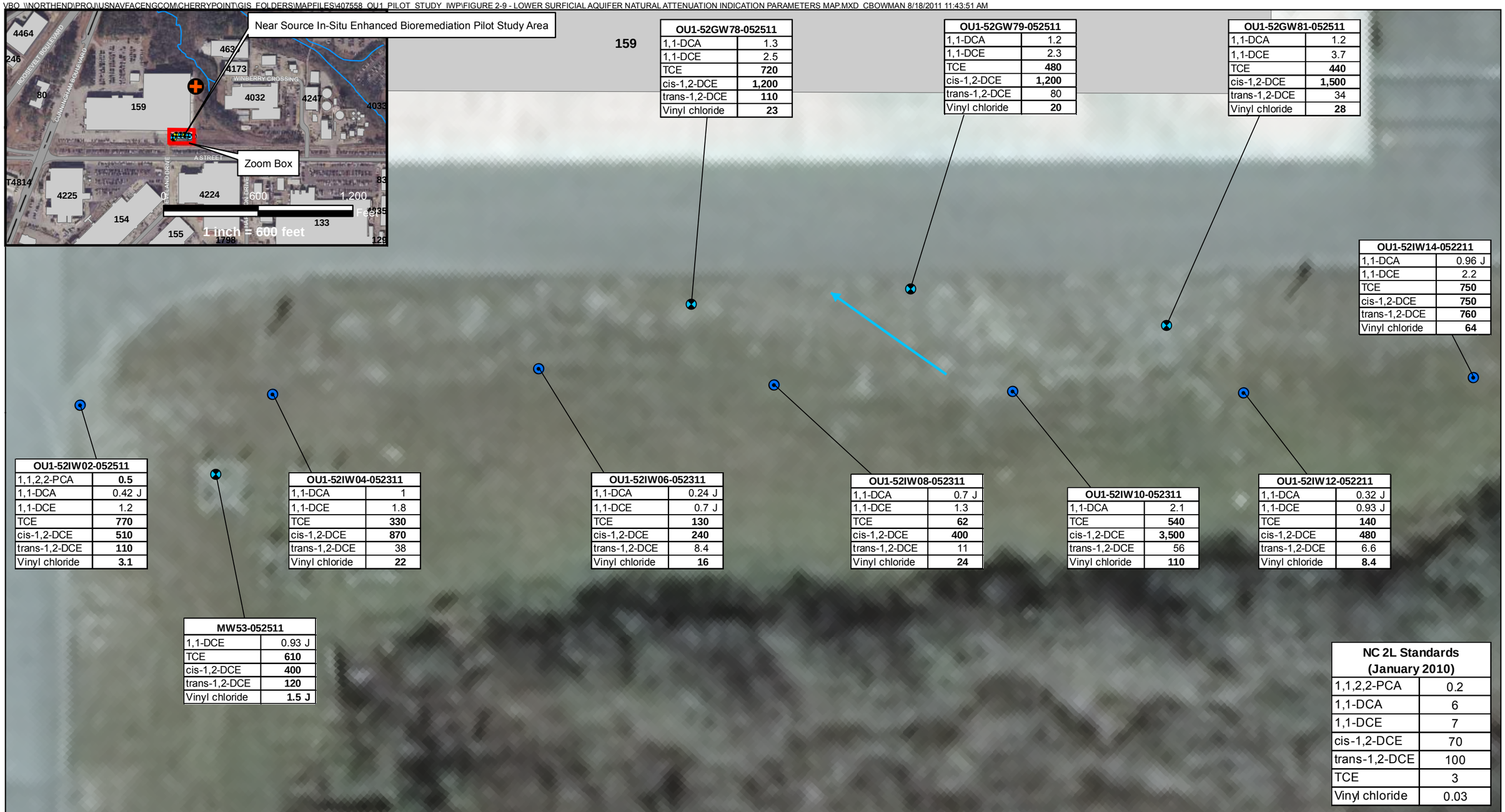
N W E S

0 10 20 Feet

1 inch = 10 feet

Figure 2-6
Upper Surficial Aquifer VOC Detections Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL



Legend

- Monitoring Well - Lower Surficial Aquifer
- Pilot Study Injection Well - Lower Surficial Aquifer
- Fire Hydrant
- Groundwater Flow Direction
- Existing Buildings

Notes:
All VOC concentrations given in micrograms per liter (µg/L)
All VOC exceedances of NC 2L Standards are in **bold** text
1,1,2,2-PCA - 1,1,2,2-Tetrachloroethane
1,1-DCA - 1,1-Dichloroethane
1,1-DCE - 1,1-Dichloroethene
cis-1,2-DCE - cis-1,2-Dichloroethene
trans-1,2-DCE - trans-1,2-Dichloroethene
TCE - Trichloroethene

N W E S

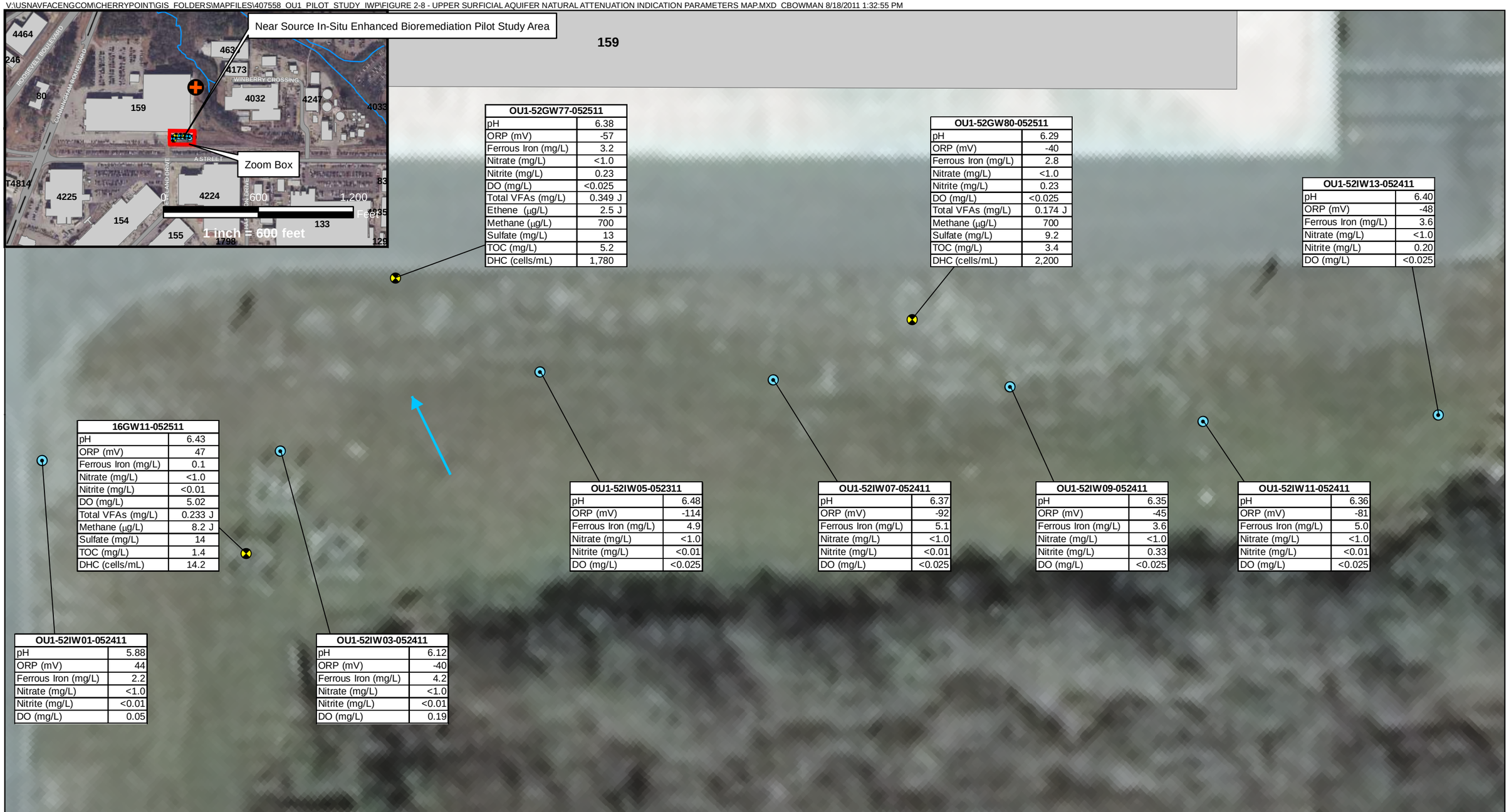
0 10 20 Feet

1 inch = 10 feet

Figure 2-7
Lower Surficial Aquifer VOC Detections Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.

V:\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 2-8 - UPPER SURFICIAL AQUIFER NATURAL ATTENUATION INDICATION PARAMETERS MAP.MXD CBOWMAN 8/18/2011 1:32:55 PM



Legend

- Monitoring Well - Upper Surficial Aquifer
- Pilot Study Injection Well - Upper Surficial Aquifer
- Fire Hydrant
- Groundwater Flow Direction
- Existing Buildings

Notes:
DHC - *Dehalococcoides*
mg/L - micrograms per liter
mg/L - milligrams per liter
mL - milliliters
mV - milliVolts
SU - scientific units
VFAs - volatile fatty acids

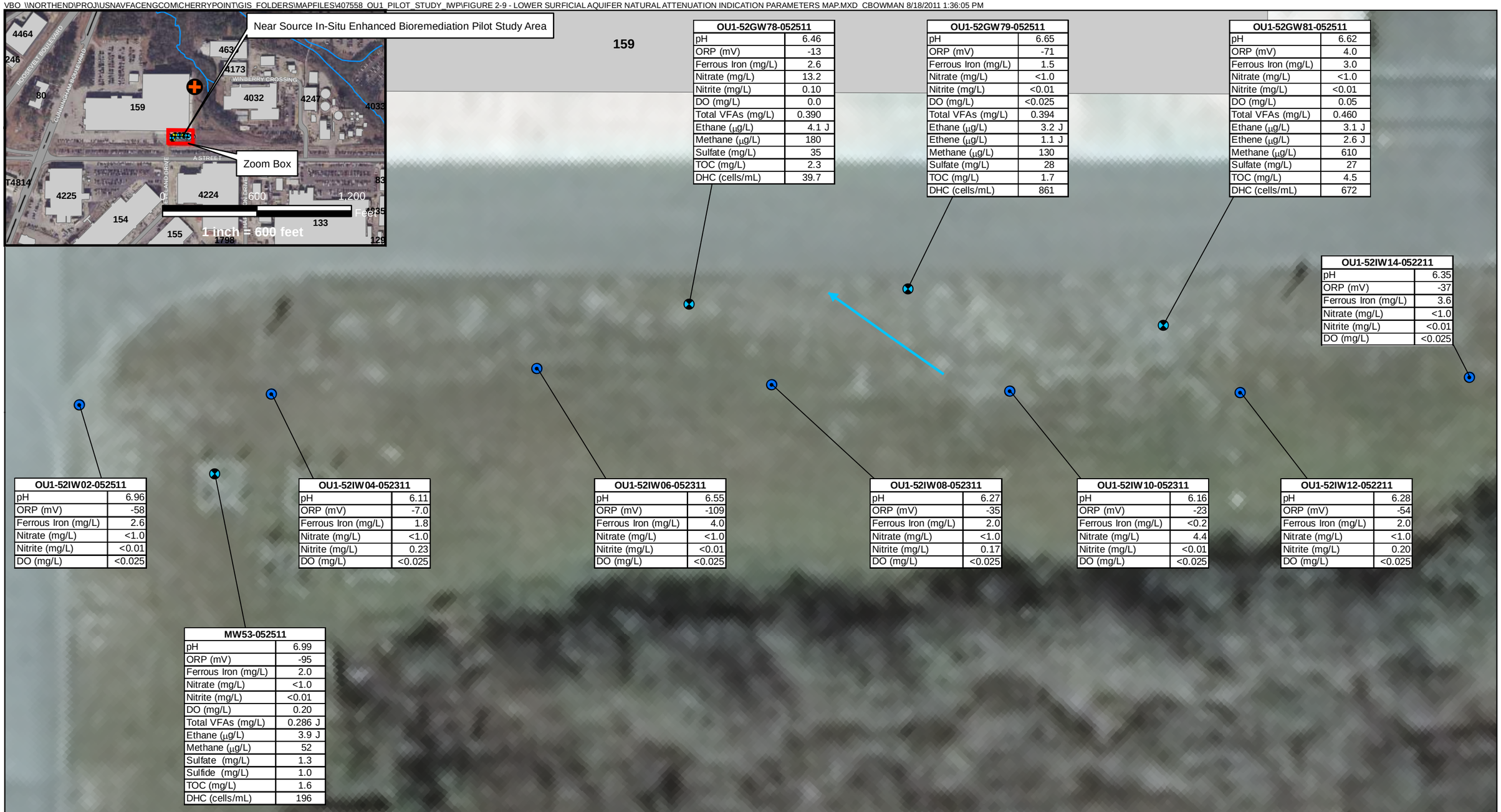
0 10 20 Feet

1 inch = 10 feet

Figure 2-8
Upper Surficial Aquifer Natural Attenuation Indication Parameters Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\CHERRYPOINT\GIS_FOLDERS\MAPFILES\407558_OU1_PILOT_STUDY_IWP\FIGURE 2-9 - LOWER SURFICIAL AQUIFER NATURAL ATTENUATION INDICATION PARAMETERS MAP.MXD CBOWMAN 8/18/2011 1:36:05 PM



OU1-52GW78-052511	
pH	6.46
ORP (mV)	-13
Ferrous Iron (mg/L)	2.6
Nitrate (mg/L)	13.2
Nitrite (mg/L)	0.10
DO (mg/L)	0.0
Total VFAs (mg/L)	0.390
Ethane (µg/L)	4.1 J
Methane (µg/L)	180
Sulfate (mg/L)	35
TOC (mg/L)	2.3
DHC (cells/mL)	39.7

OU1-52GW79-052511	
pH	6.65
ORP (mV)	-71
Ferrous Iron (mg/L)	1.5
Nitrate (mg/L)	<1.0
Nitrite (mg/L)	<0.01
DO (mg/L)	<0.025
Total VFAs (mg/L)	0.394
Ethane (µg/L)	3.2 J
Ethene (µg/L)	1.1 J
Methane (µg/L)	130
Sulfate (mg/L)	28
TOC (mg/L)	1.7
DHC (cells/mL)	861

OU1-52GW81-052511	
pH	6.62
ORP (mV)	4.0
Ferrous Iron (mg/L)	3.0
Nitrate (mg/L)	<1.0
Nitrite (mg/L)	<0.01
DO (mg/L)	0.05
Total VFAs (mg/L)	0.460
Ethane (µg/L)	3.1 J
Ethene (µg/L)	2.6 J
Methane (µg/L)	610
Sulfate (mg/L)	27
TOC (mg/L)	4.5
DHC (cells/mL)	672

OU1-52IW14-052211	
pH	6.35
ORP (mV)	-37
Ferrous Iron (mg/L)	3.6
Nitrate (mg/L)	<1.0
Nitrite (mg/L)	<0.01
DO (mg/L)	<0.025

OU1-52IW02-052511	
pH	6.96
ORP (mV)	-58
Ferrous Iron (mg/L)	2.6
Nitrate (mg/L)	<1.0
Nitrite (mg/L)	<0.01
DO (mg/L)	<0.025

OU1-52IW04-052311	
pH	6.11
ORP (mV)	-7.0
Ferrous Iron (mg/L)	1.8
Nitrate (mg/L)	<1.0
Nitrite (mg/L)	0.23
DO (mg/L)	<0.025

OU1-52IW06-052311	
pH	6.55
ORP (mV)	-109
Ferrous Iron (mg/L)	4.0
Nitrate (mg/L)	<1.0
Nitrite (mg/L)	<0.01
DO (mg/L)	<0.025

OU1-52IW08-052311	
pH	6.27
ORP (mV)	-35
Ferrous Iron (mg/L)	2.0
Nitrate (mg/L)	<1.0
Nitrite (mg/L)	0.17
DO (mg/L)	<0.025

OU1-52IW10-052311	
pH	6.16
ORP (mV)	-23
Ferrous Iron (mg/L)	<0.2
Nitrate (mg/L)	4.4
Nitrite (mg/L)	<0.01
DO (mg/L)	<0.025

OU1-52IW12-052211	
pH	6.28
ORP (mV)	-54
Ferrous Iron (mg/L)	2.0
Nitrate (mg/L)	<1.0
Nitrite (mg/L)	0.20
DO (mg/L)	<0.025

MW53-052511	
pH	6.99
ORP (mV)	-95
Ferrous Iron (mg/L)	2.0
Nitrate (mg/L)	<1.0
Nitrite (mg/L)	<0.01
DO (mg/L)	0.20
Total VFAs (mg/L)	0.286 J
Ethane (µg/L)	3.9 J
Methane (µg/L)	52
Sulfate (mg/L)	1.3
Sulfide (mg/L)	1.0
TOC (mg/L)	1.6
DHC (cells/mL)	196

Legend

- Monitoring Well - Lower Surficial Aquifer
- Pilot Study Injection Well - Lower Surficial Aquifer
- Fire Hydrant
- Groundwater Flow Direction
- Existing Buildings

Notes:
DHC - *Dehalococcoides*
µg/L - micrograms per liter
mg/L - milligrams per liter
mL - milliliters
mV - milliVolts
SU - scientfic units
VFAs - volatile fatty acids

N S E W

0 10 20 Feet

1 inch = 10 feet

Figure 2-9
Lower Surficial Aquifer Natural Attenuation Indication Parameters Map
Marine Corps Air Station Cherry Point
Cherry Point, North Carolina

CH2MHILL.

SECTION 3

Current Observations and Post-Injection Monitoring

3.1 Observations to Date

The baseline groundwater sampling event indicated that, similar to the 2009 sampling event, COCs detected in the Pilot Study area were limited to TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE, 1,1-DCA, 1,1,2,2-PCA, and VC, with the highest concentrations detected in the lower surficial aquifer wells. In addition, baseline concentrations of NAIPs indicate favorable conditions existing in the upper and lower surficial aquifers for anaerobic reductive dechlorination.

Based on the data collected during the SRS and bioaugmentation injections, the following observations were noted:

- Injection flow rates of 25 to 30 gpm were achieved in both the upper and lower surficial aquifers with little to no back pressure in the Pilot Study area.
- Within one week of injections, SRS was observed up to 12.7 feet away from the injection well in the upper surficial aquifer and up to 12.3 feet away from the nearest injection well in the lower surficial aquifer, based on the results of the post-injection TOC sampling and visual observations.
- Downgradient monitoring wells indicate the desired 12.5-foot ROI was achieved during the injections. However, data collected from the existing updgradient monitoring wells (16GW11 – 11.4 feet from OU1-52IW03 and MW53 – 10.5 feet from OU1-52IW04) did not indicate the presence of substrate when measured approximately one week after SRS injections were complete.

3.2 Post-Injection Monitoring

As specified in the OU1 Pilot Study SAP (CH2M HILL, 2011b), groundwater monitoring will be conducted at intervals of 3, 6, 9, 12, and 24 months following injections. The first post-injection sampling event is scheduled for September 2011.

Post-injection groundwater samples will be collected from the five newly-installed monitoring wells (OU1-52GW77 to OU1-52GW81) and two existing monitoring wells (16GW11, screened in the upper surficial aquifer, and MW53, screened in the lower surficial aquifer), as shown on **Figure 2-1.** The injection wells will not be included in the post-injection monitoring activities. All sample handling and analysis will be conducted in accordance with the Master Quality Assurance Plan (AGVIQ/CH2M HILL, 2004b).

As additional data are collected, further conclusions regarding substrate distribution will be drawn. The additional data will also be used in comparison to the baseline data to determine effectiveness in achieving Pilot Study goals.

SECTION 4

References

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Appendix A
Well Construction Diagrams and Well Construction Records

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW01	SHEET 1 OF 1

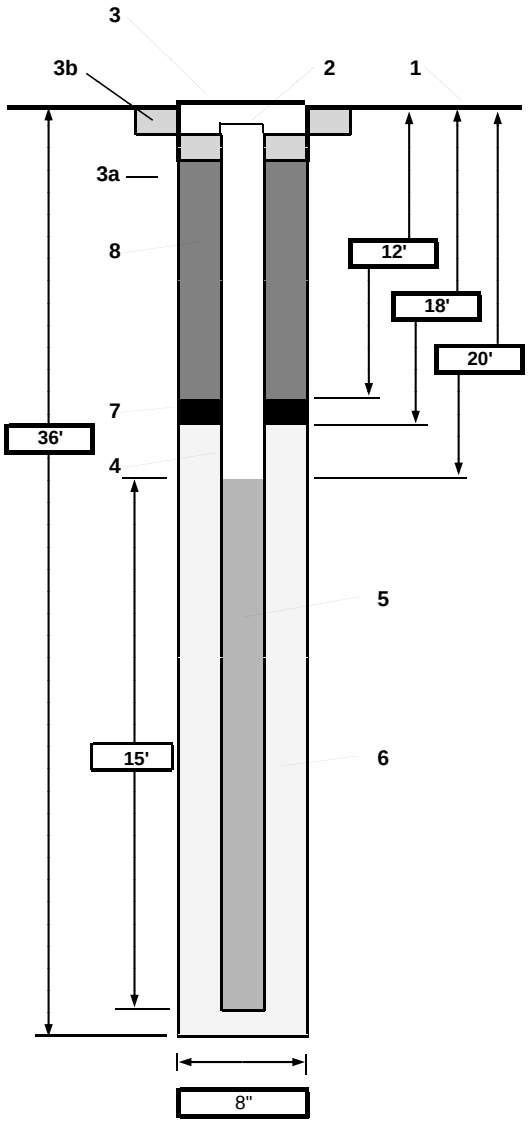
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.84 ft msl START : 5/15/11 1400 END : 1455 LOGGER J.Frank/RDU



1- Ground elevation at well	20.70 ft msl
2- Top of casing elevation	20.39 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6- Type screen filter	#2 DSI Sand
a) Quantity used	Six 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	20 gallons
Development method	Overpumping/Surging
Development time	1-hour 20-minutes
Estimated purge volume	175-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW02	SHEET 1 OF 1

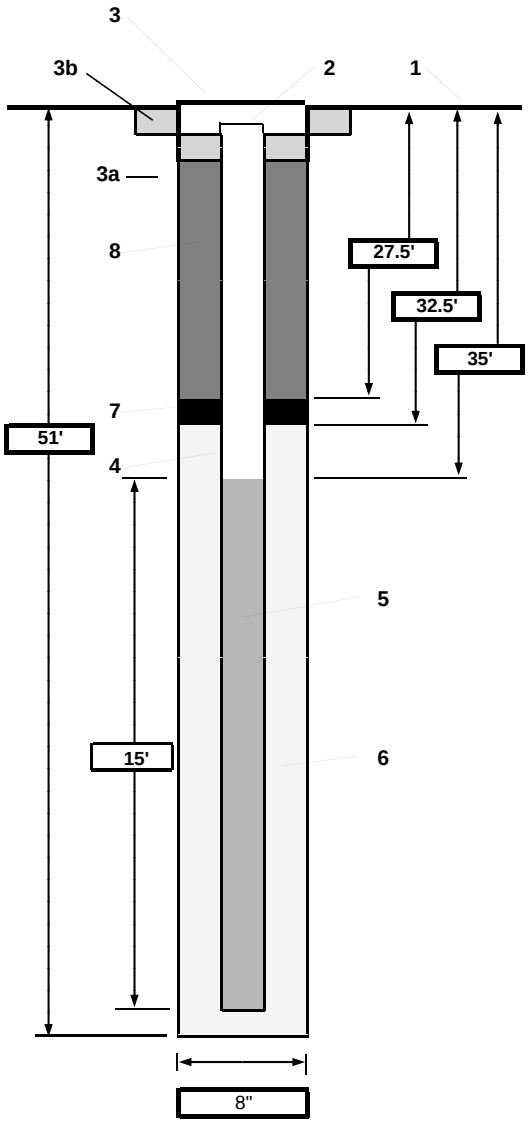
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.63 ft msl START : 5/14/2011 1240 END : 1400 LOGGER J.Frank/RDU



1-	Ground elevation at well	20.46 ft msl
2-	Top of casing elevation	20.38 ft msl
3-	Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
	a) locking expansion plug	Yes, with base lock
	b) concrete pad dimensions	2-feet by 2-feet
4-	Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5-	Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6-	Type screen filter	#2 DSI Sand
	a) Quantity used	Six 50-pound bags
7-	Type of seal	3/8-in. Bentonite Enviroplug
	a) Quantity used	One 50-pound bucket
8-	Grout	
	a) Grout mix used	Portland Type I/II and Bentonite
	b) Method of placement	Tremie Pipe via Side Discharge
	c) Vol. of well casing grout	40 gallons
	Development method	Overpumping/Surging
	Development time	1-hour
	Estimated purge volume	160-gallons
	Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW03	SHEET 1 OF 1

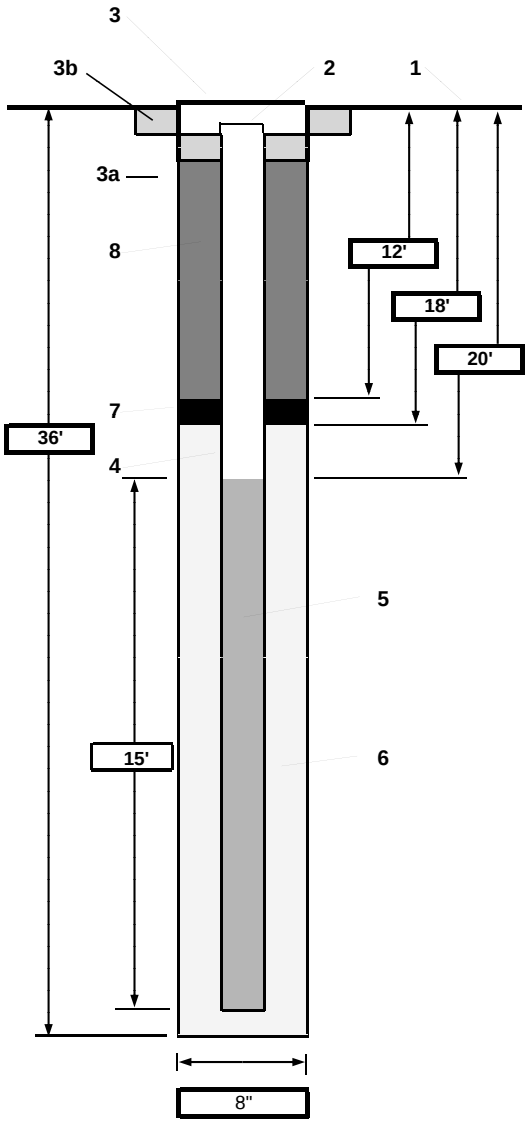
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.82 ft msl START : 5/17/2011 1400 END : 1630 LOGGER S.Kline/RDU



1- Ground elevation at well	20.22 ft msl
2- Top of casing elevation	20.17 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6- Type screen filter	#2 DSI Sand
a) Quantity used	Six 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	20 gallons
Development method	Overpumping/Surging
Development time	1-hour
Estimated purge volume	160-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW04	SHEET 1 OF 1

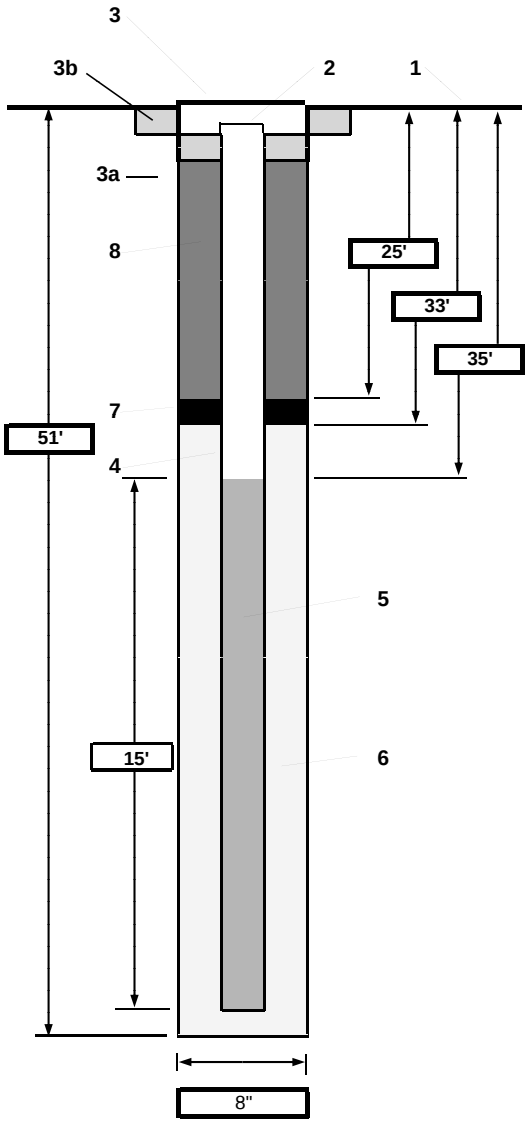
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.66 ft msl START : 5/14/11 0905 END : 1200 LOGGER J.Frank/RDU



1- Ground elevation at well	20.24 ft msl
2- Top of casing elevation	20.11 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6- Type screen filter	#2 DSI Sand
a) Quantity used	Six 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	40 gallons
Development method	Overpumping/Surging
Development time	1-hour 10-minutes
Estimated purge volume	170-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW05	SHEET 1 OF 1

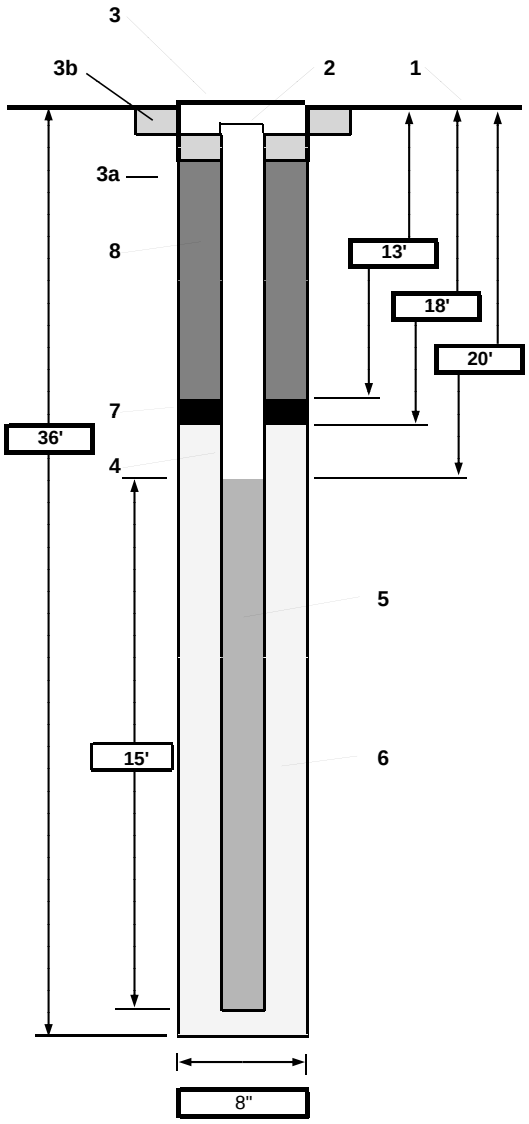
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.89 ft msl START : 5/17/11 1105 END : 1200 LOGGER S.Kline/RDU



1- Ground elevation at well	19.84 ft msl
2- Top of casing elevation	19.53 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6- Type screen filter	#2 DSI Sand
a) Quantity used	Six 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	20 gallons
Development method	Overpumping/Surging
Development time	1-hour
Estimated purge volume	160-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW06	SHEET 1 OF 1

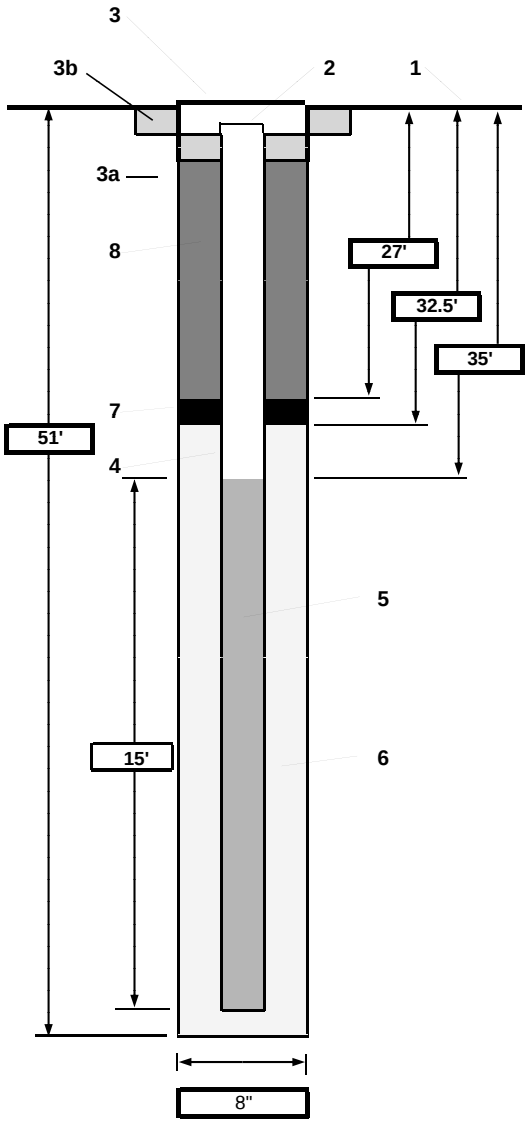
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.70 ft msl START : 5/13/11 1545 END : 1755 LOGGER J.Frank/RDU



1- Ground elevation at well	19.86 ft msl
2- Top of casing elevation	19.61 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6- Type screen filter	#2 DSI Sand
a) Quantity used	Six 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	40 gallons
Development method	Overpumping/Surging
Development time	1-hour 10-minutes
Estimated purge volume	135-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW07	SHEET 1 OF 1

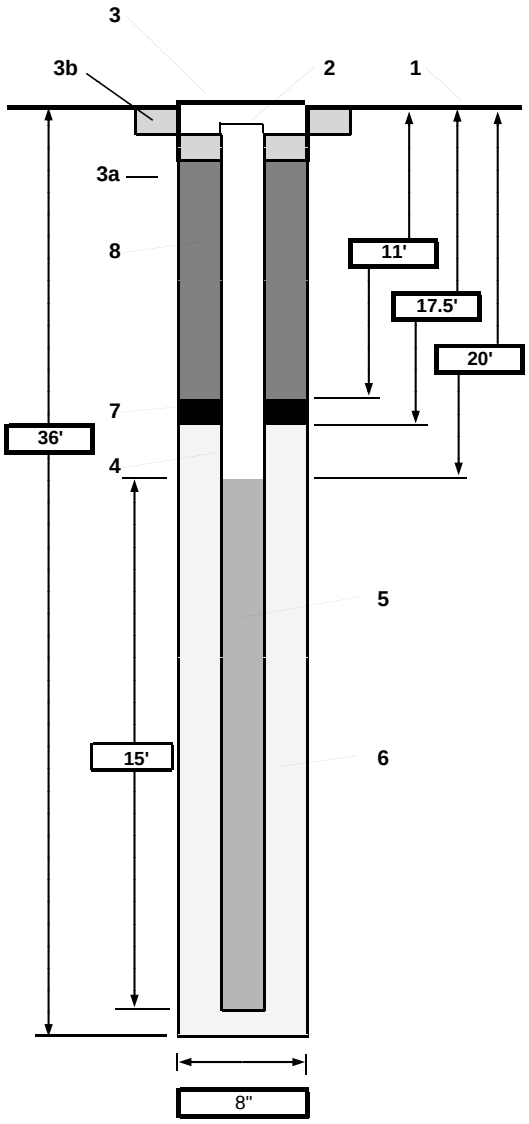
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 8.08 ft msl START : 5/17/11 0920 END : 0950 LOGGER S.Kline/RDU



1- Ground elevation at well	19.63 ft msl
2- Top of casing elevation	19.44 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6- Type screen filter	#2 DSI Sand
a) Quantity used	Six 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	20 gallons
Development method	Overpumping/Surging
Development time	1-hour
Estimated purge volume	160-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW08	SHEET 1 OF 1

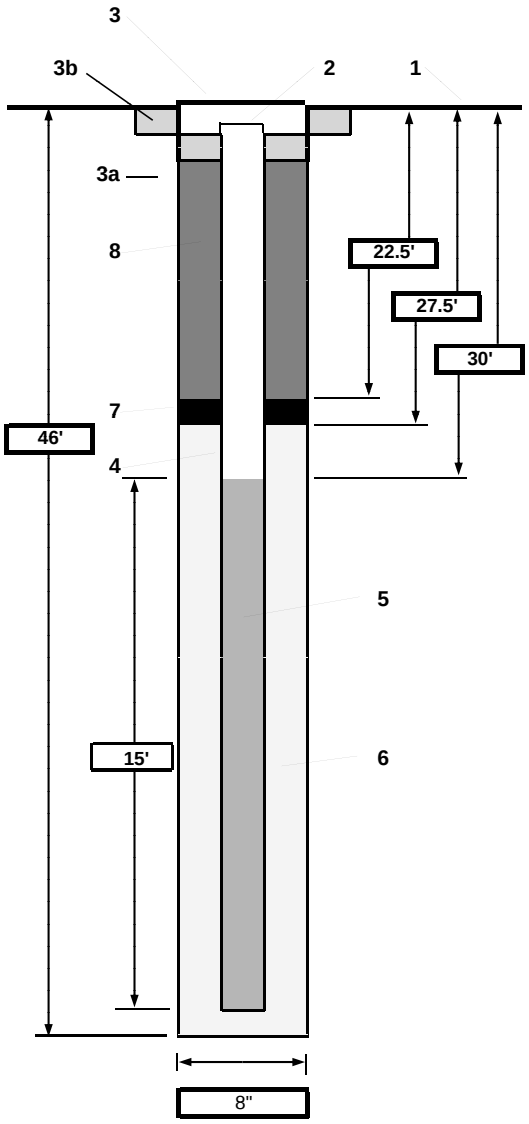
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.73 ft msl START : 5/13/11 0920 END : 1440 LOGGER J.Frank/RDU



1-	Ground elevation at well	19.59 ft msl
2-	Top of casing elevation	19.40 ft msl
3-	Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
	a) locking expansion plug	Yes, with base lock
	b) concrete pad dimensions	2-feet by 2-feet
4-	Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5-	Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6-	Type screen filter	#2 DSI Sand
	a) Quantity used	Six 50-pound bags
7-	Type of seal	3/8-in. Bentonite Enviroplug
	a) Quantity used	One 50-pound bucket
8-	Grout	
	a) Grout mix used	Portland Type I/II and Bentonite
	b) Method of placement	Tremie Pipe via Side Discharge
	c) Vol. of well casing grout	40 gallons
	Development method	Overpumping/Surging
	Development time	1-hour
	Estimated purge volume	125-gallons
	Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW09	SHEET 1 OF 1

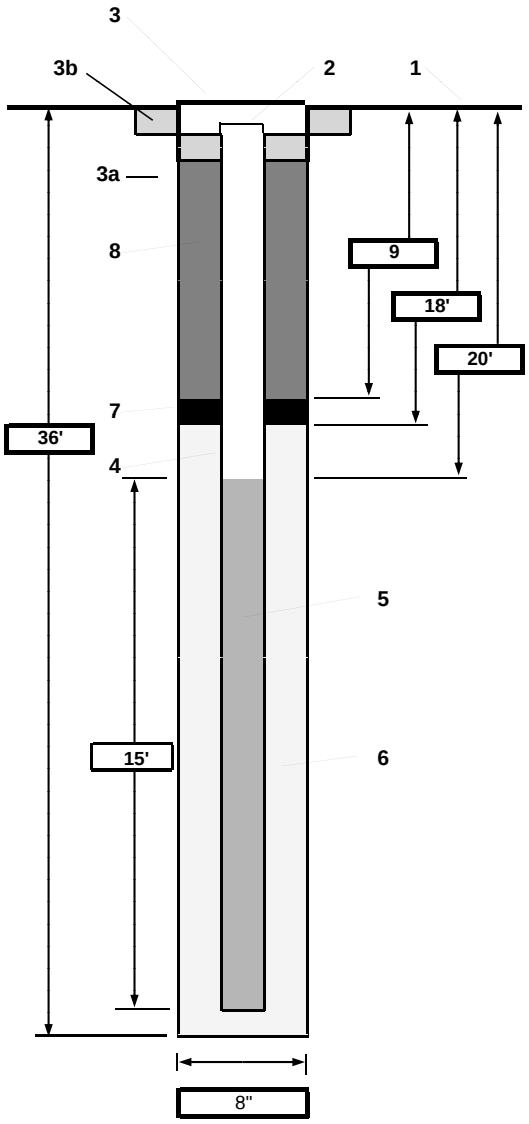
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 8.27 ft msl START : 5/16/11 1415 END : 1450 LOGGER S.Kline/RDU



1- Ground elevation at well	19.52 ft msl
2- Top of casing elevation	19.31 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6- Type screen filter	#2 DSI Sand
a) Quantity used	Six 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	20 gallons
Development method	Overpumping/Surging
Development time	1-hour
Estimated purge volume	150-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW10	SHEET 1 OF 1

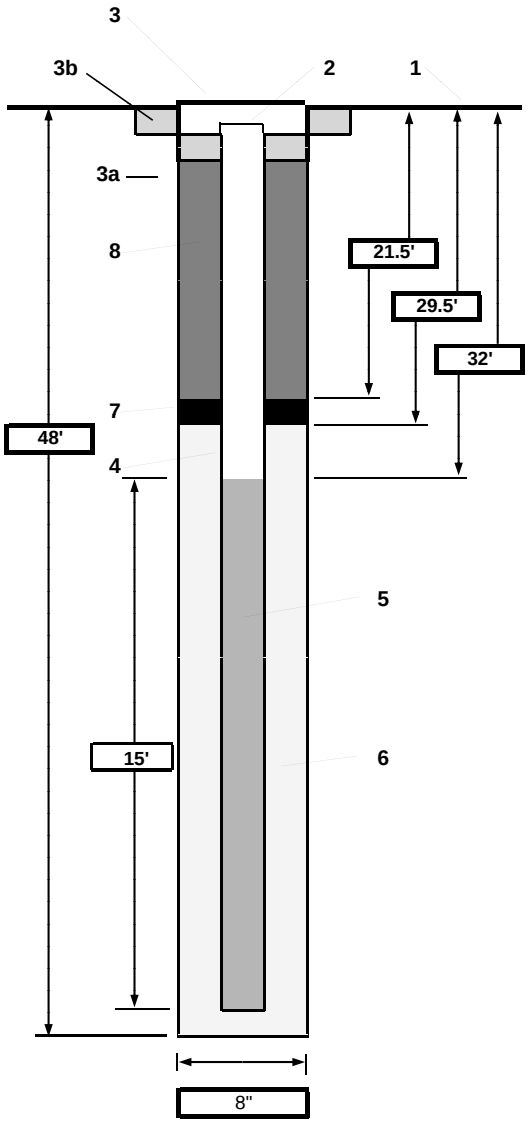
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.77 ft msl START : 5/15/11 0725 END : 1010 LOGGER J.Frank/RDU



1-	Ground elevation at well	19.46 ft msl
2-	Top of casing elevation	19.32 ft msl
3-	Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
	a) locking expansion plug	Yes, with base lock
	b) concrete pad dimensions	2-feet by 2-feet
4-	Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5-	Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6-	Type screen filter	#2 DSI Sand
	a) Quantity used	Six 50-pound bags
7-	Type of seal	3/8-in. Bentonite Enviroplug
	a) Quantity used	One 50-pound bucket
8-	Grout	
	a) Grout mix used	Portland Type I/II and Bentonite
	b) Method of placement	Tremie Pipe via Side Discharge
	c) Vol. of well casing grout	40 gallons
	Development method	Overpumping/Surging
	Development time	1-hour 5-minutes
	Estimated purge volume	135-gallons
	Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW11	SHEET 1 OF 1

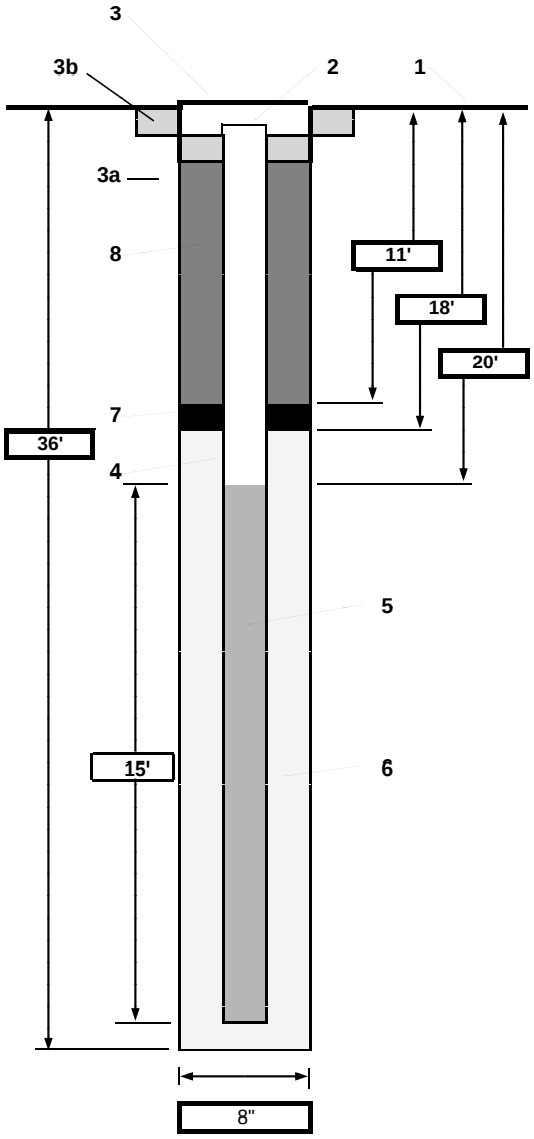
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 8.05 ft msl START : 5/15/2011 1045 END : 1250 LOGGER J.Frank/RDU



1-	Ground elevation at well	19.16 ft msl
2-	Top of casing elevation	18.95 ft msl
3-	Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
	a) locking expansion plug	Yes, with base lock
	b) concrete pad dimensions	2-feet by 2-feet
4-	Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5-	Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6-	Type screen filter	#2 DSI Sand
	a) Quantity used	Six 50-pound bags
7-	Type of seal	3/8-in. Bentonite Enviroplug
	a) Quantity used	One 50-pound bucket
8-	Grout	
	a) Grout mix used	Portland Type I/II and Bentonite
	b) Method of placement	Tremie Pipe via Side Discharge
	c) Vol. of well casing grout	21 gallons
	Development method	Overpumping/Surging
	Development time	1-hour 10-minutes
	Estimated purge volume	160-gallons
	Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW12	SHEET 1 OF 1

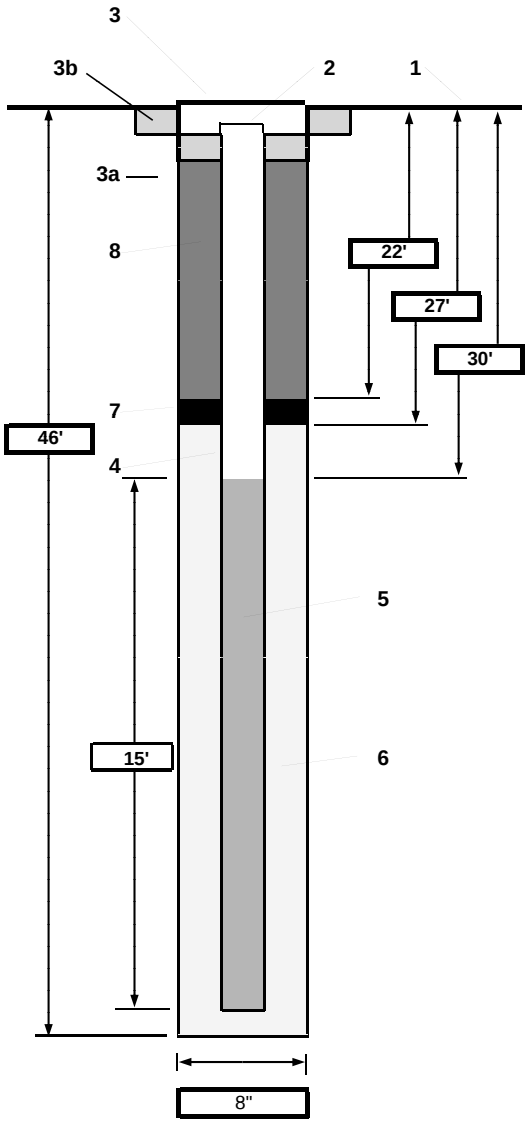
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.81 ft msl START : 5/12/11 1430 END : 5/12/11 1710 LOGGER J.Frank/RDU



1- Ground elevation at well	19.35 ft msl
2- Top of casing elevation	19.28 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6- Type screen filter	#2 DSI Sand
a) Quantity used	Six 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	40 gallons
Development method	Overpumping/Surging
Development time	1-hour 20-minutes
Estimated purge volume	110-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW13	SHEET 1 OF 1

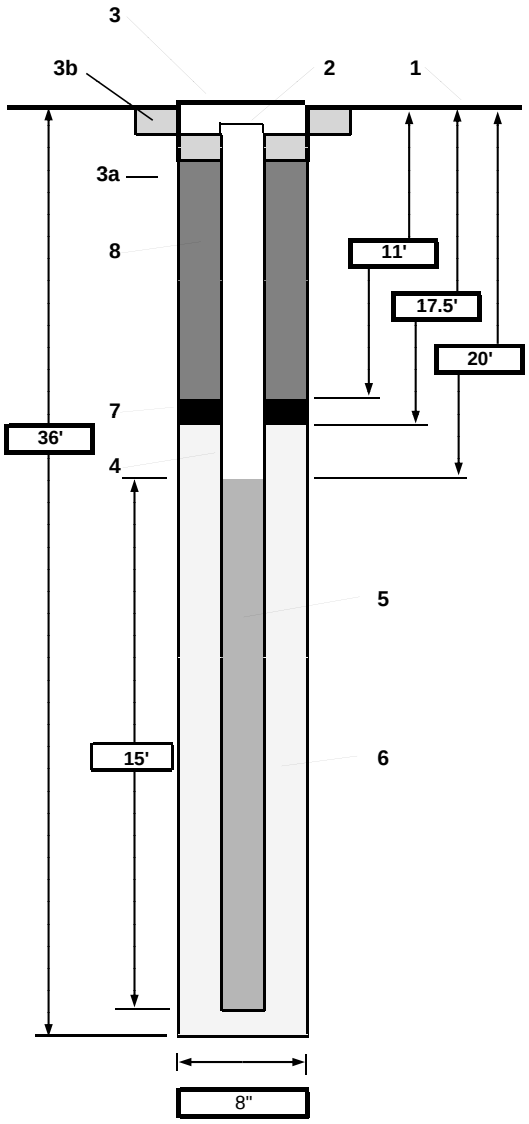
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 8.07 ft msl START : 5/16/11 1110 END : 1345 LOGGER S.Kline/RDU



1-	Ground elevation at well	18.60 ft msl
2-	Top of casing elevation	18.60 ft msl
3-	Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
	a) locking expansion plug	Yes, with base lock
	b) concrete pad dimensions	2-feet by 2-feet
4-	Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5-	Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6-	Type screen filter	#2 DSI Sand
	a) Quantity used	Six 50-pound bags
7-	Type of seal	3/8-in. Bentonite Enviroplug
	a) Quantity used	One 50-pound bucket
8-	Grout	
	a) Grout mix used	Portland Type I/II and Bentonite
	b) Method of placement	Tremie Pipe via Side Discharge
	c) Vol. of well casing grout	20 gallons
	Development method	Overpumping/Surging
	Development time	1-hour
	Estimated purge volume	160-gallons
	Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52IW14	SHEET 1 OF 1

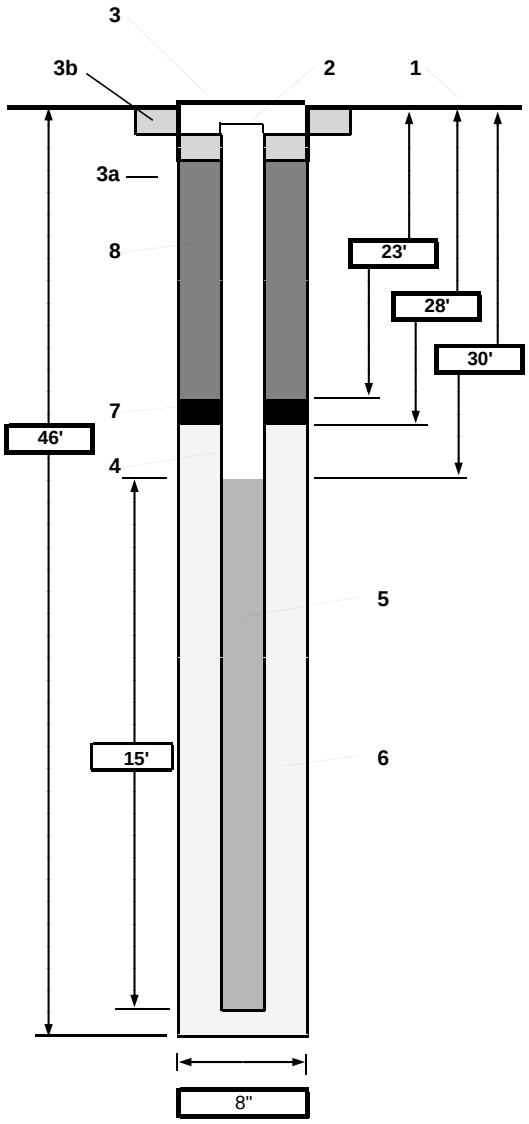
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.84 ft msl START : 5/12/11 0810 END : 1405 LOGGER J.Frank/RDU



1- Ground elevation at well	19.04 ft msl
2- Top of casing elevation	19.00 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	4-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.020-in. slot Vee-wire 4-in. ID Sch. 40 PVC
6- Type screen filter	#2 DSI Sand
a) Quantity used	Six 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	40 gallons
Development method	Overpumping/Surging
Development time	1-hour
Estimated purge volume	125-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52MW77	SHEET 1 OF 1

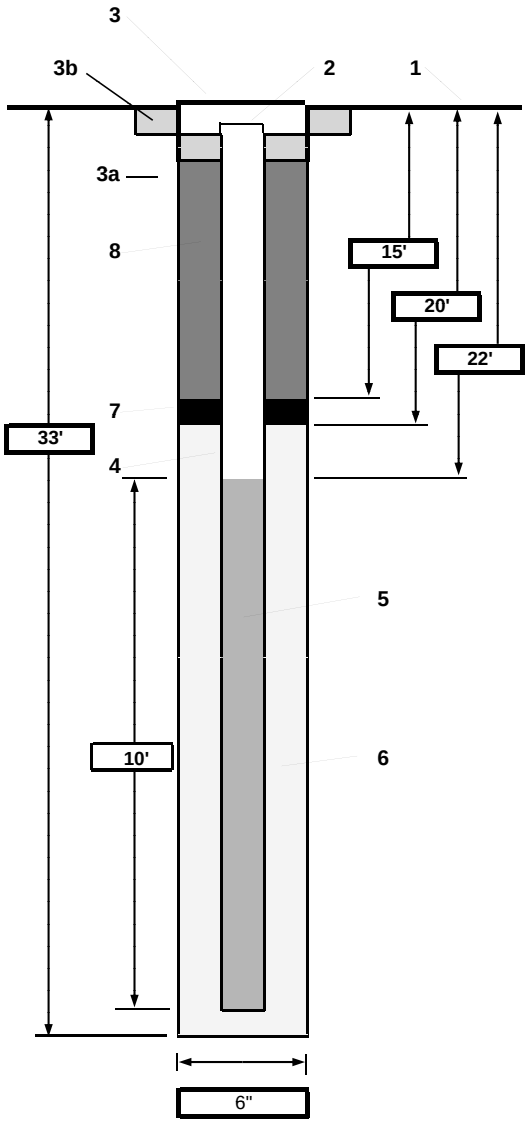
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.80 ft msl START : 5/19/11 1300 END: 1530 LOGGER S.Kline/RDU



1- Ground elevation at well	20.06 ft msl
2- Top of casing elevation	19.66 ft msl
3- Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
a) locking expansion plug	Yes, with base lock
b) concrete pad dimensions	2-feet by 2-feet
4- Dia./type of well casing	2-inch (in.) ID Schedule (Sch.) 40 PVC
5- Type/slot size of screen	0.010-in. slot Vee-wire 2-in. ID Sch. 40 PVC
6- Type screen filter	#1 DSI Filter Pack
a) Quantity used	Three 50-pound bags
7- Type of seal	3/8-in. Bentonite Enviroplug
a) Quantity used	One 50-pound bucket
8- Grout	
a) Grout mix used	Portland Type I/II and Bentonite
b) Method of placement	Tremie Pipe via Side Discharge
c) Vol. of well casing grout	
Development method	Overpumping/Surging
Development time	1-hour
Estimated purge volume	120-gallons
Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52MW78	SHEET 1 OF 1

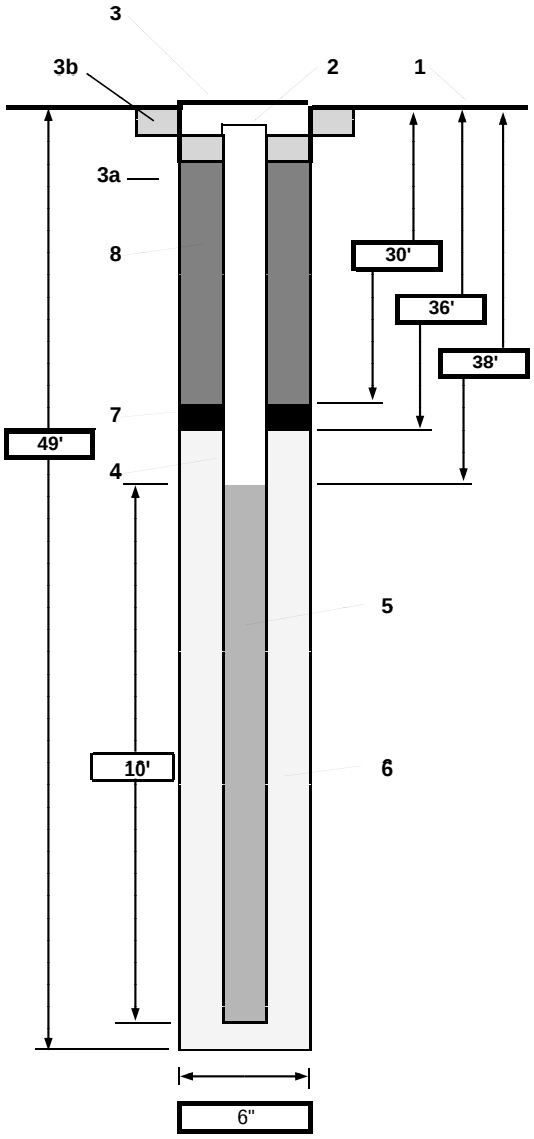
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.72 ft msl START : 5/19/11 1030 END : 1300 LOGGER S.Kline/RDU



1-	Ground elevation at well	19.86 ft msl
2-	Top of casing elevation	19.57 ft msl
3-	Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
	a) locking expansion plug	Yes, with base lock
	b) concrete pad dimensions	2-feet by 2-feet
4-	Dia./type of well casing	2-inch (in.) ID Schedule (Sch.) 40 PVC
5-	Type/slot size of screen	0.010-in. slot Vee-wire 2-in. ID Sch. 40 PVC
6-	Type screen filter	#1 DSI Filter Pack
	a) Quantity used	
7-	Type of seal	3/8-in. Bentonite Enviroplug
	a) Quantity used	One 50-pound bucket
8-	Grout	
	a) Grout mix used	Portland Type I/II and Bentonite
	b) Method of placement	Tremie Pipe via Side Discharge
	c) Vol. of well casing grout	
	Development method	Overpumping/Surging
	Development time	1-hour
	Estimated purge volume	
	Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52MW79	SHEET 1 OF 1

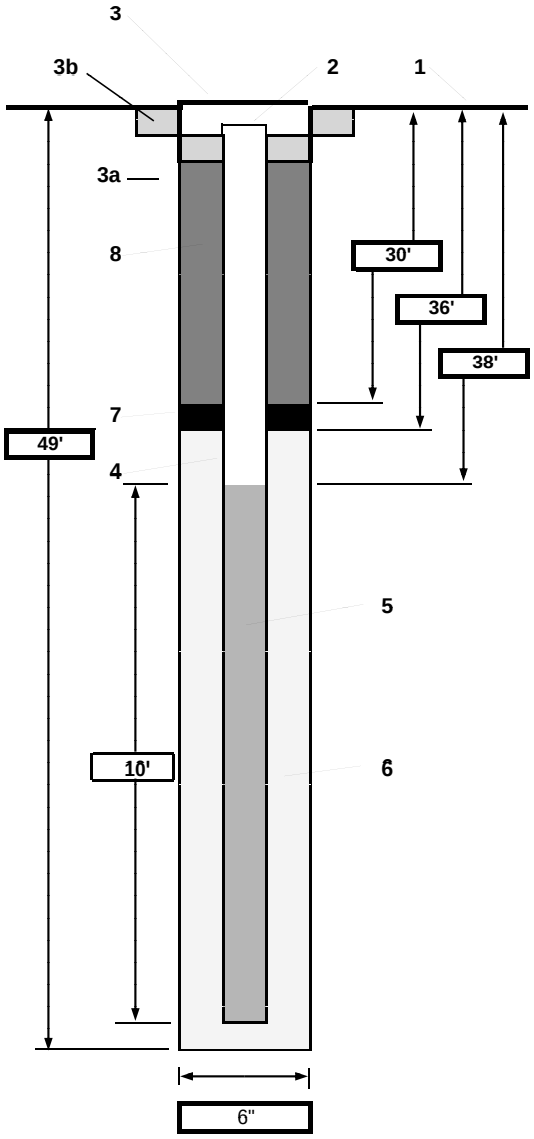
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.74 ft msl START : 5/18/2011 1355 END : 1630 LOGGER S.Kline/RDU



1-	Ground elevation at well	19.86 ft msl
2-	Top of casing elevation	19.72 ft msl
3-	Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
	a) locking expansion plug	Yes, with base lock
	b) concrete pad dimensions	2-feet by 2-feet
4-	Dia./type of well casing	2-inch (in.) ID Schedule (Sch.) 40 PVC
5-	Type/slot size of screen	0.010-in. slot Vee-wire 2-in. ID Sch. 40 PVC
6-	Type screen filter	#1 DSI Filter Pack
	a) Quantity used	Three 50-pound bags
7-	Type of seal	3/8-in. Bentonite Enviroplug
	a) Quantity used	One 50-pound bucket
8-	Grout	
	a) Grout mix used	Portland Type I/II and Bentonite
	b) Method of placement	Tremie Pipe via Side Discharge
	c) Vol. of well casing grout	
	Development method	Overpumping/Surging
	Development time	1-hour
	Estimated purge volume	160-gallons
	Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52MW80	SHEET 1 OF 1

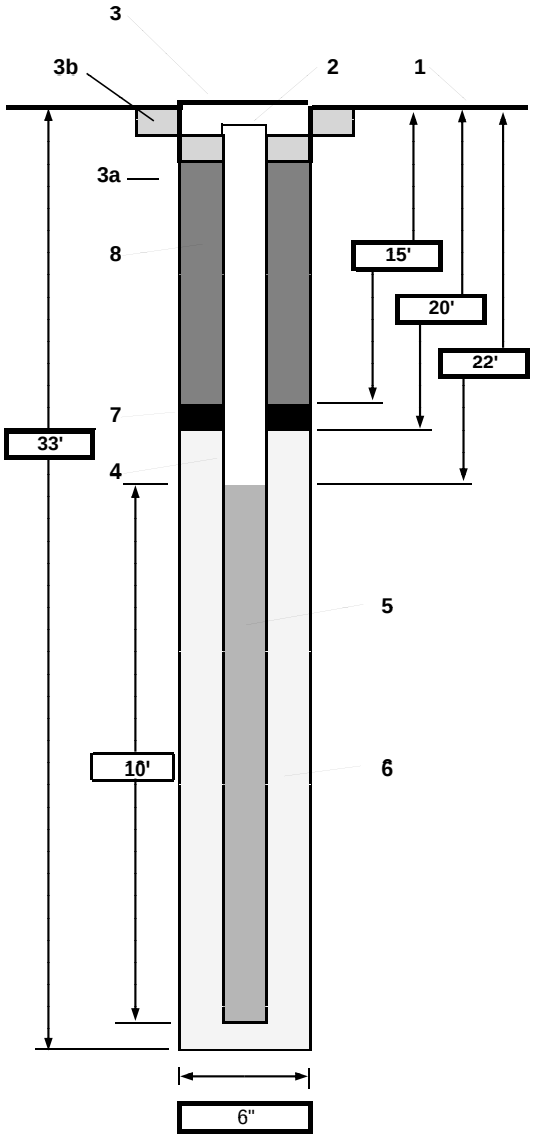
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 8.08 ft msl START : 5/19/11 0730 END: 0910 LOGGER S.Kline/RDU



1-	Ground elevation at well	19.75 ft msl
2-	Top of casing elevation	19.64 ft msl
3-	Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
	a) locking expansion plug	Yes, with base lock
	b) concrete pad dimensions	2-feet by 2-feet
4-	Dia./type of well casing	2-inch (in.) ID Schedule (Sch.) 40 PVC
5-	Type/slot size of screen	0.010-in. slot Vee-wire 2-in. ID Sch. 40 PVC
6-	Type screen filter	#1 DSI Filter Pack
	a) Quantity used	three 50-pound bags
7-	Type of seal	3/8-in. Bentonite Enviroplug
	a) Quantity used	One 25-pound bucket
8-	Grout	
	a) Grout mix used	Portland Type I/II and Bentonite
	b) Method of placement	Tremie Pipe via Side Discharge
	c) Vol. of well casing grout	
	Development method	Overpumping/Surging
	Development time	50-minutes
	Estimated purge volume	130-gallons
	Comments:	

PROJECT NUMBER	WELL NUMBER	
407558.PT.PT	OU1-52MW81	SHEET 1 OF 1

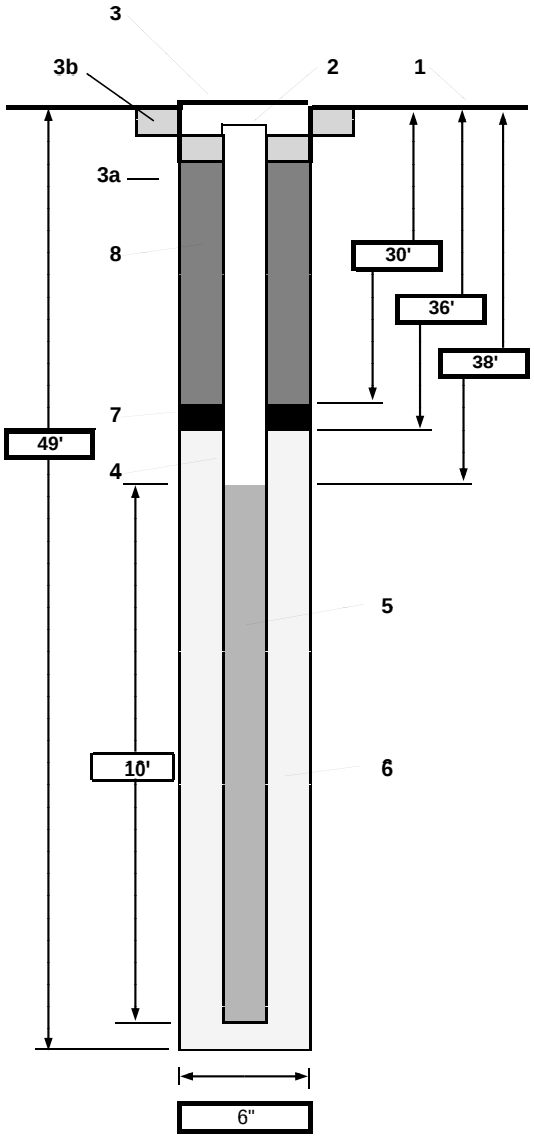
WELL COMPLETION DIAGRAM

PROJECT : OU1 ISEB Pilot Study LOCATION : MCAS Cherry Point, North Carolina

DRILLING CONTRACTOR : Tri-State Drilling, Inc.

DRILLING METHOD AND EQUIPMENT USED : Rotosonic Drilling

WATER LEVELS : 7.77 ft msl START : 5/18/11 0810 END : 1315 LOGGER S.Kline/RDU



1-	Ground elevation at well	19.65 ft msl
2-	Top of casing elevation	19.67 ft msl
3-	Wellhead protection cover type	Flush-mount vault with bolt-on iron lid
	a) locking expansion plug	Yes, with base lock
	b) concrete pad dimensions	2-feet by 2-feet
4-	Dia./type of well casing	2-inch (in.) ID Schedule (Sch.) 40 PVC
5-	Type/slot size of screen	0.010-in. slot Vee-wire 2-in. ID Sch. 40 PVC
6-	Type screen filter	#1 DSI Filter Pack
	a) Quantity used	three 50-pound bags
7-	Type of seal	3/8-in. Bentonite Enviroplug
	a) Quantity used	One 25-pound bucket
8-	Grout	
	a) Grout mix used	Portland Type I/II and Bentonite
	b) Method of placement	Tremie Pipe via Side Discharge
	c) Vol. of well casing grout	
	Development method	Overpumping/Surging
	Development time	1-hour
	Estimated purge volume	130-gallons
	Comments:	

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OW152IW01

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/15/11

4. WELL LOCATION:

Building 159 Cherry Point MCAS
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☑Flat ☐Ridge ☐Other

LATITUDE 34·89·221 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·90·173 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 36

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: 12.2 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 20 Ft.	4"	SCH 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 12 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 20	Bottom 35 Ft.	4 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 18	Bottom 36 Ft.	2	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	36	sand / clay

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 IW#2

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/14/11

4. WELL LOCATION:

Building 159 Cherry Point MCAS
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34 · 87 · 236 " DMS OR 3x.xxxxxxxx DD

LONGITUDE 076 · 90 · 165 " DMS OR 7x.xxxxxxxx DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 51

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.61 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 35 Ft.	4	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 27.5 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 30	Bottom 35 Ft.	4 in.	.020 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 32.5	Bottom 51 Ft.	2	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	51	sand / clay

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 FWP3

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/17/11

4. WELL LOCATION:

Building 159 Cherry Point MCAS
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34 · 53 · 231 " DMS OR 3X.XXXXXXXXX DD

LONGITUDE 76 · 90 · 162 " DMS OR 7X.XXXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 36

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 12.10 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Top	Bottom	Ft.	Diameter	Thickness/ Weight	Material
0	20		4"	Sch 40	PVC

8. GROUT:

Top	Bottom	Ft.	Material	Method
0	12		Portland	tremie

9. SCREEN:

Top	Bottom	Ft.	Diameter	Slot Size	Material
20	35		4 in.	.020 in.	PVC
			in.	in.	
			in.	in.	

10. SAND/GRAVEL PACK:

Top	Bottom	Ft.	Size	Material
18	36		2	Sand

11. DRILLING LOG

Top	Bottom	Formation Description
0	36	sand/clay

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 FW04

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/14/11

4. WELL LOCATION:

Cherry Point MCAS Building 159
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34 · 89 · 231 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76 · 90 · 165 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 51'

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.7 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -1.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): _____ METHOD OF TEST _____

f. DISINFECTION: Type _____ Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 35 Ft.	4"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 25 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 35	Bottom 50 Ft.	4 in.	.020 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 33	Bottom 51 Ft.	2	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	51	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 FW 05

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/17/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34 · 54 · 236 " DMS OR 3X.XXXXXXXXX DD

LONGITUDE 076 · 50 · 155 " DMS OR 7X.XXXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 36

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 12.00 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 35 Ft.	4	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 13 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 20	Bottom 35 Ft.	4 in.	.020 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 18	Bottom 36 Ft.	2	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	36	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 7W06

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/13/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☑Flat ☐Ridge ☐Other

LATITUDE 34·89·239 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·90·156 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 51

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 12.4 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Top	Bottom	Depth Ft.	Diameter	Thickness/ Weight	Material
0	35		4"	Sch 40	PVC

8. GROUT:

Top	Bottom	Depth Ft.	Material	Method
0	27		Portland	tremie

9. SCREEN:

Top	Bottom	Depth Ft.	Diameter in.	Slot Size in.	Material
35	50		4	.020	PVC

10. SAND/GRAVEL PACK:

Top	Bottom	Depth Ft.	Size	Material
32.5	51		2	Sand

11. DRILLING LOG

Top	Bottom	Formation Description
0	51	sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville — AL — 35806
City or Town — State — Zip Code

(256) 852-7000
Area code — Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 FW07

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/17/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34·89·242 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·90·150 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name — Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point — NC — 28533
City or Town — State — Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point — NC — 28533
City or Town — State — Zip Code

(252) 466-4186
Area code — Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 36

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: 11.45 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION: Type** _____ **Amount** _____

g. **WATER ZONES (depth):**

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 20 Ft.	4"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 11	Bottom 0 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 20	Bottom 35 Ft.	4 in.	.020 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 17.5	Bottom 36 Ft.	2	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	36	sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood — 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852 7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OUI-52 FW08

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/13/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34·89·234 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·90·148 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 46

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.9 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 30 Ft.	4"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 22.5 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 30	Bottom 45 Ft.	4 in.	.020 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 27.5	Bottom 46 Ft.	2	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	46	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# 041-52 FW 09

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/16/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34·89·247 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·96·144 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 36

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.1 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 20 Ft.	4"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 9 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 20	Bottom 35 Ft.	4 in.	.020 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 18	Bottom 36 Ft.	2	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	36	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OW-52 FW10

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/15/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34·89·247 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·90·145 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 48

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.1 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Top	Bottom	Ft.	Diameter	Thickness/ Weight	Material
0	32		4"	Sch 40	PVC

8. GROUT:

Top	Bottom	Ft.	Material	Method
0	21.5		Portland	tremie

9. SCREEN:

Top	Bottom	Ft.	Diameter in.	Slot Size in.	Material
32	47		4	.020	PVC

10. SAND/GRAVEL PACK:

Top	Bottom	Ft.	Size	Material
29.5	48		2	Sand

11. DRILLING LOG

Top	Bottom	Formation Description
0	48	sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OW-52 IW11

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/15/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel/Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☑Flat ☐Ridge ☐Other

LATITUDE 34·89·256 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·90·140 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 36

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.05 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Top	Bottom	Ft.	Diameter	Thickness/ Weight	Material
0	20		4"	Sch 40	PVC

8. GROUT:

Top	Bottom	Ft.	Material	Method
0	11		Portland	tremie

9. SCREEN:

Top	Bottom	Ft.	Diameter in.	Slot Size in.	Material
20	35		4	.020	PVC

10. SAND/GRAVEL PACK:

Top	Bottom	Ft.	Size	Material
18	36		2	Sand

11. DRILLING LOG

Top	Bottom	Formation Description
0	36	sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Emport Circle
Street Address

Huntsville — AL — 35806
City or Town — State — Zip Code

(256) 852-7000
Area code — Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 IW12

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/12/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34 · 51 · 25.1 " DMS OR 3x.xxxxxxxx DD

LONGITUDE 76 · 50 · 14.1 " DMS OR 7x.xxxxxxxx DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name — Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point — NC — 28533
City or Town — State — Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point — NC — 28533
City or Town — State — Zip Code

(252) 466-4186
Area code — Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 46

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.55 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 30 Ft.	4"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 22 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 30	Bottom 45 Ft.	4 in.	.020 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 27	Bottom 46 Ft.	2	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	46	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood — 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# 041-52 FW13

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/16/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34 · 54 · 25.4 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76 · 40 · 13.4 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 36

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.7 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 20 Ft.	4	Schd 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 11 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 20	Bottom 35 Ft.	4 in.	.020 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 17.5	Bottom 35 Ft.	2	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	36	sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# 041-52 IW14

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☐ Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☑ Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/12/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☑Flat ☐Ridge ☐Other

LATITUDE 34·84·253 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·90·132 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 46

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.9 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 30 Ft.	4"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 23 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 30	Bottom 45 Ft.	4 in.	.020 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 28	Bottom 46 Ft.	2	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	46	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 MW77

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/19/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☑Flat ☐Ridge ☐Other

LATITUDE 34·84·230 " DMS OR 3X.XXXXXXXXX DD

LONGITUDE 76·90·150 " DMS OR 7X.XXXXXXXXX DD

Latitude/longitude source: ☑GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 33

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 12.50 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):
Top Bottom Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 22 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 15 Ft.	Portland	Tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 22	Bottom 32 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft. in.	in.	in.	
Top	Bottom Ft. in.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 20	Bottom 32 Ft.	1	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	33	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 MW78

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/19/11

4. WELL LOCATION:

Building 155 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☑Flat ☐Ridge ☐Other

LATITUDE 34·89·242 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·90·160 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 49

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.45 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 38 Ft.	2	Schd 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 30 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 38	Bottom 48 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 36	Bottom 49 Ft.	1	sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	49	sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# 041-52 MW 79

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/18/11

4. WELL LOCATION:

Building 154 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34·89·249 " DMS OR 3X.XXXXXXXX DD

LONGITUDE 76·90·158 " DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. **TOTAL DEPTH:** 49

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☑

c. **WATER LEVEL** Below Top of Casing: 12.35 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** _____ **METHOD OF TEST** _____

f. **DISINFECTION:** Type _____ Amount _____

g. **WATER ZONES** (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Top	Bottom	Ft.	Diameter	Thickness/ Weight	Material
0	38		2	Sch 40	PVC

8. GROUT:

Top	Bottom	Ft.	Material	Method
0	30		Portland	tremie

9. SCREEN:

Top	Bottom	Ft.	Diameter in.	Slot Size in.	Material
38	48		2	.020	PVC

10. SAND/GRAVEL PACK:

Top	Bottom	Ft.	Size	Material
36	49		1	Sand

11. DRILLING LOG

Top	Bottom	Formation Description
0	49	Sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# 041-52 MW 60

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/19/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other

LATITUDE 34 · 89 · 245 " DMS OR 3X.XXXXXXXXX DD

LONGITUDE 76 · 90 · 147 " DMS OR 7X.XXXXXXXXX DD

Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 33

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 11.1 FT.
(Use "+" If Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 22 Ft.	2"	Sch 40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 15 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 22	Bottom 32 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 20	Bottom 33 Ft.	1	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	33	sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

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Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # NCWC 4075-B

1. WELL CONTRACTOR:

James Blackwood
Well Contractor (Individual) Name

Major Drilling Environmental
Well Contractor Company Name

156B Import Circle
Street Address

Huntsville AL 35806
City or Town State Zip Code

(256) 852-7000
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# OU1-52 MW81

OTHER ASSOCIATED PERMIT#(if applicable)

SITE WELL ID #(if applicable)

3. WELL USE (Check One Box) Monitoring ☑ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 5/18/11

4. WELL LOCATION:

Building 159 MCAS Cherry Point
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Havelock COUNTY Craven

TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☑Flat ☐Ridge ☐Other

LATITUDE 34·89·250 " DMS OR 3x.xxxxxxxx DD

LONGITUDE 76·90·143 " DMS OR 7x.xxxxxxxx DD

Latitude/longitude source: ☑GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Cherry Point MCAS
Facility Name Facility ID# (if applicable)

PSC Box 8006
Street Address

Cherry Point NC 28533
City or Town State Zip Code

Will Potter
Contact Name

PSC Box 8006
Mailing Address

Cherry Point NC 28533
City or Town State Zip Code

(252) 466-4186
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 49

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑

c. WATER LEVEL Below Top of Casing: 12.10 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS -.5 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): METHOD OF TEST

f. DISINFECTION: Type Amount

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom
Top	Bottom	Top	Bottom

7. CASING:

Depth		Diameter	Thickness/ Weight	Material
Top 0	Bottom 38 Ft.	2	Sch40	PVC
Top	Bottom Ft.			
Top	Bottom Ft.			

8. GROUT:

Depth		Material	Method
Top 0	Bottom 30 Ft.	Portland	tremie
Top	Bottom Ft.		
Top	Bottom Ft.		

9. SCREEN:

Depth		Diameter	Slot Size	Material
Top 38	Bottom 48 Ft.	2 in.	.010 in.	PVC
Top	Bottom Ft.	in.	in.	
Top	Bottom Ft.	in.	in.	

10. SAND/GRAVEL PACK:

Depth		Size	Material
Top 36	Bottom 49 Ft.	1	Sand
Top	Bottom Ft.		
Top	Bottom Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	49	sand

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

James Blackwood 5/31/11
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

James Blackwood
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

Appendix B
Laboratory Analytical Data

MEMORANDUM CH2MHILL

Data Validation Summary

Cherry Point CTO-144

TO: Juan Acaron/GNV

Anita Dodson/GNV

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: July 19, 2011

Introduction

The following data validation report discusses the data validation process and findings for Katahdin Analytical Services, SDG SE3005.

Samples were analyzed using the following analytical methods SW8260B Volatiles.

The samples included in this SDG are listed in the table below.

Sample Name	Matrix
OU1-TB052511	Water
OU1-52GW77D-052511	Water
OU1-52GW78-052511	Water
OU1-52GW79-052511	Water
OU1-52GW80-052511	Water
OU1-52GW81-052511	Water
OU1-52IW01-052411	Water
OU1-52IW01D-052411	Water
OU1-EB052211-GW-1	Water
OU1-EB052211-GW-2	Water
OU1-EB052311-GW	Water
OU1-EB052411-GW	Water
OU1-EB052511-GW-1	Water
OU1-EB052511-GW-2	Water
OU1-52IW02-052511	Water
OU1-52GW77-052511	Water

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008), Region III Modifications for Organic Data Review (EPA 1994), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Field Duplicates
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact.

Technical Holding Times

According to the chain of custody records, sampling was performed on 5/22/11 through 5/25/11. Samples were received at the laboratory on 5/27/11. All sample preparation analysis was performed within holding time requirements.

Blanks

Several compounds were detected in the equipment blanks. All samples results were greater than five times the blank value. Therefore, no data was qualified.

Blank ID	Compound	Conc.	Units	Action Level
OU1-EB052311-GW	cis-1,2-Dichloroethene	0.38	ug/l	1.9
OU1-EB052311-GW	1,2-Dichloroethene (total)	0.38	ug/l	1.9
OU1-EB052311-GW	Trichloroethene	0.40	ug/l	2
OU1-EB052511-GW-1	cis-1,2-Dichloroethene	0.40	ug/l	2
OU1-EB052511-GW-1	1,2-Dichloroethene (total)	0.40	ug/l	2
OU1-EB052511-GW-1	Trichloroethene	1.2	ug/l	6
OU1-EB052511-GW-2	cis-1,2-Dichloroethene	0.73	ug/l	3.65
OU1-EB052511-GW-2	1,2-Dichloroethene (total)	0.73	ug/l	3.65
OU1-EB052511-GW-2	Trichloroethene	1.2	ug/l	6

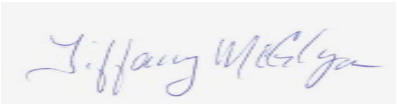
Re-extractions and Dilutions
Several samples had dilutions or re-extractions. There is no data rejected or excluded without a valid result presented for all parameters in every sample.

Conclusion

These data can be used in the project decision-making process as qualified by the data quality evaluation process.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCBL	Continuing Calibration Blank Contamination
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data

MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-1
Client ID: OU1-TB052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		88.9	%					
Toluene-d8		94.2	%					
1,2-Dichloroethane-d4		83.4	%					
Dibromofluoromethane		91.8	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

HK 7/15/2011

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-2
Client ID: OU1-EB052211-GW-1
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 22-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		90.1	%					
Toluene-d8		96.3	%					
1,2-Dichloroethane-d4		87.5	%					
Dibromofluoromethane		91.0	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-3
Client ID: OU1-EB052211-GW-2
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 22-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		85.2	%					
Toluene-d8		90.5	%					
1,2-Dichloroethane-d4		85.6	%					
Dibromofluoromethane		88.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-4
Client ID: OU1-EB052311-GW
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.38	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	J	0.38	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	0.40	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		94.3	%					
Toluene-d8		98.0	%					
1,2-Dichloroethane-d4		91.9	%					
Dibromofluoromethane		94.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-5
Client ID: OU1-EB052411-GW
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 24-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	U	1.0	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		92.6	%					
Toluene-d8		95.4	%					
1,2-Dichloroethane-d4		92.3	%					
Dibromofluoromethane		92.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-6
Client ID: OU1-EB052511-GW-1
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.40	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	J	0.40	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		1.2	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		90.6	%					
Toluene-d8		93.3	%					
1,2-Dichloroethane-d4		97.0	%					
Dibromofluoromethane		94.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-7
Client ID: OU1-EB052511-GW-2
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	J	0.73	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	J	0.73	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		1.2	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		95.1	%					
Toluene-d8		97.2	%					
1,2-Dichloroethane-d4		99.1	%					
Dibromofluoromethane		99.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-8
Client ID: OU1-52IW02-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			3.1	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene			1.2	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		120	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane		J	0.42	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	490	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		610	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	Exclude - LR	~~E~~	770	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			114.	%					
Toluene-d8			119.	%					
1,2-Dichloroethane-d4			103.	%					
Dibromofluoromethane			95.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-8DL
Client ID: OU1-52IW02-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 03-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92403

Analysis Date: 03-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	~~U~~	10.	ug/L	10	2	20.	2.4	10.
Chloromethane		~~U~~	10.	ug/L	10	2	20.	3.6	10.
Vinyl Chloride		~~J~~	2.8	ug/L	10	2	20.	2.5	10.
1,1-Dichloroethene		~~U~~	5.0	ug/L	10	1	10.	3.5	5.0
Freon-113		~~U~~	5.0	ug/L	10	1	10.	3.1	5.0
Methylene Chloride	Exclude - DL	~~U~~	25.	ug/L	10	5	50.	11.	25.
trans-1,2-Dichloroethene			110	ug/L	10	1	10.	2.5	5.0
1,1-Dichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.1	5.0
cis-1,2-Dichloroethene			510	ug/L	10	1	10.	2.1	5.0
Total 1,2-Dichloroethene			620	ug/L	10	2	20.	2.1	10.
1,1,1-Trichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
1,2-Dichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
Trichloroethene			770	ug/L	10	1	10.	2.8	5.0
Bromodichloromethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
1,1,2-Trichloroethane		~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
Tetrachloroethene		~~U~~	5.0	ug/L	10	1	10.	4.0	5.0
Bromoform		~~U~~	5.0	ug/L	10	1	10.	2.3	5.0
1,1,2,2-Tetrachloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	3.8	5.0
P-Bromofluorobenzene			99.9	%					
Toluene-d8			99.0	%					
1,2-Dichloroethane-d4			99.4	%					
Dibromofluoromethane			98.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-9
Client ID: OU1-52GW77-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 03-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92403

Analysis Date: 03-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		20.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	J	0.43	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene		7.7	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	J	0.53	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		93.	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		100	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		29.	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		90.9	%					
Toluene-d8		93.5	%					
1,2-Dichloroethane-d4		100.	%					
Dibromofluoromethane		97.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-10
Client ID: OU1-52GW77D-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 03-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92403

Analysis Date: 03-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		20.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	J	0.44	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene		8.3	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	J	0.29	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		100	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		110	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		31.	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		93.4	%					
Toluene-d8		95.2	%					
1,2-Dichloroethane-d4		101.	%					
Dibromofluoromethane		98.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-11
Client ID: OU1-52GW78-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 03-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92403

Analysis Date: 03-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			23.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene			2.5	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		120	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane			1.3	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	900	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		1000	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	Exclude - LR	~~E~~	710	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			112.	%					
Toluene-d8			113.	%					
1,2-Dichloroethane-d4			105.	%					
Dibromofluoromethane			95.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-11DL
Client ID: OU1-52GW78-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	~~U~~	10.	ug/L	10	2	20.	2.4	10.
Chloromethane		~~U~~	10.	ug/L	10	2	20.	3.6	10.
Vinyl Chloride		J	19.	ug/L	10	2	20.	2.5	10.
1,1-Dichloroethene		~~U~~	5.0	ug/L	10	1	10.	3.5	5.0
Freon-113		~~U~~	5.0	ug/L	10	1	10.	3.1	5.0
Methylene Chloride		~~U~~	25.	ug/L	10	5	50.	11.	25.
trans-1,2-Dichloroethene			110	ug/L	10	1	10.	2.5	5.0
1,1-Dichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.1	5.0
cis-1,2-Dichloroethene			1200	ug/L	10	1	10.	2.1	5.0
Total 1,2-Dichloroethene			1300	ug/L	10	2	20.	2.1	10.
1,1,1-Trichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
1,2-Dichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
Trichloroethene			720	ug/L	10	1	10.	2.8	5.0
Bromodichloromethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
1,1,2-Trichloroethane		~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
Tetrachloroethene		~~U~~	5.0	ug/L	10	1	10.	4.0	5.0
Bromoform		~~U~~	5.0	ug/L	10	1	10.	2.3	5.0
1,1,2,2-Tetrachloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	3.8	5.0
P-Bromofluorobenzene			105.	%					
Toluene-d8			95.5	%					
1,2-Dichloroethane-d4			102.	%					
Dibromofluoromethane			101.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-12
Client ID: OU1-52GW79-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 03-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92403

Analysis Date: 03-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			20.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene			2.3	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		100	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane			1.2	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	920	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		1000	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	Exclude - LR	~~E~~	560	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			108.	%					
Toluene-d8			110.	%					
1,2-Dichloroethane-d4			105.	%					
Dibromofluoromethane			97.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-12DL
Client ID: OU1-52GW79-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	U	20.	ug/L	20	2	40.	4.8	20.
Chloromethane		U	20.	ug/L	20	2	40.	7.2	20.
Vinyl Chloride		J	16.	ug/L	20	2	40.	5.0	20.
1,1-Dichloroethene		U	10.	ug/L	20	1	20.	7.0	10.
Freon-113		U	10.	ug/L	20	1	20.	6.2	10.
Methylene Chloride	Exclude - DL	U	50.	ug/L	20	5	100	23.	50.
trans-1,2-Dichloroethene			80.	ug/L	20	1	20.	5.0	10.
1,1-Dichloroethane	Exclude - DL	~~U~~	10.	ug/L	20	1	20.	4.2	10.
cis-1,2-Dichloroethene			1200	ug/L	20	1	20.	4.2	10.
Total 1,2-Dichloroethene			1300	ug/L	20	2	40.	4.2	20.
1,1,1-Trichloroethane	Exclude - DL	U	10.	ug/L	20	1	20.	4.0	10.
1,2-Dichloroethane	Exclude - DL	U	10.	ug/L	20	1	20.	4.0	10.
Trichloroethene			480	ug/L	20	1	20.	5.6	10.
Bromodichloromethane	Exclude - DL	U	10.	ug/L	20	1	20.	6.6	10.
1,1,2-Trichloroethane		U	10.	ug/L	20	1	20.	6.6	10.
Tetrachloroethene		U	10.	ug/L	20	1	20.	8.0	10.
Bromoform		U	10.	ug/L	20	1	20.	4.6	10.
1,1,2,2-Tetrachloroethane	Exclude - DL	U	10.	ug/L	20	1	20.	7.6	10.
P-Bromofluorobenzene			105.	%					
Toluene-d8			91.0	%					
1,2-Dichloroethane-d4			101.	%					
Dibromofluoromethane			96.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-13RA
Client ID: OU1-52GW80-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		3.1	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene		1.6	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		30.	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		31.	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		9.6	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		95.2	%					
Toluene-d8		88.7	%					
1,2-Dichloroethane-d4		95.3	%					
Dibromofluoromethane		87.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-14
Client ID: OU1-52GW81-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			28.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene			3.7	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		50.	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane			1.2	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	1200	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		1200	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	Exclude - LR	~~E~~	530	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			114.	%					
Toluene-d8			113.	%					
1,2-Dichloroethane-d4			109.	%					
Dibromofluoromethane			99.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-14DL
Client ID: OU1-52GW81-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 06-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92489

Analysis Date: 06-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	~~U~~	10.	ug/L	10	2	20.	2.4	10.
Chloromethane		~~U~~	10.	ug/L	10	2	20.	3.6	10.
Vinyl Chloride		~~J~~	19.	ug/L	10	2	20.	2.5	10.
1,1-Dichloroethene		~~U~~	5.0	ug/L	10	1	10.	3.5	5.0
Freon-113		~~U~~	5.0	ug/L	10	1	10.	3.1	5.0
Methylene Chloride	Exclude - DL	~~U~~	25.	ug/L	10	5	50.	11.	25.
trans-1,2-Dichloroethene			34.	ug/L	10	1	10.	2.5	5.0
1,1-Dichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.1	5.0
cis-1,2-Dichloroethene			1500	ug/L	10	1	10.	2.1	5.0
Total 1,2-Dichloroethene			1600	ug/L	10	2	20.	2.1	10.
1,1,1-Trichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
1,2-Dichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
Trichloroethene			440	ug/L	10	1	10.	2.8	5.0
Bromodichloromethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
1,1,2-Trichloroethane		~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
Tetrachloroethene		~~U~~	5.0	ug/L	10	1	10.	4.0	5.0
Bromoform		~~U~~	5.0	ug/L	10	1	10.	2.3	5.0
1,1,2,2-Tetrachloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	3.8	5.0
P-Bromofluorobenzene			95.3	%					
Toluene-d8			101.	%					
1,2-Dichloroethane-d4			95.5	%					
Dibromofluoromethane			98.3	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-15
Client ID: OU1-52IW01-052411
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 24-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		20.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	J	0.67	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene		7.5	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane		2.9	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		96.	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		100	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		15.	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		93.4	%					
Toluene-d8		95.6	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		96.3	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-16
Client ID: OU1-52IW01D-052411
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 24-MAY-11
Received Date: 27-MAY-11
Extract Date: 02-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92315

Analysis Date: 02-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		20.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	J	0.60	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene		7.8	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane		3.1	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		100	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		110	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		14.	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		92.5	%					
Toluene-d8		94.0	%					
1,2-Dichloroethane-d4		104.	%					
Dibromofluoromethane		99.9	%					

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MEMORANDUM CH2MHILL

Data Validation Summary

Cherry Point CTO-144

TO: Juan Acaron/GNV

Anita Dodson/GNV

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: July 19, 2011

Introduction

The following data validation report discusses the data validation process and findings for Katahdin Analytical Services, SDG SE3006.

Samples were analyzed using the following analytical methods SW8260B Volatiles.

The samples included in this SDG are listed in the table below.

Sample Name	Matrix
OU1-52IW03-052411	Water
OU1-52IW12-052211	Water
OU1-52IW12-052211	Water
OU1-52IW13-052411	Water
OU1-52IW14-052211	Water
OU1-52IW14-052211	Water
OU1-52IW04-052311	Water
16GW11-052511	Water
MW53-052511	Water
MW53-052511	Water
OU1-52IW04-052311	Water
OU1-52IW05-052311	Water
OU1-52IW06-052311	Water
OU1-52IW06-052311	Water
OU1-52IW07-052411	Water
OU1-52IW08-052311	Water
OU1-52IW08-052311	Water
OU1-52IW09-052411	Water

Sample Name	Matrix
OU1-52IW10-052311	Water
OU1-52IW10-052311	Water
OU1-52IW11-052411	Water

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008), Region III Modifications for Organic Data Review (EPA 1994), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Field Duplicates
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact.

Technical Holding Times

According to the chain of custody records, sampling was performed on 5/22/11 through 5/25/11. Samples were received at the laboratory on 5/27/11. All sample preparation analysis was performed within holding time requirements.

Blanks

Several compounds were detected in the equipment blanks. All samples results were greater than five times the blank value with the exception of Trichloroethene for sample 16GW11-052511. Trichloroethene was qualified as "U-EBL".

Blank ID	Compound	Conc.	Units	Action Level
OU1-EB052311-GW	cis-1,2-Dichloroethene	0.38	ug/l	1.9
OU1-EB052311-GW	1,2-Dichloroethene (total)	0.38	ug/l	1.9
OU1-EB052311-GW	Trichloroethene	0.40	ug/l	2
OU1-EB052511-GW-1	cis-1,2-Dichloroethene	0.40	ug/l	2
OU1-EB052511-GW-1	1,2-Dichloroethene (total)	0.40	ug/l	2
OU1-EB052511-GW-1	Trichloroethene	1.2	ug/l	6
OU1-EB052511-GW-2	cis-1,2-Dichloroethene	0.73	ug/l	3.65
OU1-EB052511-GW-2	1,2-Dichloroethene (total)	0.73	ug/l	3.65
OU1-EB052511-GW-2	Trichloroethene	1.2	ug/l	6

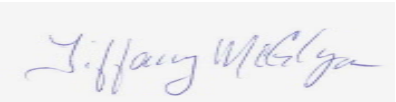
Re-extractions and Dilutions
Several samples had dilutions or re-extractions. There is no data rejected or excluded without a valid result presented for all parameters in every sample.

Conclusion

These data can be used in the project decision-making process as qualified by the data quality evaluation process.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCBL	Continuing Calibration Blank Contamination
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data

MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-1
Client ID: OU1-52IW03-052411
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 24-MAY-11
Received Date: 27-MAY-11
Extract Date: 06-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92489

Analysis Date: 06-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		12.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene		6.2	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	J	0.75	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		64.	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		70.	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		5.1	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		92.3	%					
Toluene-d8		95.7	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		97.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-2
Client ID: OU1-52IW04-052311
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 03-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92403

Analysis Date: 03-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			22.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene			1.8	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		40.	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane			1.0	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	710	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		750	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	Exclude - LR	~~E~~	380	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			104.	%					
Toluene-d8			106.	%					
1,2-Dichloroethane-d4			105.	%					
Dibromofluoromethane			93.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-2DL
Client ID: OU1-52IW04-052311
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	~~U~~	5.0	ug/L	5	2	10.	1.2	5.0
Chloromethane		~~U~~	5.0	ug/L	5	2	10.	1.8	5.0
Vinyl Chloride			16.	ug/L	5	2	10.	1.2	5.0
1,1-Dichloroethene		~~U~~	2.5	ug/L	5	1	5.0	1.8	2.5
Freon-113		~~U~~	2.5	ug/L	5	1	5.0	1.6	2.5
Methylene Chloride	Exclude - DL	~~U~~	12.	ug/L	5	5	25.	5.6	12.
trans-1,2-Dichloroethene			38.	ug/L	5	1	5.0	1.2	2.5
1,1-Dichloroethane	Exclude - DL	~~U~~	2.5	ug/L	5	1	5.0	1.0	2.5
cis-1,2-Dichloroethene			870	ug/L	5	1	5.0	1.0	2.5
Total 1,2-Dichloroethene			910	ug/L	5	2	10.	1.0	5.0
1,1,1-Trichloroethane	Exclude - DL	~~U~~	2.5	ug/L	5	1	5.0	1.0	2.5
1,2-Dichloroethane	Exclude - DL	~~U~~	2.5	ug/L	5	1	5.0	1.0	2.5
Trichloroethene			330	ug/L	5	1	5.0	1.4	2.5
Bromodichloromethane	Exclude - DL	~~U~~	2.5	ug/L	5	1	5.0	1.6	2.5
1,1,2-Trichloroethane		~~U~~	2.5	ug/L	5	1	5.0	1.6	2.5
Tetrachloroethene		~~U~~	2.5	ug/L	5	1	5.0	2.0	2.5
Bromoform		~~U~~	2.5	ug/L	5	1	5.0	1.2	2.5
1,1,2,2-Tetrachloroethane	Exclude - DL	~~U~~	2.5	ug/L	5	1	5.0	1.9	2.5
P-Bromofluorobenzene			104.	%					
Toluene-d8			97.6	%					
1,2-Dichloroethane-d4			103.	%					
Dibromofluoromethane			105.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-3RA
Client ID: OU1-52IW05-052311
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		11.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene		3.2	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		41.	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		44.	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		5.3	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		103.	%					
Toluene-d8		95.0	%					
1,2-Dichloroethane-d4		99.7	%					
Dibromofluoromethane		96.9	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-4
Client ID: OU1-52IW06-052311
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 03-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92403

Analysis Date: 03-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			16.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene		J	0.70	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		10.	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane		J	0.24	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	260	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		270	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene			130	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			95.4	%					
Toluene-d8			99.6	%					
1,2-Dichloroethane-d4			105.	%					
Dibromofluoromethane			98.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-4DL
Client ID: OU1-52IW06-052311
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	~~U~~	2.0	ug/L	2	2	4.0	0.48	2.0
Chloromethane		~~U~~	2.0	ug/L	2	2	4.0	0.72	2.0
Vinyl Chloride			13.	ug/L	2	2	4.0	0.50	2.0
1,1-Dichloroethene		~~U~~	1.0	ug/L	2	1	2.0	0.70	1.0
Freon-113		~~U~~	1.0	ug/L	2	1	2.0	0.62	1.0
Methylene Chloride	Exclude - DL	~~U~~	5.0	ug/L	2	5	10.	2.3	5.0
trans-1,2-Dichloroethene			8.4	ug/L	2	1	2.0	0.50	1.0
1,1-Dichloroethane	Exclude - DL	~~U~~	1.0	ug/L	2	1	2.0	0.42	1.0
cis-1,2-Dichloroethene			240	ug/L	2	1	2.0	0.42	1.0
Total 1,2-Dichloroethene			250	ug/L	2	2	4.0	0.42	2.0
1,1,1-Trichloroethane	Exclude - DL	~~U~~	1.0	ug/L	2	1	2.0	0.40	1.0
1,2-Dichloroethane		~~U~~	1.0	ug/L	2	1	2.0	0.40	1.0
Trichloroethene			110	ug/L	2	1	2.0	0.56	1.0
Bromodichloromethane		~~U~~	1.0	ug/L	2	1	2.0	0.66	1.0
1,1,2-Trichloroethane		~~U~~	1.0	ug/L	2	1	2.0	0.66	1.0
Tetrachloroethene		~~U~~	1.0	ug/L	2	1	2.0	0.80	1.0
Bromoform		~~U~~	1.0	ug/L	2	1	2.0	0.46	1.0
1,1,2,2-Tetrachloroethane	Exclude - DL	~~U~~	1.0	ug/L	2	1	2.0	0.76	1.0
P-Bromofluorobenzene			107.	%					
Toluene-d8			97.6	%					
1,2-Dichloroethane-d4			105.	%					
Dibromofluoromethane			99.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-5RA
Client ID: OU1-52IW07-052411
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 24-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		6.1	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene		1.3	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		22.	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		23.	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		4.4	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		100.	%					
Toluene-d8		97.3	%					
1,2-Dichloroethane-d4		93.8	%					
Dibromofluoromethane		84.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-6
Client ID: OU1-52IW08-052311
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 03-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92403

Analysis Date: 03-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			24.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene			1.3	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		15.	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane		J	0.70	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	470	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		490	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene			62.	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			96.6	%					
Toluene-d8			96.3	%					
1,2-Dichloroethane-d4			105.	%					
Dibromofluoromethane			96.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-6DL
Client ID: OU1-52IW08-052311
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 06-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92489

Analysis Date: 06-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	U	5.0	ug/L	5	2	10.	1.2	5.0
Chloromethane		U	5.0	ug/L	5	2	10.	1.8	5.0
Vinyl Chloride			15.	ug/L	5	2	10.	1.2	5.0
1,1-Dichloroethene		U	2.5	ug/L	5	1	5.0	1.8	2.5
Freon-113		U	2.5	ug/L	5	1	5.0	1.6	2.5
Methylene Chloride	Exclude - DL	U	12.	ug/L	5	5	25.	5.6	12.
trans-1,2-Dichloroethene			11.	ug/L	5	1	5.0	1.2	2.5
1,1-Dichloroethane	Exclude - DL	~~U~~	2.5	ug/L	5	1	5.0	1.0	2.5
cis-1,2-Dichloroethene			400	ug/L	5	1	5.0	1.0	2.5
Total 1,2-Dichloroethene			420	ug/L	5	2	10.	1.0	5.0
1,1,1-Trichloroethane	Exclude - DL	U	2.5	ug/L	5	1	5.0	1.0	2.5
1,2-Dichloroethane		U	2.5	ug/L	5	1	5.0	1.0	2.5
Trichloroethene			48.	ug/L	5	1	5.0	1.4	2.5
Bromodichloromethane		U	2.5	ug/L	5	1	5.0	1.6	2.5
1,1,2-Trichloroethane		U	2.5	ug/L	5	1	5.0	1.6	2.5
Tetrachloroethene		U	2.5	ug/L	5	1	5.0	2.0	2.5
Bromoform		U	2.5	ug/L	5	1	5.0	1.2	2.5
1,1,2,2-Tetrachloroethane	Exclude - DL	U	2.5	ug/L	5	1	5.0	1.9	2.5
P-Bromofluorobenzene			91.7	%					
Toluene-d8			93.3	%					
1,2-Dichloroethane-d4			88.5	%					
Dibromofluoromethane			91.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-7
Client ID: OU1-52IW09-052411
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 24-MAY-11
Received Date: 27-MAY-11
Extract Date: 06-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92489

Analysis Date: 06-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	J	1.7	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	J	0.29	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		8.2	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		8.5	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	0.94	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		94.1	%					
Toluene-d8		96.0	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		99.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-8
Client ID: OU1-52IW10-052311
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 03-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92403

Analysis Date: 03-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			110	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene		U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		84.	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane			2.1	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	1800	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		1900	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	Exclude - LR	~~E~~	640	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			107.	%					
Toluene-d8			114.	%					
1,2-Dichloroethane-d4			104.	%					
Dibromofluoromethane			90.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-8DL
Client ID: OU1-52IW10-052311
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 23-MAY-11
Received Date: 27-MAY-11
Extract Date: 06-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92489

Analysis Date: 06-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	U	20.	ug/L	20	2	40.	4.8	20.
Chloromethane		U	20.	ug/L	20	2	40.	7.2	20.
Vinyl Chloride			68.	ug/L	20	2	40.	5.0	20.
1,1-Dichloroethene		J	7.3	ug/L	20	1	20.	7.0	10.
Freon-113		U	10.	ug/L	20	1	20.	6.2	10.
Methylene Chloride	Exclude - DL	U	50.	ug/L	20	5	100	23.	50.
trans-1,2-Dichloroethene			56.	ug/L	20	1	20.	5.0	10.
1,1-Dichloroethane	Exclude - DL	~~U~~	10.	ug/L	20	1	20.	4.2	10.
cis-1,2-Dichloroethene			3500	ug/L	20	1	20.	4.2	10.
Total 1,2-Dichloroethene			3600	ug/L	20	2	40.	4.2	20.
1,1,1-Trichloroethane	Exclude - DL	U	10.	ug/L	20	1	20.	4.0	10.
1,2-Dichloroethane	Exclude - DL	U	10.	ug/L	20	1	20.	4.0	10.
Trichloroethene			540	ug/L	20	1	20.	5.6	10.
Bromodichloromethane	Exclude - DL	U	10.	ug/L	20	1	20.	6.6	10.
1,1,2-Trichloroethane		U	10.	ug/L	20	1	20.	6.6	10.
Tetrachloroethene		U	10.	ug/L	20	1	20.	8.0	10.
Bromoform		U	10.	ug/L	20	1	20.	4.6	10.
1,1,2,2-Tetrachloroethane	Exclude - DL	U	10.	ug/L	20	1	20.	7.6	10.
P-Bromofluorobenzene			89.7	%					
Toluene-d8			95.0	%					
1,2-Dichloroethane-d4			92.7	%					
Dibromofluoromethane			93.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-9RA
Client ID: OU1-52IW11-052411
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 24-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		3.0	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	J	0.83	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		25.	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		25.	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		5.4	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		96.3	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		94.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-10
Client ID: OU1-52IW12-052211
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 22-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			8.4	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene		J	0.93	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		7.8	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane		J	0.32	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	450	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		460	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene			140	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			98.4	%					
Toluene-d8			93.0	%					
1,2-Dichloroethane-d4			90.6	%					
Dibromofluoromethane			90.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-10DL
Client ID: OU1-52IW12-052211
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 22-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	~~U~~	4.0	ug/L	4	2	8.0	0.96	4.0
Chloromethane		~~U~~	4.0	ug/L	4	2	8.0	1.4	4.0
Vinyl Chloride		~~J~~	7.2	ug/L	4	2	8.0	1.0	4.0
1,1-Dichloroethene		~~U~~	2.0	ug/L	4	1	4.0	1.4	2.0
Freon-113		~~U~~	2.0	ug/L	4	1	4.0	1.2	2.0
Methylene Chloride	Exclude - DL	~~U~~	10.	ug/L	4	5	20.	4.5	10.
trans-1,2-Dichloroethene			6.6	ug/L	4	1	4.0	1.0	2.0
1,1-Dichloroethane	Exclude - DL	~~U~~	2.0	ug/L	4	1	4.0	0.84	2.0
cis-1,2-Dichloroethene			480	ug/L	4	1	4.0	0.84	2.0
Total 1,2-Dichloroethene			480	ug/L	4	2	8.0	0.84	4.0
1,1,1-Trichloroethane	Exclude - DL	~~U~~	2.0	ug/L	4	1	4.0	0.80	2.0
1,2-Dichloroethane		~~U~~	2.0	ug/L	4	1	4.0	0.80	2.0
Trichloroethene			130	ug/L	4	1	4.0	1.1	2.0
Bromodichloromethane		~~U~~	2.0	ug/L	4	1	4.0	1.3	2.0
1,1,2-Trichloroethane		~~U~~	2.0	ug/L	4	1	4.0	1.3	2.0
Tetrachloroethene		~~U~~	2.0	ug/L	4	1	4.0	1.6	2.0
Bromoform		~~U~~	2.0	ug/L	4	1	4.0	0.92	2.0
1,1,2,2-Tetrachloroethane	Exclude - DL	~~U~~	2.0	ug/L	4	1	4.0	1.5	2.0
P-Bromofluorobenzene			109.	%					
Toluene-d8			98.6	%					
1,2-Dichloroethane-d4			102.	%					
Dibromofluoromethane			97.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-11
Client ID: OU1-52IW13-052411
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 24-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		59.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene		5.4	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		150	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		160	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene		12.	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		107.	%					
Toluene-d8		98.9	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		104.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-12
Client ID: OU1-52IW14-052211
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 22-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride			64.	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene			2.2	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		13.	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane		J	0.96	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	760	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		770	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene			100	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			105.	%					
Toluene-d8			100.	%					
1,2-Dichloroethane-d4			97.7	%					
Dibromofluoromethane			95.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-12DL
Client ID: OU1-52IW14-052211
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 22-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	~~U~~	10.	ug/L	10	2	20.	2.4	10.
Chloromethane		~~U~~	10.	ug/L	10	2	20.	3.6	10.
Vinyl Chloride			46.	ug/L	10	2	20.	2.5	10.
1,1-Dichloroethene		~~U~~	5.0	ug/L	10	1	10.	3.5	5.0
Freon-113		~~U~~	5.0	ug/L	10	1	10.	3.1	5.0
Methylene Chloride	Exclude - DL	~~U~~	25.	ug/L	10	5	50.	11.	25.
trans-1,2-Dichloroethene		J	9.5	ug/L	10	1	10.	2.5	5.0
1,1-Dichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.1	5.0
cis-1,2-Dichloroethene			750	ug/L	10	1	10.	2.1	5.0
Total 1,2-Dichloroethene			760	ug/L	10	2	20.	2.1	10.
1,1,1-Trichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
1,2-Dichloroethane		~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
Trichloroethene			78.	ug/L	10	1	10.	2.8	5.0
Bromodichloromethane		~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
1,1,2-Trichloroethane		~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
Tetrachloroethene		~~U~~	5.0	ug/L	10	1	10.	4.0	5.0
Bromoform		~~U~~	5.0	ug/L	10	1	10.	2.3	5.0
1,1,2,2-Tetrachloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	3.8	5.0
P-Bromofluorobenzene			116.	%					
Toluene-d8			95.9	%					
1,2-Dichloroethane-d4			93.4	%					
Dibromofluoromethane			100.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-20
Client ID: 16GW11-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 04-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92421

Analysis Date: 04-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	J	1.2	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	J	0.72	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene		7.7	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene		8.4	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U - EBL	1.2	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		103.	%					
Toluene-d8		98.0	%					
1,2-Dichloroethane-d4		111.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-21
Client ID: MW53-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 07-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92489

Analysis Date: 07-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane		U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane		U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride		J	1.5	ug/L	1	2	2.0	0.25	1.0
1,1-Dichloroethene		J	0.93	ug/L	1	1	1.0	0.35	0.50
Freon-113		U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride		U	2.5	ug/L	1	5	5.0	1.1	2.5
trans-1,2-Dichloroethene	Exclude - RE		150	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	Exclude - LR	~~E~~	400	ug/L	1	1	1.0	0.21	0.50
Total 1,2-Dichloroethene	Exclude - RE		550	ug/L	1	2	2.0	0.21	1.0
1,1,1-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
1,2-Dichloroethane		U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	Exclude - LR	~~E~~	630	ug/L	1	1	1.0	0.28	0.50
Bromodichloromethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
1,1,2-Trichloroethane		U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene		U	0.50	ug/L	1	1	1.0	0.40	0.50
Bromoform		U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane		U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene			116.	%					
Toluene-d8			117.	%					
1,2-Dichloroethane-d4			104.	%					
Dibromofluoromethane			97.5	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-21DL
Client ID: MW53-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 06-JUN-11
Extracted By: DJP
Extraction Method: SW846 5030
Lab Prep Batch: WG92489

Analysis Date: 06-JUN-11
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-JUN-11

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	Exclude - DL	~~U~~	10.	ug/L	10	2	20.	2.4	10.
Chloromethane		~~U~~	10.	ug/L	10	2	20.	3.6	10.
Vinyl Chloride		~~U~~	10.	ug/L	10	2	20.	2.5	10.
1,1-Dichloroethene		~~U~~	5.0	ug/L	10	1	10.	3.5	5.0
Freon-113		~~U~~	5.0	ug/L	10	1	10.	3.1	5.0
Methylene Chloride	Exclude - DL	~~U~~	25.	ug/L	10	5	50.	11.	25.
trans-1,2-Dichloroethene			120	ug/L	10	1	10.	2.5	5.0
1,1-Dichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.1	5.0
cis-1,2-Dichloroethene			400	ug/L	10	1	10.	2.1	5.0
Total 1,2-Dichloroethene			510	ug/L	10	2	20.	2.1	10.
1,1,1-Trichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
1,2-Dichloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	2.0	5.0
Trichloroethene			610	ug/L	10	1	10.	2.8	5.0
Bromodichloromethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
1,1,2-Trichloroethane		~~U~~	5.0	ug/L	10	1	10.	3.3	5.0
Tetrachloroethene		~~U~~	5.0	ug/L	10	1	10.	4.0	5.0
Bromoform		~~U~~	5.0	ug/L	10	1	10.	2.3	5.0
1,1,2,2-Tetrachloroethane	Exclude - DL	~~U~~	5.0	ug/L	10	1	10.	3.8	5.0
P-Bromofluorobenzene			94.6	%					
Toluene-d8			95.6	%					
1,2-Dichloroethane-d4			100.	%					
Dibromofluoromethane			97.2	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3006-20
Report Date: 21-JUN-11
Client PO: 940931 407558 CTO-01
Project: MCAS Cherry Point OU
SDG: SE3006

Sample Description	Matrix	Date Sampled	Date Received
16GW11-052511	AQ	25-MAY-11	27-MAY-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Sulfate-Turbidimetric	14. mg/L	1.0	0.50	EPA 375.4	WG92758	10-JUN-11 16:04:48	N/A	N/A	
Sulfide-Iodometric	U0.75 mg/L	1.0	0.75	EPA 376.1	WG92459	01-JUN-11 12:25:00	N/A	N/A	
Total Organic Carbon (1)	1.4 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 01:23:35	N/A	N/A	
Total Organic Carbon (2)	1.4 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 01:34:43	N/A	N/A	
Total Organic Carbon (3)	1.3 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 01:47:55	N/A	N/A	
Total Organic Carbon (4)	1.4 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 01:58:54	N/A	N/A	
Total Organic Carbon (Average)	1.4 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 07:45:08	N/A	N/A	

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Cert No E87604

Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3005-11
Report Date: 21-JUN-11
Client PO: 940931 407558 CTO-01
Project: MCAS Cherry Point OU
SDG: SE3005

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW78-052511	AQ	25-MAY-11	27-MAY-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Sulfate-Turbidimetric	35. mg/L	2.0	1.0	EPA 375.4	WG92758	10-JUN-11 16:33:36	N/A	N/A	
Sulfide-Iodometric	U0.75 mg/L	1.0	0.75	EPA 376.1	WG92459	01-JUN-11 11:36:00	N/A	N/A	
Total Organic Carbon (1)	2.3 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 21:03:06	N/A	N/A	
Total Organic Carbon (2)	2.3 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 21:14:22	N/A	N/A	
Total Organic Carbon (3)	2.3 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 21:27:37	N/A	N/A	
Total Organic Carbon (4)	2.3 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 21:38:50	N/A	N/A	
Total Organic Carbon (Average)	2.3 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 07:45:08	N/A	N/A	

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3005-12
Report Date: 21-JUN-11
Client PO: 940931 407558 CTO-01
Project: MCAS Cherry Point OU
SDG: SE3005

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW79-052511	AQ	25-MAY-11	27-MAY-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Sulfate-Turbidimetric	28. mg/L	1.0	0.50	EPA 375.4	WG92758	10-JUN-11 16:04:48	N/A	N/A	
Sulfide-Iodometric	U0.75 mg/L	1.0	0.75	EPA 376.1	WG92459	01-JUN-11 11:53:00	N/A	N/A	
Total Organic Carbon (1)	1.7 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 21:51:58	N/A	N/A	
Total Organic Carbon (2)	1.8 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 22:32:51	N/A	N/A	
Total Organic Carbon (3)	1.7 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 22:46:00	N/A	N/A	
Total Organic Carbon (4)	1.7 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 22:57:08	N/A	N/A	
Total Organic Carbon (Average)	1.7 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 07:45:08	N/A	N/A	

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Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3005-13
Report Date: 21-JUN-11
Client PO: 940931 407558 CTO-01
Project: MCAS Cherry Point OU
SDG: SE3005

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW80-052511	AQ	25-MAY-11	27-MAY-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Sulfate-Turbidimetric	9.2 mg/L	1.0	0.50	EPA 375.4	WG92758	10-JUN-11 16:04:48	N/A	N/A	
Sulfide-Iodometric	U0.75 mg/L	1.0	0.75	EPA 376.1	WG92459	01-JUN-11 12:01:00	N/A	N/A	
Total Organic Carbon (1)	5.5 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 23:10:47	N/A	N/A	
Total Organic Carbon (2)	5.5 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 23:22:50	N/A	N/A	
Total Organic Carbon (3)	J0.91 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 23:36:51	N/A	N/A	
Total Organic Carbon (4)	1.6 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 23:49:03	N/A	N/A	
Total Organic Carbon (Average)	3.4 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 07:45:08	N/A	N/A	

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3005-14
Report Date: 21-JUN-11
Client PO: 940931 407558 CTO-01
Project: MCAS Cherry Point OU
SDG: SE3005

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW81-052511	AQ	25-MAY-11	27-MAY-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Sulfate-Turbidimetric	27. mg/L	1.0	0.50	EPA 375.4	WG92758	10-JUN-11 16:04:48	N/A	N/A	
Sulfide-Iodometric	U0.75 mg/L	1.0	0.75	EPA 376.1	WG92459	01-JUN-11 12:17:00	N/A	N/A	
Total Organic Carbon (1)	4.4 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 00:02:50	N/A	N/A	
Total Organic Carbon (2)	4.4 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 00:14:38	N/A	N/A	
Total Organic Carbon (3)	4.5 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 00:28:29	N/A	N/A	
Total Organic Carbon (4)	4.5 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 01:10:08	N/A	N/A	
Total Organic Carbon (Average)	4.5 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 07:45:08	N/A	N/A	

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-20
Client ID: 16GW11-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 31-MAY-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane	J	8.2	ug/L	1	10	10.	0.68	2.0
Ethane	U	2.0	ug/L	1	10	10.	0.58	2.0
Ethene	U	2.0	ug/L	1	10	10.	0.69	2.0

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3006-21
Client ID: MW53-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3006

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 31-MAY-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane		52.	ug/L	1	10	10.	0.68	2.0
Ethane	J	3.9	ug/L	1	10	10.	0.58	2.0
Ethene	U	2.0	ug/L	1	10	10.	0.69	2.0

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MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

mRNA

Client: **Katahdin Analytical Services**
Project: Marine Corps Air Station Cherry Point

MI Project Number: **084IE**
Date Received: 05/26/2011

Sample Information

Client Sample ID:		**OUI-52GW77-05 2511**	**OUI-52GW78-05 2511**	**OUI-52GW79-05 2511**	**OUI-52GW80-05 2511**	**OUI-52GW81-05 2511**
Sample Date:		05/25/2011	05/25/2011	05/25/2011	05/25/2011	05/25/2011
Units:		gene copies/mL	gene copies/mL	gene copies/mL	gene copies/mL	gene copies/mL
Analyst:		CT	CT	CT	CT	CT
Dechlorinating Bacteria						
Dehalococcoides spp.	*DHC*	**1.78E+03**	**3.97E+01**	**8.61E+02**	**2.20E+03**	**6.72E+02**
Dehalobacter spp.	*DHBt*	**9.61E+04**	**1.05E+04**	**1.93E+04**	**5.61E+02**	**4.64E+05**
Desulfuromonas spp.	*DSM*	**2.00E+01**	**1.22E+01**	**2.15E+02**	**4.40E+00**	**6.59E+01**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

mRNA

Client: **Katahdin Analytical Services**
Project: Marine Corps Air Station Cherry Point

MI Project Number: **084IE**
Date Received: 05/26/2011

Sample Information

Client Sample ID:	**16-GW11-052511**	**MW53-052511**
Sample Date:	05/25/2011	05/25/2011
Units:	gene copies/mL	gene copies/mL
Analyst:	CT	CT

Dechlorinating Bacteria

Dehalococcoides spp.	*DHC*	**1.42E+01**	**1.96E+02**
Dehalobacter spp.	*DHBt*	**9.33E+03**	**3.29E+03**
Desulfuromonas spp.	*DSM*	**2.80E+00**	**4.10E+03**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 1515 Cherry Point

Lab ID: **15150001** Date Received: 6/1/2011 12:57 Matrix: Water

Sample ID: **OU1-52GW77-052511** Date Collected: 5/25/2011 10:00

Parameters	Results	Units	RDL	MDL	DF	Prepared	By	Analyzed	By	Qual	RegLmt
EDonors											
Analysis Desc: AM23G			Analytical Method: AM23G								
Lactic Acid	0.25	mg/l	0.10	0.010	1			6/7/2011 09:42	KB		
Propionic Acid	0.050 U	mg/l	0.050	0.0070	1			6/7/2011 09:42	KB		
Formic Acid	0.099 J	mg/l	0.10	0.0020	1			6/7/2011 09:42	KB		
Butyric Acid	0.050 U	mg/l	0.050	0.0040	1			6/7/2011 09:42	KB		
Pyruvic Acid	0.15 U	mg/l	0.15	0.033	1			6/7/2011 09:42	KB		

CERTIFICATE OF ANALYSIS

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Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
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Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 1515 Cherry Point

Lab ID: **15150002** Date Received: 6/1/2011 12:57 Matrix: Water

Sample ID: **OU1-52GW78-052511** Date Collected: 5/25/2011 14:35

Parameters	Results	Units	RDL	MDL	DF	Prepared	By	Analyzed	By	Qual	RegLmt
EDonors											
Analysis Desc: AM23G			Analytical Method: AM23G								
Lactic Acid	0.28	mg/l	0.10	0.010	1			6/7/2011 10:24	KB		
Propionic Acid	0.050 U	mg/l	0.050	0.0070	1			6/7/2011 10:24	KB		
Formic Acid	0.11	mg/l	0.10	0.0020	1			6/7/2011 10:24	KB		
Butyric Acid	0.050 U	mg/l	0.050	0.0040	1			6/7/2011 10:24	KB		
Pyruvic Acid	0.15 U	mg/l	0.15	0.033	1			6/7/2011 10:24	KB		

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ANALYTICAL RESULTS

Workorder: 1515 Cherry Point

Lab ID: **15150003** Date Received: 6/1/2011 12:57 Matrix: Water

Sample ID: **OU1-52GW79-052511** Date Collected: 5/25/2011 16:30

Parameters	Results	Units	RDL	MDL	DF	Prepared	By	Analyzed	By	Qual	RegLmt
EDonors											
Analysis Desc: AM23G			Analytical Method: AM23G								
Lactic Acid	0.16	mg/l	0.10	0.010	1			6/7/2011 11:06	KB		
Propionic Acid	0.064	mg/l	0.050	0.0070	1			6/7/2011 11:06	KB		
Formic Acid	0.17	mg/l	0.10	0.0020	1			6/7/2011 11:06	KB		
Butyric Acid	0.050 U	mg/l	0.050	0.0040	1			6/7/2011 11:06	KB		
Pyruvic Acid	0.15 U	mg/l	0.15	0.033	1			6/7/2011 11:06	KB		

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ANALYTICAL RESULTS

Workorder: 1515 Cherry Point

Lab ID: **15150004** Date Received: 6/1/2011 12:57 Matrix: Water

Sample ID: **OU1-52GW80-052511** Date Collected: 5/25/2011 17:00

Parameters	Results	Units	RDL	MDL	DF	Prepared	By	Analyzed	By	Qual	RegLmt
EDonors											
Analysis Desc: AM23G			Analytical Method: AM23G								
Lactic Acid	0.10	Umg/l	0.10	0.010	1			6/7/2011 11:48	KB		
Propionic Acid	0.080	mg/l	0.050	0.0070	1			6/7/2011 11:48	KB		
Formic Acid	0.094	Jmg/l	0.10	0.0020	1			6/7/2011 11:48	KB		
Butyric Acid	0.050	Umg/l	0.050	0.0040	1			6/7/2011 11:48	KB		
Pyruvic Acid	0.15	Umg/l	0.15	0.033	1			6/7/2011 11:48	KB		

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ANALYTICAL RESULTS

Workorder: 1515 Cherry Point

Lab ID: **15150005** Date Received: 6/1/2011 12:57 Matrix: Water

Sample ID: **OU1-52GW81-052511** Date Collected: 5/25/2011 15:40

Parameters	Results	Units	RDL	MDL	DF	Prepared	By	Analyzed	By	Qual	RegLmt
EDonors											
Analysis Desc: AM23G			Analytical Method: AM23G								
Lactic Acid	0.21	mg/l	0.10	0.010	1			6/7/2011 12:30	KB		
Propionic Acid	0.060	mg/l	0.050	0.0070	1			6/7/2011 12:30	KB		
Formic Acid	0.19	mg/l	0.10	0.0020	1			6/7/2011 12:30	KB		
Butyric Acid	0.050 U	mg/l	0.050	0.0040	1			6/7/2011 12:30	KB		
Pyruvic Acid	0.15 U	mg/l	0.15	0.033	1			6/7/2011 12:30	KB		

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220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 1515 Cherry Point

Lab ID: **15150006** Date Received: 6/1/2011 12:57 Matrix: Water

Sample ID: **16GW11-052511** Date Collected: 5/25/2011 14:00

Parameters	Results	Units	RDL	MDL	DF	Prepared	By	Analyzed	By	Qual	RegLmt
EDonors											
Analysis Desc: AM23G			Analytical Method: AM23G								
Lactic Acid	0.12	mg/l	0.10	0.010	1			6/7/2011 13:12	KB		
Propionic Acid	0.052	mg/l	0.050	0.0070	1			6/7/2011 13:12	KB		
Formic Acid	0.061 J	mg/l	0.10	0.0020	1			6/7/2011 13:12	KB		
Butyric Acid	0.050 U	mg/l	0.050	0.0040	1			6/7/2011 13:12	KB		
Pyruvic Acid	0.15 U	mg/l	0.15	0.033	1			6/7/2011 13:12	KB		

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Pittsburgh, PA 15238
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ANALYTICAL RESULTS

Workorder: 1515 Cherry Point

Lab ID: **15150007** Date Received: 6/1/2011 12:57 Matrix: Water

Sample ID: **MW53-052511** Date Collected: 5/25/2011 09:35

Parameters	Results	Units	RDL	MDL	DF	Prepared	By	Analyzed	By	Qual	RegLmt
EDonors											
Analysis Desc: AM23G			Analytical Method: AM23G								
Lactic Acid	0.15	mg/l	0.10	0.010	1			6/7/2011 13:54	KB		
Propionic Acid	0.070	mg/l	0.050	0.0070	1			6/7/2011 13:54	KB		
Formic Acid	0.066J	mg/l	0.10	0.0020	1			6/7/2011 13:54	KB		
Butyric Acid	0.050 U	mg/l	0.050	0.0040	1			6/7/2011 13:54	KB		
Pyruvic Acid	0.15 U	mg/l	0.15	0.033	1			6/7/2011 13:54	KB		

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-9
Client ID: OU1-52GW77-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 31-MAY-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane	E	1400	ug/L	1	10	10.	0.68	2.0
Ethane	U	2.0	ug/L	1	10	10.	0.58	2.0
Ethene	J	2.5	ug/L	1	10	10.	0.69	2.0

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Katahdin
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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-9DL
Client ID: OU1-52GW77-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 01-JUN-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92233

Analysis Date: 01-JUN-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane		700	ug/L	5	10	50.	3.4	10.
Ethane	U	10.	ug/L	5	10	50.	2.9	10.
Ethene	U	10.	ug/L	5	10	50.	3.4	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-11
Client ID: OU1-52GW78-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 31-MAY-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane		180	ug/L	1	10	10.	0.68	2.0
Ethane	J	4.1	ug/L	1	10	10.	0.58	2.0
Ethene	U	2.0	ug/L	1	10	10.	0.69	2.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-12
Client ID: OU1-52GW79-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 31-MAY-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane		130	ug/L	1	10	10.	0.68	2.0
Ethane	J	3.2	ug/L	1	10	10.	0.58	2.0
Ethene	J	1.1	ug/L	1	10	10.	0.69	2.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-13
Client ID: OU1-52GW80-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 31-MAY-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane		700	ug/L	1	10	10.	0.68	2.0
Ethane	U	2.0	ug/L	1	10	10.	0.58	2.0
Ethene	U	2.0	ug/L	1	10	10.	0.69	2.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SE3005-14
Client ID: OU1-52GW81-052511
Project: MCAS Cherry Point OU-1 Pil
SDG: SE3005

Sample Date: 25-MAY-11
Received Date: 27-MAY-11
Extract Date: 31-MAY-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-JUN-11

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane		610	ug/L	1	10	10.	0.68	2.0
Ethane	J	3.1	ug/L	1	10	10.	0.58	2.0
Ethene	J	2.6	ug/L	1	10	10.	0.69	2.0

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Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3005-9
Report Date: 21-JUN-11
Client PO: 940931 407558 CTO-01
Project: MCAS Cherry Point OU
SDG: SE3005

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW77-052511	AQ	25-MAY-11	27-MAY-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Sulfate-Turbidimetric	13. mg/L	1.0	0.50	EPA 375.4	WG92758	10-JUN-11 15:50:24	N/A	N/A	
Sulfide-Iodometric	U0.75 mg/L	1.0	0.75	EPA 376.1	WG92459	01-JUN-11 11:20:00	N/A	N/A	
Total Organic Carbon (1)	8.7 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 20:05:57	N/A	N/A	
Total Organic Carbon (2)	9.0 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 20:18:12	N/A	N/A	
Total Organic Carbon (3)	1.1 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 20:32:33	N/A	N/A	
Total Organic Carbon (4)	2.2 mg/L	1.0	0.50	SW846 9060	WG92931	14-JUN-11 20:49:32	N/A	N/A	
Total Organic Carbon (Average)	5.2 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 07:45:08	N/A	N/A	

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Report of Analytical Results

Client:
Lab ID: WG92181-1
Client ID: Method Blank Sample
Project:
SDG: SE3006

Sample Date:
Received Date:
Extract Date: 31-MAY-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-jun-2011 10:02

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane	J	1.2	ug/L	1	10	10.	0.68	2.0
Ethane	U	2.0	ug/L	1	10	10.	0.58	2.0
Ethene	U	2.0	ug/L	1	10	10.	0.69	2.0

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LCS Recovery Report

Client:
Lab ID: WG92181-2
Client ID: LCS
Project:
SDG: SE3006

Sample Date:
Received Date: 31-MAY-11
Extract Date:
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-jun-2011 10:02

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Methane	89.5	133.	119.	ug/L	70-130
Ethane	92.8	249.	231.	ug/L	70-130
Ethene	88.8	233.	207.	ug/L	70-130

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LCS Recovery Report

Client:
Lab ID: WG92181-2
Client ID: LCS
Project:
SDG: SE3005

Sample Date:
Received Date: 31-MAY-11
Extract Date:
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-jun-2011 09:29

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Methane	89.5	133.	119.	ug/L	70-130
Ethane	92.8	249.	231.	ug/L	70-130
Ethene	88.8	233.	207.	ug/L	70-130

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Report of Analytical Results

Client:
Lab ID: WG92181-1
Client ID: Method Blank Sample
Project:
SDG: SE3005

Sample Date:
Received Date:
Extract Date: 31-MAY-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92181

Analysis Date: 31-MAY-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-jun-2011 09:28

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane	J	1.2	ug/L	1	10	10.	0.68	2.0
Ethane	U	2.0	ug/L	1	10	10.	0.58	2.0
Ethene	U	2.0	ug/L	1	10	10.	0.69	2.0

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Report of Analytical Results

Client:
Lab ID: WG92233-1
Client ID: Method Blank Sample
Project:
SDG: SE3005

Sample Date:
Received Date:
Extract Date: 01-JUN-11
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92233

Analysis Date: 01-JUN-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-jun-2011 09:29

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Methane	U	2.0	ug/L	1	10	10.	0.68	2.0
Ethane	U	2.0	ug/L	1	10	10.	0.58	2.0
Ethene	U	2.0	ug/L	1	10	10.	0.69	2.0

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LCS Recovery Report

Client:
Lab ID: WG92233-2
Client ID: LCS
Project:
SDG: SE3005

Sample Date:
Received Date: 01-JUN-11
Extract Date:
Extracted By: CB
Extraction Method: RSK SOP 175
Lab Prep Batch: WG92233

Analysis Date: 01-JUN-11
Analyst: CB
Analysis Method: RSK SOP 175
Matrix: AQ
% Solids: NA
Report Date: 21-jun-2011 09:29

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Methane	85.0	133.	113.	ug/L	70-130
Ethane	88.8	249.	221.	ug/L	70-130
Ethene	85.0	233.	198.	ug/L	70-130

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3330-7
Report Date: 27-JUN-11
Client PO: No PO, No buyer
Project: MCAS Cherry Point OU
SDG: SE3330

Sample Description	Matrix	Date Sampled	Date Received
OU1-16GW11-060911	AQ	09-JUN-11	11-JUN-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon (1)	13. mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 10:20:08	N/A	N/A	
Total Organic Carbon (2)	13. mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 10:32:55	N/A	N/A	
Total Organic Carbon (3)	1.4 mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 10:46:53	N/A	N/A	
Total Organic Carbon (4)	1.5 mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 10:58:02	N/A	N/A	
Total Organic Carbon (Average)	7.1 mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 10:58:00	N/A	N/A	

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3330-6
Report Date: 27-JUN-11
Client PO: No PO, No buyer
Project: MCAS Cherry Point OU
SDG: SE3330

Sample Description	Matrix	Date Sampled	Date Received
OU1-MW53-060911	AQ	09-JUN-11	11-JUN-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon (1)	3.7 mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 08:55:35	N/A	N/A	
Total Organic Carbon (2)	2.2 mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 09:41:17	N/A	N/A	
Total Organic Carbon (3)	2.0 mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 09:54:37	N/A	N/A	
Total Organic Carbon (4)	1.9 mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 10:05:58	N/A	N/A	
Total Organic Carbon (Average)	2.4 mg/L	1.0	0.50	SW846 9060	WG92956	15-JUN-11 10:58:00	N/A	N/A	

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Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3330-2
Report Date: 27-JUN-11
Client PO: No PO, No buyer
Project: MCAS Cherry Point OU
SDG: SE3330

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW78-060911	AQ	09-JUN-11	11-JUN-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon (1)	3100 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 16:38:13	N/A	N/A	
Total Organic Carbon (2)	3100 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 16:52:06	N/A	N/A	
Total Organic Carbon (3)	3000 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 17:07:56	N/A	N/A	
Total Organic Carbon (4)	3000 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 17:21:54	N/A	N/A	
Total Organic Carbon (Average)	3100 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 00:00:00	N/A	N/A	

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Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3330-1
Report Date: 27-JUN-11
Client PO: No PO, No buyer
Project: MCAS Cherry Point OU
SDG: SE3330

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW77-061011	AQ	10-JUN-11	11-JUN-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon (1)	9.7 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 03:02:03	N/A	N/A	
Total Organic Carbon (2)	9.9 mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 03:44:38	N/A	N/A	
Total Organic Carbon (3)	10. mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 03:59:14	N/A	N/A	
Total Organic Carbon (4)	10. mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 04:11:49	N/A	N/A	
Total Organic Carbon (Average)	10. mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 07:45:08	N/A	N/A	

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3330-3
Report Date: 27-JUN-11
Client PO: No PO, No buyer
Project: MCAS Cherry Point OU
SDG: SE3330

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW79-061011	AQ	10-JUN-11	11-JUN-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon (1)	25. mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 05:29:48	N/A	N/A	
Total Organic Carbon (2)	25. mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 05:42:38	N/A	N/A	
Total Organic Carbon (3)	19. mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 05:57:20	N/A	N/A	
Total Organic Carbon (4)	18. mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 06:40:59	N/A	N/A	
Total Organic Carbon (Average)	22. mg/L	1.0	0.50	SW846 9060	WG92931	15-JUN-11 07:45:08	N/A	N/A	

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Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3330-4
Report Date: 27-JUN-11
Client PO: No PO, No buyer
Project: MCAS Cherry Point OU
SDG: SE3330

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW80-061011	AQ	10-JUN-11	11-JUN-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon (1)	1700 mg/L	10.	5.0	SW846 9060	WG92931	15-JUN-11 06:56:19	N/A	N/A	
Total Organic Carbon (2)	1800 mg/L	10.	5.0	SW846 9060	WG92931	15-JUN-11 07:10:27	N/A	N/A	
Total Organic Carbon (3)	1900 mg/L	10.	5.0	SW846 9060	WG92931	15-JUN-11 07:26:27	N/A	N/A	
Total Organic Carbon (4)	1900 mg/L	10.	5.0	SW846 9060	WG92931	15-JUN-11 07:40:25	N/A	N/A	
Total Organic Carbon (Average)	1800 mg/L	10.	5.0	SW846 9060	WG92931	15-JUN-11 07:45:08	N/A	N/A	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Victoria Weber
CH2M HILL
5700 Cleveland St.
Virginia Beach,VA 23462

Lab Sample ID: SE3330-5
Report Date: 27-JUN-11
Client PO: No PO, No buyer
Project: MCAS Cherry Point OU
SDG: SE3330

Sample Description	Matrix	Date Sampled	Date Received
OU1-52GW81-061011	AQ	10-JUN-11	11-JUN-11

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Organic Carbon (1)	1600 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 17:37:31	N/A	N/A	
Total Organic Carbon (2)	1600 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 17:51:00	N/A	N/A	
Total Organic Carbon (3)	1700 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 18:06:46	N/A	N/A	
Total Organic Carbon (4)	1700 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 18:20:29	N/A	N/A	
Total Organic Carbon (Average)	1600 mg/L	40.	20.	SW846 9060	WG93275	24-JUN-11 00:00:00	N/A	N/A	

Appendix C
Injection Monitoring Data

TABLE C.1
Injection Summary for IW01

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/1/2011 9:45	IW01	0	Begin Injecting SRS - Batch 1/2.
6/1/2011 12:30	IW01	4,260	Finish Injecting SRS - Batch 1/2.
6/1/2011 13:25	IW01	4,260	Begin Injecting SRS - Batch 2/2.
6/1/2011 17:25	IW01	8,235	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW01	20 - 35	16GW11	23.6	12 - 27	bottom
		IW03	25.1	20 - 35	middle
		MW53	14.6	44 - 54	top

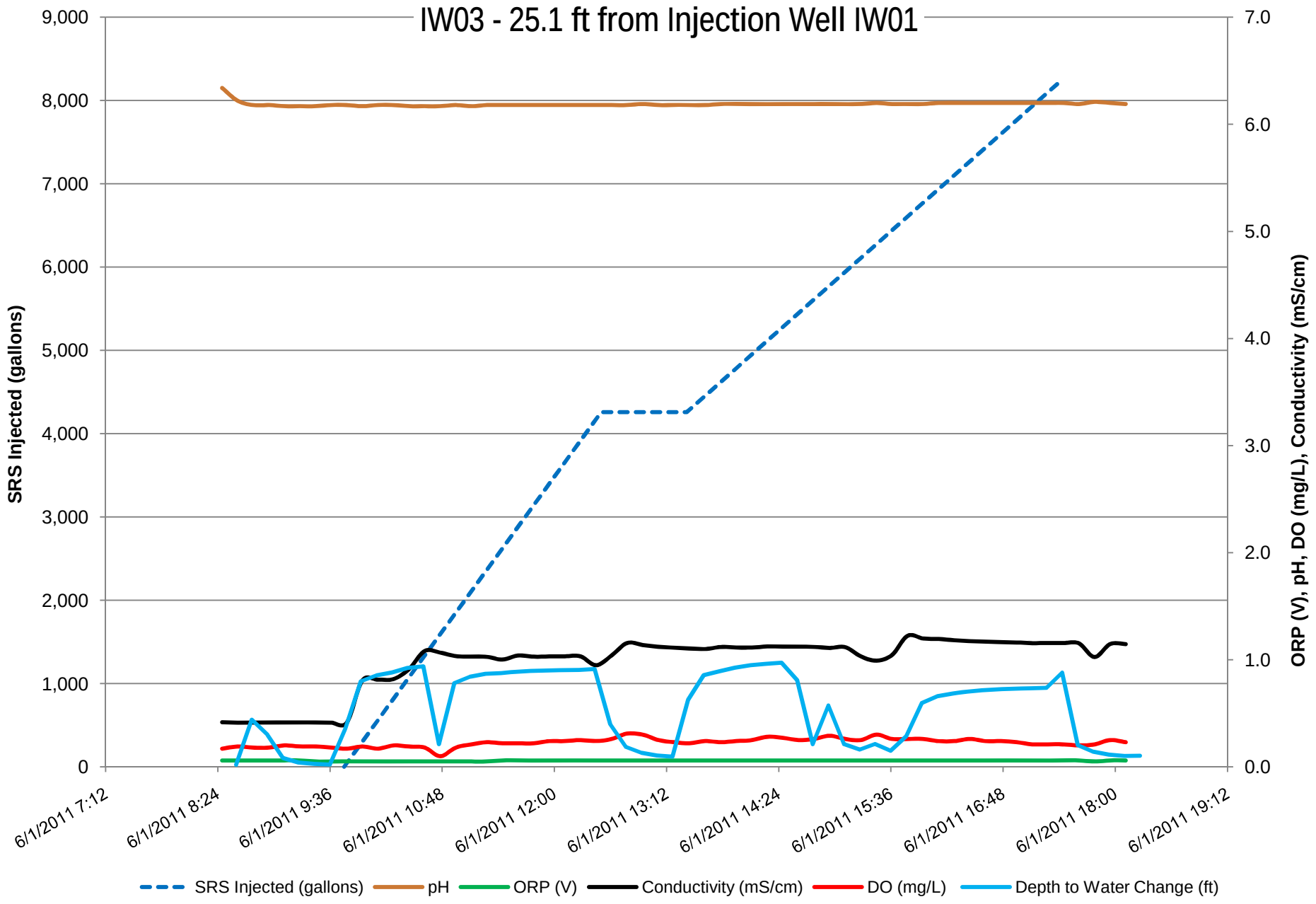

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Figure C.1
SRS Injection Data Timeline - IW03

TABLE C.2
Monitoring Well Data for IW03

Monitoring Well ID: **IW03**
Injection Well ID: IW01
Distance to Injection Well: 25.1-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 5/31/2011
Test stopped on: 6/1/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/1/2011 8:26	0.06	6.34	0.17	0.417
6/1/2011 8:36	0.06	6.22	0.19	0.414
6/1/2011 8:46	0.06	6.18	0.18	0.413
6/1/2011 8:56	0.06	6.18	0.18	0.415
6/1/2011 9:06	0.06	6.17	0.20	0.415
6/1/2011 9:16	0.06	6.17	0.19	0.415
6/1/2011 9:26	0.05	6.17	0.19	0.414
6/1/2011 9:36	0.05	6.18	0.18	0.413
6/1/2011 9:46	0.05	6.18	0.17	0.412
6/1/2011 9:56	0.05	6.17	0.19	0.808
6/1/2011 10:06	0.05	6.18	0.17	0.814
6/1/2011 10:16	0.05	6.18	0.20	0.820
6/1/2011 10:26	0.05	6.17	0.19	0.913
6/1/2011 10:36	0.05	6.17	0.18	1.082
6/1/2011 10:46	0.05	6.17	0.10	1.067
6/1/2011 10:56	0.05	6.18	0.18	1.034
6/1/2011 11:06	0.05	6.17	0.21	1.030
6/1/2011 11:16	0.05	6.18	0.23	1.028
6/1/2011 11:26	0.06	6.18	0.22	1.002
6/1/2011 11:36	0.06	6.18	0.22	1.040
6/1/2011 11:46	0.06	6.18	0.22	1.029
6/1/2011 11:56	0.06	6.18	0.24	1.032
6/1/2011 12:06	0.06	6.18	0.24	1.032
6/1/2011 12:16	0.06	6.18	0.25	1.032
6/1/2011 12:26	0.06	6.18	0.24	0.949
6/1/2011 12:36	0.06	6.18	0.26	1.041
6/1/2011 12:46	0.06	6.18	0.31	1.157
6/1/2011 12:56	0.06	6.19	0.30	1.138
6/1/2011 13:06	0.06	6.18	0.25	1.121
6/1/2011 13:16	0.06	6.18	0.23	1.113
6/1/2011 13:26	0.06	6.18	0.22	1.107
6/1/2011 13:36	0.06	6.18	0.24	1.100
6/1/2011 13:46	0.06	6.19	0.23	1.120
6/1/2011 13:56	0.06	6.19	0.24	1.115
6/1/2011 14:06	0.06	6.19	0.25	1.115
6/1/2011 14:16	0.06	6.19	0.28	1.124
6/1/2011 14:26	0.06	6.19	0.27	1.123
6/1/2011 14:36	0.06	6.19	0.25	1.124
6/1/2011 14:46	0.06	6.19	0.26	1.121
6/1/2011 14:56	0.06	6.19	0.29	1.111
6/1/2011 15:06	0.06	6.19	0.26	1.118
6/1/2011 15:16	0.06	6.19	0.25	1.032
6/1/2011 15:26	0.06	6.20	0.30	0.992
6/1/2011 15:36	0.06	6.19	0.26	1.045
6/1/2011 15:46	0.06	6.19	0.26	1.224
6/1/2011 15:56	0.06	6.19	0.26	1.199
6/1/2011 16:06	0.06	6.20	0.24	1.194
6/1/2011 16:16	0.06	6.20	0.24	1.183
6/1/2011 16:26	0.06	6.20	0.26	1.174

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 5/31/2011
Test stopped on: 6/1/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/1/2011 8:35	3.134	18.848	0.020
6/1/2011 8:45	3.316	18.843	0.441
6/1/2011 8:55	3.255	18.843	0.300
6/1/2011 9:05	3.160	18.837	0.082
6/1/2011 9:15	3.142	18.834	0.040
6/1/2011 9:25	3.137	18.835	0.029
6/1/2011 9:35	3.134	18.827	0.021
6/1/2011 9:45	3.279	18.830	0.355
6/1/2011 9:55	3.471	18.834	0.800
6/1/2011 10:05	3.495	18.834	0.855
6/1/2011 10:15	3.507	18.826	0.882
6/1/2011 10:25	3.525	18.816	0.924
6/1/2011 10:35	3.531	18.827	0.939
6/1/2011 10:45	3.217	18.816	0.212
6/1/2011 10:55	3.464	18.820	0.783
6/1/2011 11:05	3.489	18.832	0.841
6/1/2011 11:15	3.501	18.837	0.869
6/1/2011 11:25	3.504	18.825	0.875
6/1/2011 11:35	3.510	18.832	0.889
6/1/2011 11:45	3.513	18.831	0.896
6/1/2011 11:55	3.515	18.829	0.901
6/1/2011 12:05	3.516	18.830	0.904
6/1/2011 12:15	3.518	18.827	0.906
6/1/2011 12:25	3.520	18.824	0.913
6/1/2011 12:35	3.297	18.829	0.398
6/1/2011 12:45	3.206	18.812	0.187
6/1/2011 12:55	3.182	18.809	0.131
6/1/2011 13:05	3.171	18.814	0.106
6/1/2011 13:15	3.166	18.796	0.095
6/1/2011 13:25	3.396	18.802	0.626
6/1/2011 13:35	3.496	18.803	0.857
6/1/2011 13:45	3.511	18.794	0.892
6/1/2011 13:55	3.526	18.797	0.927
6/1/2011 14:05	3.537	18.799	0.950
6/1/2011 14:15	3.541	18.800	0.962
6/1/2011 14:25	3.546	18.801	0.972
6/1/2011 14:35	3.475	18.800	0.809
6/1/2011 14:45	3.217	18.792	0.212
6/1/2011 14:55	3.373	18.789	0.573
6/1/2011 15:05	3.216	18.812	0.211
6/1/2011 15:15	3.195	18.818	0.162
6/1/2011 15:25	3.217	18.831	0.213
6/1/2011 15:35	3.191	18.823	0.151
6/1/2011 15:45	3.248	18.811	0.285
6/1/2011 15:55	3.383	18.808	0.596
6/1/2011 16:05	3.410	18.804	0.659
6/1/2011 16:15	3.422	18.802	0.685
6/1/2011 16:25	3.430	18.801	0.704
6/1/2011 16:35	3.435	18.811	0.716

TABLE C.2

Monitoring Well Data for IW03

Monitoring Well ID: **IW03**
Injection Well ID: IW01
Distance to Injection Well: 25.1-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 5/31/2011
Test stopped on: 6/1/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/1/2011 16:36	0.06	6.20	0.24	1.170
6/1/2011 16:46	0.06	6.20	0.24	1.165
6/1/2011 16:56	0.06	6.20	0.23	1.162
6/1/2011 17:06	0.06	6.20	0.21	1.155
6/1/2011 17:16	0.06	6.20	0.21	1.157
6/1/2011 17:26	0.06	6.20	0.21	1.157
6/1/2011 17:36	0.06	6.19	0.20	1.153
6/1/2011 17:46	0.05	6.21	0.21	1.026
6/1/2011 17:56	0.06	6.20	0.25	1.147
6/1/2011 18:06	0.06	6.19	0.23	1.147

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 5/31/2011
Test stopped on: 6/1/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/1/2011 16:45	3.439	18.811	0.724
6/1/2011 16:55	3.442	18.790	0.731
6/1/2011 17:05	3.442	18.794	0.733
6/1/2011 17:15	3.445	18.803	0.738
6/1/2011 17:25	3.506	18.797	0.879
6/1/2011 17:35	3.213	18.801	0.203
6/1/2011 17:45	3.187	18.797	0.143
6/1/2011 17:55	3.175	18.792	0.114
6/1/2011 18:05	3.169	18.792	0.101
6/1/2011 18:15	3.170	18.828	0.105

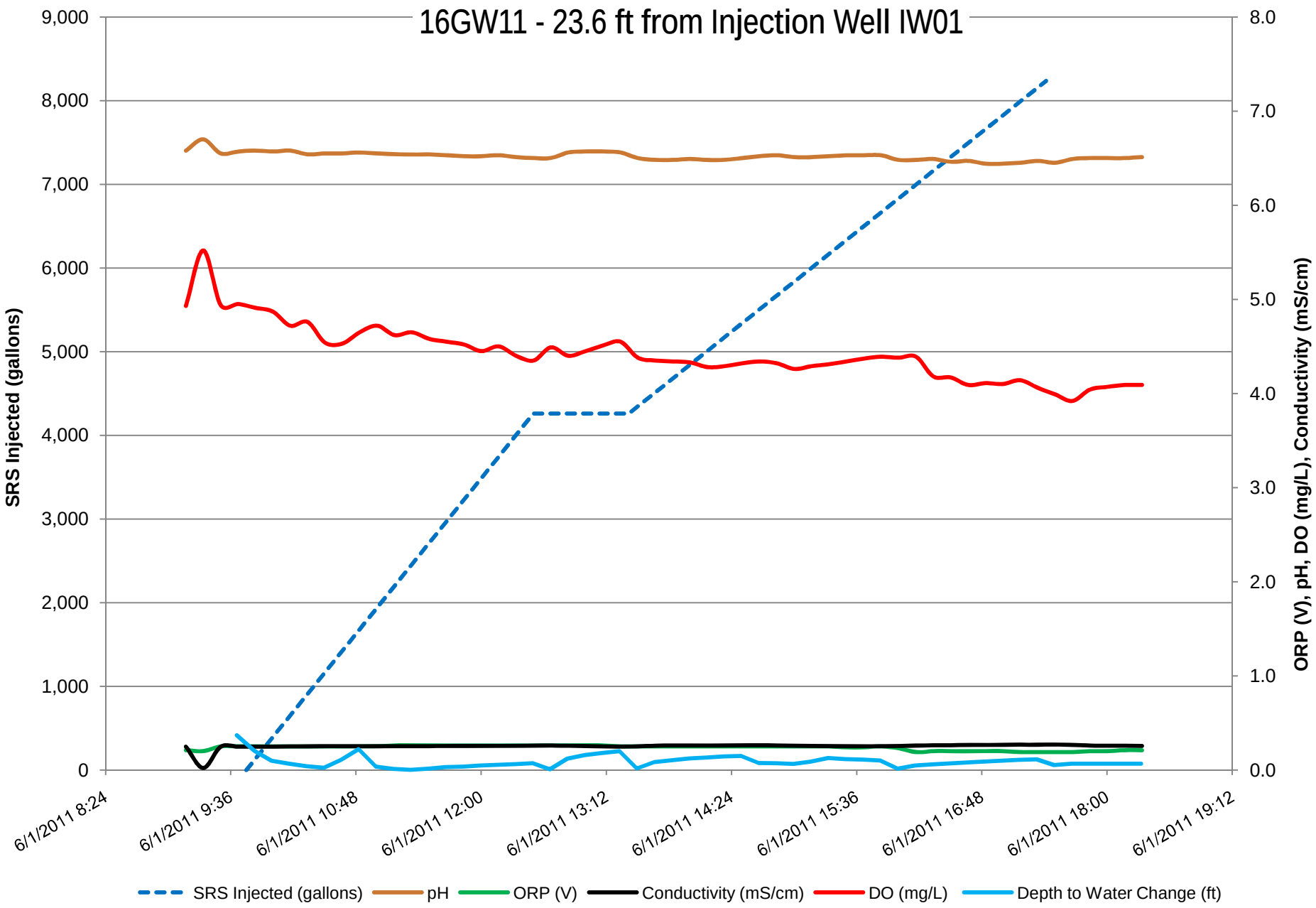

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Figure C.2
SRS Injection Data Timeline - 16GW11

TABLE C.3
Monitoring Well Data for 16GW11

Monitoring Well ID: **16GW11**
Injection Well ID: IW01
Distance to Injection Well: 23.6-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 5/31/2011
Test stopped on: 6/1/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/1/2011 9:10	0.21	6.58	4.93	0.24681
6/1/2011 9:20	0.2	6.7	5.52	0.02172
6/1/2011 9:30	0.25	6.55	4.94	0.24549
6/1/2011 9:40	0.25	6.57	4.95	0.24626
6/1/2011 9:50	0.25	6.58	4.91	0.24626
6/1/2011 10:00	0.25	6.57	4.87	0.24754
6/1/2011 10:10	0.25	6.58	4.72	0.24817
6/1/2011 10:20	0.25	6.54	4.76	0.25001
6/1/2011 10:30	0.25	6.55	4.54	0.25133
6/1/2011 10:40	0.25	6.55	4.53	0.25069
6/1/2011 10:50	0.25	6.56	4.65	0.25122
6/1/2011 11:00	0.25	6.55	4.72	0.25042
6/1/2011 11:10	0.26	6.54	4.62	0.25233
6/1/2011 11:20	0.26	6.54	4.65	0.25229
6/1/2011 11:30	0.26	6.54	4.58	0.25252
6/1/2011 11:40	0.26	6.53	4.55	0.25426
6/1/2011 11:50	0.26	6.52	4.52	0.25399
6/1/2011 12:00	0.26	6.52	4.45	0.25446
6/1/2011 12:10	0.26	6.53	4.5	0.2545
6/1/2011 12:20	0.26	6.51	4.4	0.25603
6/1/2011 12:30	0.26	6.5	4.35	0.25742
6/1/2011 12:40	0.26	6.5	4.49	0.2579
6/1/2011 12:50	0.26	6.56	4.4	0.25559
6/1/2011 13:00	0.26	6.57	4.45	0.25298
6/1/2011 13:10	0.26	6.57	4.51	0.24832
6/1/2011 13:20	0.25	6.56	4.55	0.24803
6/1/2011 13:30	0.25	6.5	4.38	0.24967
6/1/2011 13:40	0.25	6.48	4.35	0.25658
6/1/2011 13:50	0.25	6.48	4.34	0.25818
6/1/2011 14:00	0.25	6.49	4.33	0.25838
6/1/2011 14:10	0.25	6.48	4.28	0.2577
6/1/2011 14:20	0.25	6.48	4.29	0.26028
6/1/2011 14:30	0.25	6.5	4.32	0.26
6/1/2011 14:40	0.25	6.52	4.34	0.26147
6/1/2011 14:50	0.25	6.53	4.32	0.25976
6/1/2011 15:00	0.25	6.51	4.26	0.2575
6/1/2011 15:10	0.25	6.51	4.29	0.25457
6/1/2011 15:20	0.25	6.52	4.31	0.25206
6/1/2011 15:30	0.24	6.53	4.34	0.25126
6/1/2011 15:40	0.24	6.53	4.37	0.25103
6/1/2011 15:50	0.25	6.53	4.39	0.25141
6/1/2011 16:00	0.23	6.48	4.38	0.25264
6/1/2011 16:10	0.19	6.48	4.39	0.2583
6/1/2011 16:20	0.2	6.49	4.18	0.26033
6/1/2011 16:30	0.2	6.46	4.17	0.26069
6/1/2011 16:40	0.2	6.47	4.09	0.26545
6/1/2011 16:50	0.2	6.44	4.11	0.26414
6/1/2011 17:00	0.2	6.44	4.1	0.2672
6/1/2011 17:10	0.19	6.45	4.14	0.26745

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 5/31/2011
Test stopped on: 6/1/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/1/2011 9:39	2.352	19.038	0.369
6/1/2011 9:49	2.423	18.972	0.205
6/1/2011 9:59	2.47	18.983	0.097
6/1/2011 10:09	2.483	18.956	0.066
6/1/2011 10:19	2.495	18.93	0.039
6/1/2011 10:29	2.502	18.925	0.024
6/1/2011 10:39	2.465	18.925	0.108
6/1/2011 10:49	2.416	18.906	0.221
6/1/2011 10:59	2.498	18.913	0.034
6/1/2011 11:09	2.508	18.908	0.01
6/1/2011 11:19	2.513	18.914	0.002
6/1/2011 11:29	2.518	18.916	0.014
6/1/2011 11:39	2.525	18.919	0.03
6/1/2011 11:49	2.528	18.926	0.036
6/1/2011 11:59	2.533	18.927	0.048
6/1/2011 12:09	2.536	18.924	0.054
6/1/2011 12:19	2.539	18.921	0.062
6/1/2011 12:29	2.543	18.922	0.071
6/1/2011 12:39	2.509	18.975	0.007
6/1/2011 12:49	2.46	18.922	0.119
6/1/2011 12:59	2.443	18.903	0.158
6/1/2011 13:09	2.434	18.888	0.18
6/1/2011 13:19	2.426	18.878	0.2
6/1/2011 13:29	2.506	18.884	0.015
6/1/2011 13:39	2.548	18.923	0.083
6/1/2011 13:49	2.556	18.941	0.102
6/1/2011 13:59	2.565	18.959	0.123
6/1/2011 14:09	2.569	18.972	0.131
6/1/2011 14:19	2.574	18.979	0.144
6/1/2011 14:29	2.576	18.99	0.149
6/1/2011 14:39	2.544	18.977	0.073
6/1/2011 14:49	2.481	18.947	0.071
6/1/2011 14:59	2.539	18.916	0.063
6/1/2011 15:09	2.474	18.905	0.089
6/1/2011 15:19	2.457	18.888	0.127
6/1/2011 15:29	2.463	18.881	0.114
6/1/2011 15:39	2.464	18.883	0.111
6/1/2011 15:49	2.468	18.871	0.101
6/1/2011 15:59	2.518	18.876	0.014
6/1/2011 16:09	2.532	18.913	0.046
6/1/2011 16:19	2.538	18.922	0.059
6/1/2011 16:29	2.542	18.928	0.069
6/1/2011 16:39	2.546	18.932	0.078
6/1/2011 16:49	2.551	18.949	0.091
6/1/2011 16:59	2.554	18.958	0.097
6/1/2011 17:09	2.559	18.949	0.108
6/1/2011 17:19	2.561	18.954	0.113
6/1/2011 17:29	2.535	18.954	0.052
6/1/2011 17:39	2.484	18.921	0.066

TABLE C.3

Monitoring Well Data for 16GW11

Monitoring Well ID:	**16GW11**
Injection Well ID:	IW01
Distance to Injection Well:	23.6-ft

In-Situ Inc.	Troll 9500
Serial number:	48057
Test started on:	5/31/2011
Test stopped on:	6/1/2011
Time Between Data Points:	10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/1/2011 17:20	0.19	6.47	4.06	0.26698
6/1/2011 17:30	0.19	6.45	3.99	0.26862
6/1/2011 17:40	0.19	6.49	3.92	0.26685
6/1/2011 17:50	0.20	6.50	4.04	0.2579
6/1/2011 18:00	0.20	6.50	4.07	0.25654
6/1/2011 18:10	0.21	6.50	4.09	0.25559
6/1/2011 18:20	0.21	6.51	4.09	0.25501

In-Situ Inc.	Level Troll 700
Serial number:	134219
Test started on:	5/31/2011
Test stopped on:	6/1/2011
Time Between Data Points:	10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/1/2011 17:49	2.468	18.901	0.066
6/1/2011 17:59	2.458	18.897	0.066
6/1/2011 18:09	2.451	18.886	0.066
6/1/2011 18:19	2.446	18.88	0.066

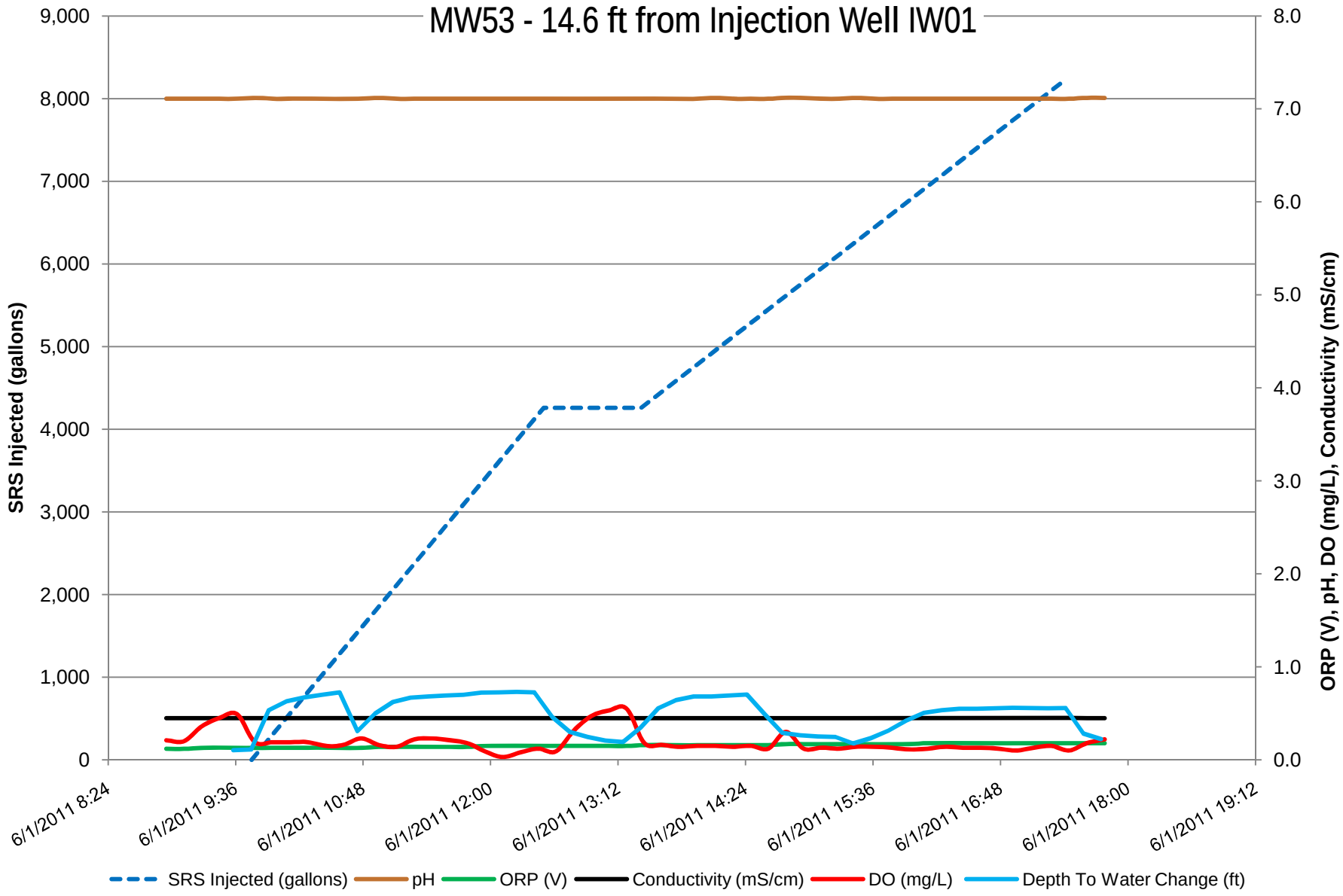

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Figure C.3
SRS Injection Data Timeline - MW53

TABLE C.4
Monitoring Well Data for MW53

Monitoring Well ID: **MW53**
Injection Well ID: IW01
Distance to Injection Well: 14.6-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 5/31/2011
Test stopped on: 6/1/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/1/2011 8:56	0.12	7.11	0.21	0.4482
6/1/2011 9:06	0.12	7.11	0.20	0.4485
6/1/2011 9:16	0.13	7.11	0.36	0.4479
6/1/2011 9:26	0.13	7.11	0.45	0.4482
6/1/2011 9:36	0.13	7.11	0.49	0.4481
6/1/2011 9:46	0.13	7.12	0.19	0.4476
6/1/2011 9:56	0.13	7.11	0.19	0.4481
6/1/2011 10:06	0.13	7.11	0.19	0.4484
6/1/2011 10:16	0.13	7.11	0.19	0.4481
6/1/2011 10:26	0.13	7.11	0.15	0.4484
6/1/2011 10:36	0.13	7.11	0.16	0.4485
6/1/2011 10:46	0.13	7.11	0.23	0.4484
6/1/2011 10:56	0.14	7.12	0.16	0.4480
6/1/2011 11:06	0.14	7.11	0.14	0.4511
6/1/2011 11:16	0.14	7.11	0.22	0.4485
6/1/2011 11:26	0.14	7.11	0.23	0.4478
6/1/2011 11:36	0.14	7.11	0.21	0.4481
6/1/2011 11:46	0.14	7.11	0.18	0.4485
6/1/2011 11:56	0.15	7.11	0.09	0.4481
6/1/2011 12:06	0.15	7.11	0.03	0.4484
6/1/2011 12:16	0.15	7.11	0.08	0.4484
6/1/2011 12:26	0.15	7.11	0.12	0.4484
6/1/2011 12:36	0.15	7.11	0.09	0.4476
6/1/2011 12:46	0.15	7.11	0.31	0.4484
6/1/2011 12:56	0.15	7.11	0.47	0.4479
6/1/2011 13:06	0.15	7.11	0.53	0.4485
6/1/2011 13:16	0.15	7.11	0.55	0.4485
6/1/2011 13:26	0.16	7.11	0.18	0.4486
6/1/2011 13:36	0.16	7.11	0.16	0.4485
6/1/2011 13:46	0.16	7.11	0.14	0.4482
6/1/2011 13:56	0.16	7.11	0.15	0.4485
6/1/2011 14:06	0.16	7.12	0.15	0.4476
6/1/2011 14:16	0.16	7.11	0.14	0.4479
6/1/2011 14:26	0.16	7.11	0.15	0.4484
6/1/2011 14:36	0.16	7.11	0.12	0.4478
6/1/2011 14:46	0.17	7.12	0.30	0.4480
6/1/2011 14:56	0.17	7.12	0.12	0.4485
6/1/2011 15:06	0.17	7.11	0.13	0.4485
6/1/2011 15:16	0.17	7.11	0.12	0.4485
6/1/2011 15:26	0.17	7.12	0.14	0.4487
6/1/2011 15:36	0.17	7.11	0.14	0.4491
6/1/2011 15:46	0.17	7.11	0.13	0.4493
6/1/2011 15:56	0.17	7.11	0.11	0.4495
6/1/2011 16:06	0.18	7.11	0.12	0.4495
6/1/2011 16:16	0.18	7.11	0.14	0.4489
6/1/2011 16:26	0.18	7.11	0.13	0.4490
6/1/2011 16:36	0.18	7.11	0.13	0.4487
6/1/2011 16:46	0.18	7.11	0.12	0.4491
6/1/2011 16:56	0.18	7.11	0.10	0.4492

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 5/31/2011
Test stopped on: 6/1/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/1/2011 9:34	6.702	20.19	0.103
6/1/2011 9:44	6.706	20.132	0.112
6/1/2011 9:54	6.888	20.179	0.533
6/1/2011 10:04	6.931	20.195	0.631
6/1/2011 10:14	6.948	20.151	0.671
6/1/2011 10:24	6.961	20.171	0.7
6/1/2011 10:34	6.972	20.204	0.726
6/1/2011 10:44	6.792	20.127	0.31
6/1/2011 10:54	6.872	20.149	0.497
6/1/2011 11:04	6.927	20.174	0.622
6/1/2011 11:14	6.948	20.164	0.67
6/1/2011 11:24	6.952	20.133	0.681
6/1/2011 11:34	6.958	20.207	0.693
6/1/2011 11:44	6.96	20.233	0.699
6/1/2011 11:54	6.971	20.152	0.723
6/1/2011 12:04	6.972	20.131	0.726
6/1/2011 12:14	6.973	20.184	0.73
6/1/2011 12:24	6.972	20.216	0.727
6/1/2011 12:34	6.857	20.145	0.461
6/1/2011 12:44	6.788	20.058	0.302
6/1/2011 12:54	6.765	20.111	0.247
6/1/2011 13:04	6.747	20.199	0.207
6/1/2011 13:14	6.74	20.138	0.191
6/1/2011 13:24	6.808	20.123	0.347
6/1/2011 13:34	6.898	20.285	0.556
6/1/2011 13:44	6.936	20.249	0.643
6/1/2011 13:54	6.953	20.254	0.683
6/1/2011 14:04	6.953	20.221	0.683
6/1/2011 14:14	6.958	20.241	0.693
6/1/2011 14:24	6.961	20.242	0.702
6/1/2011 14:34	6.871	20.195	0.493
6/1/2011 14:44	6.784	20.079	0.292
6/1/2011 14:54	6.772	20.14	0.264
6/1/2011 15:04	6.766	20.132	0.252
6/1/2011 15:14	6.764	20.125	0.247
6/1/2011 15:24	6.734	20.067	0.178
6/1/2011 15:34	6.758	20.122	0.233
6/1/2011 15:44	6.793	20.155	0.314
6/1/2011 15:54	6.841	20.165	0.423
6/1/2011 16:04	6.877	20.168	0.507
6/1/2011 16:14	6.889	20.176	0.534
6/1/2011 16:24	6.896	20.212	0.55
6/1/2011 16:34	6.895	20.213	0.549
6/1/2011 16:44	6.898	20.155	0.555
6/1/2011 16:54	6.899	20.207	0.559
6/1/2011 17:04	6.899	20.281	0.558
6/1/2011 17:14	6.898	20.221	0.555
6/1/2011 17:24	6.899	20.172	0.557
6/1/2011 17:34	6.78	20.132	0.284

TABLE C.4

Monitoring Well Data for MW53

Monitoring Well ID:	**MW53**
Injection Well ID:	IW01
Distance to Injection Well:	14.6-ft

In-Situ Inc.	Troll 9500
Serial number:	48173
Test started on:	5/31/2011
Test stopped on:	6/1/2011
Time Between Data Points:	10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/1/2011 17:06	0.18	7.11	0.13	0.4490
6/1/2011 17:16	0.18	7.11	0.15	0.4495
6/1/2011 17:26	0.18	7.11	0.10	0.4496
6/1/2011 17:36	0.18	7.12	0.18	0.4490
6/1/2011 17:46	0.18	7.12	0.22	0.4489

In-Situ Inc.	Level Troll 700
Serial number:	135710
Test started on:	5/31/2011
Test stopped on:	6/1/2011
Time Between Data Points:	10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/1/2011 17:44	6.754	20.123	0.224

TABLE C.5
Injection Summary for IW02

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/2/2011 7:00	IW02	0	Begin Injecting SRS - Batch 1/2.
6/2/2011 9:25	IW02	4,135	Finish Injecting SRS - Batch 1/2.
6/2/2011 10:10	IW02	4,135	Begin Injecting SRS - Batch 2/2.
6/2/2011 12:55	IW02	8,270	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW02	35 - 50	MW53	16.5	44 - 54	middle
		IW03	25.7	20 - 35	bottom
		IW04	20.5	35 - 50	middle

SRS Solution Water Quality Parameter Check Batch IW02-1/2

Temp (deg C)	ORP (mV)	pH	DO (mg/L)	Conductivity (mS/cm)
22.05	259	7.25	8.63	0.971

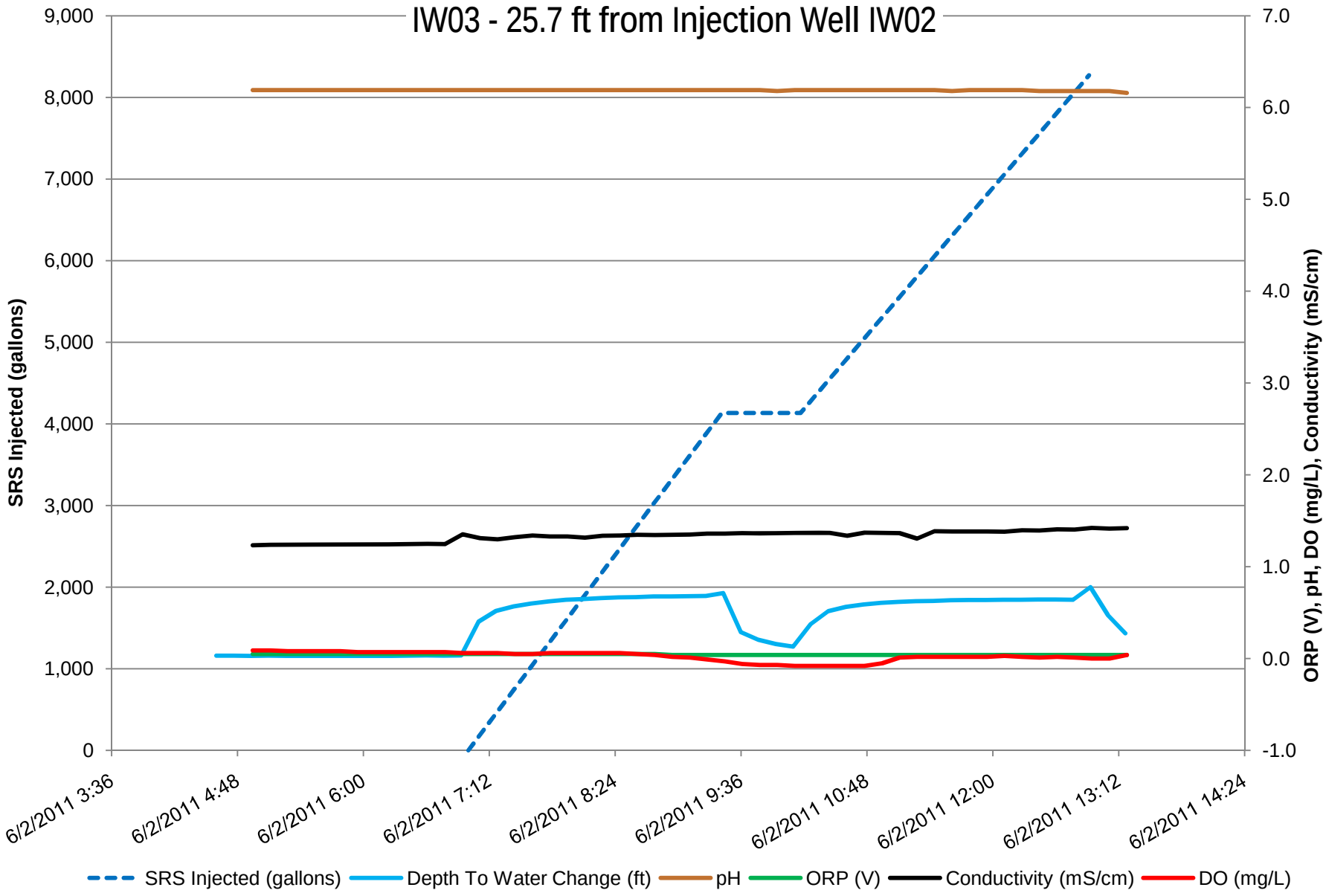

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Figure C.4
SRS Injection Data Timeline - IW03

TABLE C.6
Monitoring Well Data for IW03

Monitoring Well ID: **IW03**
Injection Well ID: IW02
Distance to Injection Well: 25.7-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/2/2011 4:56	0.05	6.19	0.09	1.23419
6/2/2011 5:06	0.05	6.19	0.09	1.2391
6/2/2011 5:16	0.05	6.19	0.08	1.24028
6/2/2011 5:26	0.05	6.19	0.08	1.24129
6/2/2011 5:36	0.05	6.19	0.08	1.24077
6/2/2011 5:46	0.05	6.19	0.08	1.24281
6/2/2011 5:56	0.05	6.19	0.07	1.2416
6/2/2011 6:06	0.05	6.19	0.07	1.2451
6/2/2011 6:16	0.05	6.19	0.07	1.24411
6/2/2011 6:26	0.05	6.19	0.07	1.24724
6/2/2011 6:36	0.05	6.19	0.07	1.24887
6/2/2011 6:46	0.05	6.19	0.07	1.24817
6/2/2011 6:56	0.05	6.19	0.06	1.35207
6/2/2011 7:06	0.05	6.19	0.06	1.31249
6/2/2011 7:16	0.05	6.19	0.06	1.29818
6/2/2011 7:26	0.05	6.19	0.05	1.32191
6/2/2011 7:36	0.05	6.19	0.05	1.34094
6/2/2011 7:46	0.05	6.19	0.06	1.32952
6/2/2011 7:56	0.05	6.19	0.06	1.32949
6/2/2011 8:06	0.05	6.19	0.06	1.31646
6/2/2011 8:16	0.05	6.19	0.06	1.33756
6/2/2011 8:26	0.05	6.19	0.06	1.33909
6/2/2011 8:36	0.05	6.19	0.05	1.34908
6/2/2011 8:46	0.05	6.19	0.04	1.3464
6/2/2011 8:56	0.04	6.19	0.02	1.3485
6/2/2011 9:06	0.04	6.19	0.01	1.3502
6/2/2011 9:16	0.04	6.19	-0.01	1.36211
6/2/2011 9:26	0.04	6.19	-0.03	1.36155
6/2/2011 9:36	0.04	6.19	-0.06	1.36533
6/2/2011 9:46	0.04	6.19	-0.07	1.36436
6/2/2011 9:56	0.04	6.18	-0.07	1.36613
6/2/2011 10:06	0.04	6.19	-0.08	1.36924
6/2/2011 10:16	0.04	6.19	-0.08	1.36868
6/2/2011 10:26	0.04	6.19	-0.08	1.36879
6/2/2011 10:36	0.04	6.19	-0.08	1.33816
6/2/2011 10:46	0.04	6.19	-0.08	1.37078
6/2/2011 10:56	0.04	6.19	-0.05	1.36942
6/2/2011 11:06	0.04	6.19	0.01	1.36634
6/2/2011 11:16	0.04	6.19	0.02	1.30664
6/2/2011 11:26	0.04	6.19	0.02	1.38632
6/2/2011 11:36	0.04	6.18	0.02	1.38335
6/2/2011 11:46	0.04	6.19	0.02	1.38438
6/2/2011 11:56	0.04	6.19	0.02	1.38317
6/2/2011 12:06	0.04	6.19	0.03	1.38263
6/2/2011 12:16	0.04	6.19	0.02	1.3961
6/2/2011 12:26	0.04	6.18	0.01	1.39494
6/2/2011 12:36	0.04	6.18	0.02	1.40636
6/2/2011 12:46	0.04	6.18	0.01	1.40603
6/2/2011 12:56	0.04	6.18	0	1.42294

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/2/2011 4:35	3.139	18.825	0.032
6/2/2011 4:45	3.139	18.832	0.033
6/2/2011 4:55	3.137	18.828	0.028
6/2/2011 5:05	3.139	18.824	0.031
6/2/2011 5:15	3.138	18.84	0.030
6/2/2011 5:25	3.138	18.848	0.029
6/2/2011 5:35	3.137	18.838	0.029
6/2/2011 5:45	3.138	18.834	0.030
6/2/2011 5:55	3.137	18.831	0.028
6/2/2011 6:05	3.137	18.821	0.029
6/2/2011 6:15	3.138	18.828	0.030
6/2/2011 6:25	3.139	18.828	0.032
6/2/2011 6:35	3.14	18.821	0.034
6/2/2011 6:45	3.139	18.827	0.032
6/2/2011 6:55	3.14	18.822	0.034
6/2/2011 7:05	3.299	18.825	0.402
6/2/2011 7:15	3.349	18.83	0.518
6/2/2011 7:25	3.371	18.836	0.568
6/2/2011 7:35	3.385	18.843	0.600
6/2/2011 7:45	3.395	18.824	0.622
6/2/2011 7:55	3.402	18.82	0.640
6/2/2011 8:05	3.406	18.808	0.649
6/2/2011 8:15	3.41	18.807	0.659
6/2/2011 8:25	3.413	18.821	0.666
6/2/2011 8:35	3.415	18.825	0.669
6/2/2011 8:45	3.418	18.809	0.676
6/2/2011 8:55	3.418	18.81	0.677
6/2/2011 9:05	3.419	18.812	0.679
6/2/2011 9:15	3.42	18.823	0.681
6/2/2011 9:25	3.434	18.814	0.712
6/2/2011 9:35	3.25	18.802	0.289
6/2/2011 9:45	3.214	18.833	0.205
6/2/2011 9:55	3.194	18.822	0.158
6/2/2011 10:05	3.182	18.835	0.131
6/2/2011 10:15	3.288	18.822	0.376
6/2/2011 10:25	3.349	18.835	0.516
6/2/2011 10:35	3.369	18.839	0.562
6/2/2011 10:45	3.38	18.837	0.589
6/2/2011 10:55	3.388	18.827	0.607
6/2/2011 11:05	3.392	18.815	0.617
6/2/2011 11:15	3.395	18.814	0.624
6/2/2011 11:25	3.397	18.812	0.627
6/2/2011 11:35	3.401	18.823	0.636
6/2/2011 11:45	3.401	18.815	0.637
6/2/2011 11:55	3.401	18.826	0.637
6/2/2011 12:05	3.402	18.814	0.640
6/2/2011 12:15	3.403	18.815	0.641
6/2/2011 12:25	3.403	18.818	0.642
6/2/2011 12:35	3.403	18.811	0.643

TABLE C.6

Monitoring Well Data for IW03

Monitoring Well ID: **IW03**
Injection Well ID: IW02
Distance to Injection Well: 25.7-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/2/2011 13:06	0.04	6.18	0	1.414
6/2/2011 13:16	0.04	6.16	0.04	1.42045

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/2/2011 12:45	3.402	18.814	0.640
6/2/2011 12:55	3.462	18.813	0.777
6/2/2011 13:05	3.329	18.821	0.472
6/2/2011 13:15	3.244	18.82	0.275

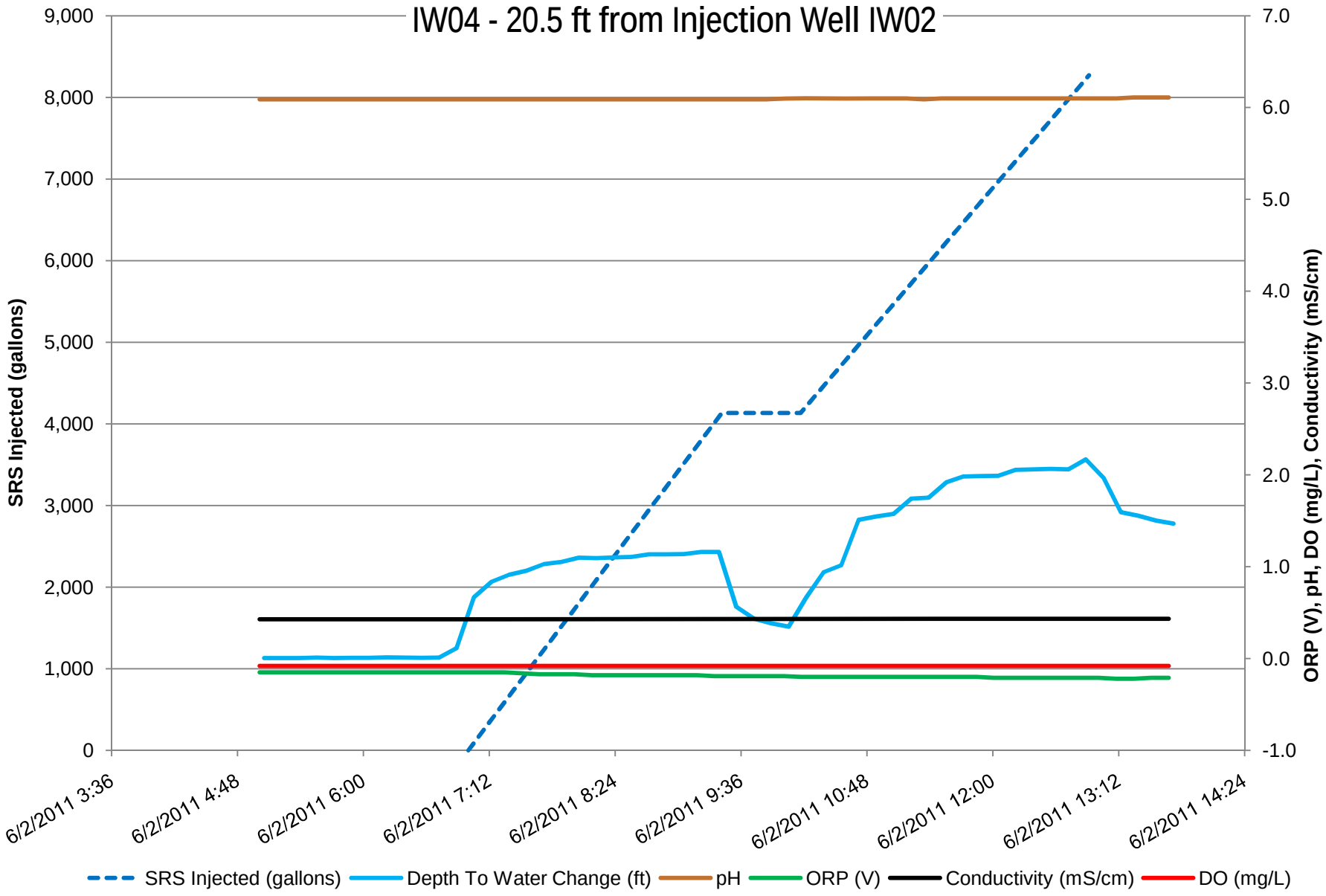

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Figure C.5
SRS Injection Data Timeline - IW04

TABLE C.7
Monitoring Well Data for IW04

Monitoring Well ID: **IW04**
Injection Well ID: IW02
Distance to Injection Well: 20.5-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/2/2011 5:00	-0.15	6.09	-0.08	0.42712
6/2/2011 5:10	-0.15	6.09	-0.08	0.42744
6/2/2011 5:20	-0.15	6.09	-0.08	0.42733
6/2/2011 5:30	-0.15	6.09	-0.08	0.42755
6/2/2011 5:40	-0.15	6.09	-0.08	0.42744
6/2/2011 5:50	-0.15	6.09	-0.08	0.42744
6/2/2011 6:00	-0.15	6.09	-0.08	0.42744
6/2/2011 6:10	-0.15	6.09	-0.08	0.42733
6/2/2011 6:20	-0.15	6.09	-0.08	0.42755
6/2/2011 6:30	-0.15	6.09	-0.08	0.42733
6/2/2011 6:40	-0.15	6.09	-0.08	0.42733
6/2/2011 6:50	-0.15	6.09	-0.08	0.42711
6/2/2011 7:00	-0.15	6.09	-0.08	0.42733
6/2/2011 7:10	-0.15	6.09	-0.08	0.42711
6/2/2011 7:20	-0.15	6.09	-0.08	0.42777
6/2/2011 7:30	-0.16	6.09	-0.08	0.42831
6/2/2011 7:40	-0.17	6.09	-0.08	0.42852
6/2/2011 7:50	-0.17	6.09	-0.08	0.42907
6/2/2011 8:00	-0.17	6.09	-0.08	0.42929
6/2/2011 8:10	-0.18	6.09	-0.08	0.42929
6/2/2011 8:20	-0.18	6.09	-0.08	0.42984
6/2/2011 8:30	-0.18	6.09	-0.08	0.43006
6/2/2011 8:40	-0.18	6.09	-0.08	0.42994
6/2/2011 8:50	-0.18	6.09	-0.08	0.43028
6/2/2011 9:00	-0.18	6.09	-0.08	0.43039
6/2/2011 9:10	-0.18	6.09	-0.08	0.43049
6/2/2011 9:20	-0.19	6.09	-0.08	0.4306
6/2/2011 9:30	-0.19	6.09	-0.08	0.43105
6/2/2011 9:40	-0.19	6.09	-0.08	0.43127
6/2/2011 9:50	-0.19	6.09	-0.08	0.43094
6/2/2011 10:00	-0.19	6.1	-0.08	0.43149
6/2/2011 10:10	-0.2	6.1	-0.08	0.43205
6/2/2011 10:20	-0.2	6.1	-0.08	0.43172
6/2/2011 10:30	-0.2	6.1	-0.08	0.43172
6/2/2011 10:40	-0.2	6.1	-0.08	0.43193
6/2/2011 10:50	-0.2	6.1	-0.08	0.43227
6/2/2011 11:00	-0.2	6.1	-0.08	0.43238
6/2/2011 11:10	-0.2	6.1	-0.08	0.43215
6/2/2011 11:20	-0.2	6.09	-0.08	0.43238
6/2/2011 11:30	-0.2	6.1	-0.08	0.43204
6/2/2011 11:40	-0.2	6.1	-0.08	0.43237
6/2/2011 11:50	-0.2	6.1	-0.08	0.4326
6/2/2011 12:00	-0.21	6.1	-0.08	0.43249
6/2/2011 12:10	-0.21	6.1	-0.08	0.43215
6/2/2011 12:20	-0.21	6.1	-0.08	0.4326
6/2/2011 12:30	-0.21	6.1	-0.08	0.43271
6/2/2011 12:40	-0.21	6.1	-0.08	0.4326
6/2/2011 12:50	-0.21	6.1	-0.08	0.43293
6/2/2011 13:00	-0.21	6.1	-0.08	0.43293

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date and Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/2/2011 5:03	5.289	19.729	0.005
6/2/2011 5:13	5.289	19.719	0.007
6/2/2011 5:23	5.289	19.73	0.005
6/2/2011 5:33	5.291	19.719	0.01
6/2/2011 5:43	5.289	19.736	0.007
6/2/2011 5:53	5.29	19.729	0.009
6/2/2011 6:03	5.29	19.729	0.009
6/2/2011 6:13	5.292	19.713	0.013
6/2/2011 6:23	5.292	19.723	0.012
6/2/2011 6:33	5.29	19.736	0.009
6/2/2011 6:43	5.291	19.726	0.01
6/2/2011 6:53	5.336	19.748	0.114
6/2/2011 7:03	5.576	19.739	0.668
6/2/2011 7:13	5.649	19.764	0.838
6/2/2011 7:23	5.681	19.785	0.912
6/2/2011 7:33	5.7	19.776	0.956
6/2/2011 7:43	5.732	19.79	1.028
6/2/2011 7:53	5.742	19.767	1.052
6/2/2011 8:03	5.763	19.778	1.099
6/2/2011 8:13	5.76	19.772	1.094
6/2/2011 8:23	5.764	19.755	1.103
6/2/2011 8:33	5.766	19.744	1.108
6/2/2011 8:43	5.778	19.754	1.136
6/2/2011 8:53	5.778	19.736	1.135
6/2/2011 9:03	5.779	19.786	1.137
6/2/2011 9:13	5.79	19.747	1.162
6/2/2011 9:23	5.789	19.751	1.161
6/2/2011 9:33	5.53	19.741	0.563
6/2/2011 9:43	5.476	19.726	0.437
6/2/2011 9:53	5.452	19.725	0.383
6/2/2011 10:03	5.437	19.711	0.349
6/2/2011 10:13	5.575	19.727	0.667
6/2/2011 10:23	5.693	19.766	0.94
6/2/2011 10:33	5.726	19.771	1.015
6/2/2011 10:43	5.941	19.839	1.512
6/2/2011 10:53	5.956	19.825	1.547
6/2/2011 11:03	5.97	19.798	1.577
6/2/2011 11:13	6.041	19.791	1.741
6/2/2011 11:23	6.045	19.818	1.751
6/2/2011 11:33	6.117	19.854	1.917
6/2/2011 11:43	6.145	19.841	1.983
6/2/2011 11:53	6.148	19.847	1.989
6/2/2011 12:03	6.149	19.838	1.991
6/2/2011 12:13	6.177	19.824	2.056
6/2/2011 12:23	6.179	19.853	2.06
6/2/2011 12:33	6.181	19.867	2.065
6/2/2011 12:43	6.179	19.866	2.061
6/2/2011 12:53	6.225	19.846	2.168
6/2/2011 13:03	6.139	19.865	1.969

TABLE C.7

Monitoring Well Data for IW04

Monitoring Well ID: **IW04**
Injection Well ID: IW02
Distance to Injection Well: 20.5-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/2/2011 13:10	-0.22	6.1	-0.08	0.43293
6/2/2011 13:20	-0.22	6.11	-0.08	0.43271
6/2/2011 13:30	-0.21	6.11	-0.08	0.43305
6/2/2011 13:40	-0.21	6.11	-0.08	0.43383

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date and Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/2/2011 13:13	5.976	19.808	1.593
6/2/2011 13:23	5.96	19.79	1.554
6/2/2011 13:33	5.938	19.797	1.503
6/2/2011 13:43	5.923	19.85	1.469

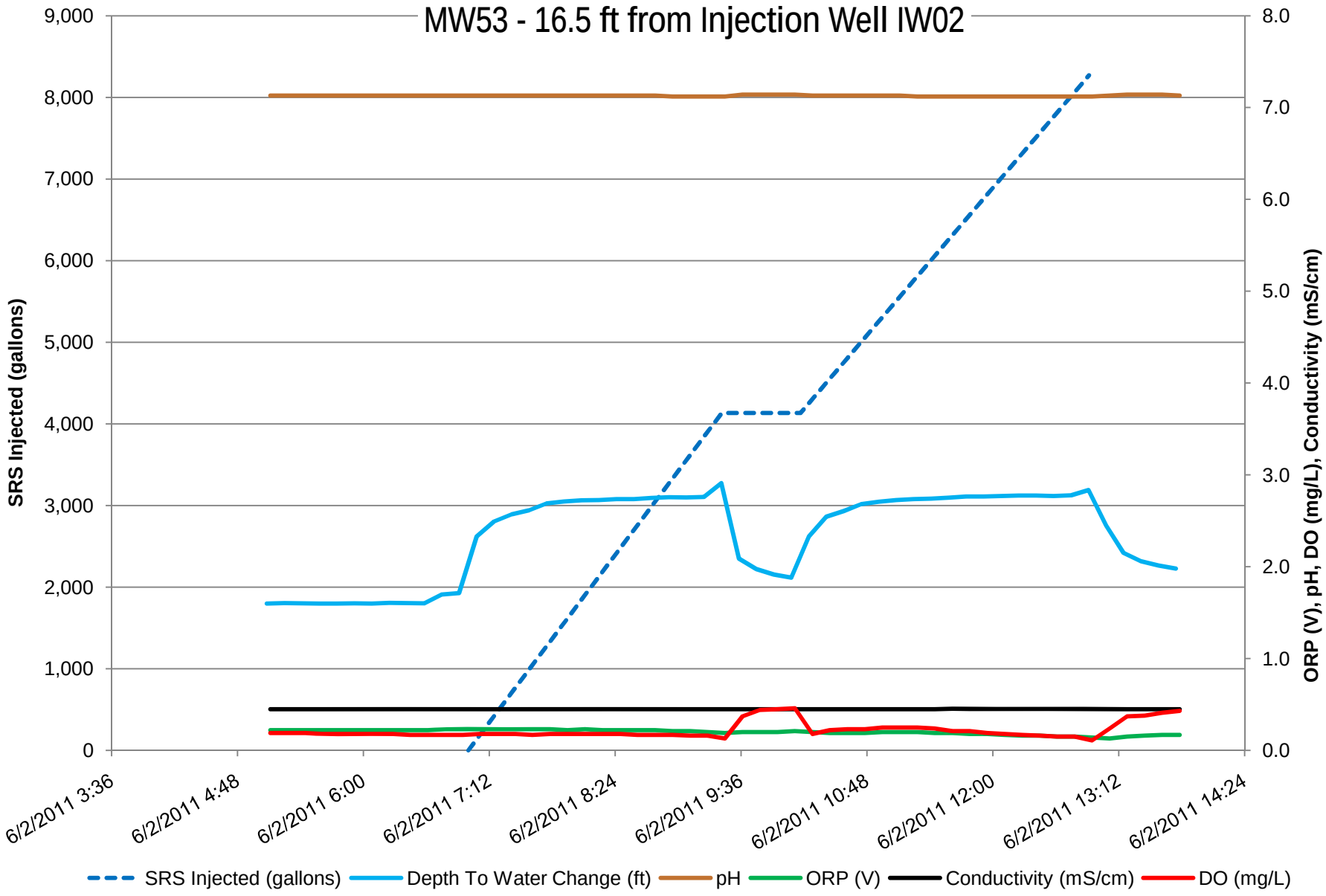

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Figure C.6
SRS Injection Data Timeline - MW53

TABLE C.8
Monitoring Well Data for MW53

Monitoring Well ID: **MW53**
Injection Well ID: IW02
Distance to Injection Well: 16.5-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/2/2011 5:06	0.22	7.13	0.19	0.4490
6/2/2011 5:16	0.22	7.13	0.19	0.4500
6/2/2011 5:26	0.22	7.13	0.19	0.4498
6/2/2011 5:36	0.22	7.13	0.18	0.4495
6/2/2011 5:46	0.22	7.13	0.18	0.4496
6/2/2011 5:56	0.22	7.13	0.18	0.4501
6/2/2011 6:06	0.22	7.13	0.18	0.4492
6/2/2011 6:16	0.22	7.13	0.18	0.4496
6/2/2011 6:26	0.22	7.13	0.17	0.4500
6/2/2011 6:36	0.22	7.13	0.17	0.4497
6/2/2011 6:46	0.23	7.13	0.17	0.4492
6/2/2011 6:56	0.23	7.13	0.17	0.4493
6/2/2011 7:06	0.23	7.13	0.18	0.4495
6/2/2011 7:16	0.23	7.13	0.18	0.4487
6/2/2011 7:26	0.23	7.13	0.18	0.4482
6/2/2011 7:36	0.23	7.13	0.17	0.4482
6/2/2011 7:46	0.23	7.13	0.18	0.4490
6/2/2011 7:56	0.22	7.13	0.18	0.4491
6/2/2011 8:06	0.23	7.13	0.18	0.4482
6/2/2011 8:16	0.22	7.13	0.18	0.4491
6/2/2011 8:26	0.22	7.13	0.18	0.4495
6/2/2011 8:36	0.22	7.13	0.17	0.4495
6/2/2011 8:46	0.22	7.13	0.17	0.4504
6/2/2011 8:56	0.21	7.12	0.17	0.4500
6/2/2011 9:06	0.21	7.12	0.16	0.4500
6/2/2011 9:16	0.20	7.12	0.16	0.4492
6/2/2011 9:26	0.19	7.12	0.13	0.4490
6/2/2011 9:36	0.20	7.14	0.37	0.4490
6/2/2011 9:46	0.20	7.14	0.44	0.4485
6/2/2011 9:56	0.20	7.14	0.45	0.4485
6/2/2011 10:06	0.21	7.14	0.46	0.4475
6/2/2011 10:16	0.20	7.13	0.18	0.4487
6/2/2011 10:26	0.19	7.13	0.22	0.4488
6/2/2011 10:36	0.19	7.13	0.23	0.4488
6/2/2011 10:46	0.19	7.13	0.23	0.4491
6/2/2011 10:56	0.20	7.13	0.25	0.4492
6/2/2011 11:06	0.20	7.13	0.25	0.4489
6/2/2011 11:16	0.20	7.12	0.25	0.4482
6/2/2011 11:26	0.19	7.12	0.24	0.4493
6/2/2011 11:36	0.19	7.12	0.21	0.4529
6/2/2011 11:46	0.18	7.12	0.21	0.4511
6/2/2011 11:56	0.18	7.12	0.19	0.4513
6/2/2011 12:06	0.17	7.12	0.18	0.4503
6/2/2011 12:16	0.16	7.12	0.17	0.4502
6/2/2011 12:26	0.16	7.12	0.16	0.4501
6/2/2011 12:36	0.15	7.12	0.15	0.4504
6/2/2011 12:46	0.15	7.12	0.15	0.4501
6/2/2011 12:56	0.14	7.12	0.11	0.4504
6/2/2011 13:06	0.13	7.13	0.24	0.4499

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/1/2011
Test stopped on: 6/2/2011
Time Between Data Points: 10 minutes

Date and Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/2/2011 5:04	7.35	20.179	1.598
6/2/2011 5:14	7.352	20.213	1.604
6/2/2011 5:24	7.351	20.229	1.601
6/2/2011 5:34	7.35	20.23	1.599
6/2/2011 5:44	7.349	20.21	1.598
6/2/2011 5:54	7.351	20.223	1.601
6/2/2011 6:04	7.35	20.17	1.599
6/2/2011 6:14	7.353	20.201	1.606
6/2/2011 6:24	7.352	20.203	1.605
6/2/2011 6:34	7.351	20.227	1.602
6/2/2011 6:44	7.393	20.166	1.698
6/2/2011 6:54	7.399	20.149	1.713
6/2/2011 7:04	7.667	20.321	2.33
6/2/2011 7:14	7.737	20.255	2.492
6/2/2011 7:24	7.77	20.279	2.57
6/2/2011 7:34	7.79	20.237	2.615
6/2/2011 7:44	7.822	20.224	2.689
6/2/2011 7:54	7.831	20.258	2.71
6/2/2011 8:04	7.837	20.277	2.724
6/2/2011 8:14	7.839	20.244	2.727
6/2/2011 8:24	7.842	20.212	2.736
6/2/2011 8:34	7.842	20.218	2.736
6/2/2011 8:44	7.848	20.254	2.749
6/2/2011 8:54	7.851	20.331	2.757
6/2/2011 9:04	7.851	20.327	2.755
6/2/2011 9:14	7.853	20.27	2.76
6/2/2011 9:24	7.918	20.279	2.91
6/2/2011 9:34	7.562	20.221	2.088
6/2/2011 9:44	7.512	20.211	1.974
6/2/2011 9:54	7.487	20.25	1.915
6/2/2011 10:04	7.472	20.203	1.882
6/2/2011 10:14	7.666	20.285	2.329
6/2/2011 10:24	7.76	20.288	2.545
6/2/2011 10:34	7.787	20.259	2.608
6/2/2011 10:44	7.819	20.248	2.683
6/2/2011 10:54	7.831	20.211	2.709
6/2/2011 11:04	7.838	20.201	2.727
6/2/2011 11:14	7.842	20.229	2.736
6/2/2011 11:24	7.845	20.266	2.742
6/2/2011 11:34	7.849	20.278	2.751
6/2/2011 11:44	7.854	20.289	2.764
6/2/2011 11:54	7.855	20.248	2.766
6/2/2011 12:04	7.857	20.275	2.77
6/2/2011 12:14	7.859	20.279	2.775
6/2/2011 12:24	7.859	20.297	2.776
6/2/2011 12:34	7.857	20.283	2.77
6/2/2011 12:44	7.86	20.19	2.778
6/2/2011 12:54	7.885	20.224	2.834
6/2/2011 13:04	7.718	20.257	2.448

TABLE C.8
Monitoring Well Data for MW53

Monitoring Well ID:	**MW53**
Injection Well ID:	IW02
Distance to Injection Well:	16.5-ft

In-Situ Inc.	Troll 9500
Serial number:	48173
Test started on:	6/1/2011
Test stopped on:	6/2/2011
Time Between Data Points:	10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/2/2011 13:16	0.15	7.14	0.37	0.4497
6/2/2011 13:26	0.16	7.14	0.38	0.4496
6/2/2011 13:36	0.17	7.14	0.41	0.4487
6/2/2011 13:46	0.17	7.13	0.43	0.4477

In-Situ Inc.	Level Troll 700
Serial number:	135710
Test started on:	6/1/2011
Test stopped on:	6/2/2011
Time Between Data Points:	10 minutes

Date and Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/2/2011 13:14	7.588	20.201	2.15
6/2/2011 13:24	7.549	20.175	2.06
6/2/2011 13:34	7.529	20.19	2.013
6/2/2011 13:44	7.515	20.263	1.98

TABLE C.9
Injection Summary for IW03

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/3/2011 6:20	IW03	0	Begin Injecting SRS - Batch 1/2.
6/3/2011 9:00	IW03	4135	Finish Injecting SRS - Batch 1/2.
6/3/2011 9:43	IW03	4135	Begin Injecting SRS - Batch 2/2.
6/3/2011 12:25	IW03	8270	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW03	20 - 35	16GW11	11.4	12 - 27	middle
		52GW77	22	22 - 32	middle
		IW05	28.7	20 - 35	middle

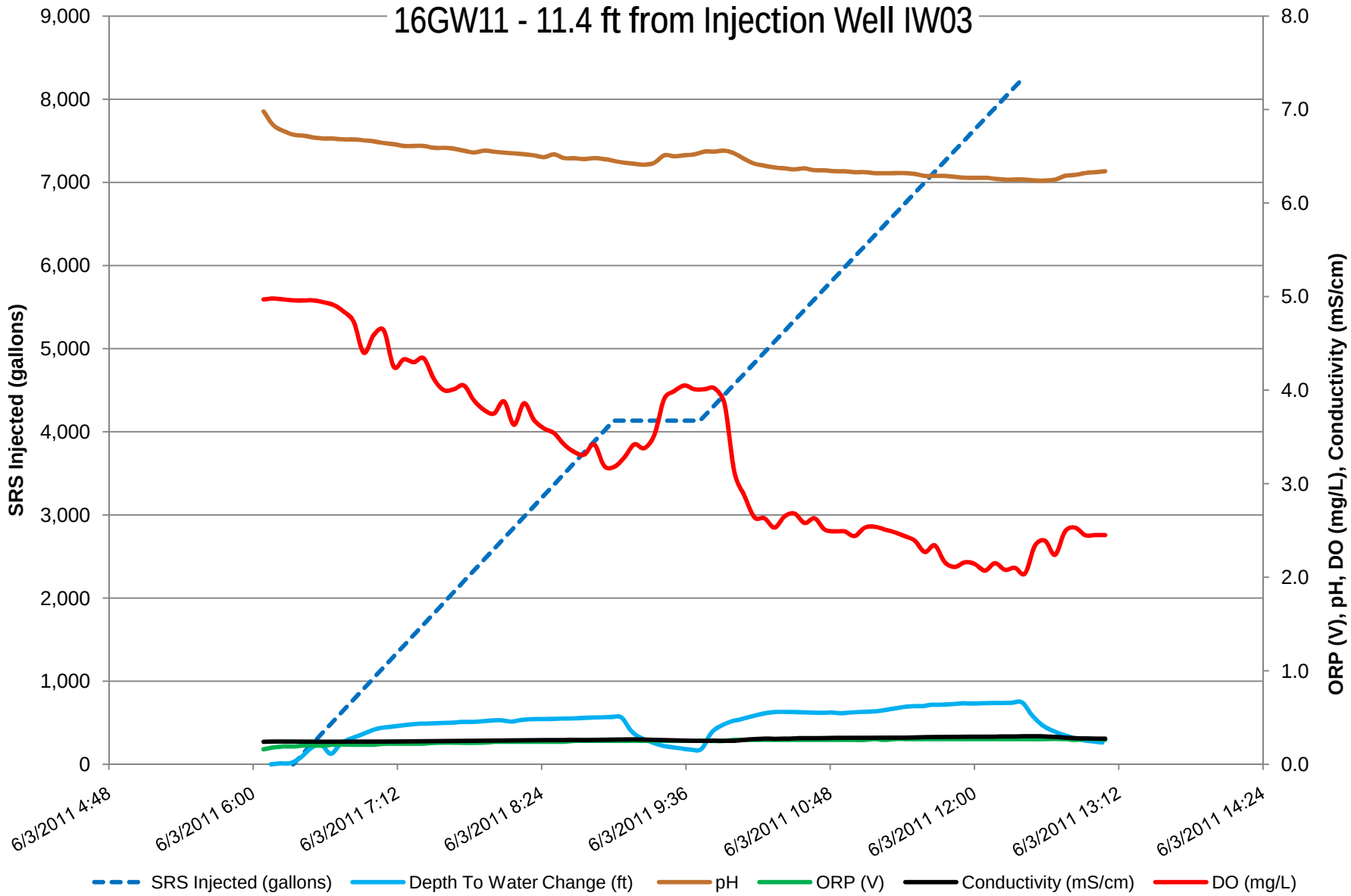

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Figure C.7
SRS Injection Data Timeline - 16GW11

TABLE C.10
Monitoring Well Data for 16GW11

Monitoring Well ID: **16GW11**
Injection Well ID: IW03
Distance to Injection Well: 11.4-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/3/2011
Test stopped on: 6/3/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 6:05	0.16	6.98	4.97	0.2417
6/3/2011 6:10	0.18	6.83	4.98	0.2420
6/3/2011 6:15	0.19	6.77	4.97	0.2423
6/3/2011 6:20	0.19	6.73	4.96	0.2422
6/3/2011 6:25	0.20	6.72	4.96	0.2425
6/3/2011 6:30	0.20	6.70	4.96	0.2418
6/3/2011 6:35	0.20	6.69	4.94	0.2417
6/3/2011 6:40	0.21	6.69	4.91	0.2414
6/3/2011 6:45	0.21	6.68	4.84	0.2407
6/3/2011 6:50	0.21	6.68	4.73	0.2408
6/3/2011 6:55	0.21	6.67	4.40	0.2418
6/3/2011 7:00	0.21	6.66	4.59	0.2423
6/3/2011 7:05	0.22	6.64	4.64	0.2436
6/3/2011 7:10	0.22	6.63	4.25	0.2446
6/3/2011 7:15	0.22	6.61	4.33	0.2453
6/3/2011 7:20	0.22	6.61	4.30	0.2466
6/3/2011 7:25	0.22	6.61	4.34	0.2468
6/3/2011 7:30	0.23	6.59	4.12	0.2481
6/3/2011 7:35	0.23	6.59	4.00	0.2482
6/3/2011 7:40	0.23	6.58	4.01	0.2494
6/3/2011 7:45	0.23	6.56	4.05	0.2502
6/3/2011 7:50	0.23	6.54	3.89	0.2513
6/3/2011 7:55	0.23	6.56	3.79	0.2517
6/3/2011 8:00	0.24	6.55	3.75	0.2528
6/3/2011 8:05	0.24	6.54	3.88	0.2548
6/3/2011 8:10	0.24	6.53	3.63	0.2553
6/3/2011 8:15	0.24	6.52	3.86	0.2557
6/3/2011 8:20	0.24	6.51	3.68	0.2565
6/3/2011 8:25	0.24	6.49	3.59	0.2582
6/3/2011 8:30	0.24	6.52	3.54	0.2584
6/3/2011 8:35	0.24	6.48	3.42	0.2592
6/3/2011 8:40	0.25	6.48	3.34	0.2614
6/3/2011 8:45	0.25	6.47	3.31	0.2624
6/3/2011 8:50	0.25	6.48	3.42	0.2626
6/3/2011 8:55	0.25	6.47	3.19	0.2616
6/3/2011 9:00	0.25	6.45	3.18	0.2636
6/3/2011 9:05	0.25	6.43	3.28	0.2669
6/3/2011 9:10	0.25	6.42	3.42	0.2659
6/3/2011 9:15	0.25	6.41	3.38	0.2646
6/3/2011 9:20	0.25	6.43	3.52	0.2618
6/3/2011 9:25	0.25	6.51	3.91	0.2583
6/3/2011 9:30	0.25	6.50	3.99	0.2557
6/3/2011 9:35	0.25	6.51	4.05	0.2531
6/3/2011 9:40	0.25	6.52	4.01	0.2516
6/3/2011 9:45	0.25	6.55	4.01	0.2505
6/3/2011 9:50	0.25	6.55	4.02	0.2528
6/3/2011 9:55	0.25	6.56	3.86	0.2506
6/3/2011 10:00	0.26	6.53	3.12	0.2517
6/3/2011 10:05	0.26	6.47	2.87	0.2623

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/3/2011
Test stopped on: 6/3/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 6:08	2.341	19.283	0.000
6/3/2011 6:13	2.337	19.139	0.010
6/3/2011 6:18	2.335	19.091	0.014
6/3/2011 6:23	2.373	19.1	0.074
6/3/2011 6:28	2.416	19.084	0.172
6/3/2011 6:33	2.433	19.091	0.212
6/3/2011 6:38	2.39	19.099	0.113
6/3/2011 6:43	2.438	19.093	0.225
6/3/2011 6:48	2.46	19.1	0.276
6/3/2011 6:53	2.478	19.118	0.316
6/3/2011 6:58	2.497	19.145	0.36
6/3/2011 7:03	2.511	19.158	0.391
6/3/2011 7:08	2.516	19.169	0.403
6/3/2011 7:13	2.521	19.168	0.415
6/3/2011 7:18	2.527	19.178	0.428
6/3/2011 7:23	2.531	19.183	0.437
6/3/2011 7:28	2.53	19.174	0.437
6/3/2011 7:33	2.533	19.175	0.444
6/3/2011 7:38	2.534	19.2	0.446
6/3/2011 7:43	2.538	19.202	0.454
6/3/2011 7:48	2.538	19.182	0.454
6/3/2011 7:53	2.54	19.201	0.459
6/3/2011 7:58	2.545	19.183	0.47
6/3/2011 8:03	2.546	19.174	0.472
6/3/2011 8:08	2.54	19.174	0.458
6/3/2011 8:13	2.547	19.221	0.476
6/3/2011 8:18	2.55	19.219	0.482
6/3/2011 8:23	2.551	19.221	0.486
6/3/2011 8:28	2.551	19.221	0.485
6/3/2011 8:33	2.553	19.209	0.49
6/3/2011 8:38	2.554	19.189	0.491
6/3/2011 8:43	2.556	19.196	0.496
6/3/2011 8:48	2.558	19.195	0.5
6/3/2011 8:53	2.559	19.201	0.504
6/3/2011 8:58	2.561	19.205	0.507
6/3/2011 9:03	2.559	19.205	0.502
6/3/2011 9:08	2.495	19.155	0.355
6/3/2011 9:13	2.463	19.138	0.28
6/3/2011 9:18	2.444	19.127	0.238
6/3/2011 9:23	2.429	19.122	0.202
6/3/2011 9:28	2.421	19.118	0.184
6/3/2011 9:33	2.415	19.108	0.17
6/3/2011 9:38	2.409	19.105	0.156
6/3/2011 9:43	2.413	19.089	0.166
6/3/2011 9:48	2.489	19.091	0.341
6/3/2011 9:53	2.521	19.109	0.416
6/3/2011 9:58	2.541	19.13	0.461
6/3/2011 10:03	2.551	19.155	0.484
6/3/2011 10:08	2.564	19.171	0.514

TABLE C.10
Monitoring Well Data for 16GW11

Monitoring Well ID:	**16GW11**
Injection Well ID:	IW03
Distance to Injection Well:	11.4-ft

In-Situ Inc.	Troll 9500
Serial number:	48060
Test started on:	6/3/2011
Test stopped on:	6/3/2011
Time Between Data Points:	5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 10:10	0.26	6.42	2.64	0.2692
6/3/2011 10:15	0.26	6.40	2.63	0.2733
6/3/2011 10:20	0.26	6.38	2.53	0.2729
6/3/2011 10:25	0.26	6.37	2.65	0.2741
6/3/2011 10:30	0.26	6.36	2.68	0.2771
6/3/2011 10:35	0.26	6.37	2.58	0.2795
6/3/2011 10:40	0.26	6.35	2.63	0.2790
6/3/2011 10:45	0.26	6.35	2.51	0.2816
6/3/2011 10:50	0.26	6.34	2.49	0.2835
6/3/2011 10:55	0.26	6.34	2.49	0.2817
6/3/2011 11:00	0.26	6.33	2.44	0.2832
6/3/2011 11:05	0.26	6.33	2.53	0.2851
6/3/2011 11:10	0.27	6.32	2.54	0.2855
6/3/2011 11:15	0.26	6.32	2.51	0.2839
6/3/2011 11:20	0.27	6.32	2.48	0.2855
6/3/2011 11:25	0.27	6.32	2.44	0.2849
6/3/2011 11:30	0.27	6.31	2.39	0.2882
6/3/2011 11:35	0.27	6.29	2.27	0.2901
6/3/2011 11:40	0.27	6.29	2.34	0.2921
6/3/2011 11:45	0.27	6.29	2.16	0.2931
6/3/2011 11:50	0.27	6.28	2.11	0.2937
6/3/2011 11:55	0.27	6.27	2.16	0.2957
6/3/2011 12:00	0.27	6.27	2.14	0.2962
6/3/2011 12:05	0.27	6.27	2.07	0.2957
6/3/2011 12:10	0.27	6.26	2.15	0.2961
6/3/2011 12:15	0.27	6.25	2.08	0.2982
6/3/2011 12:20	0.27	6.25	2.10	0.2989
6/3/2011 12:25	0.27	6.25	2.04	0.3001
6/3/2011 12:30	0.27	6.24	2.34	0.2997
6/3/2011 12:35	0.27	6.24	2.39	0.2980
6/3/2011 12:40	0.27	6.25	2.24	0.2931
6/3/2011 12:45	0.27	6.29	2.49	0.2857
6/3/2011 12:50	0.26	6.30	2.53	0.2794
6/3/2011 12:55	0.27	6.32	2.45	0.2763
6/3/2011 13:00	0.27	6.33	2.45	0.2748
6/3/2011 13:05	0.26	6.34	2.45	0.2736

In-Situ Inc.	Level Troll 700
Serial number:	134219
Test started on:	6/3/2011
Test stopped on:	6/3/2011
Time Between Data Points:	5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 10:13	2.575	19.186	0.54
6/3/2011 10:18	2.582	19.215	0.557
6/3/2011 10:23	2.585	19.204	0.562
6/3/2011 10:28	2.584	19.21	0.56
6/3/2011 10:33	2.583	19.191	0.559
6/3/2011 10:38	2.581	19.192	0.553
6/3/2011 10:43	2.581	19.202	0.553
6/3/2011 10:48	2.581	19.192	0.555
6/3/2011 10:53	2.578	19.196	0.547
6/3/2011 10:58	2.582	19.206	0.557
6/3/2011 11:03	2.585	19.21	0.562
6/3/2011 11:08	2.586	19.206	0.565
6/3/2011 11:13	2.591	19.207	0.577
6/3/2011 11:18	2.598	19.22	0.594
6/3/2011 11:23	2.606	19.236	0.612
6/3/2011 11:28	2.611	19.235	0.623
6/3/2011 11:33	2.611	19.253	0.623
6/3/2011 11:38	2.618	19.249	0.639
6/3/2011 11:43	2.618	19.241	0.639
6/3/2011 11:48	2.62	19.223	0.644
6/3/2011 11:53	2.624	19.223	0.654
6/3/2011 11:58	2.623	19.208	0.651
6/3/2011 12:03	2.624	19.212	0.654
6/3/2011 12:08	2.625	19.204	0.656
6/3/2011 12:13	2.626	19.213	0.657
6/3/2011 12:18	2.627	19.208	0.66
6/3/2011 12:23	2.628	19.208	0.663
6/3/2011 12:28	2.568	19.208	0.524
6/3/2011 12:33	2.523	19.197	0.421
6/3/2011 12:38	2.498	19.177	0.362
6/3/2011 12:43	2.48	19.138	0.32
6/3/2011 12:48	2.465	19.118	0.287
6/3/2011 12:53	2.454	19.112	0.26
6/3/2011 12:58	2.448	19.13	0.247
6/3/2011 13:03	2.442	19.113	0.233

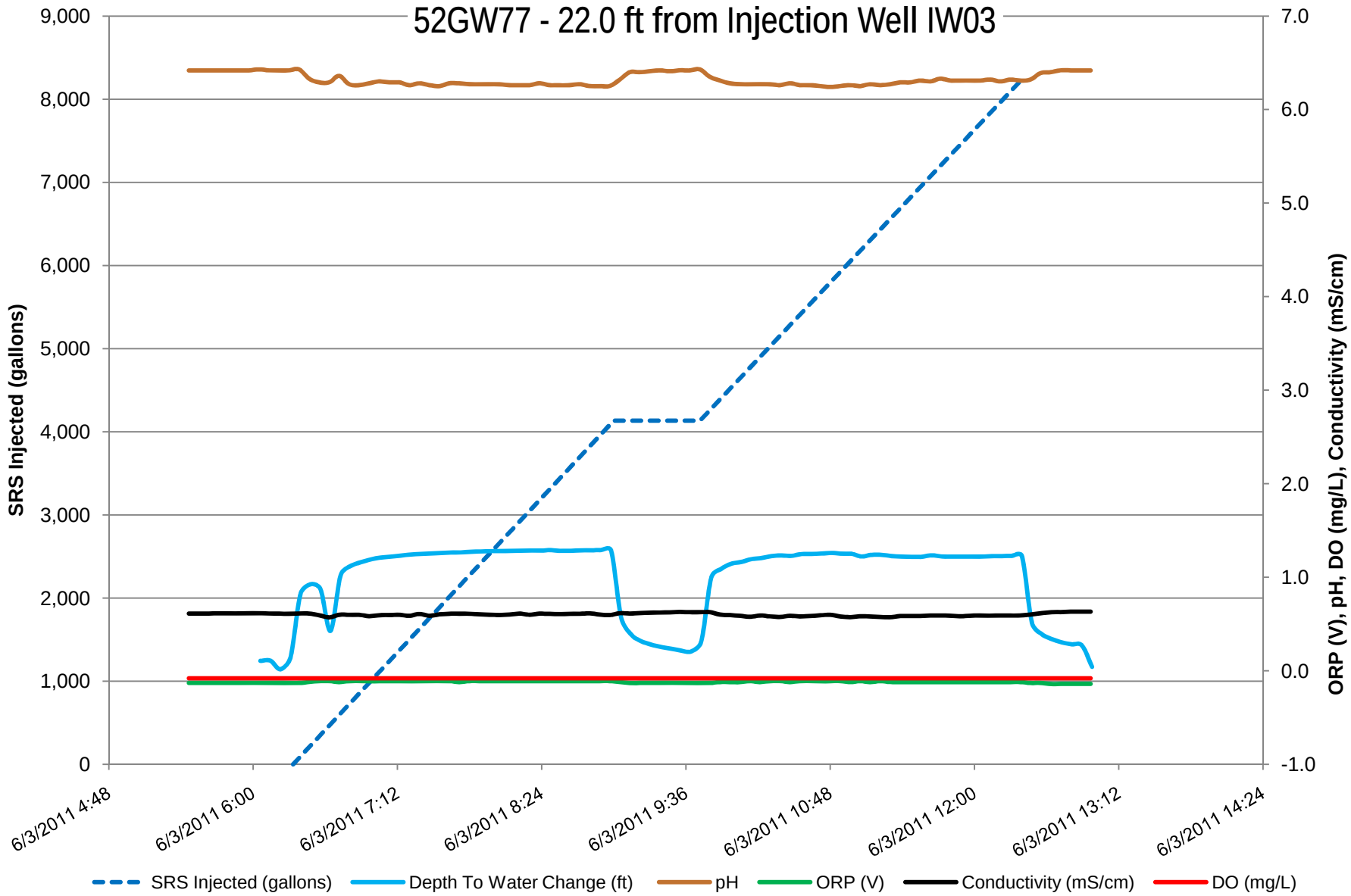

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Figure C.8
SRS Injection Data Timeline - 52GW77

TABLE C.11
Monitoring Well Data for 52GW77

Monitoring Well ID: **52GW77**
Injection Well ID: IW03
Distance to Injection Well: 22-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/3/2011
Test stopped on: 6/3/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 5:27	-0.13	6.42	-0.08	0.6129
6/3/2011 5:32	-0.13	6.42	-0.08	0.6127
6/3/2011 5:37	-0.13	6.42	-0.08	0.6129
6/3/2011 5:42	-0.13	6.42	-0.08	0.6149
6/3/2011 5:47	-0.13	6.42	-0.08	0.6138
6/3/2011 5:52	-0.13	6.42	-0.08	0.6145
6/3/2011 5:57	-0.13	6.42	-0.08	0.6138
6/3/2011 6:02	-0.13	6.43	-0.08	0.6172
6/3/2011 6:07	-0.13	6.42	-0.08	0.6122
6/3/2011 6:12	-0.13	6.42	-0.08	0.6118
6/3/2011 6:17	-0.13	6.42	-0.08	0.6102
6/3/2011 6:22	-0.13	6.43	-0.08	0.6129
6/3/2011 6:27	-0.12	6.33	-0.08	0.6129
6/3/2011 6:32	-0.11	6.29	-0.08	0.5950
6/3/2011 6:37	-0.11	6.29	-0.08	0.5721
6/3/2011 6:42	-0.12	6.36	-0.08	0.5988
6/3/2011 6:47	-0.11	6.27	-0.08	0.6001
6/3/2011 6:52	-0.11	6.26	-0.08	0.5986
6/3/2011 6:57	-0.11	6.28	-0.08	0.5845
6/3/2011 7:02	-0.11	6.30	-0.08	0.5947
6/3/2011 7:07	-0.11	6.29	-0.08	0.5960
6/3/2011 7:12	-0.11	6.29	-0.08	0.5990
6/3/2011 7:17	-0.11	6.26	-0.08	0.5882
6/3/2011 7:22	-0.11	6.28	-0.08	0.6082
6/3/2011 7:27	-0.11	6.26	-0.08	0.5893
6/3/2011 7:32	-0.11	6.25	-0.08	0.6033
6/3/2011 7:37	-0.11	6.28	-0.08	0.6109
6/3/2011 7:42	-0.12	6.28	-0.08	0.6104
6/3/2011 7:47	-0.11	6.27	-0.08	0.6109
6/3/2011 7:52	-0.11	6.27	-0.08	0.6038
6/3/2011 7:57	-0.11	6.27	-0.08	0.6001
6/3/2011 8:02	-0.11	6.27	-0.08	0.5973
6/3/2011 8:07	-0.11	6.26	-0.08	0.6027
6/3/2011 8:12	-0.11	6.26	-0.08	0.6115
6/3/2011 8:17	-0.11	6.26	-0.08	0.6001
6/3/2011 8:22	-0.11	6.28	-0.08	0.6111
6/3/2011 8:27	-0.11	6.26	-0.08	0.6089
6/3/2011 8:32	-0.11	6.26	-0.08	0.6064
6/3/2011 8:37	-0.11	6.26	-0.08	0.6095
6/3/2011 8:42	-0.11	6.27	-0.08	0.6100
6/3/2011 8:47	-0.11	6.25	-0.08	0.6140
6/3/2011 8:52	-0.11	6.25	-0.08	0.6025
6/3/2011 8:57	-0.11	6.25	-0.08	0.5964
6/3/2011 9:02	-0.12	6.32	-0.08	0.6160
6/3/2011 9:07	-0.13	6.40	-0.08	0.6127
6/3/2011 9:12	-0.13	6.40	-0.08	0.6170
6/3/2011 9:17	-0.13	6.41	-0.08	0.6223
6/3/2011 9:22	-0.13	6.42	-0.08	0.6228
6/3/2011 9:27	-0.13	6.41	-0.08	0.6260

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/3/2011
Test stopped on: 6/3/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 6:03	4.559	19.349	0.107
6/3/2011 6:08	4.56	19.347	0.109
6/3/2011 6:13	4.52	19.349	0.017
6/3/2011 6:18	4.575	19.346	0.143
6/3/2011 6:23	4.868	19.367	0.821
6/3/2011 6:28	4.914	19.376	0.926
6/3/2011 6:33	4.891	19.366	0.873
6/3/2011 6:38	4.698	19.348	0.428
6/3/2011 6:43	4.955	19.374	1.021
6/3/2011 6:48	4.998	19.372	1.121
6/3/2011 6:53	5.015	19.362	1.16
6/3/2011 6:58	5.029	19.359	1.192
6/3/2011 7:03	5.037	19.353	1.211
6/3/2011 7:08	5.042	19.354	1.221
6/3/2011 7:13	5.047	19.352	1.232
6/3/2011 7:18	5.052	19.355	1.245
6/3/2011 7:23	5.055	19.358	1.251
6/3/2011 7:28	5.057	19.359	1.256
6/3/2011 7:33	5.059	19.353	1.26
6/3/2011 7:38	5.061	19.353	1.265
6/3/2011 7:43	5.062	19.357	1.267
6/3/2011 7:48	5.065	19.351	1.274
6/3/2011 7:53	5.066	19.349	1.276
6/3/2011 7:58	5.068	19.352	1.282
6/3/2011 8:03	5.068	19.35	1.281
6/3/2011 8:08	5.068	19.358	1.282
6/3/2011 8:13	5.07	19.345	1.287
6/3/2011 8:18	5.07	19.351	1.286
6/3/2011 8:23	5.07	19.351	1.286
6/3/2011 8:28	5.072	19.352	1.291
6/3/2011 8:33	5.069	19.35	1.283
6/3/2011 8:38	5.07	19.354	1.285
6/3/2011 8:43	5.071	19.348	1.29
6/3/2011 8:48	5.071	19.35	1.289
6/3/2011 8:53	5.073	19.351	1.293
6/3/2011 8:58	5.07	19.352	1.287
6/3/2011 9:03	4.76	19.335	0.571
6/3/2011 9:08	4.681	19.314	0.389
6/3/2011 9:13	4.65	19.32	0.318
6/3/2011 9:18	4.635	19.327	0.281
6/3/2011 9:23	4.623	19.33	0.255
6/3/2011 9:28	4.616	19.333	0.237
6/3/2011 9:33	4.607	19.337	0.217
6/3/2011 9:38	4.603	19.334	0.208
6/3/2011 9:43	4.649	19.335	0.315
6/3/2011 9:48	4.946	19.367	0.999
6/3/2011 9:53	4.985	19.345	1.091
6/3/2011 9:58	5.009	19.342	1.146
6/3/2011 10:03	5.017	19.339	1.165

TABLE C.11
Monitoring Well Data for 52GW77

Monitoring Well ID:	**52GW77**
Injection Well ID:	IW03
Distance to Injection Well:	22-ft

In-Situ Inc.	Troll 9500
Serial number:	48057
Test started on:	6/3/2011
Test stopped on:	6/3/2011
Time Between Data Points:	5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 9:32	-0.13	6.42	-0.08	0.6289
6/3/2011 9:37	-0.13	6.42	-0.08	0.6282
6/3/2011 9:42	-0.13	6.43	-0.08	0.6270
6/3/2011 9:47	-0.13	6.35	-0.08	0.6274
6/3/2011 9:52	-0.12	6.31	-0.08	0.6016
6/3/2011 9:57	-0.12	6.28	-0.08	0.5956
6/3/2011 10:02	-0.12	6.27	-0.08	0.5884
6/3/2011 10:07	-0.11	6.27	-0.08	0.5778
6/3/2011 10:12	-0.12	6.27	-0.08	0.5911
6/3/2011 10:17	-0.11	6.27	-0.08	0.5825
6/3/2011 10:22	-0.11	6.26	-0.08	0.5770
6/3/2011 10:27	-0.12	6.28	-0.08	0.5880
6/3/2011 10:32	-0.11	6.26	-0.08	0.5820
6/3/2011 10:37	-0.11	6.26	-0.08	0.5855
6/3/2011 10:42	-0.11	6.25	-0.08	0.5932
6/3/2011 10:47	-0.11	6.24	-0.08	0.5994
6/3/2011 10:52	-0.11	6.25	-0.08	0.5818
6/3/2011 10:57	-0.12	6.26	-0.08	0.5748
6/3/2011 11:02	-0.11	6.25	-0.08	0.5839
6/3/2011 11:07	-0.12	6.27	-0.08	0.5825
6/3/2011 11:12	-0.11	6.26	-0.08	0.5770
6/3/2011 11:17	-0.12	6.27	-0.08	0.5726
6/3/2011 11:22	-0.12	6.29	-0.08	0.5866
6/3/2011 11:27	-0.12	6.29	-0.08	0.5864
6/3/2011 11:32	-0.12	6.31	-0.08	0.5872
6/3/2011 11:37	-0.12	6.30	-0.08	0.5918
6/3/2011 11:42	-0.12	6.33	-0.08	0.5922
6/3/2011 11:47	-0.12	6.31	-0.08	0.5888
6/3/2011 11:52	-0.12	6.31	-0.08	0.5835
6/3/2011 11:57	-0.12	6.31	-0.08	0.5884
6/3/2011 12:02	-0.12	6.31	-0.08	0.5918
6/3/2011 12:07	-0.12	6.32	-0.08	0.5897
6/3/2011 12:12	-0.12	6.30	-0.08	0.5916
6/3/2011 12:17	-0.12	6.32	-0.08	0.5907
6/3/2011 12:22	-0.12	6.31	-0.08	0.5918
6/3/2011 12:27	-0.13	6.32	-0.08	0.6025
6/3/2011 12:32	-0.13	6.39	-0.08	0.6138
6/3/2011 12:37	-0.14	6.40	-0.08	0.6267
6/3/2011 12:42	-0.14	6.42	-0.08	0.6279
6/3/2011 12:47	-0.14	6.42	-0.08	0.6320
6/3/2011 12:52	-0.14	6.42	-0.08	0.6324
6/3/2011 12:57	-0.14	6.42	-0.08	0.6324

In-Situ Inc.	Level Troll 700
Serial number:	134221
Test started on:	6/3/2011
Test stopped on:	6/3/2011
Time Between Data Points:	5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 10:08	5.03	19.335	1.195
6/3/2011 10:13	5.036	19.336	1.207
6/3/2011 10:18	5.044	19.334	1.227
6/3/2011 10:23	5.047	19.334	1.234
6/3/2011 10:28	5.046	19.338	1.23
6/3/2011 10:33	5.054	19.339	1.249
6/3/2011 10:38	5.055	19.341	1.251
6/3/2011 10:43	5.057	19.345	1.255
6/3/2011 10:48	5.059	19.346	1.261
6/3/2011 10:53	5.056	19.352	1.253
6/3/2011 10:58	5.055	19.349	1.252
6/3/2011 11:03	5.042	19.349	1.223
6/3/2011 11:08	5.05	19.354	1.241
6/3/2011 11:13	5.05	19.352	1.241
6/3/2011 11:18	5.045	19.334	1.228
6/3/2011 11:23	5.042	19.333	1.222
6/3/2011 11:28	5.041	19.332	1.219
6/3/2011 11:33	5.041	19.329	1.22
6/3/2011 11:38	5.048	19.331	1.236
6/3/2011 11:43	5.042	19.326	1.223
6/3/2011 11:48	5.042	19.324	1.222
6/3/2011 11:53	5.042	19.324	1.223
6/3/2011 11:58	5.043	19.324	1.223
6/3/2011 12:03	5.042	19.324	1.223
6/3/2011 12:08	5.044	19.326	1.227
6/3/2011 12:13	5.045	19.323	1.228
6/3/2011 12:18	5.046	19.325	1.23
6/3/2011 12:23	5.044	19.326	1.227
6/3/2011 12:28	4.736	19.308	0.515
6/3/2011 12:33	4.682	19.32	0.391
6/3/2011 12:38	4.66	19.329	0.34
6/3/2011 12:43	4.644	19.338	0.304
6/3/2011 12:48	4.636	19.339	0.284
6/3/2011 12:53	4.63	19.342	0.27
6/3/2011 12:58	4.494	19.314	0.044

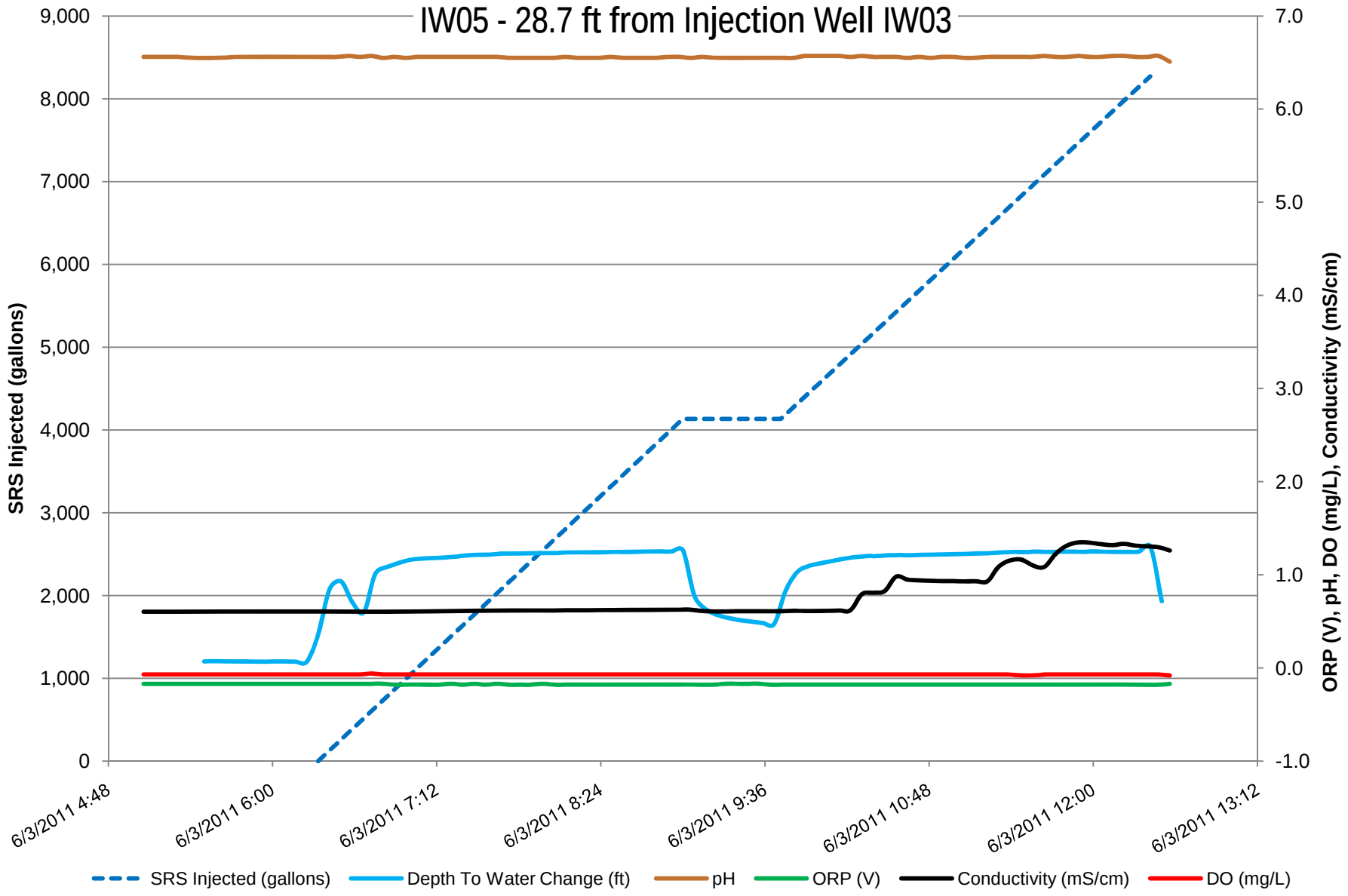

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Figure C.9
SRS Injection Data Timeline - IW05

TABLE C.12
Monitoring Well Data for IW05

Monitoring Well ID: **IW05**
Injection Well ID: IW03
Distance to Injection Well: 28.7-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/2/2011
Test stopped on: 6/3/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 5:03	-0.17	6.56	-0.07	0.6060
6/3/2011 5:08	-0.17	6.56	-0.07	0.6062
6/3/2011 5:13	-0.17	6.56	-0.07	0.6060
6/3/2011 5:18	-0.17	6.56	-0.07	0.6062
6/3/2011 5:23	-0.17	6.55	-0.07	0.6060
6/3/2011 5:28	-0.17	6.55	-0.07	0.6064
6/3/2011 5:33	-0.17	6.55	-0.07	0.6066
6/3/2011 5:38	-0.17	6.55	-0.07	0.6069
6/3/2011 5:43	-0.17	6.56	-0.07	0.6060
6/3/2011 5:48	-0.17	6.56	-0.07	0.6066
6/3/2011 5:53	-0.17	6.56	-0.07	0.6066
6/3/2011 5:58	-0.17	6.56	-0.07	0.6066
6/3/2011 6:03	-0.17	6.56	-0.07	0.6066
6/3/2011 6:08	-0.17	6.56	-0.07	0.6069
6/3/2011 6:13	-0.17	6.56	-0.07	0.6071
6/3/2011 6:18	-0.17	6.56	-0.07	0.6073
6/3/2011 6:23	-0.17	6.56	-0.07	0.6069
6/3/2011 6:28	-0.17	6.56	-0.07	0.6062
6/3/2011 6:33	-0.17	6.57	-0.07	0.6071
6/3/2011 6:38	-0.17	6.56	-0.07	0.6062
6/3/2011 6:43	-0.17	6.57	-0.06	0.6044
6/3/2011 6:48	-0.17	6.55	-0.07	0.6046
6/3/2011 6:53	-0.18	6.56	-0.07	0.6069
6/3/2011 6:58	-0.18	6.55	-0.07	0.6075
6/3/2011 7:03	-0.18	6.56	-0.07	0.6073
6/3/2011 7:08	-0.18	6.56	-0.07	0.6080
6/3/2011 7:13	-0.18	6.56	-0.07	0.6103
6/3/2011 7:18	-0.17	6.56	-0.07	0.6114
6/3/2011 7:23	-0.18	6.56	-0.07	0.6151
6/3/2011 7:28	-0.17	6.56	-0.07	0.6148
6/3/2011 7:33	-0.18	6.56	-0.07	0.6167
6/3/2011 7:38	-0.17	6.56	-0.07	0.6171
6/3/2011 7:43	-0.18	6.55	-0.07	0.6178
6/3/2011 7:48	-0.18	6.55	-0.07	0.6178
6/3/2011 7:53	-0.18	6.55	-0.07	0.6190
6/3/2011 7:58	-0.17	6.55	-0.07	0.6195
6/3/2011 8:03	-0.18	6.55	-0.07	0.6195
6/3/2011 8:08	-0.18	6.56	-0.07	0.6209
6/3/2011 8:13	-0.18	6.55	-0.07	0.6216
6/3/2011 8:18	-0.18	6.55	-0.07	0.6218
6/3/2011 8:23	-0.18	6.55	-0.07	0.6223
6/3/2011 8:28	-0.18	6.56	-0.07	0.6230
6/3/2011 8:33	-0.18	6.55	-0.07	0.6235
6/3/2011 8:38	-0.18	6.55	-0.07	0.6244
6/3/2011 8:43	-0.18	6.55	-0.07	0.6256
6/3/2011 8:48	-0.18	6.55	-0.07	0.6266
6/3/2011 8:53	-0.18	6.56	-0.07	0.6271
6/3/2011 8:58	-0.18	6.56	-0.07	0.6271
6/3/2011 9:03	-0.18	6.55	-0.07	0.6271

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/2/2011
Test stopped on: 6/3/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 5:30	3.667	18.93	0.07
6/3/2011 5:35	3.666	18.93	0.073
6/3/2011 5:40	3.667	18.928	0.07
6/3/2011 5:45	3.667	18.93	0.071
6/3/2011 5:50	3.668	18.93	0.069
6/3/2011 5:55	3.668	18.93	0.068
6/3/2011 6:00	3.667	18.929	0.07
6/3/2011 6:05	3.667	18.935	0.069
6/3/2011 6:10	3.668	18.929	0.068
6/3/2011 6:15	3.668	18.93	0.068
6/3/2011 6:20	3.854	18.951	0.361
6/3/2011 6:25	4.065	18.976	0.848
6/3/2011 6:30	4.101	18.962	0.931
6/3/2011 6:35	4.003	18.966	0.706
6/3/2011 6:40	3.957	18.972	0.599
6/3/2011 6:45	4.134	18.971	1.009
6/3/2011 6:50	4.167	18.958	1.083
6/3/2011 6:55	4.184	18.953	1.124
6/3/2011 7:00	4.2	18.949	1.16
6/3/2011 7:05	4.206	18.951	1.174
6/3/2011 7:10	4.208	18.949	1.179
6/3/2011 7:15	4.211	18.948	1.187
6/3/2011 7:20	4.215	18.945	1.195
6/3/2011 7:25	4.221	18.948	1.209
6/3/2011 7:30	4.223	18.948	1.215
6/3/2011 7:35	4.224	18.95	1.216
6/3/2011 7:40	4.229	18.948	1.228
6/3/2011 7:45	4.229	18.949	1.228
6/3/2011 7:50	4.231	18.953	1.232
6/3/2011 7:55	4.231	18.952	1.232
6/3/2011 8:00	4.232	18.953	1.234
6/3/2011 8:05	4.232	18.985	1.235
6/3/2011 8:10	4.235	18.955	1.242
6/3/2011 8:15	4.235	18.957	1.241
6/3/2011 8:20	4.236	18.959	1.243
6/3/2011 8:25	4.236	18.959	1.243
6/3/2011 8:30	4.238	18.962	1.247
6/3/2011 8:35	4.236	18.962	1.245
6/3/2011 8:40	4.238	18.962	1.248
6/3/2011 8:45	4.239	18.984	1.252
6/3/2011 8:50	4.24	18.988	1.252
6/3/2011 8:55	4.239	18.991	1.251
6/3/2011 9:00	4.245	18.968	1.263
6/3/2011 9:05	4.033	18.953	0.775
6/3/2011 9:10	3.97	18.965	0.631
6/3/2011 9:15	3.944	18.976	0.57
6/3/2011 9:20	3.93	18.98	0.537
6/3/2011 9:25	3.92	18.975	0.514
6/3/2011 9:30	3.913	18.966	0.497

TABLE C.12
Monitoring Well Data for IW05

Monitoring Well ID: **IW05**
Injection Well ID: IW03
Distance to Injection Well: 28.7-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/2/2011
Test stopped on: 6/3/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 9:08	-0.18	6.56	-0.07	0.6128
6/3/2011 9:13	-0.18	6.55	-0.07	0.6078
6/3/2011 9:18	-0.17	6.55	-0.07	0.6084
6/3/2011 9:23	-0.17	6.55	-0.07	0.6093
6/3/2011 9:28	-0.17	6.55	-0.07	0.6093
6/3/2011 9:33	-0.17	6.55	-0.07	0.6100
6/3/2011 9:38	-0.18	6.55	-0.07	0.6098
6/3/2011 9:43	-0.18	6.55	-0.07	0.6109
6/3/2011 9:48	-0.18	6.55	-0.07	0.6153
6/3/2011 9:53	-0.18	6.57	-0.07	0.6130
6/3/2011 9:58	-0.18	6.57	-0.07	0.6139
6/3/2011 10:03	-0.18	6.57	-0.07	0.6146
6/3/2011 10:08	-0.18	6.57	-0.07	0.6185
6/3/2011 10:13	-0.18	6.56	-0.07	0.6216
6/3/2011 10:18	-0.18	6.57	-0.07	0.7937
6/3/2011 10:23	-0.18	6.56	-0.07	0.8088
6/3/2011 10:28	-0.18	6.56	-0.07	0.8270
6/3/2011 10:33	-0.18	6.56	-0.07	0.9813
6/3/2011 10:38	-0.18	6.55	-0.07	0.9493
6/3/2011 10:43	-0.18	6.56	-0.07	0.9403
6/3/2011 10:48	-0.18	6.55	-0.07	0.9359
6/3/2011 10:53	-0.18	6.56	-0.07	0.9334
6/3/2011 10:58	-0.18	6.56	-0.07	0.9326
6/3/2011 11:03	-0.18	6.55	-0.07	0.9308
6/3/2011 11:08	-0.18	6.55	-0.07	0.9320
6/3/2011 11:13	-0.18	6.56	-0.07	0.9309
6/3/2011 11:18	-0.18	6.56	-0.07	1.0879
6/3/2011 11:23	-0.18	6.56	-0.07	1.1544
6/3/2011 11:28	-0.18	6.56	-0.08	1.1633
6/3/2011 11:33	-0.18	6.56	-0.08	1.1001
6/3/2011 11:38	-0.18	6.57	-0.07	1.0854
6/3/2011 11:43	-0.18	6.56	-0.07	1.2253
6/3/2011 11:48	-0.18	6.56	-0.07	1.3149
6/3/2011 11:53	-0.18	6.57	-0.07	1.3476
6/3/2011 11:58	-0.18	6.56	-0.07	1.3442
6/3/2011 12:03	-0.18	6.56	-0.07	1.3284
6/3/2011 12:08	-0.18	6.57	-0.07	1.3180
6/3/2011 12:13	-0.18	6.57	-0.07	1.3329
6/3/2011 12:18	-0.18	6.56	-0.07	1.3127
6/3/2011 12:23	-0.18	6.56	-0.07	1.3061
6/3/2011 12:28	-0.18	6.57	-0.07	1.2966
6/3/2011 12:33	-0.17	6.51	-0.08	1.2614

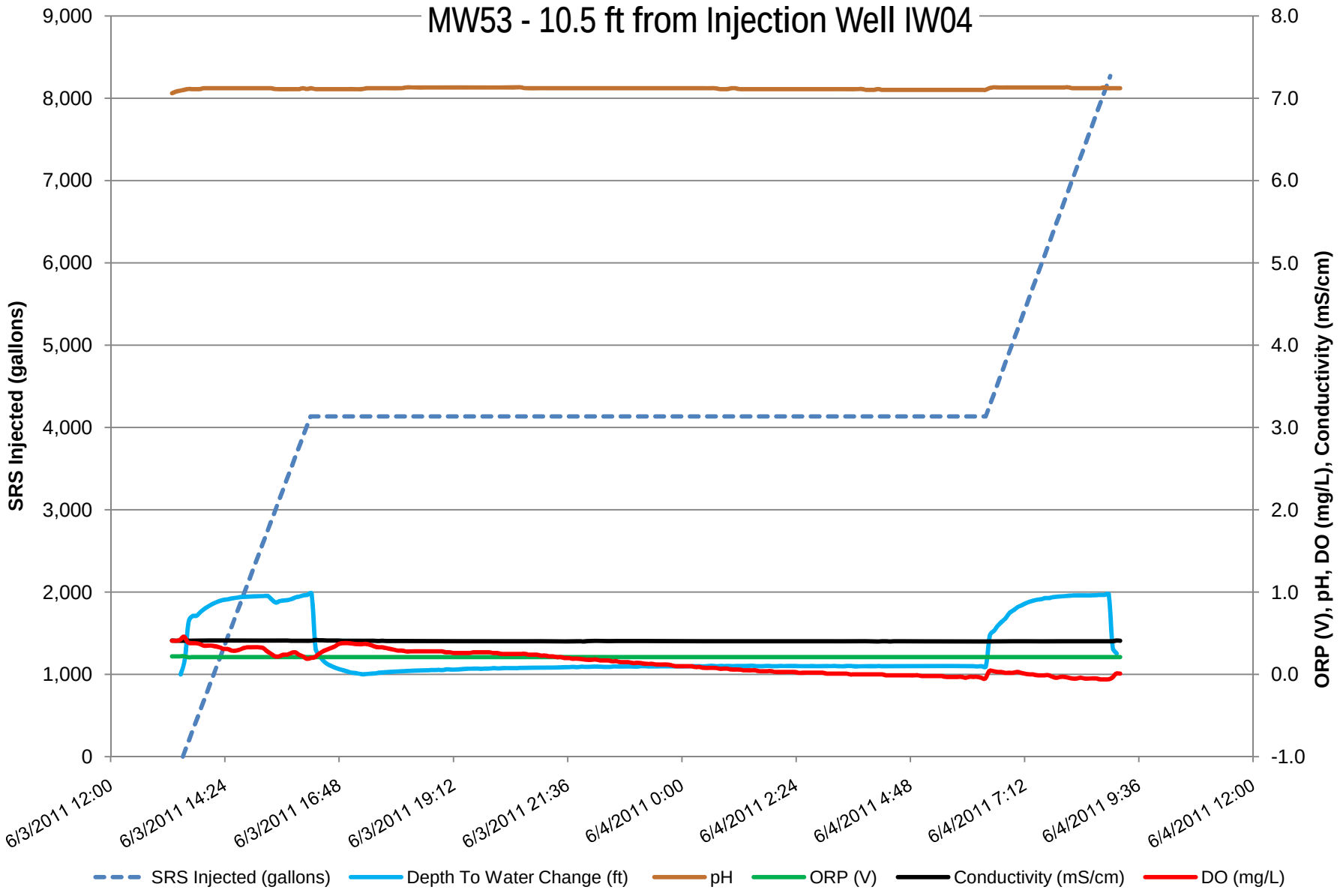
In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/2/2011
Test stopped on: 6/3/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 9:35	3.907	18.964	0.483
6/3/2011 9:40	3.902	18.96	0.473
6/3/2011 9:45	4.056	18.957	0.827
6/3/2011 9:50	4.143	18.963	1.028
6/3/2011 9:55	4.171	18.954	1.094
6/3/2011 10:00	4.184	18.954	1.123
6/3/2011 10:05	4.194	18.954	1.146
6/3/2011 10:10	4.204	18.956	1.171
6/3/2011 10:15	4.212	18.954	1.189
6/3/2011 10:20	4.217	18.953	1.201
6/3/2011 10:25	4.218	18.955	1.202
6/3/2011 10:30	4.221	18.951	1.21
6/3/2011 10:35	4.222	18.96	1.212
6/3/2011 10:40	4.222	18.955	1.211
6/3/2011 10:45	4.224	18.951	1.216
6/3/2011 10:50	4.224	18.952	1.217
6/3/2011 10:55	4.227	18.954	1.222
6/3/2011 11:00	4.227	18.957	1.222
6/3/2011 11:05	4.229	18.951	1.227
6/3/2011 11:10	4.231	18.952	1.232
6/3/2011 11:15	4.232	18.951	1.233
6/3/2011 11:20	4.235	18.966	1.241
6/3/2011 11:25	4.237	18.966	1.246
6/3/2011 11:30	4.236	18.968	1.244
6/3/2011 11:35	4.239	18.973	1.25
6/3/2011 11:40	4.237	18.963	1.246
6/3/2011 11:45	4.238	18.963	1.248
6/3/2011 11:50	4.239	18.961	1.25
6/3/2011 11:55	4.237	18.958	1.247
6/3/2011 12:00	4.24	18.96	1.252
6/3/2011 12:05	4.238	18.955	1.248
6/3/2011 12:10	4.237	18.958	1.247
6/3/2011 12:15	4.237	18.961	1.247
6/3/2011 12:20	4.239	18.961	1.25
6/3/2011 12:25	4.262	18.959	1.303
6/3/2011 12:30	4.008	18.965	0.717

TABLE C.13
Injection Summary for IW04

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/3/2011 13:31	IW04	0	Begin Injecting SRS - Batch 1/2.
6/3/2011 16:12	IW04	4,135	Finish Injecting SRS - Batch 1/2.
6/4/2011 6:23	IW04	4,135	Begin Injecting SRS - Batch 2/2.
6/4/2011 9:00	IW04	8,270	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW04	35 - 50	MW53	10.5	44 - 54	middle
		52GW77	20.5	22 - 32	bottom
		IW06	28.3	35 - 50	middle



CH2MHILL

Figure C.10
SRS Injection Data Timeline - MW53

TABLE C.14
Monitoring Well Data for MW53

Monitoring Well ID: **MW53**
Injection Well ID: IW04
Distance to Injection Well: 10.5-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 13:17	0.22	7.06	0.41	0.4100
6/3/2011 13:22	0.22	7.08	0.41	0.4096
6/3/2011 13:27	0.22	7.09	0.42	0.4090
6/3/2011 13:32	0.22	7.10	0.46	0.4079
6/3/2011 13:37	0.21	7.11	0.39	0.4101
6/3/2011 13:42	0.21	7.11	0.38	0.4106
6/3/2011 13:47	0.21	7.11	0.38	0.4117
6/3/2011 13:52	0.21	7.11	0.37	0.4121
6/3/2011 13:57	0.21	7.12	0.35	0.4124
6/3/2011 14:02	0.21	7.12	0.35	0.4126
6/3/2011 14:07	0.21	7.12	0.35	0.4125
6/3/2011 14:12	0.21	7.12	0.34	0.4127
6/3/2011 14:17	0.21	7.12	0.33	0.4112
6/3/2011 14:22	0.21	7.12	0.31	0.4118
6/3/2011 14:27	0.21	7.12	0.31	0.4119
6/3/2011 14:32	0.21	7.12	0.29	0.4119
6/3/2011 14:37	0.21	7.12	0.29	0.4120
6/3/2011 14:42	0.21	7.12	0.30	0.4117
6/3/2011 14:47	0.21	7.12	0.32	0.4118
6/3/2011 14:52	0.21	7.12	0.33	0.4113
6/3/2011 14:57	0.21	7.12	0.33	0.4114
6/3/2011 15:02	0.21	7.12	0.33	0.4111
6/3/2011 15:07	0.21	7.12	0.33	0.4112
6/3/2011 15:12	0.21	7.12	0.32	0.4110
6/3/2011 15:17	0.21	7.12	0.28	0.4111
6/3/2011 15:22	0.21	7.12	0.25	0.4106
6/3/2011 15:27	0.21	7.11	0.22	0.4106
6/3/2011 15:32	0.21	7.11	0.22	0.4094
6/3/2011 15:37	0.21	7.11	0.24	0.4094
6/3/2011 15:42	0.21	7.11	0.24	0.4101
6/3/2011 15:47	0.21	7.11	0.26	0.4098
6/3/2011 15:52	0.21	7.11	0.27	0.4099
6/3/2011 15:57	0.21	7.11	0.24	0.4097
6/3/2011 16:02	0.21	7.12	0.22	0.4096
6/3/2011 16:07	0.21	7.11	0.19	0.4083
6/3/2011 16:12	0.21	7.12	0.20	0.4085
6/3/2011 16:17	0.21	7.11	0.21	0.4159
6/3/2011 16:22	0.21	7.11	0.25	0.4148
6/3/2011 16:27	0.21	7.11	0.28	0.4142
6/3/2011 16:32	0.21	7.11	0.30	0.4126
6/3/2011 16:37	0.21	7.11	0.32	0.4116
6/3/2011 16:42	0.21	7.11	0.34	0.4109
6/3/2011 16:47	0.21	7.11	0.37	0.4104
6/3/2011 16:52	0.21	7.11	0.38	0.4093
6/3/2011 16:57	0.21	7.11	0.38	0.4090
6/3/2011 17:02	0.21	7.11	0.38	0.4087
6/3/2011 17:07	0.21	7.11	0.37	0.4085
6/3/2011 17:12	0.21	7.11	0.37	0.4081
6/3/2011 17:17	0.21	7.11	0.37	0.4079

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 13:28	6.401	20.11	0
6/3/2011 13:33	6.475	20.012	0.17
6/3/2011 13:38	6.678	20.079	0.64
6/3/2011 13:43	6.708	20.102	0.708
6/3/2011 13:48	6.709	20.112	0.711
6/3/2011 13:53	6.73	20.127	0.759
6/3/2011 13:58	6.745	20.138	0.793
6/3/2011 14:03	6.759	20.097	0.826
6/3/2011 14:08	6.771	20.063	0.853
6/3/2011 14:13	6.781	20.075	0.876
6/3/2011 14:18	6.789	20.05	0.895
6/3/2011 14:23	6.794	20.038	0.906
6/3/2011 14:28	6.797	20.054	0.913
6/3/2011 14:33	6.801	20.089	0.923
6/3/2011 14:38	6.804	20.084	0.929
6/3/2011 14:43	6.808	20.096	0.938
6/3/2011 14:48	6.809	20.095	0.941
6/3/2011 14:53	6.811	20.084	0.945
6/3/2011 14:58	6.812	20.125	0.948
6/3/2011 15:03	6.812	20.107	0.948
6/3/2011 15:08	6.812	20.061	0.949
6/3/2011 15:13	6.812	20.022	0.95
6/3/2011 15:18	6.813	20.036	0.951
6/3/2011 15:23	6.794	20.008	0.907
6/3/2011 15:28	6.779	20.01	0.872
6/3/2011 15:33	6.787	20.007	0.89
6/3/2011 15:38	6.79	20.04	0.898
6/3/2011 15:43	6.791	20.136	0.901
6/3/2011 15:48	6.798	20.132	0.915
6/3/2011 15:53	6.806	20.107	0.935
6/3/2011 15:58	6.81	20.082	0.945
6/3/2011 16:03	6.817	20.045	0.959
6/3/2011 16:08	6.819	20.051	0.965
6/3/2011 16:13	6.826	20.068	0.98
6/3/2011 16:18	6.539	19.989	0.318
6/3/2011 16:23	6.499	19.954	0.226
6/3/2011 16:28	6.472	19.954	0.163
6/3/2011 16:33	6.455	19.962	0.125
6/3/2011 16:38	6.445	19.988	0.101
6/3/2011 16:43	6.436	19.965	0.08
6/3/2011 16:48	6.428	19.979	0.063
6/3/2011 16:53	6.423	19.958	0.049
6/3/2011 16:58	6.416	20.036	0.035
6/3/2011 17:03	6.41	20.019	0.021
6/3/2011 17:08	6.408	19.992	0.017
6/3/2011 17:13	6.404	19.97	0.007
6/3/2011 17:18	6.402	19.923	0.001
6/3/2011 17:23	6.399	19.898	0.005
6/3/2011 17:28	6.398	19.927	0.008

TABLE C.14
Monitoring Well Data for MW53

Monitoring Well ID: **MW53**
Injection Well ID: IW04
Distance to Injection Well: 10.5-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 17:22	0.21	7.12	0.37	0.4080
6/3/2011 17:27	0.21	7.12	0.36	0.4075
6/3/2011 17:32	0.21	7.12	0.34	0.4075
6/3/2011 17:37	0.21	7.12	0.33	0.4070
6/3/2011 17:42	0.21	7.12	0.33	0.4072
6/3/2011 17:47	0.21	7.12	0.32	0.4068
6/3/2011 17:52	0.21	7.12	0.31	0.4066
6/3/2011 17:57	0.21	7.12	0.30	0.4064
6/3/2011 18:02	0.21	7.12	0.29	0.4064
6/3/2011 18:07	0.21	7.12	0.29	0.4063
6/3/2011 18:12	0.21	7.13	0.28	0.4061
6/3/2011 18:17	0.21	7.13	0.28	0.4058
6/3/2011 18:22	0.21	7.13	0.28	0.4061
6/3/2011 18:27	0.21	7.13	0.28	0.4056
6/3/2011 18:32	0.21	7.13	0.28	0.4057
6/3/2011 18:37	0.21	7.13	0.28	0.4051
6/3/2011 18:42	0.21	7.13	0.28	0.4052
6/3/2011 18:47	0.21	7.13	0.28	0.4049
6/3/2011 18:52	0.21	7.13	0.28	0.4044
6/3/2011 18:57	0.21	7.13	0.28	0.4052
6/3/2011 19:02	0.21	7.13	0.27	0.4045
6/3/2011 19:07	0.21	7.13	0.27	0.4046
6/3/2011 19:12	0.21	7.13	0.26	0.4044
6/3/2011 19:17	0.21	7.13	0.26	0.4043
6/3/2011 19:22	0.21	7.13	0.26	0.4042
6/3/2011 19:27	0.21	7.13	0.26	0.4041
6/3/2011 19:32	0.21	7.13	0.26	0.4038
6/3/2011 19:37	0.21	7.13	0.27	0.4038
6/3/2011 19:42	0.21	7.13	0.27	0.4039
6/3/2011 19:47	0.21	7.13	0.27	0.4035
6/3/2011 19:52	0.21	7.13	0.27	0.4033
6/3/2011 19:57	0.21	7.13	0.27	0.4031
6/3/2011 20:02	0.21	7.13	0.26	0.4029
6/3/2011 20:07	0.21	7.13	0.26	0.4029
6/3/2011 20:12	0.21	7.13	0.25	0.4028
6/3/2011 20:17	0.21	7.13	0.25	0.4025
6/3/2011 20:22	0.21	7.13	0.25	0.4028
6/3/2011 20:27	0.21	7.13	0.25	0.4025
6/3/2011 20:32	0.21	7.13	0.25	0.4025
6/3/2011 20:37	0.21	7.13	0.25	0.4022
6/3/2011 20:42	0.21	7.12	0.25	0.4024
6/3/2011 20:47	0.21	7.12	0.24	0.4021
6/3/2011 20:52	0.21	7.12	0.24	0.4022
6/3/2011 20:57	0.21	7.12	0.24	0.4017
6/3/2011 21:02	0.21	7.12	0.23	0.4017
6/3/2011 21:07	0.21	7.12	0.23	0.4019
6/3/2011 21:12	0.21	7.12	0.22	0.4019
6/3/2011 21:17	0.21	7.12	0.22	0.4017
6/3/2011 21:22	0.21	7.12	0.21	0.4015

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 17:33	6.396	19.965	0.011
6/3/2011 17:38	6.392	19.991	0.02
6/3/2011 17:43	6.392	20.031	0.022
6/3/2011 17:48	6.39	20.007	0.026
6/3/2011 17:53	6.387	20.028	0.032
6/3/2011 17:58	6.387	20.029	0.033
6/3/2011 18:03	6.384	19.997	0.039
6/3/2011 18:08	6.384	19.965	0.039
6/3/2011 18:13	6.383	19.976	0.042
6/3/2011 18:18	6.383	19.999	0.043
6/3/2011 18:23	6.382	20.029	0.044
6/3/2011 18:28	6.382	20.005	0.046
6/3/2011 18:33	6.38	20.054	0.049
6/3/2011 18:38	6.38	20.035	0.049
6/3/2011 18:43	6.379	20.018	0.052
6/3/2011 18:48	6.379	20.042	0.052
6/3/2011 18:53	6.378	19.98	0.054
6/3/2011 18:58	6.379	19.964	0.052
6/3/2011 19:03	6.375	20.012	0.06
6/3/2011 19:08	6.376	20.055	0.059
6/3/2011 19:13	6.376	20.107	0.058
6/3/2011 19:18	6.376	20.074	0.059
6/3/2011 19:23	6.373	20.01	0.065
6/3/2011 19:28	6.372	20.03	0.067
6/3/2011 19:33	6.372	20.041	0.068
6/3/2011 19:38	6.372	20.08	0.069
6/3/2011 19:43	6.371	20.069	0.069
6/3/2011 19:48	6.372	20.101	0.068
6/3/2011 19:53	6.371	20.116	0.07
6/3/2011 19:58	6.37	20.079	0.071
6/3/2011 20:03	6.368	20.063	0.076
6/3/2011 20:08	6.371	20.079	0.071
6/3/2011 20:13	6.369	20.037	0.075
6/3/2011 20:18	6.369	19.957	0.075
6/3/2011 20:23	6.368	19.973	0.076
6/3/2011 20:28	6.368	19.953	0.077
6/3/2011 20:33	6.368	19.992	0.077
6/3/2011 20:38	6.367	20.058	0.079
6/3/2011 20:43	6.368	20.051	0.078
6/3/2011 20:48	6.367	20.071	0.08
6/3/2011 20:53	6.366	20.033	0.082
6/3/2011 20:58	6.366	20.036	0.081
6/3/2011 21:03	6.366	20.034	0.082
6/3/2011 21:08	6.365	20.1	0.083
6/3/2011 21:13	6.365	20.064	0.083
6/3/2011 21:18	6.366	20.086	0.082
6/3/2011 21:23	6.365	20.036	0.085
6/3/2011 21:28	6.365	20.03	0.085
6/3/2011 21:33	6.363	20.018	0.088

TABLE C.14
Monitoring Well Data for MW53

Monitoring Well ID: **MW53**
Injection Well ID: IW04
Distance to Injection Well: 10.5-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 21:27	0.21	7.12	0.21	0.4017
6/3/2011 21:32	0.21	7.12	0.20	0.4012
6/3/2011 21:37	0.21	7.12	0.20	0.4018
6/3/2011 21:42	0.21	7.12	0.19	0.4015
6/3/2011 21:47	0.21	7.12	0.19	0.4017
6/3/2011 21:52	0.21	7.12	0.19	0.4016
6/3/2011 21:57	0.21	7.12	0.18	0.4011
6/3/2011 22:02	0.21	7.12	0.18	0.4070
6/3/2011 22:07	0.21	7.12	0.18	0.4066
6/3/2011 22:12	0.21	7.12	0.18	0.4059
6/3/2011 22:17	0.21	7.12	0.17	0.4059
6/3/2011 22:22	0.21	7.12	0.17	0.4057
6/3/2011 22:27	0.21	7.12	0.17	0.4060
6/3/2011 22:32	0.21	7.12	0.16	0.4055
6/3/2011 22:37	0.21	7.12	0.16	0.4052
6/3/2011 22:42	0.21	7.12	0.15	0.4057
6/3/2011 22:47	0.21	7.12	0.15	0.4051
6/3/2011 22:52	0.21	7.12	0.15	0.4054
6/3/2011 22:57	0.21	7.12	0.14	0.4053
6/3/2011 23:02	0.21	7.12	0.14	0.4053
6/3/2011 23:07	0.21	7.12	0.14	0.4053
6/3/2011 23:12	0.21	7.12	0.13	0.4051
6/3/2011 23:17	0.21	7.12	0.13	0.4052
6/3/2011 23:22	0.21	7.12	0.13	0.4050
6/3/2011 23:27	0.21	7.12	0.12	0.4050
6/3/2011 23:32	0.21	7.12	0.12	0.4049
6/3/2011 23:37	0.21	7.12	0.12	0.4050
6/3/2011 23:42	0.21	7.12	0.12	0.4050
6/3/2011 23:47	0.21	7.12	0.11	0.4048
6/3/2011 23:52	0.21	7.12	0.10	0.4042
6/3/2011 23:57	0.21	7.12	0.10	0.4046
6/4/2011 0:02	0.21	7.12	0.10	0.4045
6/4/2011 0:07	0.21	7.12	0.10	0.4044
6/4/2011 0:12	0.21	7.12	0.10	0.4042
6/4/2011 0:17	0.21	7.12	0.09	0.4043
6/4/2011 0:22	0.21	7.12	0.09	0.4042
6/4/2011 0:27	0.21	7.12	0.08	0.4041
6/4/2011 0:32	0.21	7.12	0.08	0.4039
6/4/2011 0:37	0.21	7.12	0.08	0.4039
6/4/2011 0:42	0.21	7.12	0.08	0.4041
6/4/2011 0:47	0.21	7.11	0.07	0.4036
6/4/2011 0:52	0.21	7.11	0.07	0.4042
6/4/2011 0:57	0.21	7.11	0.07	0.4040
6/4/2011 1:02	0.21	7.12	0.06	0.4040
6/4/2011 1:07	0.21	7.12	0.06	0.4039
6/4/2011 1:12	0.21	7.11	0.06	0.4039
6/4/2011 1:17	0.21	7.11	0.05	0.4035
6/4/2011 1:22	0.21	7.11	0.05	0.4041
6/4/2011 1:27	0.21	7.11	0.05	0.4032

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 21:38	6.363	20.057	0.088
6/3/2011 21:43	6.362	20.069	0.09
6/3/2011 21:48	6.364	20.029	0.087
6/3/2011 21:53	6.361	20.002	0.093
6/3/2011 21:58	6.362	20.008	0.09
6/3/2011 22:03	6.362	19.994	0.092
6/3/2011 22:08	6.361	20.009	0.092
6/3/2011 22:13	6.361	20.009	0.092
6/3/2011 22:18	6.361	20.038	0.093
6/3/2011 22:23	6.362	20.01	0.09
6/3/2011 22:28	6.363	19.988	0.089
6/3/2011 22:33	6.36	20.019	0.095
6/3/2011 22:38	6.36	20.036	0.095
6/3/2011 22:43	6.36	20.003	0.095
6/3/2011 22:48	6.361	20.028	0.094
6/3/2011 22:53	6.36	20.046	0.095
6/3/2011 22:58	6.36	20.025	0.096
6/3/2011 23:03	6.361	19.973	0.093
6/3/2011 23:08	6.359	19.96	0.099
6/3/2011 23:13	6.358	19.959	0.1
6/3/2011 23:18	6.36	20.006	0.095
6/3/2011 23:23	6.359	20.021	0.097
6/3/2011 23:28	6.36	19.998	0.095
6/3/2011 23:33	6.359	20.007	0.097
6/3/2011 23:38	6.358	20.007	0.099
6/3/2011 23:43	6.359	20.025	0.099
6/3/2011 23:48	6.359	20.001	0.097
6/3/2011 23:53	6.359	19.92	0.097
6/3/2011 23:58	6.359	19.95	0.096
6/4/2011 0:03	6.358	19.977	0.099
6/4/2011 0:08	6.36	20.005	0.095
6/4/2011 0:13	6.359	19.999	0.098
6/4/2011 0:18	6.359	19.975	0.098
6/4/2011 0:23	6.358	19.942	0.1
6/4/2011 0:28	6.359	19.968	0.097
6/4/2011 0:33	6.357	20.028	0.101
6/4/2011 0:38	6.356	20.019	0.104
6/4/2011 0:43	6.359	20.016	0.098
6/4/2011 0:48	6.357	19.996	0.102
6/4/2011 0:53	6.358	19.951	0.1
6/4/2011 0:58	6.357	19.943	0.103
6/4/2011 1:03	6.358	20.036	0.1
6/4/2011 1:08	6.358	19.96	0.101
6/4/2011 1:13	6.357	19.959	0.102
6/4/2011 1:18	6.357	19.994	0.102
6/4/2011 1:23	6.357	19.969	0.102
6/4/2011 1:28	6.356	19.995	0.105
6/4/2011 1:33	6.358	20.006	0.1
6/4/2011 1:38	6.358	19.987	0.1

TABLE C.14
Monitoring Well Data for MW53

Monitoring Well ID: **MW53**
Injection Well ID: IW04
Distance to Injection Well: 10.5-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 1:32	0.21	7.11	0.05	0.4035
6/4/2011 1:37	0.21	7.11	0.04	0.4037
6/4/2011 1:42	0.21	7.11	0.04	0.4033
6/4/2011 1:47	0.21	7.11	0.04	0.4031
6/4/2011 1:52	0.21	7.11	0.04	0.4030
6/4/2011 1:57	0.21	7.11	0.03	0.4031
6/4/2011 2:02	0.21	7.11	0.03	0.4030
6/4/2011 2:07	0.21	7.11	0.03	0.4031
6/4/2011 2:12	0.21	7.11	0.03	0.4027
6/4/2011 2:17	0.21	7.11	0.03	0.4032
6/4/2011 2:22	0.21	7.11	0.03	0.4031
6/4/2011 2:27	0.21	7.11	0.02	0.4024
6/4/2011 2:32	0.21	7.11	0.02	0.4029
6/4/2011 2:37	0.21	7.11	0.02	0.4029
6/4/2011 2:42	0.21	7.11	0.02	0.4024
6/4/2011 2:47	0.21	7.11	0.02	0.4025
6/4/2011 2:52	0.21	7.11	0.02	0.4024
6/4/2011 2:57	0.21	7.11	0.02	0.4028
6/4/2011 3:02	0.21	7.11	0.01	0.4027
6/4/2011 3:07	0.21	7.11	0.01	0.4023
6/4/2011 3:12	0.21	7.11	0.01	0.4024
6/4/2011 3:17	0.21	7.11	0.01	0.4024
6/4/2011 3:22	0.21	7.11	0.01	0.4021
6/4/2011 3:27	0.21	7.11	0.01	0.4024
6/4/2011 3:32	0.21	7.11	0.00	0.4023
6/4/2011 3:37	0.21	7.11	0.00	0.4020
6/4/2011 3:42	0.21	7.11	0.00	0.4023
6/4/2011 3:47	0.21	7.11	0.00	0.4021
6/4/2011 3:52	0.21	7.10	0.00	0.4019
6/4/2011 3:57	0.21	7.10	0.00	0.4019
6/4/2011 4:02	0.21	7.10	0.00	0.4020
6/4/2011 4:07	0.21	7.11	0.00	0.4015
6/4/2011 4:12	0.21	7.10	0.00	0.4019
6/4/2011 4:17	0.21	7.10	-0.01	0.4018
6/4/2011 4:22	0.21	7.10	-0.01	0.4014
6/4/2011 4:27	0.21	7.10	-0.01	0.4020
6/4/2011 4:32	0.21	7.10	-0.01	0.4016
6/4/2011 4:37	0.21	7.10	-0.01	0.4017
6/4/2011 4:42	0.21	7.10	-0.01	0.4019
6/4/2011 4:47	0.21	7.10	-0.01	0.4018
6/4/2011 4:52	0.21	7.10	-0.01	0.4016
6/4/2011 4:57	0.21	7.10	-0.01	0.4016
6/4/2011 5:02	0.21	7.10	-0.02	0.4019
6/4/2011 5:07	0.21	7.10	-0.02	0.4018
6/4/2011 5:12	0.21	7.10	-0.02	0.4016
6/4/2011 5:17	0.21	7.10	-0.02	0.4014
6/4/2011 5:22	0.21	7.10	-0.02	0.4019
6/4/2011 5:27	0.21	7.10	-0.02	0.4013
6/4/2011 5:32	0.21	7.10	-0.03	0.4014

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 1:43	6.358	19.982	0.099
6/4/2011 1:48	6.357	19.997	0.102
6/4/2011 1:53	6.358	19.929	0.1
6/4/2011 1:58	6.359	19.913	0.099
6/4/2011 2:03	6.358	19.998	0.101
6/4/2011 2:08	6.358	20.03	0.1
6/4/2011 2:13	6.357	20.066	0.101
6/4/2011 2:18	6.358	20.105	0.101
6/4/2011 2:23	6.357	20.101	0.101
6/4/2011 2:28	6.358	20.065	0.1
6/4/2011 2:33	6.358	20.01	0.099
6/4/2011 2:38	6.358	19.991	0.099
6/4/2011 2:43	6.357	19.98	0.101
6/4/2011 2:48	6.358	20.011	0.1
6/4/2011 2:53	6.358	20.054	0.099
6/4/2011 2:58	6.359	20.053	0.099
6/4/2011 3:03	6.358	20.066	0.101
6/4/2011 3:08	6.358	20.098	0.1
6/4/2011 3:13	6.357	20.065	0.101
6/4/2011 3:18	6.358	20.039	0.099
6/4/2011 3:23	6.359	20.034	0.097
6/4/2011 3:28	6.357	20.018	0.102
6/4/2011 3:33	6.357	20.082	0.101
6/4/2011 3:38	6.359	20.124	0.097
6/4/2011 3:43	6.359	20.087	0.098
6/4/2011 3:48	6.359	20.052	0.098
6/4/2011 3:53	6.359	20.033	0.099
6/4/2011 3:58	6.359	20.082	0.099
6/4/2011 4:03	6.358	20.066	0.099
6/4/2011 4:08	6.357	20.034	0.101
6/4/2011 4:13	6.359	20.009	0.098
6/4/2011 4:18	6.358	20.044	0.1
6/4/2011 4:23	6.358	20.036	0.099
6/4/2011 4:28	6.358	20.106	0.1
6/4/2011 4:33	6.358	20.132	0.099
6/4/2011 4:38	6.358	20.133	0.099
6/4/2011 4:43	6.358	20.058	0.1
6/4/2011 4:48	6.358	20.036	0.101
6/4/2011 4:53	6.357	19.986	0.103
6/4/2011 4:58	6.358	19.964	0.1
6/4/2011 5:03	6.357	20.021	0.101
6/4/2011 5:08	6.358	20.065	0.101
6/4/2011 5:13	6.357	20.009	0.103
6/4/2011 5:18	6.358	19.989	0.1
6/4/2011 5:23	6.358	20.03	0.1
6/4/2011 5:28	6.359	20.031	0.098
6/4/2011 5:33	6.356	20.03	0.103
6/4/2011 5:38	6.357	20.026	0.102
6/4/2011 5:43	6.358	20.024	0.1

TABLE C.14
Monitoring Well Data for MW53

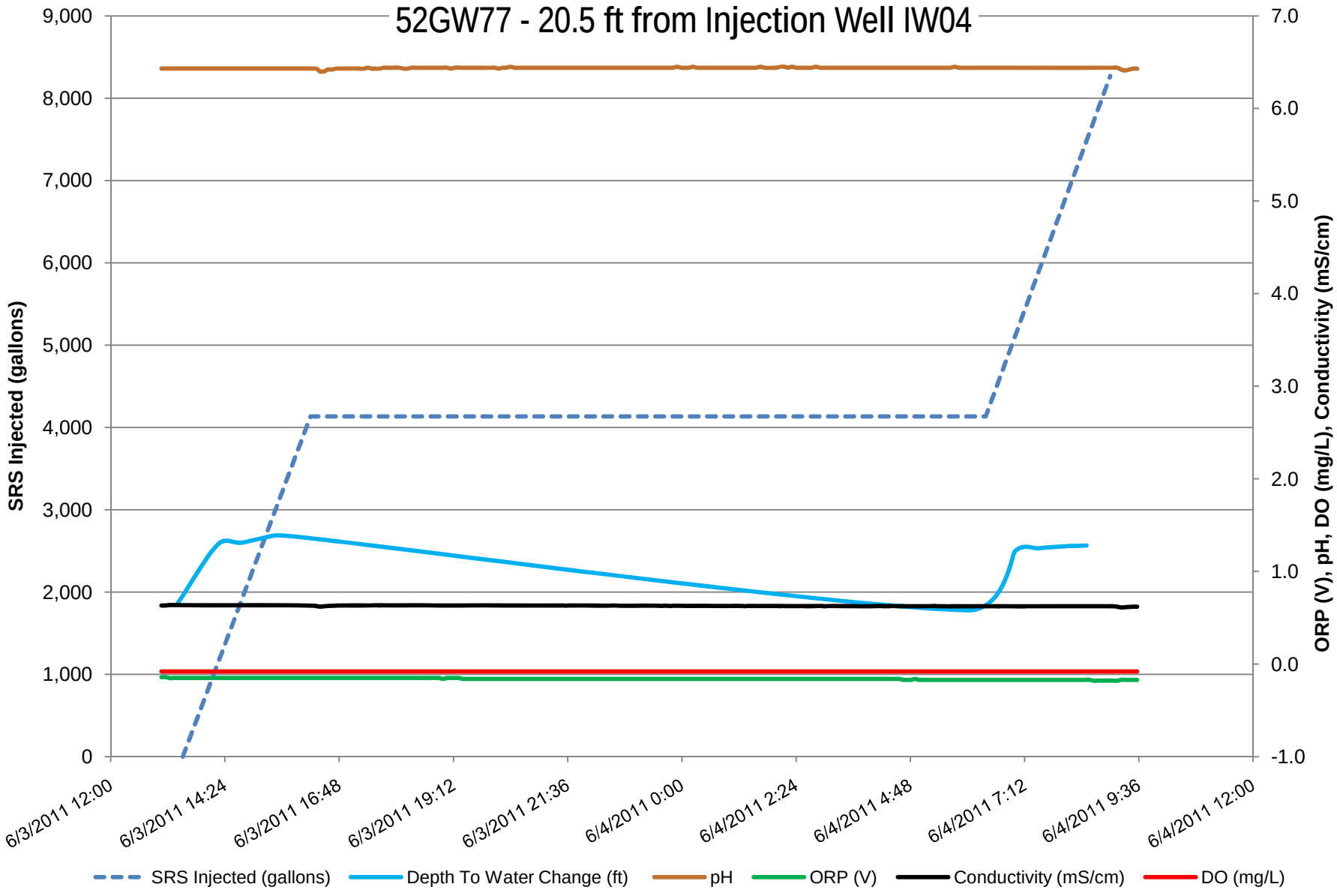
Monitoring Well ID: **MW53**
Injection Well ID: IW04
Distance to Injection Well: 10.5-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 5:37	0.21	7.10	-0.03	0.4015
6/4/2011 5:42	0.21	7.10	-0.03	0.4012
6/4/2011 5:47	0.21	7.10	-0.03	0.4011
6/4/2011 5:52	0.21	7.10	-0.03	0.4013
6/4/2011 5:57	0.21	7.10	-0.04	0.4012
6/4/2011 6:02	0.21	7.10	-0.03	0.4013
6/4/2011 6:07	0.21	7.10	-0.03	0.4004
6/4/2011 6:12	0.21	7.10	-0.03	0.4008
6/4/2011 6:17	0.21	7.10	-0.04	0.4006
6/4/2011 6:22	0.21	7.10	-0.05	0.4011
6/4/2011 6:27	0.21	7.12	0.04	0.4024
6/4/2011 6:32	0.21	7.13	0.04	0.4023
6/4/2011 6:37	0.21	7.13	0.03	0.4025
6/4/2011 6:42	0.21	7.13	0.03	0.4022
6/4/2011 6:47	0.21	7.13	0.02	0.4023
6/4/2011 6:52	0.21	7.13	0.02	0.4024
6/4/2011 6:57	0.21	7.13	0.02	0.4027
6/4/2011 7:02	0.21	7.13	0.03	0.4031
6/4/2011 7:07	0.21	7.13	0.02	0.4023
6/4/2011 7:12	0.21	7.13	0.01	0.4022
6/4/2011 7:17	0.21	7.13	0.00	0.4028
6/4/2011 7:22	0.21	7.13	0.00	0.4027
6/4/2011 7:27	0.21	7.13	-0.01	0.4026
6/4/2011 7:32	0.21	7.13	-0.01	0.4036
6/4/2011 7:37	0.21	7.13	-0.01	0.4006
6/4/2011 7:42	0.21	7.13	-0.01	0.4018
6/4/2011 7:47	0.21	7.13	-0.03	0.4027
6/4/2011 7:52	0.21	7.13	-0.04	0.4032
6/4/2011 7:57	0.21	7.13	-0.03	0.4028
6/4/2011 8:02	0.21	7.13	-0.03	0.4031
6/4/2011 8:07	0.21	7.13	-0.04	0.4030
6/4/2011 8:12	0.21	7.12	-0.05	0.4038
6/4/2011 8:17	0.21	7.12	-0.05	0.4035
6/4/2011 8:22	0.21	7.12	-0.04	0.4034
6/4/2011 8:27	0.21	7.12	-0.05	0.4035
6/4/2011 8:32	0.21	7.12	-0.05	0.4025
6/4/2011 8:37	0.21	7.12	-0.05	0.4028
6/4/2011 8:42	0.21	7.12	-0.05	0.4028
6/4/2011 8:47	0.21	7.12	-0.06	0.4030
6/4/2011 8:52	0.21	7.13	-0.06	0.4025
6/4/2011 8:57	0.21	7.12	-0.06	0.4028
6/4/2011 9:02	0.21	7.12	-0.04	0.4026
6/4/2011 9:07	0.21	7.12	0.01	0.4104
6/4/2011 9:12	0.21	7.12	0.01	0.4093

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 5:48	6.357	19.972	0.102
6/4/2011 5:53	6.357	19.967	0.102
6/4/2011 5:58	6.357	19.948	0.102
6/4/2011 6:03	6.359	19.969	0.098
6/4/2011 6:08	6.359	19.99	0.098
6/4/2011 6:13	6.359	20.022	0.097
6/4/2011 6:18	6.358	19.993	0.099
6/4/2011 6:23	6.359	19.976	0.097
6/4/2011 6:28	6.605	20.049	0.471
6/4/2011 6:33	6.629	20.112	0.526
6/4/2011 6:38	6.657	20.14	0.59
6/4/2011 6:43	6.677	20.149	0.638
6/4/2011 6:48	6.697	20.142	0.683
6/4/2011 6:53	6.725	20.146	0.747
6/4/2011 6:58	6.738	20.077	0.779
6/4/2011 7:03	6.755	20.08	0.816
6/4/2011 7:08	6.764	20.025	0.838
6/4/2011 7:13	6.775	20.022	0.862
6/4/2011 7:18	6.782	20.036	0.88
6/4/2011 7:23	6.789	20.045	0.895
6/4/2011 7:28	6.795	20.038	0.908
6/4/2011 7:33	6.796	20.101	0.912
6/4/2011 7:38	6.803	20.108	0.927
6/4/2011 7:43	6.803	20.055	0.927
6/4/2011 7:48	6.808	20.014	0.939
6/4/2011 7:53	6.81	19.978	0.943
6/4/2011 7:58	6.811	19.969	0.946
6/4/2011 8:03	6.813	19.984	0.951
6/4/2011 8:08	6.815	20.009	0.956
6/4/2011 8:13	6.816	19.994	0.957
6/4/2011 8:18	6.817	19.996	0.96
6/4/2011 8:23	6.816	20.042	0.959
6/4/2011 8:28	6.816	20.024	0.959
6/4/2011 8:33	6.816	19.957	0.958
6/4/2011 8:38	6.817	19.949	0.959
6/4/2011 8:43	6.818	19.993	0.963
6/4/2011 8:48	6.818	20.033	0.963
6/4/2011 8:53	6.819	20.024	0.965
6/4/2011 8:58	6.821	20.05	0.97
6/4/2011 9:03	6.541	20.063	0.323
6/4/2011 9:08	6.511	19.956	0.254



CH2MHILL

Figure C.11
SRS Injection Data Timeline - 52GW77

TABLE C.15

Monitoring Well Data for 52GW77

Monitoring Well ID: **52GW77**
Injection Well ID: IW04
Distance to Injection Well: 20.5-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 13:03	-0.14	6.43	-0.08	0.6310
6/3/2011 13:08	-0.14	6.43	-0.08	0.6312
6/3/2011 13:13	-0.15	6.43	-0.08	0.6361
6/3/2011 13:18	-0.15	6.43	-0.08	0.6368
6/3/2011 13:23	-0.15	6.43	-0.08	0.6358
6/3/2011 13:28	-0.15	6.43	-0.08	0.6356
6/3/2011 13:33	-0.15	6.43	-0.08	0.6349
6/3/2011 13:38	-0.15	6.43	-0.08	0.6346
6/3/2011 13:43	-0.15	6.43	-0.08	0.6344
6/3/2011 13:48	-0.15	6.43	-0.08	0.6349
6/3/2011 13:53	-0.15	6.43	-0.08	0.6346
6/3/2011 13:58	-0.15	6.43	-0.08	0.6346
6/3/2011 14:03	-0.15	6.43	-0.08	0.6349
6/3/2011 14:08	-0.15	6.43	-0.08	0.6346
6/3/2011 14:13	-0.15	6.43	-0.08	0.6351
6/3/2011 14:18	-0.15	6.43	-0.08	0.6346
6/3/2011 14:23	-0.15	6.43	-0.08	0.6351
6/3/2011 14:28	-0.15	6.43	-0.08	0.6351
6/3/2011 14:33	-0.15	6.43	-0.08	0.6353
6/3/2011 14:38	-0.15	6.43	-0.08	0.6351
6/3/2011 14:43	-0.15	6.43	-0.08	0.6353
6/3/2011 14:48	-0.15	6.43	-0.08	0.6353
6/3/2011 14:53	-0.15	6.43	-0.08	0.6356
6/3/2011 14:58	-0.15	6.43	-0.08	0.6353
6/3/2011 15:03	-0.15	6.43	-0.08	0.6353
6/3/2011 15:08	-0.15	6.43	-0.08	0.6356
6/3/2011 15:13	-0.15	6.43	-0.08	0.6348
6/3/2011 15:18	-0.15	6.43	-0.08	0.6356
6/3/2011 15:23	-0.15	6.43	-0.08	0.6353
6/3/2011 15:28	-0.15	6.43	-0.08	0.6353
6/3/2011 15:33	-0.15	6.43	-0.08	0.6346
6/3/2011 15:38	-0.15	6.43	-0.08	0.6353
6/3/2011 15:43	-0.15	6.43	-0.08	0.6348
6/3/2011 15:48	-0.15	6.43	-0.08	0.6341
6/3/2011 15:53	-0.15	6.43	-0.08	0.6334
6/3/2011 15:58	-0.15	6.43	-0.08	0.6329
6/3/2011 16:03	-0.15	6.43	-0.08	0.6324
6/3/2011 16:08	-0.15	6.43	-0.08	0.6322
6/3/2011 16:13	-0.15	6.43	-0.08	0.6317
6/3/2011 16:18	-0.15	6.43	-0.08	0.6262
6/3/2011 16:23	-0.15	6.40	-0.08	0.6202
6/3/2011 16:28	-0.15	6.40	-0.08	0.6239
6/3/2011 16:33	-0.15	6.42	-0.08	0.6279
6/3/2011 16:38	-0.15	6.42	-0.08	0.6303
6/3/2011 16:43	-0.15	6.43	-0.08	0.6305
6/3/2011 16:48	-0.15	6.43	-0.08	0.6312
6/3/2011 16:53	-0.15	6.43	-0.08	0.6339
6/3/2011 16:58	-0.15	6.43	-0.08	0.6339
6/3/2011 17:03	-0.15	6.43	-0.08	0.6332
6/3/2011 17:08	-0.15	6.43	-0.08	0.6324
6/3/2011 17:13	-0.15	6.43	-0.08	0.6317

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 30-60 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 13:25	NM	NM	0.66
6/3/2011 14:15	NM	NM	1.29
6/3/2011 14:45	NM	NM	1.31
6/3/2011 15:30	NM	NM	1.39
6/3/2011 16:00	NM	NM	1.37
6/4/2011 6:00	NM	NM	0.58
6/4/2011 7:00	NM	NM	1.22
6/4/2011 7:30	NM	NM	1.25
6/4/2011 8:00	NM	NM	1.27
6/4/2011 8:30	NM	NM	1.28

TABLE C.15

Monitoring Well Data for 52GW77

Monitoring Well ID: **52GW77**
Injection Well ID: IW04
Distance to Injection Well: 20.5-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 30-60 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 17:18	-0.15	6.43	-0.08	0.6327
6/3/2011 17:23	-0.15	6.44	-0.08	0.6324
6/3/2011 17:28	-0.15	6.43	-0.08	0.6332
6/3/2011 17:33	-0.15	6.43	-0.08	0.6334
6/3/2011 17:38	-0.15	6.43	-0.08	0.6332
6/3/2011 17:43	-0.15	6.44	-0.08	0.6339
6/3/2011 17:48	-0.15	6.44	-0.08	0.6329
6/3/2011 17:53	-0.15	6.44	-0.08	0.6341
6/3/2011 17:58	-0.15	6.44	-0.08	0.6344
6/3/2011 18:03	-0.15	6.44	-0.08	0.6329
6/3/2011 18:08	-0.15	6.43	-0.08	0.6322
6/3/2011 18:13	-0.15	6.43	-0.08	0.6337
6/3/2011 18:18	-0.15	6.44	-0.08	0.6334
6/3/2011 18:23	-0.15	6.44	-0.08	0.6339
6/3/2011 18:28	-0.15	6.44	-0.08	0.6339
6/3/2011 18:33	-0.15	6.44	-0.08	0.6341
6/3/2011 18:38	-0.15	6.44	-0.08	0.6339
6/3/2011 18:43	-0.15	6.44	-0.08	0.6332
6/3/2011 18:48	-0.15	6.44	-0.08	0.6329
6/3/2011 18:53	-0.15	6.44	-0.08	0.6329
6/3/2011 18:58	-0.16	6.44	-0.08	0.6332
6/3/2011 19:03	-0.15	6.44	-0.08	0.6324
6/3/2011 19:08	-0.15	6.43	-0.08	0.6322
6/3/2011 19:13	-0.15	6.44	-0.08	0.6322
6/3/2011 19:18	-0.15	6.44	-0.08	0.6320
6/3/2011 19:23	-0.16	6.44	-0.08	0.6339
6/3/2011 19:28	-0.16	6.44	-0.08	0.6325
6/3/2011 19:33	-0.16	6.44	-0.08	0.6327
6/3/2011 19:38	-0.16	6.44	-0.08	0.6325
6/3/2011 19:43	-0.16	6.44	-0.08	0.6341
6/3/2011 19:48	-0.16	6.44	-0.08	0.6334
6/3/2011 19:53	-0.16	6.44	-0.08	0.6334
6/3/2011 19:58	-0.16	6.44	-0.08	0.6332
6/3/2011 20:03	-0.16	6.44	-0.08	0.6320
6/3/2011 20:08	-0.16	6.43	-0.08	0.6332
6/3/2011 20:13	-0.16	6.44	-0.08	0.6320
6/3/2011 20:18	-0.16	6.44	-0.08	0.6332
6/3/2011 20:23	-0.16	6.45	-0.08	0.6325
6/3/2011 20:28	-0.16	6.44	-0.08	0.6320
6/3/2011 20:33	-0.16	6.44	-0.08	0.6320
6/3/2011 20:38	-0.16	6.44	-0.08	0.6320
6/3/2011 20:43	-0.16	6.44	-0.08	0.6329
6/3/2011 20:48	-0.16	6.44	-0.08	0.6320
6/3/2011 20:53	-0.16	6.44	-0.08	0.6322
6/3/2011 20:58	-0.16	6.44	-0.08	0.6320
6/3/2011 21:03	-0.16	6.44	-0.08	0.6313
6/3/2011 21:08	-0.16	6.44	-0.08	0.6317
6/3/2011 21:13	-0.16	6.44	-0.08	0.6332
6/3/2011 21:18	-0.16	6.44	-0.08	0.6317
6/3/2011 21:23	-0.16	6.44	-0.08	0.6324
6/3/2011 21:28	-0.16	6.44	-0.08	0.6322

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)

TABLE C.15

Monitoring Well Data for 52GW77

Monitoring Well ID: **52GW77**
Injection Well ID: IW04
Distance to Injection Well: 20.5-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 30-60 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 21:33	-0.16	6.44	-0.08	0.6303
6/3/2011 21:38	-0.16	6.44	-0.08	0.6320
6/3/2011 21:43	-0.16	6.44	-0.08	0.6313
6/3/2011 21:48	-0.16	6.44	-0.08	0.6320
6/3/2011 21:53	-0.16	6.44	-0.08	0.6310
6/3/2011 21:58	-0.16	6.44	-0.08	0.6325
6/3/2011 22:03	-0.16	6.44	-0.08	0.6310
6/3/2011 22:08	-0.16	6.44	-0.08	0.6320
6/3/2011 22:13	-0.16	6.44	-0.08	0.6301
6/3/2011 22:18	-0.16	6.44	-0.08	0.6303
6/3/2011 22:23	-0.16	6.44	-0.08	0.6308
6/3/2011 22:28	-0.16	6.44	-0.08	0.6305
6/3/2011 22:33	-0.16	6.44	-0.08	0.6320
6/3/2011 22:38	-0.16	6.44	-0.08	0.6308
6/3/2011 22:43	-0.16	6.44	-0.08	0.6296
6/3/2011 22:48	-0.16	6.44	-0.08	0.6296
6/3/2011 22:53	-0.16	6.44	-0.08	0.6305
6/3/2011 22:58	-0.16	6.44	-0.08	0.6303
6/3/2011 23:03	-0.16	6.44	-0.08	0.6296
6/3/2011 23:08	-0.16	6.44	-0.08	0.6301
6/3/2011 23:13	-0.16	6.44	-0.08	0.6296
6/3/2011 23:18	-0.16	6.44	-0.08	0.6320
6/3/2011 23:23	-0.16	6.44	-0.08	0.6303
6/3/2011 23:28	-0.16	6.44	-0.08	0.6301
6/3/2011 23:33	-0.16	6.44	-0.08	0.6275
6/3/2011 23:38	-0.16	6.44	-0.08	0.6303
6/3/2011 23:43	-0.16	6.44	-0.08	0.6277
6/3/2011 23:48	-0.16	6.44	-0.08	0.6289
6/3/2011 23:53	-0.16	6.45	-0.08	0.6286
6/3/2011 23:58	-0.16	6.44	-0.08	0.6272
6/4/2011 0:03	-0.16	6.44	-0.08	0.6289
6/4/2011 0:08	-0.16	6.44	-0.08	0.6291
6/4/2011 0:13	-0.16	6.45	-0.08	0.6270
6/4/2011 0:18	-0.16	6.44	-0.08	0.6284
6/4/2011 0:23	-0.16	6.44	-0.08	0.6293
6/4/2011 0:28	-0.16	6.44	-0.08	0.6275
6/4/2011 0:33	-0.16	6.44	-0.08	0.6279
6/4/2011 0:38	-0.16	6.44	-0.08	0.6270
6/4/2011 0:43	-0.16	6.44	-0.08	0.6279
6/4/2011 0:48	-0.16	6.44	-0.08	0.6279
6/4/2011 0:53	-0.16	6.44	-0.08	0.6270
6/4/2011 0:58	-0.16	6.44	-0.08	0.6272
6/4/2011 1:03	-0.16	6.44	-0.08	0.6267
6/4/2011 1:08	-0.16	6.44	-0.08	0.6289
6/4/2011 1:13	-0.16	6.44	-0.08	0.6272
6/4/2011 1:18	-0.16	6.44	-0.08	0.6258
6/4/2011 1:23	-0.16	6.44	-0.08	0.6267
6/4/2011 1:28	-0.16	6.44	-0.08	0.6260
6/4/2011 1:33	-0.16	6.44	-0.08	0.6267
6/4/2011 1:38	-0.16	6.45	-0.08	0.6267
6/4/2011 1:43	-0.16	6.44	-0.08	0.6267

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)

TABLE C.15

Monitoring Well Data for 52GW77

Monitoring Well ID: **52GW77**
Injection Well ID: IW04
Distance to Injection Well: 20.5-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 30-60 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 1:48	-0.16	6.44	-0.08	0.6263
6/4/2011 1:53	-0.16	6.44	-0.08	0.6267
6/4/2011 1:58	-0.16	6.44	-0.08	0.6272
6/4/2011 2:03	-0.16	6.45	-0.08	0.6253
6/4/2011 2:08	-0.16	6.45	-0.08	0.6272
6/4/2011 2:13	-0.16	6.44	-0.08	0.6265
6/4/2011 2:18	-0.16	6.45	-0.08	0.6251
6/4/2011 2:23	-0.16	6.44	-0.08	0.6267
6/4/2011 2:28	-0.16	6.44	-0.08	0.6275
6/4/2011 2:33	-0.16	6.44	-0.08	0.6258
6/4/2011 2:38	-0.16	6.44	-0.08	0.6246
6/4/2011 2:43	-0.16	6.44	-0.08	0.6251
6/4/2011 2:48	-0.16	6.45	-0.08	0.6282
6/4/2011 2:53	-0.16	6.44	-0.08	0.6279
6/4/2011 2:58	-0.16	6.44	-0.08	0.6258
6/4/2011 3:03	-0.16	6.44	-0.08	0.6260
6/4/2011 3:08	-0.16	6.44	-0.08	0.6265
6/4/2011 3:13	-0.16	6.44	-0.08	0.6260
6/4/2011 3:18	-0.16	6.44	-0.08	0.6267
6/4/2011 3:23	-0.16	6.44	-0.08	0.6251
6/4/2011 3:28	-0.16	6.44	-0.08	0.6260
6/4/2011 3:33	-0.16	6.44	-0.08	0.6256
6/4/2011 3:38	-0.16	6.44	-0.08	0.6251
6/4/2011 3:43	-0.16	6.44	-0.08	0.6246
6/4/2011 3:48	-0.16	6.44	-0.08	0.6246
6/4/2011 3:53	-0.16	6.44	-0.08	0.6253
6/4/2011 3:58	-0.16	6.44	-0.08	0.6256
6/4/2011 4:03	-0.16	6.44	-0.08	0.6246
6/4/2011 4:08	-0.16	6.44	-0.08	0.6265
6/4/2011 4:13	-0.16	6.44	-0.08	0.6253
6/4/2011 4:18	-0.16	6.44	-0.08	0.6239
6/4/2011 4:23	-0.16	6.44	-0.08	0.6265
6/4/2011 4:28	-0.16	6.44	-0.08	0.6237
6/4/2011 4:33	-0.16	6.44	-0.08	0.6251
6/4/2011 4:38	-0.17	6.44	-0.08	0.6260
6/4/2011 4:43	-0.17	6.44	-0.08	0.6249
6/4/2011 4:48	-0.17	6.44	-0.08	0.6244
6/4/2011 4:53	-0.16	6.44	-0.08	0.6253
6/4/2011 4:58	-0.17	6.44	-0.08	0.6256
6/4/2011 5:03	-0.17	6.44	-0.08	0.6242
6/4/2011 5:08	-0.17	6.44	-0.08	0.6253
6/4/2011 5:13	-0.17	6.44	-0.08	0.6258
6/4/2011 5:18	-0.17	6.44	-0.08	0.6260

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)

TABLE C.15

Monitoring Well Data for 52GW77

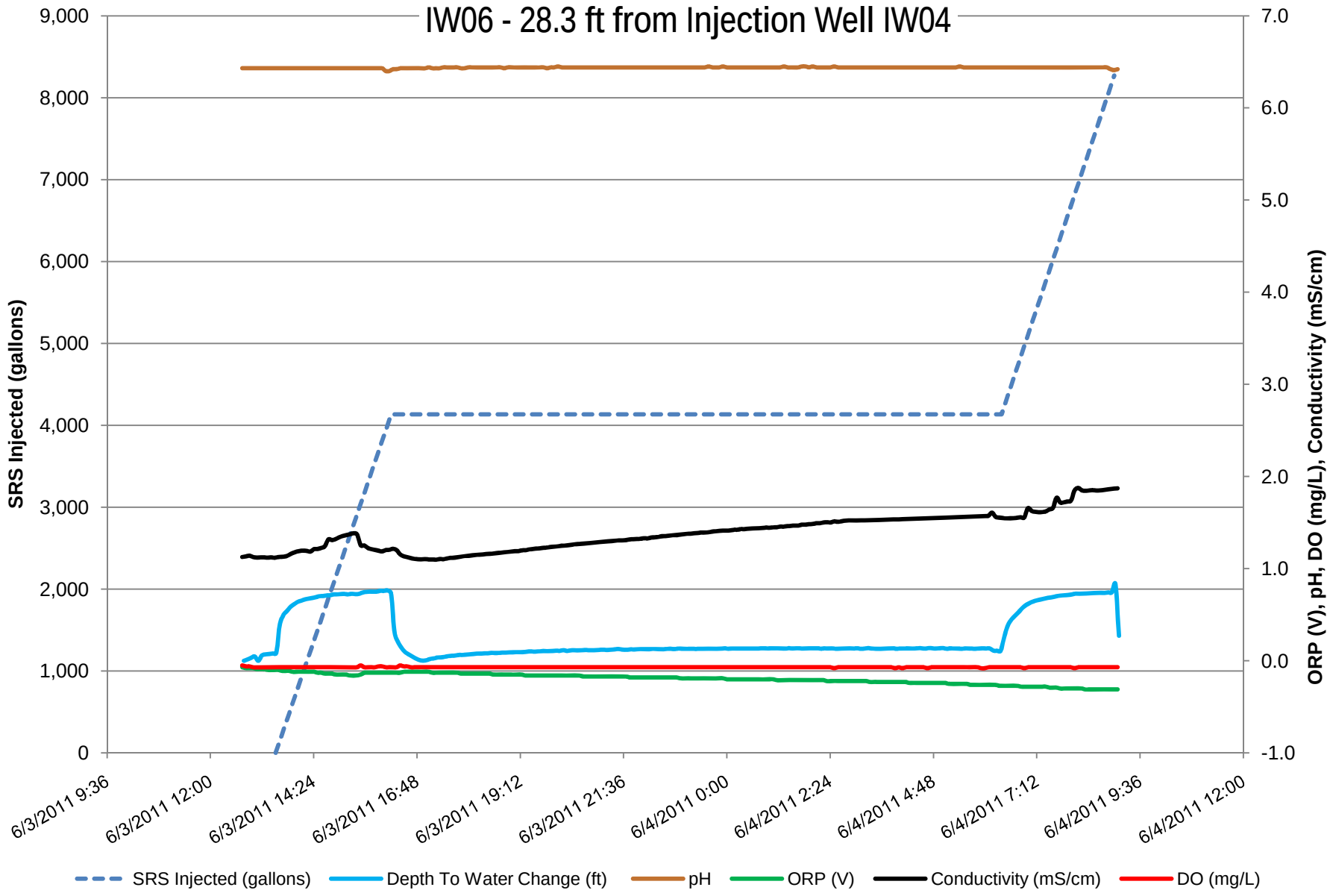
Monitoring Well ID: **52GW77**
Injection Well ID: IW04
Distance to Injection Well: 20.5-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 30-60 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 5:23	-0.17	6.44	-0.08	0.6237
6/4/2011 5:28	-0.17	6.44	-0.08	0.6258
6/4/2011 5:33	-0.17	6.44	-0.08	0.6239
6/4/2011 5:38	-0.17	6.44	-0.08	0.6232
6/4/2011 5:43	-0.17	6.45	-0.08	0.6246
6/4/2011 5:48	-0.17	6.44	-0.08	0.6244
6/4/2011 5:53	-0.17	6.44	-0.08	0.6246
6/4/2011 5:58	-0.17	6.44	-0.08	0.6244
6/4/2011 6:03	-0.17	6.44	-0.08	0.6232
6/4/2011 6:08	-0.17	6.44	-0.08	0.6251
6/4/2011 6:13	-0.17	6.44	-0.08	0.6237
6/4/2011 6:18	-0.17	6.44	-0.08	0.6244
6/4/2011 6:23	-0.17	6.44	-0.08	0.6246
6/4/2011 6:28	-0.17	6.44	-0.08	0.6235
6/4/2011 6:33	-0.17	6.44	-0.08	0.6235
6/4/2011 6:38	-0.17	6.44	-0.08	0.6230
6/4/2011 6:43	-0.17	6.44	-0.08	0.6244
6/4/2011 6:48	-0.17	6.44	-0.08	0.6239
6/4/2011 6:53	-0.17	6.44	-0.08	0.6237
6/4/2011 6:58	-0.17	6.44	-0.08	0.6235
6/4/2011 7:03	-0.17	6.44	-0.08	0.6228
6/4/2011 7:08	-0.17	6.44	-0.08	0.6232
6/4/2011 7:13	-0.17	6.44	-0.08	0.6239
6/4/2011 7:18	-0.17	6.44	-0.08	0.6244
6/4/2011 7:23	-0.17	6.44	-0.08	0.6246
6/4/2011 7:28	-0.17	6.44	-0.08	0.6246
6/4/2011 7:33	-0.17	6.44	-0.08	0.6242
6/4/2011 7:38	-0.17	6.44	-0.08	0.6244
6/4/2011 7:43	-0.17	6.44	-0.08	0.6241
6/4/2011 7:48	-0.17	6.44	-0.08	0.6244
6/4/2011 7:53	-0.17	6.44	-0.08	0.6241
6/4/2011 7:58	-0.17	6.44	-0.08	0.6253
6/4/2011 8:03	-0.17	6.44	-0.08	0.6248
6/4/2011 8:08	-0.17	6.44	-0.08	0.6248
6/4/2011 8:13	-0.17	6.44	-0.08	0.6248
6/4/2011 8:18	-0.17	6.44	-0.08	0.6251
6/4/2011 8:23	-0.17	6.44	-0.08	0.6248
6/4/2011 8:28	-0.17	6.44	-0.08	0.6251
6/4/2011 8:33	-0.17	6.44	-0.08	0.6246
6/4/2011 8:38	-0.18	6.44	-0.08	0.6253
6/4/2011 8:43	-0.18	6.44	-0.08	0.6248
6/4/2011 8:48	-0.18	6.44	-0.08	0.6248
6/4/2011 8:53	-0.18	6.44	-0.08	0.6251
6/4/2011 8:58	-0.18	6.44	-0.08	0.6248
6/4/2011 9:03	-0.18	6.44	-0.08	0.6251
6/4/2011 9:08	-0.18	6.44	-0.08	0.6181
6/4/2011 9:13	-0.17	6.42	-0.08	0.6129
6/4/2011 9:18	-0.17	6.41	-0.08	0.6149
6/4/2011 9:23	-0.17	6.42	-0.08	0.6168
6/4/2011 9:28	-0.17	6.43	-0.08	0.6193
6/4/2011 9:33	-0.17	6.43	-0.08	0.6204

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)



CH2MHILL

Figure C.12
SRS Injection Data Timeline - IW06

TABLE C.16
Monitoring Well Data for IW06

Monitoring Well ID: **IW06**
Injection Well ID: IW04
Distance to Injection Well: 28.3-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 12:44	-0.07	6.36	-0.05	1.1275
6/3/2011 12:49	-0.08	6.37	-0.06	1.1338
6/3/2011 12:54	-0.08	6.37	-0.06	1.1412
6/3/2011 12:59	-0.08	6.37	-0.07	1.1278
6/3/2011 13:04	-0.09	6.37	-0.07	1.1206
6/3/2011 13:09	-0.09	6.38	-0.07	1.1223
6/3/2011 13:14	-0.09	6.39	-0.07	1.1233
6/3/2011 13:19	-0.10	6.39	-0.07	1.1199
6/3/2011 13:24	-0.10	6.40	-0.07	1.1237
6/3/2011 13:29	-0.10	6.40	-0.07	1.1187
6/3/2011 13:34	-0.10	6.41	-0.07	1.1266
6/3/2011 13:39	-0.11	6.41	-0.07	1.1286
6/3/2011 13:44	-0.11	6.42	-0.07	1.1331
6/3/2011 13:49	-0.11	6.44	-0.07	1.1489
6/3/2011 13:54	-0.12	6.45	-0.07	1.1702
6/3/2011 13:59	-0.12	6.46	-0.07	1.1830
6/3/2011 14:04	-0.12	6.47	-0.07	1.1929
6/3/2011 14:09	-0.12	6.47	-0.07	1.1962
6/3/2011 14:14	-0.12	6.47	-0.07	1.1924
6/3/2011 14:19	-0.12	6.47	-0.07	1.1855
6/3/2011 14:24	-0.12	6.47	-0.07	1.2134
6/3/2011 14:29	-0.13	6.47	-0.07	1.2142
6/3/2011 14:34	-0.13	6.49	-0.07	1.2262
6/3/2011 14:39	-0.14	6.52	-0.07	1.2428
6/3/2011 14:44	-0.14	6.53	-0.07	1.3181
6/3/2011 14:49	-0.14	6.54	-0.07	1.3109
6/3/2011 14:54	-0.15	6.56	-0.07	1.3213
6/3/2011 14:59	-0.15	6.56	-0.07	1.3406
6/3/2011 15:04	-0.15	6.57	-0.07	1.3562
6/3/2011 15:09	-0.15	6.58	-0.07	1.3649
6/3/2011 15:14	-0.16	6.59	-0.07	1.3735
6/3/2011 15:19	-0.16	6.59	-0.07	1.3845
6/3/2011 15:24	-0.16	6.59	-0.07	1.3722
6/3/2011 15:29	-0.15	6.53	-0.05	1.2552
6/3/2011 15:34	-0.13	6.44	-0.07	1.2526
6/3/2011 15:39	-0.13	6.43	-0.07	1.2252
6/3/2011 15:44	-0.13	6.43	-0.07	1.2126
6/3/2011 15:49	-0.13	6.42	-0.07	1.2035
6/3/2011 15:54	-0.13	6.41	-0.06	1.1955
6/3/2011 15:59	-0.13	6.41	-0.06	1.1878
6/3/2011 16:04	-0.13	6.41	-0.07	1.2029
6/3/2011 16:09	-0.13	6.42	-0.07	1.2050
6/3/2011 16:14	-0.13	6.43	-0.07	1.2164
6/3/2011 16:19	-0.13	6.43	-0.07	1.2026
6/3/2011 16:24	-0.13	6.40	-0.05	1.1559
6/3/2011 16:29	-0.12	6.36	-0.06	1.1354
6/3/2011 16:34	-0.12	6.36	-0.06	1.1255
6/3/2011 16:39	-0.12	6.35	-0.07	1.1150
6/3/2011 16:44	-0.12	6.34	-0.07	1.1062

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 12:46	3.973	19.901	0
6/3/2011 12:51	3.967	19.438	0.014
6/3/2011 12:56	3.959	19.337	0.032
6/3/2011 13:01	3.952	19.32	0.047
6/3/2011 13:06	3.973	19.316	0
6/3/2011 13:11	3.948	19.312	0.058
6/3/2011 13:16	3.943	19.313	0.07
6/3/2011 13:21	3.941	19.307	0.073
6/3/2011 13:26	3.938	19.303	0.08
6/3/2011 13:31	3.937	19.309	0.084
6/3/2011 13:36	4.143	19.321	0.393
6/3/2011 13:41	4.188	19.352	0.496
6/3/2011 13:46	4.207	19.342	0.541
6/3/2011 13:51	4.226	19.332	0.586
6/3/2011 13:56	4.239	19.329	0.615
6/3/2011 14:01	4.25	19.345	0.64
6/3/2011 14:06	4.256	19.34	0.654
6/3/2011 14:11	4.262	19.335	0.667
6/3/2011 14:16	4.265	19.34	0.675
6/3/2011 14:21	4.268	19.336	0.682
6/3/2011 14:26	4.272	19.339	0.69
6/3/2011 14:31	4.276	19.349	0.701
6/3/2011 14:36	4.277	19.325	0.703
6/3/2011 14:41	4.28	19.327	0.71
6/3/2011 14:46	4.281	19.327	0.712
6/3/2011 14:51	4.285	19.334	0.721
6/3/2011 14:56	4.285	19.338	0.721
6/3/2011 15:01	4.287	19.316	0.725
6/3/2011 15:06	4.287	19.303	0.726
6/3/2011 15:11	4.286	19.308	0.722
6/3/2011 15:16	4.288	19.295	0.728
6/3/2011 15:21	4.287	19.32	0.725
6/3/2011 15:26	4.287	19.33	0.726
6/3/2011 15:31	4.293	19.33	0.74
6/3/2011 15:36	4.297	19.321	0.749
6/3/2011 15:41	4.297	19.324	0.75
6/3/2011 15:46	4.298	19.324	0.75
6/3/2011 15:51	4.298	19.336	0.751
6/3/2011 15:56	4.302	19.32	0.76
6/3/2011 16:01	4.301	19.325	0.759
6/3/2011 16:06	4.304	19.331	0.764
6/3/2011 16:11	4.291	19.321	0.734
6/3/2011 16:16	4.105	19.32	0.305
6/3/2011 16:21	4.059	19.312	0.2
6/3/2011 16:26	4.032	19.294	0.137
6/3/2011 16:31	4.013	19.301	0.093
6/3/2011 16:36	4.002	19.292	0.068
6/3/2011 16:41	3.992	19.311	0.044
6/3/2011 16:46	3.983	19.31	0.024

TABLE C.16
Monitoring Well Data for IW06

Monitoring Well ID: **IW06**
Injection Well ID: IW04
Distance to Injection Well: 28.3-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 16:49	-0.12	6.34	-0.07	1.1038
6/3/2011 16:54	-0.12	6.34	-0.07	1.1031
6/3/2011 16:59	-0.12	6.34	-0.07	1.1043
6/3/2011 17:04	-0.12	6.35	-0.07	1.0999
6/3/2011 17:09	-0.13	6.35	-0.07	1.1012
6/3/2011 17:14	-0.13	6.36	-0.07	1.0980
6/3/2011 17:19	-0.13	6.36	-0.07	1.1042
6/3/2011 17:24	-0.13	6.37	-0.07	1.1039
6/3/2011 17:29	-0.13	6.37	-0.07	1.1102
6/3/2011 17:34	-0.13	6.38	-0.07	1.1174
6/3/2011 17:39	-0.13	6.38	-0.07	1.1180
6/3/2011 17:44	-0.13	6.38	-0.07	1.1250
6/3/2011 17:49	-0.14	6.39	-0.07	1.1311
6/3/2011 17:54	-0.14	6.39	-0.07	1.1379
6/3/2011 17:59	-0.14	6.40	-0.07	1.1391
6/3/2011 18:04	-0.14	6.40	-0.07	1.1447
6/3/2011 18:09	-0.14	6.40	-0.07	1.1494
6/3/2011 18:14	-0.14	6.40	-0.07	1.1521
6/3/2011 18:19	-0.14	6.41	-0.07	1.1556
6/3/2011 18:24	-0.14	6.41	-0.07	1.1598
6/3/2011 18:29	-0.14	6.41	-0.07	1.1622
6/3/2011 18:34	-0.15	6.41	-0.07	1.1640
6/3/2011 18:39	-0.15	6.41	-0.07	1.1704
6/3/2011 18:44	-0.15	6.41	-0.07	1.1738
6/3/2011 18:49	-0.15	6.42	-0.07	1.1774
6/3/2011 18:54	-0.15	6.42	-0.07	1.1817
6/3/2011 18:59	-0.15	6.42	-0.07	1.1868
6/3/2011 19:04	-0.15	6.42	-0.07	1.1908
6/3/2011 19:09	-0.15	6.42	-0.07	1.1920
6/3/2011 19:14	-0.15	6.42	-0.07	1.1994
6/3/2011 19:19	-0.16	6.43	-0.07	1.2007
6/3/2011 19:24	-0.16	6.43	-0.07	1.2098
6/3/2011 19:29	-0.16	6.43	-0.07	1.2128
6/3/2011 19:34	-0.16	6.43	-0.07	1.2190
6/3/2011 19:39	-0.16	6.43	-0.07	1.2219
6/3/2011 19:44	-0.16	6.43	-0.07	1.2278
6/3/2011 19:49	-0.16	6.43	-0.07	1.2291
6/3/2011 19:54	-0.16	6.43	-0.07	1.2371
6/3/2011 19:59	-0.16	6.44	-0.07	1.2391
6/3/2011 20:04	-0.16	6.44	-0.07	1.2431
6/3/2011 20:09	-0.16	6.44	-0.07	1.2497
6/3/2011 20:14	-0.16	6.44	-0.07	1.2514
6/3/2011 20:19	-0.16	6.44	-0.07	1.2560
6/3/2011 20:24	-0.16	6.44	-0.07	1.2613
6/3/2011 20:29	-0.16	6.44	-0.07	1.2670
6/3/2011 20:34	-0.16	6.44	-0.07	1.2681
6/3/2011 20:39	-0.17	6.44	-0.07	1.2730
6/3/2011 20:44	-0.17	6.44	-0.07	1.2747
6/3/2011 20:49	-0.17	6.44	-0.07	1.2793

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 16:51	3.976	19.288	0.007
6/3/2011 16:56	3.973	19.303	0.001
6/3/2011 17:01	3.97	19.303	0.007
6/3/2011 17:06	3.964	19.303	0.021
6/3/2011 17:11	3.961	19.295	0.026
6/3/2011 17:16	3.957	19.296	0.036
6/3/2011 17:21	3.957	19.296	0.037
6/3/2011 17:26	3.954	19.308	0.044
6/3/2011 17:31	3.951	19.314	0.051
6/3/2011 17:36	3.949	19.301	0.054
6/3/2011 17:41	3.948	19.296	0.057
6/3/2011 17:46	3.945	19.302	0.064
6/3/2011 17:51	3.945	19.314	0.064
6/3/2011 17:56	3.943	19.304	0.068
6/3/2011 18:01	3.943	19.308	0.07
6/3/2011 18:06	3.941	19.305	0.074
6/3/2011 18:11	3.939	19.287	0.079
6/3/2011 18:16	3.939	19.299	0.078
6/3/2011 18:21	3.938	19.302	0.081
6/3/2011 18:26	3.937	19.311	0.082
6/3/2011 18:31	3.936	19.307	0.086
6/3/2011 18:36	3.936	19.311	0.084
6/3/2011 18:41	3.935	19.328	0.086
6/3/2011 18:46	3.934	19.317	0.089
6/3/2011 18:51	3.934	19.314	0.09
6/3/2011 18:56	3.934	19.301	0.091
6/3/2011 19:01	3.933	19.3	0.092
6/3/2011 19:06	3.933	19.315	0.093
6/3/2011 19:11	3.932	19.309	0.094
6/3/2011 19:16	3.932	19.294	0.095
6/3/2011 19:21	3.93	19.299	0.099
6/3/2011 19:26	3.928	19.306	0.103
6/3/2011 19:31	3.93	19.31	0.098
6/3/2011 19:36	3.929	19.316	0.101
6/3/2011 19:41	3.927	19.313	0.105
6/3/2011 19:46	3.927	19.304	0.107
6/3/2011 19:51	3.928	19.31	0.104
6/3/2011 19:56	3.926	19.307	0.107
6/3/2011 20:01	3.925	19.288	0.11
6/3/2011 20:06	3.926	19.302	0.108
6/3/2011 20:11	3.923	19.306	0.115
6/3/2011 20:16	3.926	19.309	0.108
6/3/2011 20:21	3.924	19.315	0.112
6/3/2011 20:26	3.923	19.329	0.115
6/3/2011 20:31	3.924	19.31	0.113
6/3/2011 20:36	3.923	19.295	0.114
6/3/2011 20:41	3.922	19.313	0.117
6/3/2011 20:46	3.923	19.305	0.115
6/3/2011 20:51	3.923	19.313	0.115

TABLE C.16
Monitoring Well Data for IW06

Monitoring Well ID: **IW06**
Injection Well ID: IW04
Distance to Injection Well: 28.3-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/3/2011 20:54	-0.17	6.45	-0.07	1.2831
6/3/2011 20:59	-0.17	6.45	-0.07	1.2860
6/3/2011 21:04	-0.17	6.45	-0.07	1.2905
6/3/2011 21:09	-0.17	6.45	-0.07	1.2952
6/3/2011 21:14	-0.17	6.45	-0.07	1.2979
6/3/2011 21:19	-0.17	6.45	-0.07	1.3004
6/3/2011 21:24	-0.17	6.45	-0.07	1.3035
6/3/2011 21:29	-0.17	6.45	-0.07	1.3085
6/3/2011 21:34	-0.17	6.46	-0.07	1.3078
6/3/2011 21:39	-0.17	6.46	-0.07	1.3111
6/3/2011 21:44	-0.18	6.46	-0.07	1.3175
6/3/2011 21:49	-0.18	6.46	-0.07	1.3207
6/3/2011 21:54	-0.18	6.46	-0.07	1.3225
6/3/2011 21:59	-0.18	6.46	-0.07	1.3244
6/3/2011 22:04	-0.18	6.46	-0.07	1.3318
6/3/2011 22:09	-0.18	6.46	-0.07	1.3292
6/3/2011 22:14	-0.18	6.46	-0.07	1.3382
6/3/2011 22:19	-0.18	6.46	-0.07	1.3418
6/3/2011 22:24	-0.18	6.46	-0.07	1.3444
6/3/2011 22:29	-0.18	6.46	-0.07	1.3535
6/3/2011 22:34	-0.18	6.46	-0.07	1.3540
6/3/2011 22:39	-0.18	6.46	-0.07	1.3600
6/3/2011 22:44	-0.18	6.46	-0.07	1.3649
6/3/2011 22:49	-0.18	6.46	-0.07	1.3652
6/3/2011 22:54	-0.19	6.46	-0.07	1.3693
6/3/2011 22:59	-0.19	6.46	-0.07	1.3753
6/3/2011 23:04	-0.19	6.46	-0.07	1.3797
6/3/2011 23:09	-0.19	6.46	-0.07	1.3812
6/3/2011 23:14	-0.19	6.46	-0.07	1.3840
6/3/2011 23:19	-0.19	6.46	-0.07	1.3877
6/3/2011 23:24	-0.19	6.46	-0.07	1.3939
6/3/2011 23:29	-0.19	6.46	-0.07	1.3928
6/3/2011 23:34	-0.19	6.46	-0.07	1.3962
6/3/2011 23:39	-0.19	6.46	-0.07	1.4028
6/3/2011 23:44	-0.19	6.47	-0.07	1.4069
6/3/2011 23:49	-0.19	6.47	-0.07	1.4112
6/3/2011 23:54	-0.19	6.47	-0.07	1.4134
6/3/2011 23:59	-0.20	6.47	-0.07	1.4126
6/4/2011 0:04	-0.20	6.47	-0.07	1.4161
6/4/2011 0:09	-0.20	6.47	-0.07	1.4224
6/4/2011 0:14	-0.20	6.47	-0.07	1.4233
6/4/2011 0:19	-0.20	6.47	-0.07	1.4305
6/4/2011 0:24	-0.20	6.47	-0.07	1.4297
6/4/2011 0:29	-0.20	6.47	-0.07	1.4335
6/4/2011 0:34	-0.20	6.47	-0.07	1.4372
6/4/2011 0:39	-0.20	6.47	-0.07	1.4384
6/4/2011 0:44	-0.20	6.47	-0.07	1.4401
6/4/2011 0:49	-0.20	6.47	-0.07	1.4418
6/4/2011 0:54	-0.20	6.47	-0.07	1.4470

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/3/2011 20:56	3.923	19.316	0.115
6/3/2011 21:01	3.922	19.31	0.118
6/3/2011 21:06	3.921	19.326	0.12
6/3/2011 21:11	3.922	19.327	0.118
6/3/2011 21:16	3.921	19.315	0.12
6/3/2011 21:21	3.92	19.303	0.122
6/3/2011 21:26	3.918	19.297	0.127
6/3/2011 21:31	3.919	19.313	0.125
6/3/2011 21:36	3.921	19.306	0.119
6/3/2011 21:41	3.92	19.315	0.121
6/3/2011 21:46	3.919	19.324	0.124
6/3/2011 21:51	3.92	19.306	0.123
6/3/2011 21:56	3.918	19.3	0.126
6/3/2011 22:01	3.917	19.324	0.128
6/3/2011 22:06	3.918	19.314	0.126
6/3/2011 22:11	3.918	19.332	0.126
6/3/2011 22:16	3.917	19.318	0.129
6/3/2011 22:21	3.917	19.313	0.129
6/3/2011 22:26	3.918	19.305	0.126
6/3/2011 22:31	3.919	19.31	0.125
6/3/2011 22:36	3.917	19.3	0.129
6/3/2011 22:41	3.916	19.313	0.131
6/3/2011 22:46	3.918	19.299	0.127
6/3/2011 22:51	3.916	19.314	0.132
6/3/2011 22:56	3.916	19.318	0.131
6/3/2011 23:01	3.916	19.317	0.131
6/3/2011 23:06	3.916	19.315	0.131
6/3/2011 23:11	3.916	19.314	0.131
6/3/2011 23:16	3.917	19.304	0.129
6/3/2011 23:21	3.916	19.317	0.131
6/3/2011 23:26	3.916	19.323	0.13
6/3/2011 23:31	3.916	19.295	0.132
6/3/2011 23:36	3.916	19.306	0.131
6/3/2011 23:41	3.917	19.303	0.13
6/3/2011 23:46	3.916	19.313	0.132
6/3/2011 23:51	3.916	19.308	0.131
6/3/2011 23:56	3.914	19.297	0.135
6/4/2011 0:01	3.916	19.303	0.131
6/4/2011 0:06	3.915	19.306	0.134
6/4/2011 0:11	3.915	19.311	0.133
6/4/2011 0:16	3.915	19.31	0.134
6/4/2011 0:21	3.915	19.309	0.133
6/4/2011 0:26	3.915	19.308	0.133
6/4/2011 0:31	3.916	19.307	0.132
6/4/2011 0:36	3.915	19.305	0.133
6/4/2011 0:41	3.916	19.305	0.132
6/4/2011 0:46	3.914	19.317	0.136
6/4/2011 0:51	3.914	19.307	0.136
6/4/2011 0:56	3.915	19.311	0.133

TABLE C.16
Monitoring Well Data for IW06

Monitoring Well ID: **IW06**
Injection Well ID: IW04
Distance to Injection Well: 28.3-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 0:59	-0.20	6.47	-0.07	1.4445
6/4/2011 1:04	-0.20	6.47	-0.07	1.4488
6/4/2011 1:09	-0.21	6.47	-0.07	1.4511
6/4/2011 1:14	-0.21	6.47	-0.07	1.4567
6/4/2011 1:19	-0.21	6.47	-0.07	1.4566
6/4/2011 1:24	-0.21	6.47	-0.07	1.4628
6/4/2011 1:29	-0.21	6.47	-0.07	1.4647
6/4/2011 1:34	-0.21	6.47	-0.07	1.4691
6/4/2011 1:39	-0.21	6.47	-0.07	1.4692
6/4/2011 1:44	-0.21	6.47	-0.07	1.4777
6/4/2011 1:49	-0.21	6.47	-0.07	1.4786
6/4/2011 1:54	-0.21	6.47	-0.07	1.4839
6/4/2011 1:59	-0.21	6.48	-0.07	1.4860
6/4/2011 2:04	-0.21	6.48	-0.07	1.4932
6/4/2011 2:09	-0.21	6.47	-0.07	1.4949
6/4/2011 2:14	-0.21	6.47	-0.07	1.5018
6/4/2011 2:19	-0.22	6.47	-0.07	1.5051
6/4/2011 2:24	-0.22	6.47	-0.07	1.5021
6/4/2011 2:29	-0.22	6.47	-0.08	1.5139
6/4/2011 2:34	-0.22	6.47	-0.07	1.5085
6/4/2011 2:39	-0.22	6.48	-0.07	1.5151
6/4/2011 2:44	-0.22	6.48	-0.07	1.5221
6/4/2011 2:49	-0.22	6.47	-0.07	1.5241
6/4/2011 2:54	-0.22	6.48	-0.07	1.5236
6/4/2011 2:59	-0.22	6.48	-0.07	1.5247
6/4/2011 3:04	-0.22	6.48	-0.07	1.5237
6/4/2011 3:09	-0.22	6.48	-0.07	1.5258
6/4/2011 3:14	-0.22	6.48	-0.07	1.5255
6/4/2011 3:19	-0.23	6.48	-0.07	1.5264
6/4/2011 3:24	-0.23	6.48	-0.07	1.5290
6/4/2011 3:29	-0.23	6.48	-0.07	1.5290
6/4/2011 3:34	-0.23	6.48	-0.07	1.5295
6/4/2011 3:39	-0.23	6.48	-0.07	1.5312
6/4/2011 3:44	-0.23	6.48	-0.07	1.5322
6/4/2011 3:49	-0.23	6.48	-0.07	1.5344
6/4/2011 3:54	-0.23	6.48	-0.08	1.5343
6/4/2011 3:59	-0.23	6.48	-0.07	1.5362
6/4/2011 4:04	-0.23	6.48	-0.08	1.5374
6/4/2011 4:09	-0.23	6.48	-0.07	1.5388
6/4/2011 4:14	-0.24	6.48	-0.07	1.5405
6/4/2011 4:19	-0.24	6.48	-0.07	1.5420
6/4/2011 4:24	-0.24	6.48	-0.07	1.5441
6/4/2011 4:29	-0.24	6.48	-0.07	1.5455
6/4/2011 4:34	-0.24	6.48	-0.07	1.5460
6/4/2011 4:39	-0.24	6.48	-0.08	1.5473
6/4/2011 4:44	-0.24	6.48	-0.07	1.5489
6/4/2011 4:49	-0.24	6.48	-0.07	1.5492
6/4/2011 4:54	-0.24	6.48	-0.07	1.5514
6/4/2011 4:59	-0.24	6.48	-0.07	1.5533

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 1:01	3.914	19.304	0.136
6/4/2011 1:06	3.914	19.311	0.135
6/4/2011 1:11	3.914	19.318	0.135
6/4/2011 1:16	3.915	19.327	0.134
6/4/2011 1:21	3.916	19.312	0.132
6/4/2011 1:26	3.913	19.317	0.137
6/4/2011 1:31	3.915	19.303	0.134
6/4/2011 1:36	3.914	19.31	0.135
6/4/2011 1:41	3.914	19.325	0.135
6/4/2011 1:46	3.915	19.309	0.133
6/4/2011 1:51	3.914	19.318	0.135
6/4/2011 1:56	3.914	19.321	0.136
6/4/2011 2:01	3.914	19.304	0.136
6/4/2011 2:06	3.914	19.306	0.136
6/4/2011 2:11	3.916	19.309	0.131
6/4/2011 2:16	3.914	19.315	0.136
6/4/2011 2:21	3.915	19.309	0.133
6/4/2011 2:26	3.914	19.305	0.135
6/4/2011 2:31	3.916	19.322	0.131
6/4/2011 2:36	3.916	19.322	0.132
6/4/2011 2:41	3.915	19.305	0.134
6/4/2011 2:46	3.915	19.313	0.134
6/4/2011 2:51	3.914	19.313	0.136
6/4/2011 2:56	3.915	19.322	0.133
6/4/2011 3:01	3.914	19.323	0.136
6/4/2011 3:06	3.916	19.308	0.131
6/4/2011 3:11	3.916	19.319	0.132
6/4/2011 3:16	3.913	19.316	0.138
6/4/2011 3:21	3.915	19.311	0.134
6/4/2011 3:26	3.916	19.301	0.131
6/4/2011 3:31	3.916	19.307	0.131
6/4/2011 3:36	3.916	19.312	0.131
6/4/2011 3:41	3.916	19.31	0.132
6/4/2011 3:46	3.914	19.316	0.136
6/4/2011 3:51	3.914	19.311	0.136
6/4/2011 3:56	3.917	19.304	0.13
6/4/2011 4:01	3.915	19.303	0.134
6/4/2011 4:06	3.916	19.292	0.132
6/4/2011 4:11	3.914	19.307	0.135
6/4/2011 4:16	3.916	19.313	0.132
6/4/2011 4:21	3.915	19.308	0.133
6/4/2011 4:26	3.914	19.307	0.137
6/4/2011 4:31	3.914	19.315	0.136
6/4/2011 4:36	3.915	19.309	0.133
6/4/2011 4:41	3.913	19.305	0.138
6/4/2011 4:46	3.914	19.304	0.135
6/4/2011 4:51	3.915	19.314	0.133
6/4/2011 4:56	3.914	19.306	0.136
6/4/2011 5:01	3.913	19.323	0.137

TABLE C.16
Monitoring Well Data for IW06

Monitoring Well ID: **IW06**
Injection Well ID: IW04
Distance to Injection Well: 28.3-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 5:04	-0.24	6.48	-0.07	1.5549
6/4/2011 5:09	-0.25	6.48	-0.07	1.5562
6/4/2011 5:14	-0.25	6.48	-0.07	1.5583
6/4/2011 5:19	-0.25	6.48	-0.07	1.5588
6/4/2011 5:24	-0.25	6.48	-0.07	1.5605
6/4/2011 5:29	-0.25	6.48	-0.07	1.5622
6/4/2011 5:34	-0.25	6.48	-0.07	1.5639
6/4/2011 5:39	-0.26	6.49	-0.07	1.5651
6/4/2011 5:44	-0.26	6.49	-0.07	1.5680
6/4/2011 5:49	-0.26	6.49	-0.07	1.5698
6/4/2011 5:54	-0.26	6.49	-0.08	1.5707
6/4/2011 5:59	-0.26	6.49	-0.08	1.5726
6/4/2011 6:04	-0.26	6.48	-0.07	1.5742
6/4/2011 6:09	-0.26	6.48	-0.07	1.6088
6/4/2011 6:14	-0.26	6.48	-0.07	1.5628
6/4/2011 6:19	-0.27	6.49	-0.07	1.5558
6/4/2011 6:24	-0.27	6.49	-0.07	1.5505
6/4/2011 6:29	-0.27	6.49	-0.07	1.5449
6/4/2011 6:34	-0.27	6.49	-0.07	1.5478
6/4/2011 6:39	-0.27	6.49	-0.07	1.5492
6/4/2011 6:44	-0.27	6.49	-0.07	1.5531
6/4/2011 6:49	-0.28	6.50	-0.07	1.5586
6/4/2011 6:54	-0.28	6.50	-0.08	1.5568
6/4/2011 6:59	-0.28	6.49	-0.07	1.6572
6/4/2011 7:04	-0.28	6.48	-0.07	1.6279
6/4/2011 7:09	-0.28	6.47	-0.07	1.6172
6/4/2011 7:14	-0.28	6.47	-0.07	1.6140
6/4/2011 7:19	-0.28	6.47	-0.07	1.6146
6/4/2011 7:24	-0.28	6.49	-0.07	1.6222
6/4/2011 7:29	-0.29	6.52	-0.07	1.6438
6/4/2011 7:34	-0.29	6.54	-0.07	1.6609
6/4/2011 7:39	-0.29	6.56	-0.07	1.7710
6/4/2011 7:44	-0.30	6.57	-0.07	1.7188
6/4/2011 7:49	-0.30	6.59	-0.07	1.7203
6/4/2011 7:54	-0.30	6.60	-0.07	1.7295
6/4/2011 7:59	-0.30	6.62	-0.07	1.7391
6/4/2011 8:04	-0.30	6.63	-0.08	1.8493
6/4/2011 8:09	-0.30	6.64	-0.07	1.8773
6/4/2011 8:14	-0.30	6.66	-0.07	1.8516
6/4/2011 8:19	-0.31	6.67	-0.07	1.8470
6/4/2011 8:24	-0.31	6.68	-0.07	1.8481
6/4/2011 8:29	-0.31	6.68	-0.07	1.8531
6/4/2011 8:34	-0.31	6.70	-0.07	1.8491
6/4/2011 8:39	-0.31	6.70	-0.07	1.8486
6/4/2011 8:44	-0.31	6.71	-0.07	1.8544
6/4/2011 8:49	-0.31	6.72	-0.07	1.8600
6/4/2011 8:54	-0.31	6.72	-0.07	1.8654
6/4/2011 8:59	-0.31	6.73	-0.07	1.8691
6/4/2011 9:04	-0.31	6.74	-0.07	1.8729

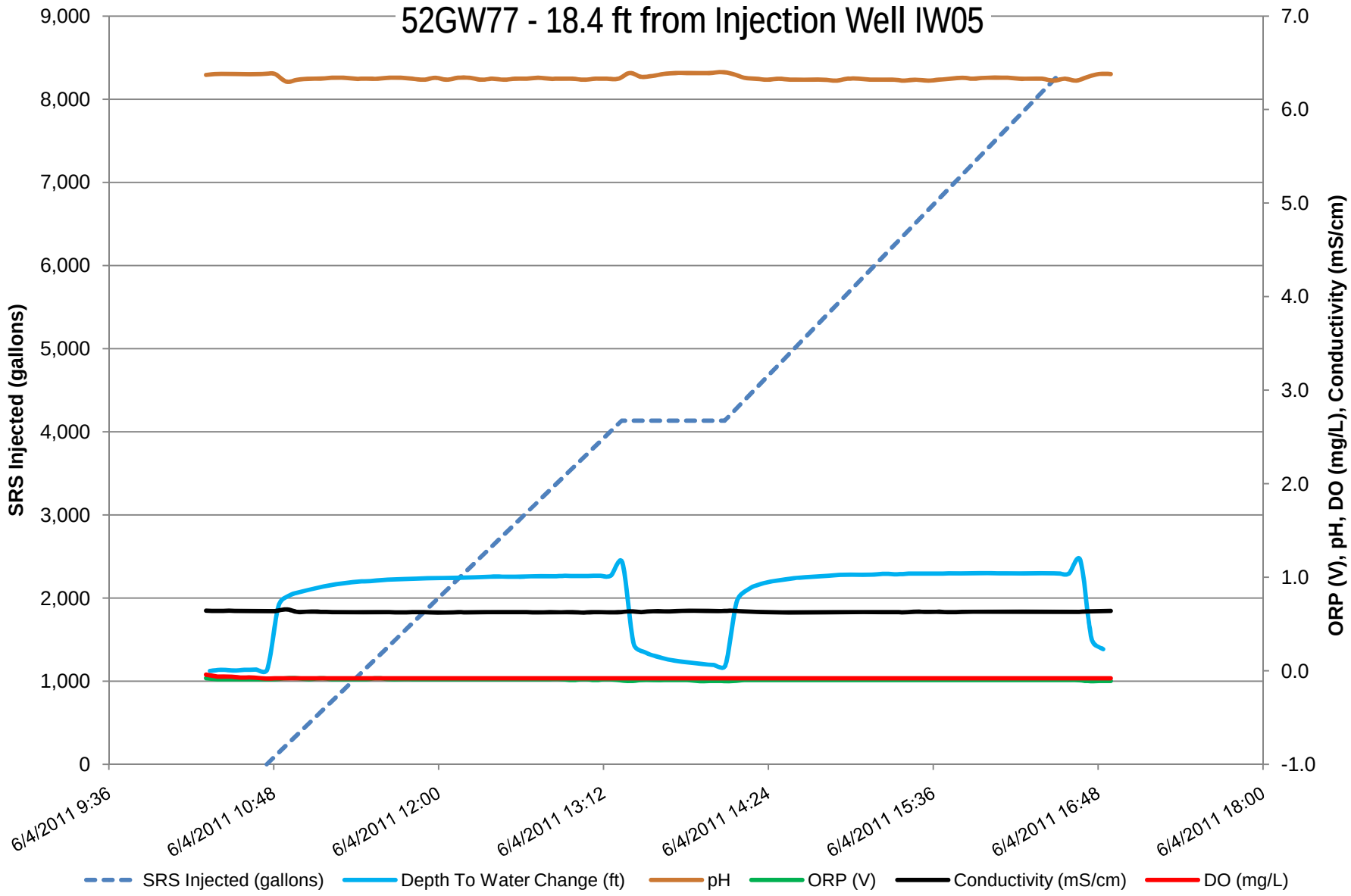
In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/3/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 5:06	3.916	19.315	0.131
6/4/2011 5:11	3.914	19.302	0.136
6/4/2011 5:16	3.916	19.323	0.132
6/4/2011 5:21	3.915	19.314	0.134
6/4/2011 5:26	3.916	19.302	0.13
6/4/2011 5:31	3.915	19.314	0.134
6/4/2011 5:36	3.915	19.31	0.134
6/4/2011 5:41	3.916	19.313	0.132
6/4/2011 5:46	3.916	19.307	0.131
6/4/2011 5:51	3.915	19.305	0.134
6/4/2011 5:56	3.914	19.298	0.135
6/4/2011 6:01	3.915	19.313	0.134
6/4/2011 6:06	3.915	19.3	0.133
6/4/2011 6:11	3.925	19.316	0.11
6/4/2011 6:16	3.926	19.311	0.109
6/4/2011 6:21	3.926	19.306	0.109
6/4/2011 6:26	4.085	19.316	0.26
6/4/2011 6:31	4.139	19.339	0.384
6/4/2011 6:36	4.167	19.34	0.447
6/4/2011 6:41	4.185	19.311	0.489
6/4/2011 6:46	4.201	19.323	0.528
6/4/2011 6:51	4.221	19.329	0.572
6/4/2011 6:56	4.234	19.307	0.603
6/4/2011 7:01	4.244	19.319	0.626
6/4/2011 7:06	4.251	19.327	0.643
6/4/2011 7:11	4.257	19.342	0.655
6/4/2011 7:16	4.261	19.349	0.665
6/4/2011 7:21	4.264	19.342	0.673
6/4/2011 7:26	4.268	19.325	0.683
6/4/2011 7:31	4.271	19.332	0.689
6/4/2011 7:36	4.274	19.337	0.696
6/4/2011 7:41	4.278	19.335	0.705
6/4/2011 7:46	4.28	19.31	0.71
6/4/2011 7:51	4.281	19.303	0.712
6/4/2011 7:56	4.283	19.307	0.716
6/4/2011 8:01	4.285	19.307	0.722
6/4/2011 8:06	4.289	19.328	0.73
6/4/2011 8:11	4.289	19.31	0.73
6/4/2011 8:16	4.289	19.316	0.729
6/4/2011 8:21	4.289	19.321	0.731
6/4/2011 8:26	4.29	19.316	0.733
6/4/2011 8:31	4.291	19.31	0.736
6/4/2011 8:36	4.292	19.316	0.737
6/4/2011 8:41	4.293	19.323	0.739
6/4/2011 8:46	4.293	19.334	0.738
6/4/2011 8:51	4.294	19.329	0.742
6/4/2011 8:56	4.295	19.316	0.744
6/4/2011 9:01	4.334	19.317	0.834
6/4/2011 9:06	4.091	19.291	0.272

TABLE C.17
Injection Summary for IW05

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/4/2011 10:45	IW05	0	Begin Injecting SRS - Batch 1/2.
6/4/2011 13:20	IW05	4,135	Finish Injecting SRS - Batch 1/2.
6/4/2011 14:05	IW05	4,135	Begin Injecting SRS - Batch 2/2.
6/4/2011 16:30	IW05	8,270	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW05	20 - 35	52GW77	18.4	22 - 32	middle
		IW07	24.5	20 - 35	middle
		52GW78	14.25	38 - 48	top



CH2MHILL

Figure C.13
SRS Injection Data Timeline - 52GW77

TABLE C.18
Monitoring Well Data for 52GW77

Monitoring Well ID: **52GW77**
Injection Well ID: IW05
Distance to Injection Well: 18.4-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 10:18	-0.08	6.37	-0.04	0.6427
6/4/2011 10:23	-0.09	6.38	-0.06	0.6411
6/4/2011 10:28	-0.09	6.38	-0.06	0.6422
6/4/2011 10:33	-0.09	6.38	-0.07	0.6406
6/4/2011 10:38	-0.09	6.38	-0.07	0.6387
6/4/2011 10:43	-0.09	6.38	-0.08	0.6396
6/4/2011 10:48	-0.09	6.38	-0.08	0.6384
6/4/2011 10:53	-0.08	6.30	-0.08	0.6564
6/4/2011 10:58	-0.08	6.32	-0.08	0.6297
6/4/2011 11:03	-0.09	6.33	-0.08	0.6332
6/4/2011 11:08	-0.08	6.33	-0.08	0.6302
6/4/2011 11:13	-0.09	6.34	-0.08	0.6292
6/4/2011 11:18	-0.09	6.34	-0.08	0.6265
6/4/2011 11:23	-0.09	6.33	-0.08	0.6283
6/4/2011 11:28	-0.09	6.33	-0.08	0.6265
6/4/2011 11:33	-0.08	6.33	-0.08	0.6274
6/4/2011 11:38	-0.09	6.34	-0.08	0.6269
6/4/2011 11:43	-0.09	6.34	-0.08	0.6251
6/4/2011 11:48	-0.09	6.33	-0.08	0.6269
6/4/2011 11:53	-0.09	6.32	-0.08	0.6274
6/4/2011 11:58	-0.09	6.34	-0.08	0.6253
6/4/2011 12:03	-0.09	6.32	-0.08	0.6235
6/4/2011 12:08	-0.09	6.34	-0.08	0.6276
6/4/2011 12:13	-0.09	6.34	-0.08	0.6253
6/4/2011 12:18	-0.09	6.32	-0.08	0.6279
6/4/2011 12:23	-0.09	6.33	-0.08	0.6276
6/4/2011 12:28	-0.09	6.32	-0.08	0.6283
6/4/2011 12:33	-0.09	6.33	-0.08	0.6269
6/4/2011 12:38	-0.09	6.33	-0.08	0.6269
6/4/2011 12:43	-0.09	6.34	-0.08	0.6260
6/4/2011 12:48	-0.09	6.33	-0.08	0.6272
6/4/2011 12:53	-0.09	6.33	-0.08	0.6265
6/4/2011 12:58	-0.10	6.33	-0.08	0.6269
6/4/2011 13:03	-0.09	6.32	-0.08	0.6239
6/4/2011 13:08	-0.10	6.33	-0.08	0.6283
6/4/2011 13:13	-0.09	6.33	-0.08	0.6260
6/4/2011 13:18	-0.10	6.33	-0.08	0.6272
6/4/2011 13:23	-0.11	6.39	-0.08	0.6356
6/4/2011 13:28	-0.10	6.35	-0.08	0.6290
6/4/2011 13:33	-0.10	6.36	-0.08	0.6382
6/4/2011 13:38	-0.10	6.38	-0.08	0.6349
6/4/2011 13:43	-0.10	6.39	-0.08	0.6392
6/4/2011 13:48	-0.10	6.39	-0.08	0.6414
6/4/2011 13:53	-0.11	6.39	-0.08	0.6431
6/4/2011 13:58	-0.11	6.39	-0.08	0.6397
6/4/2011 14:03	-0.11	6.40	-0.08	0.6385
6/4/2011 14:08	-0.11	6.38	-0.08	0.6421
6/4/2011 14:13	-0.10	6.34	-0.08	0.6349
6/4/2011 14:18	-0.10	6.33	-0.08	0.6302

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 10:20	4.851	19.514	0
6/4/2011 10:25	4.846	19.377	0.012
6/4/2011 10:30	4.849	19.345	0.004
6/4/2011 10:35	4.846	19.339	0.011
6/4/2011 10:40	4.845	19.336	0.014
6/4/2011 10:45	4.845	19.329	0.015
6/4/2011 10:50	5.155	19.334	0.701
6/4/2011 10:55	5.202	19.327	0.809
6/4/2011 11:00	5.217	19.324	0.846
6/4/2011 11:05	5.231	19.326	0.877
6/4/2011 11:10	5.242	19.332	0.903
6/4/2011 11:15	5.252	19.334	0.925
6/4/2011 11:20	5.258	19.326	0.94
6/4/2011 11:25	5.264	19.325	0.954
6/4/2011 11:30	5.267	19.326	0.96
6/4/2011 11:35	5.271	19.324	0.969
6/4/2011 11:40	5.275	19.325	0.978
6/4/2011 11:45	5.275	19.325	0.98
6/4/2011 11:50	5.278	19.324	0.985
6/4/2011 11:55	5.28	19.326	0.99
6/4/2011 12:00	5.281	19.323	0.993
6/4/2011 12:05	5.281	19.323	0.993
6/4/2011 12:10	5.281	19.326	0.994
6/4/2011 12:15	5.284	19.323	1
6/4/2011 12:20	5.285	19.326	1.003
6/4/2011 12:25	5.287	19.324	1.008
6/4/2011 12:30	5.286	19.324	1.005
6/4/2011 12:35	5.287	19.333	1.006
6/4/2011 12:40	5.289	19.327	1.011
6/4/2011 12:45	5.29	19.323	1.012
6/4/2011 12:50	5.288	19.324	1.01
6/4/2011 12:55	5.291	19.321	1.015
6/4/2011 13:00	5.29	19.324	1.013
6/4/2011 13:05	5.29	19.322	1.013
6/4/2011 13:10	5.291	19.322	1.017
6/4/2011 13:15	5.292	19.325	1.017
6/4/2011 13:20	5.353	19.328	1.159
6/4/2011 13:25	4.976	19.309	0.289
6/4/2011 13:30	4.937	19.317	0.198
6/4/2011 13:35	4.918	19.323	0.154
6/4/2011 13:40	4.904	19.323	0.122
6/4/2011 13:45	4.895	19.326	0.102
6/4/2011 13:50	4.888	19.33	0.086
6/4/2011 13:55	4.883	19.328	0.073
6/4/2011 14:00	4.878	19.329	0.063
6/4/2011 14:05	4.876	19.326	0.058
6/4/2011 14:10	5.171	19.329	0.74
6/4/2011 14:15	5.228	19.329	0.871
6/4/2011 14:20	5.252	19.326	0.925

TABLE C.18
Monitoring Well Data for 52GW77

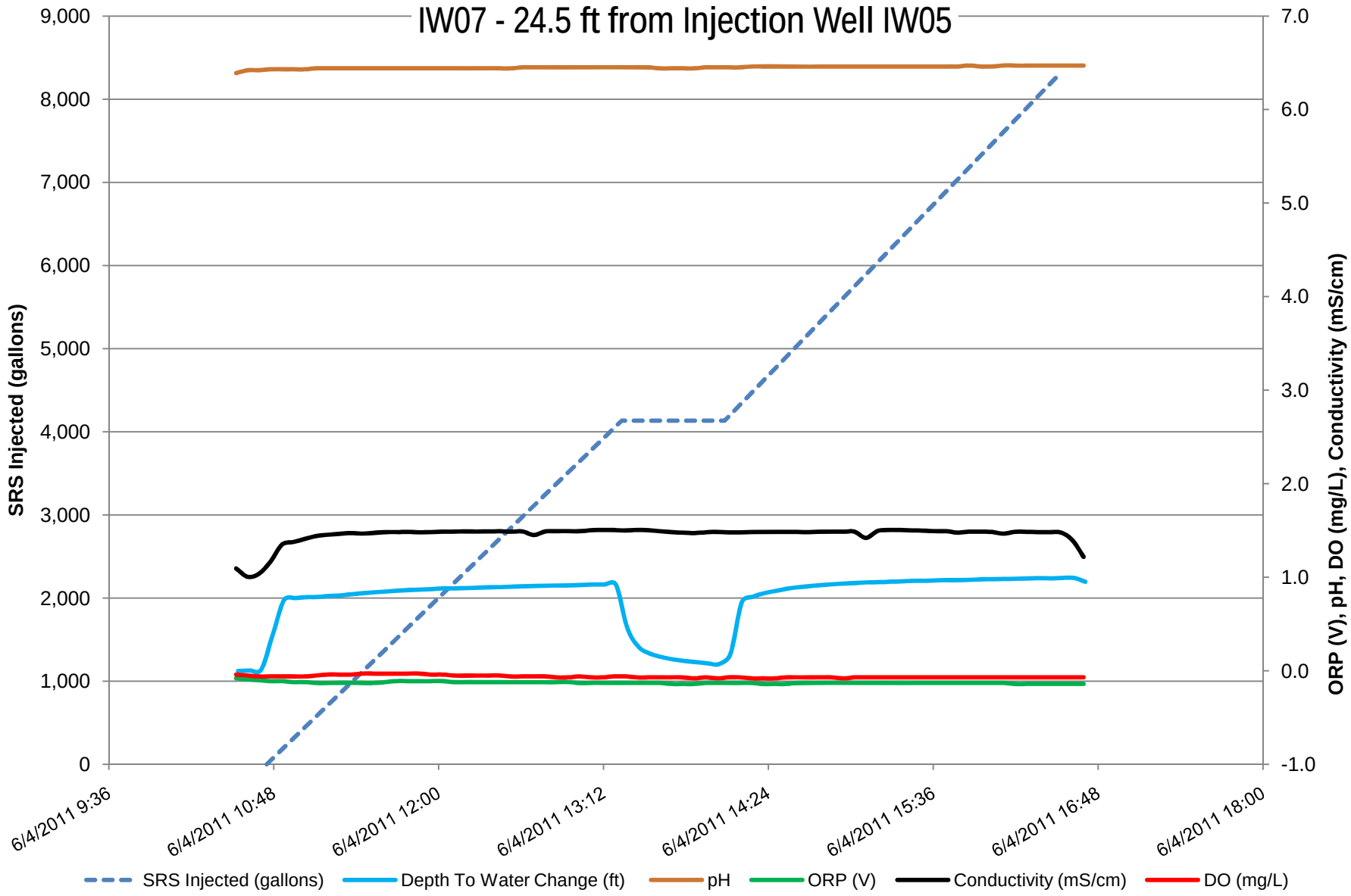
Monitoring Well ID:	**52GW77**
Injection Well ID:	IW05
Distance to Injection Well:	18.4-ft

In-Situ Inc.	Troll 9500
Serial number:	48057
Test started on:	6/4/2011
Test stopped on:	6/4/2011
Time Between Data Points:	5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 14:23	-0.10	6.32	-0.08	0.6272
6/4/2011 14:28	-0.10	6.33	-0.08	0.6255
6/4/2011 14:33	-0.10	6.32	-0.08	0.6242
6/4/2011 14:38	-0.10	6.32	-0.08	0.6253
6/4/2011 14:43	-0.10	6.32	-0.08	0.6246
6/4/2011 14:48	-0.10	6.32	-0.08	0.6255
6/4/2011 14:53	-0.10	6.31	-0.08	0.6279
6/4/2011 14:58	-0.10	6.33	-0.08	0.6293
6/4/2011 15:03	-0.10	6.33	-0.08	0.6274
6/4/2011 15:08	-0.10	6.32	-0.08	0.6269
6/4/2011 15:13	-0.10	6.32	-0.08	0.6269
6/4/2011 15:18	-0.10	6.32	-0.08	0.6288
6/4/2011 15:23	-0.10	6.31	-0.08	0.6267
6/4/2011 15:28	-0.10	6.32	-0.08	0.6323
6/4/2011 15:33	-0.10	6.31	-0.08	0.6300
6/4/2011 15:38	-0.10	6.32	-0.08	0.6318
6/4/2011 15:43	-0.10	6.33	-0.08	0.6269
6/4/2011 15:48	-0.10	6.34	-0.08	0.6311
6/4/2011 15:53	-0.10	6.33	-0.08	0.6323
6/4/2011 15:58	-0.10	6.34	-0.08	0.6302
6/4/2011 16:03	-0.10	6.34	-0.08	0.6309
6/4/2011 16:08	-0.10	6.34	-0.08	0.6339
6/4/2011 16:13	-0.10	6.33	-0.08	0.6306
6/4/2011 16:18	-0.10	6.33	-0.08	0.6325
6/4/2011 16:23	-0.10	6.33	-0.08	0.6325
6/4/2011 16:28	-0.10	6.31	-0.08	0.6304
6/4/2011 16:33	-0.10	6.33	-0.08	0.6314
6/4/2011 16:38	-0.10	6.31	-0.08	0.6304
6/4/2011 16:43	-0.11	6.35	-0.08	0.6356
6/4/2011 16:48	-0.11	6.38	-0.08	0.6382
6/4/2011 16:53	-0.11	6.38	-0.08	0.6406

In-Situ Inc.	Level Troll 700
Serial number:	134221
Test started on:	6/4/2011
Test stopped on:	6/4/2011
Time Between Data Points:	5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 14:25	5.265	19.322	0.955
6/4/2011 14:30	5.273	19.324	0.973
6/4/2011 14:35	5.28	19.326	0.991
6/4/2011 14:40	5.284	19.326	1
6/4/2011 14:45	5.288	19.319	1.009
6/4/2011 14:50	5.292	19.322	1.017
6/4/2011 14:55	5.295	19.324	1.024
6/4/2011 15:00	5.296	19.323	1.028
6/4/2011 15:05	5.295	19.32	1.026
6/4/2011 15:10	5.297	19.325	1.03
6/4/2011 15:15	5.3	19.32	1.037
6/4/2011 15:20	5.298	19.323	1.032
6/4/2011 15:25	5.301	19.319	1.039
6/4/2011 15:30	5.301	19.326	1.038
6/4/2011 15:35	5.301	19.321	1.039
6/4/2011 15:40	5.302	19.322	1.04
6/4/2011 15:45	5.302	19.323	1.042
6/4/2011 15:50	5.302	19.322	1.041
6/4/2011 15:55	5.302	19.323	1.042
6/4/2011 16:00	5.303	19.322	1.045
6/4/2011 16:05	5.302	19.32	1.041
6/4/2011 16:10	5.303	19.323	1.043
6/4/2011 16:15	5.303	19.32	1.043
6/4/2011 16:20	5.302	19.322	1.042
6/4/2011 16:25	5.303	19.32	1.043
6/4/2011 16:30	5.303	19.326	1.043
6/4/2011 16:35	5.301	19.321	1.039
6/4/2011 16:40	5.363	19.323	1.183
6/4/2011 16:45	4.996	19.305	0.335
6/4/2011 16:50	4.952	19.315	0.232



CH2MHILL

Figure C.14
SRS Injection Data Timeline - IW07

TABLE C.19
Monitoring Well Data for IW07

Monitoring Well ID: **IW07**
Injection Well ID: IW05
Distance to Injection Well: 24.5-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 10:31	-0.08	6.39	-0.04	1.0935
6/4/2011 10:36	-0.09	6.42	-0.05	1.0038
6/4/2011 10:41	-0.10	6.42	-0.06	1.0379
6/4/2011 10:46	-0.11	6.43	-0.06	1.1682
6/4/2011 10:51	-0.11	6.43	-0.06	1.3489
6/4/2011 10:56	-0.12	6.43	-0.06	1.3776
6/4/2011 11:01	-0.12	6.43	-0.06	1.4103
6/4/2011 11:06	-0.13	6.44	-0.05	1.4411
6/4/2011 11:11	-0.13	6.44	-0.04	1.4559
6/4/2011 11:16	-0.13	6.44	-0.04	1.4649
6/4/2011 11:21	-0.13	6.44	-0.04	1.4724
6/4/2011 11:26	-0.13	6.44	-0.03	1.4667
6/4/2011 11:31	-0.13	6.44	-0.03	1.4747
6/4/2011 11:36	-0.12	6.44	-0.03	1.4837
6/4/2011 11:41	-0.11	6.44	-0.03	1.4827
6/4/2011 11:46	-0.11	6.44	-0.03	1.4864
6/4/2011 11:51	-0.11	6.44	-0.03	1.4817
6/4/2011 11:56	-0.11	6.44	-0.04	1.4841
6/4/2011 12:01	-0.11	6.44	-0.04	1.4874
6/4/2011 12:06	-0.12	6.44	-0.05	1.4892
6/4/2011 12:11	-0.12	6.44	-0.05	1.4919
6/4/2011 12:16	-0.12	6.44	-0.05	1.4891
6/4/2011 12:21	-0.12	6.44	-0.05	1.4911
6/4/2011 12:26	-0.12	6.44	-0.05	1.4923
6/4/2011 12:31	-0.12	6.44	-0.06	1.4883
6/4/2011 12:36	-0.12	6.45	-0.06	1.4905
6/4/2011 12:41	-0.12	6.45	-0.06	1.4521
6/4/2011 12:46	-0.12	6.45	-0.06	1.4910
6/4/2011 12:51	-0.12	6.45	-0.07	1.4926
6/4/2011 12:56	-0.12	6.45	-0.07	1.4938
6/4/2011 13:01	-0.13	6.45	-0.06	1.4923
6/4/2011 13:06	-0.13	6.45	-0.07	1.5036
6/4/2011 13:11	-0.13	6.45	-0.07	1.5059
6/4/2011 13:16	-0.13	6.45	-0.06	1.5053
6/4/2011 13:21	-0.13	6.45	-0.06	1.5001
6/4/2011 13:26	-0.13	6.45	-0.07	1.5066
6/4/2011 13:31	-0.13	6.45	-0.07	1.5048
6/4/2011 13:36	-0.13	6.44	-0.07	1.4933
6/4/2011 13:41	-0.14	6.44	-0.07	1.4821
6/4/2011 13:46	-0.14	6.44	-0.07	1.4775
6/4/2011 13:51	-0.14	6.44	-0.08	1.4732
6/4/2011 13:56	-0.13	6.45	-0.07	1.4814
6/4/2011 14:01	-0.13	6.45	-0.08	1.4859
6/4/2011 14:06	-0.13	6.45	-0.07	1.4802
6/4/2011 14:11	-0.13	6.45	-0.07	1.4815
6/4/2011 14:16	-0.13	6.46	-0.08	1.4838
6/4/2011 14:21	-0.14	6.46	-0.08	1.4862
6/4/2011 14:26	-0.14	6.46	-0.08	1.4845
6/4/2011 14:31	-0.14	6.46	-0.07	1.4854

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 10:32	3.321	20.297	0
6/4/2011 10:37	3.319	19.247	0.005
6/4/2011 10:42	3.317	18.977	0.011
6/4/2011 10:47	3.484	18.89	0.375
6/4/2011 10:52	3.648	18.873	0.755
6/4/2011 10:57	3.658	18.866	0.778
6/4/2011 11:02	3.663	18.859	0.788
6/4/2011 11:07	3.664	18.852	0.79
6/4/2011 11:12	3.668	18.854	0.801
6/4/2011 11:17	3.671	18.855	0.807
6/4/2011 11:22	3.677	18.857	0.821
6/4/2011 11:27	3.681	18.851	0.831
6/4/2011 11:32	3.686	18.846	0.841
6/4/2011 11:37	3.689	18.84	0.849
6/4/2011 11:42	3.693	18.838	0.858
6/4/2011 11:47	3.696	18.843	0.865
6/4/2011 11:52	3.698	18.839	0.869
6/4/2011 11:57	3.7	18.841	0.875
6/4/2011 12:02	3.703	18.839	0.881
6/4/2011 12:07	3.704	18.84	0.883
6/4/2011 12:12	3.705	18.842	0.885
6/4/2011 12:17	3.707	18.841	0.89
6/4/2011 12:22	3.709	18.844	0.895
6/4/2011 12:27	3.709	18.836	0.895
6/4/2011 12:32	3.711	18.836	0.9
6/4/2011 12:37	3.713	18.835	0.905
6/4/2011 12:42	3.714	18.838	0.907
6/4/2011 12:47	3.716	18.839	0.91
6/4/2011 12:52	3.717	18.838	0.914
6/4/2011 12:57	3.717	18.842	0.914
6/4/2011 13:02	3.719	18.843	0.918
6/4/2011 13:07	3.721	18.839	0.922
6/4/2011 13:12	3.721	18.841	0.923
6/4/2011 13:17	3.72	18.837	0.921
6/4/2011 13:22	3.519	18.839	0.457
6/4/2011 13:27	3.432	18.832	0.255
6/4/2011 13:32	3.401	18.831	0.184
6/4/2011 13:37	3.385	18.832	0.147
6/4/2011 13:42	3.375	18.83	0.124
6/4/2011 13:47	3.367	18.829	0.105
6/4/2011 13:52	3.362	18.833	0.094
6/4/2011 13:57	3.356	18.828	0.081
6/4/2011 14:02	3.353	18.828	0.073
6/4/2011 14:07	3.399	18.828	0.179
6/4/2011 14:12	3.639	18.831	0.734
6/4/2011 14:17	3.665	18.832	0.793
6/4/2011 14:22	3.682	18.834	0.832
6/4/2011 14:27	3.692	18.839	0.855
6/4/2011 14:32	3.702	18.841	0.879

TABLE C.19
Monitoring Well Data for IW07

Monitoring Well ID: **IW07**
Injection Well ID: IW05
Distance to Injection Well: 24.5-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 14:36	-0.13	6.46	-0.07	1.4854
6/4/2011 14:41	-0.13	6.46	-0.07	1.4826
6/4/2011 14:46	-0.13	6.46	-0.07	1.4878
6/4/2011 14:51	-0.13	6.46	-0.07	1.4891
6/4/2011 14:56	-0.13	6.46	-0.08	1.4872
6/4/2011 15:01	-0.13	6.46	-0.07	1.4879
6/4/2011 15:06	-0.13	6.46	-0.07	1.4216
6/4/2011 15:11	-0.13	6.46	-0.07	1.4951
6/4/2011 15:16	-0.13	6.46	-0.07	1.5061
6/4/2011 15:21	-0.13	6.46	-0.07	1.5053
6/4/2011 15:26	-0.13	6.46	-0.07	1.5011
6/4/2011 15:31	-0.13	6.46	-0.07	1.4994
6/4/2011 15:36	-0.13	6.46	-0.07	1.4934
6/4/2011 15:41	-0.13	6.46	-0.07	1.4938
6/4/2011 15:46	-0.13	6.46	-0.07	1.4781
6/4/2011 15:51	-0.13	6.47	-0.07	1.4883
6/4/2011 15:56	-0.13	6.46	-0.07	1.4871
6/4/2011 16:01	-0.13	6.46	-0.07	1.4850
6/4/2011 16:06	-0.13	6.47	-0.07	1.4666
6/4/2011 16:11	-0.14	6.47	-0.07	1.4869
6/4/2011 16:16	-0.14	6.47	-0.07	1.4864
6/4/2011 16:21	-0.14	6.47	-0.07	1.4840
6/4/2011 16:26	-0.14	6.47	-0.07	1.4820
6/4/2011 16:31	-0.14	6.47	-0.07	1.4799
6/4/2011 16:36	-0.14	6.47	-0.07	1.4006
6/4/2011 16:41	-0.14	6.47	-0.07	1.2179

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 14:37	3.709	18.842	0.895
6/4/2011 14:42	3.714	18.843	0.905
6/4/2011 14:47	3.72	18.833	0.919
6/4/2011 14:52	3.722	18.835	0.926
6/4/2011 14:57	3.726	18.841	0.934
6/4/2011 15:02	3.728	18.841	0.938
6/4/2011 15:07	3.732	18.844	0.947
6/4/2011 15:12	3.732	18.843	0.948
6/4/2011 15:17	3.734	18.841	0.953
6/4/2011 15:22	3.736	18.839	0.957
6/4/2011 15:27	3.739	18.836	0.963
6/4/2011 15:32	3.738	18.84	0.963
6/4/2011 15:37	3.741	18.837	0.968
6/4/2011 15:42	3.742	18.84	0.97
6/4/2011 15:47	3.742	18.839	0.971
6/4/2011 15:52	3.742	18.842	0.972
6/4/2011 15:57	3.745	18.837	0.979
6/4/2011 16:02	3.746	18.848	0.981
6/4/2011 16:07	3.747	18.838	0.982
6/4/2011 16:12	3.748	18.841	0.984
6/4/2011 16:17	3.75	18.842	0.989
6/4/2011 16:22	3.75	18.838	0.99
6/4/2011 16:27	3.75	18.839	0.989
6/4/2011 16:32	3.751	18.84	0.993
6/4/2011 16:37	3.752	18.853	0.994
6/4/2011 16:42	3.734	18.857	0.952

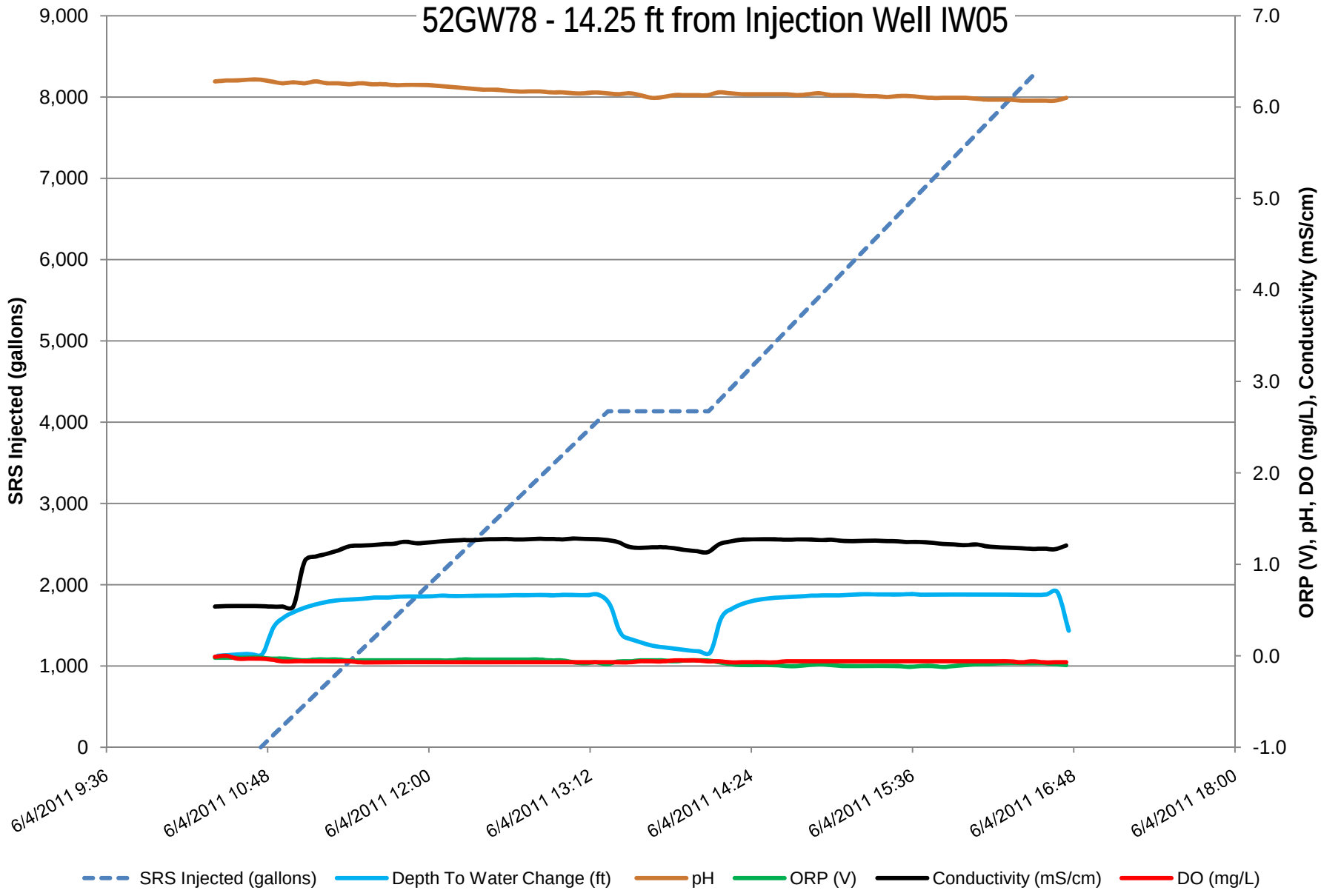


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Figure C.15
SRS Injection Data Timeline - 52GW78

TABLE C.20
Monitoring Well Data for 52GW78

Monitoring Well ID: **52GW78**
Injection Well ID: IW05
Distance to Injection Well: 14.25-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 10:24	-0.02	6.28	-0.01	0.5398
6/4/2011 10:29	-0.02	6.29	0.00	0.5452
6/4/2011 10:34	-0.02	6.29	-0.03	0.5470
6/4/2011 10:39	-0.02	6.30	-0.03	0.5455
6/4/2011 10:44	-0.02	6.30	-0.03	0.5459
6/4/2011 10:49	-0.03	6.28	-0.04	0.5392
6/4/2011 10:54	-0.03	6.26	-0.06	0.5400
6/4/2011 10:59	-0.04	6.27	-0.06	0.5434
6/4/2011 11:04	-0.05	6.26	-0.06	1.0345
6/4/2011 11:09	-0.04	6.28	-0.06	1.0879
6/4/2011 11:14	-0.04	6.26	-0.06	1.1168
6/4/2011 11:19	-0.04	6.26	-0.06	1.1539
6/4/2011 11:24	-0.05	6.25	-0.06	1.1995
6/4/2011 11:29	-0.05	6.26	-0.07	1.2074
6/4/2011 11:34	-0.05	6.25	-0.07	1.2126
6/4/2011 11:39	-0.05	6.25	-0.07	1.2226
6/4/2011 11:44	-0.05	6.24	-0.07	1.2276
6/4/2011 11:49	-0.05	6.24	-0.07	1.2490
6/4/2011 11:54	-0.05	6.24	-0.07	1.2312
6/4/2011 11:59	-0.05	6.24	-0.07	1.2404
6/4/2011 12:04	-0.05	6.23	-0.07	1.2515
6/4/2011 12:09	-0.05	6.22	-0.07	1.2603
6/4/2011 12:14	-0.04	6.21	-0.07	1.2669
6/4/2011 12:19	-0.04	6.20	-0.07	1.2670
6/4/2011 12:24	-0.04	6.19	-0.07	1.2726
6/4/2011 12:29	-0.04	6.19	-0.07	1.2771
6/4/2011 12:34	-0.04	6.18	-0.07	1.2775
6/4/2011 12:39	-0.04	6.17	-0.07	1.2734
6/4/2011 12:44	-0.04	6.17	-0.07	1.2757
6/4/2011 12:49	-0.04	6.17	-0.07	1.2801
6/4/2011 12:54	-0.05	6.16	-0.07	1.2789
6/4/2011 12:59	-0.05	6.16	-0.07	1.2749
6/4/2011 13:04	-0.07	6.15	-0.07	1.2835
6/4/2011 13:09	-0.08	6.15	-0.07	1.2779
6/4/2011 13:14	-0.07	6.16	-0.07	1.2786
6/4/2011 13:19	-0.09	6.15	-0.07	1.2664
6/4/2011 13:24	-0.06	6.14	-0.07	1.2441
6/4/2011 13:29	-0.06	6.15	-0.07	1.1918
6/4/2011 13:34	-0.05	6.13	-0.06	1.1821
6/4/2011 13:39	-0.05	6.10	-0.06	1.1875
6/4/2011 13:44	-0.05	6.11	-0.06	1.1890
6/4/2011 13:49	-0.06	6.13	-0.05	1.1769
6/4/2011 13:54	-0.05	6.13	-0.05	1.1582
6/4/2011 13:59	-0.05	6.13	-0.05	1.1454
6/4/2011 14:04	-0.05	6.13	-0.06	1.1346
6/4/2011 14:09	-0.07	6.16	-0.06	1.2208
6/4/2011 14:14	-0.09	6.15	-0.07	1.2514
6/4/2011 14:19	-0.10	6.14	-0.07	1.2714
6/4/2011 14:24	-0.10	6.14	-0.07	1.2730

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 10:25	4.07	23.42	0.000
6/4/2011 10:30	4.07	20.69	0.009
6/4/2011 10:35	4.06	20.04	0.018
6/4/2011 10:40	4.06	19.84	0.019
6/4/2011 10:45	4.06	19.78	0.022
6/4/2011 10:50	4.21	19.76	0.314
6/4/2011 10:55	4.26	19.75	0.428
6/4/2011 11:00	4.28	19.76	0.49
6/4/2011 11:05	4.30	19.76	0.537
6/4/2011 11:10	4.32	19.75	0.57
6/4/2011 11:15	4.33	19.75	0.596
6/4/2011 11:20	4.34	19.72	0.611
6/4/2011 11:25	4.34	19.71	0.618
6/4/2011 11:30	4.34	19.70	0.624
6/4/2011 11:35	4.35	19.69	0.638
6/4/2011 11:40	4.35	19.68	0.638
6/4/2011 11:45	4.35	19.69	0.645
6/4/2011 11:50	4.35	19.70	0.649
6/4/2011 11:55	4.35	19.70	0.651
6/4/2011 12:00	4.35	19.70	0.65
6/4/2011 12:05	4.36	19.69	0.659
6/4/2011 12:10	4.35	19.69	0.654
6/4/2011 12:15	4.36	19.69	0.656
6/4/2011 12:20	4.36	19.67	0.656
6/4/2011 12:25	4.36	19.66	0.658
6/4/2011 12:30	4.36	19.64	0.66
6/4/2011 12:35	4.36	19.63	0.662
6/4/2011 12:40	4.36	19.64	0.664
6/4/2011 12:45	4.36	19.65	0.663
6/4/2011 12:50	4.36	19.65	0.666
6/4/2011 12:55	4.36	19.66	0.662
6/4/2011 13:00	4.36	19.68	0.667
6/4/2011 13:05	4.36	19.64	0.666
6/4/2011 13:10	4.36	19.63	0.664
6/4/2011 13:15	4.36	19.65	0.669
6/4/2011 13:20	4.32	19.64	0.565
6/4/2011 13:25	4.18	19.64	0.245
6/4/2011 13:30	4.15	19.62	0.179
6/4/2011 13:35	4.13	19.63	0.14
6/4/2011 13:40	4.12	19.64	0.107
6/4/2011 13:45	4.11	19.64	0.091
6/4/2011 13:50	4.10	19.65	0.075
6/4/2011 13:55	4.10	19.66	0.06
6/4/2011 14:00	4.09	19.65	0.049
6/4/2011 14:05	4.09	19.64	0.041
6/4/2011 14:10	4.25	19.66	0.421
6/4/2011 14:15	4.30	19.69	0.52
6/4/2011 14:20	4.32	19.70	0.574
6/4/2011 14:25	4.33	19.71	0.607

TABLE C.20
Monitoring Well Data for 52GW78

Monitoring Well ID: **52GW78**
Injection Well ID: IW05
Distance to Injection Well: 14.25-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/4/2011 14:29	-0.10	6.14	-0.07	1.2751
6/4/2011 14:34	-0.10	6.14	-0.07	1.2760
6/4/2011 14:39	-0.11	6.14	-0.06	1.2704
6/4/2011 14:44	-0.11	6.13	-0.06	1.2735
6/4/2011 14:49	-0.10	6.14	-0.06	1.2741
6/4/2011 14:54	-0.09	6.15	-0.06	1.2662
6/4/2011 14:59	-0.10	6.13	-0.06	1.2705
6/4/2011 15:04	-0.11	6.13	-0.06	1.2590
6/4/2011 15:09	-0.11	6.13	-0.06	1.2554
6/4/2011 15:14	-0.11	6.12	-0.06	1.2590
6/4/2011 15:19	-0.11	6.12	-0.06	1.2599
6/4/2011 15:24	-0.11	6.11	-0.06	1.2558
6/4/2011 15:29	-0.11	6.12	-0.06	1.2530
6/4/2011 15:34	-0.12	6.12	-0.06	1.2438
6/4/2011 15:39	-0.11	6.11	-0.06	1.2479
6/4/2011 15:44	-0.11	6.10	-0.06	1.2362
6/4/2011 15:49	-0.12	6.10	-0.06	1.2256
6/4/2011 15:54	-0.11	6.10	-0.06	1.2190
6/4/2011 15:59	-0.10	6.10	-0.06	1.2108
6/4/2011 16:04	-0.09	6.09	-0.06	1.2196
6/4/2011 16:09	-0.09	6.08	-0.06	1.1953
6/4/2011 16:14	-0.08	6.08	-0.06	1.1889
6/4/2011 16:19	-0.08	6.08	-0.06	1.1823
6/4/2011 16:24	-0.08	6.07	-0.07	1.1778
6/4/2011 16:29	-0.08	6.07	-0.06	1.1702
6/4/2011 16:34	-0.08	6.07	-0.07	1.1737
6/4/2011 16:39	-0.09	6.07	-0.07	1.1669
6/4/2011 16:44	-0.10	6.10	-0.07	1.2074

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/4/2011 14:30	4.34	19.71	0.626
6/4/2011 14:35	4.35	19.70	0.637
6/4/2011 14:40	4.35	19.68	0.644
6/4/2011 14:45	4.35	19.69	0.651
6/4/2011 14:50	4.36	19.70	0.658
6/4/2011 14:55	4.36	19.71	0.661
6/4/2011 15:00	4.36	19.71	0.662
6/4/2011 15:05	4.36	19.70	0.664
6/4/2011 15:10	4.36	19.69	0.672
6/4/2011 15:15	4.36	19.70	0.674
6/4/2011 15:20	4.36	19.69	0.671
6/4/2011 15:25	4.36	19.69	0.671
6/4/2011 15:30	4.36	19.66	0.671
6/4/2011 15:35	4.36	19.67	0.676
6/4/2011 15:40	4.36	19.67	0.669
6/4/2011 15:45	4.36	19.68	0.671
6/4/2011 15:50	4.36	19.68	0.672
6/4/2011 15:55	4.36	19.66	0.668
6/4/2011 16:00	4.36	19.67	0.67
6/4/2011 16:05	4.36	19.66	0.672
6/4/2011 16:10	4.36	19.65	0.671
6/4/2011 16:15	4.36	19.65	0.67
6/4/2011 16:20	4.36	19.64	0.67
6/4/2011 16:25	4.36	19.62	0.667
6/4/2011 16:30	4.36	19.61	0.667
6/4/2011 16:35	4.36	19.60	0.671
6/4/2011 16:40	4.37	19.61	0.694
6/4/2011 16:45	4.19	19.61	0.275

TABLE C.21
Injection Summary for IW06

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/5/2011 6:45	IW06	0	Begin Injecting SRS - Batch 1/2.
6/5/2011 9:15	IW06	4162	Finish Injecting SRS - Batch 1/2.
6/5/2011 10:45	IW06	4162	Begin Injecting SRS - Batch 2/2.
6/5/2011 13:30	IW06	8274	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW06	35 - 50	52GW77	14.7	22 - 32	bottom
		IW08	25	30 - 45	middle
		52GW78	17.4	38 - 48	middle

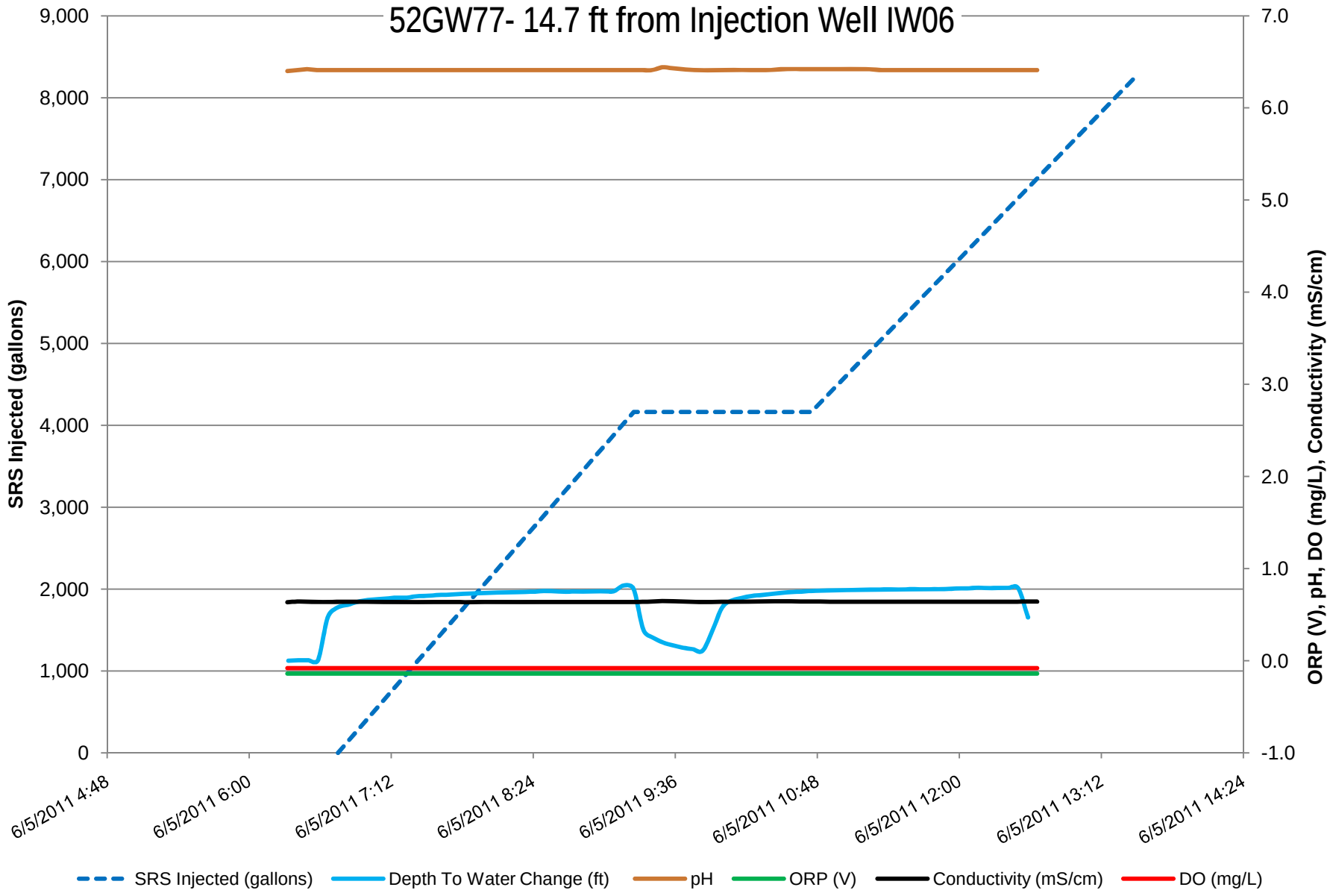

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Figure C.16
SRS Injection Data Timeline - 52GW77

TABLE C.21
Monitoring Well Data for 52GW77

Monitoring Well ID: **52GW77**
Injection Well ID: IW06
Distance to Injection Well: 14.7-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/5/2011 6:19	-0.14	6.40	-0.08	0.6342
6/5/2011 6:24	-0.14	6.41	-0.08	0.6421
6/5/2011 6:29	-0.14	6.42	-0.08	0.6402
6/5/2011 6:34	-0.14	6.41	-0.08	0.6378
6/5/2011 6:39	-0.14	6.41	-0.08	0.6375
6/5/2011 6:44	-0.14	6.41	-0.08	0.6392
6/5/2011 6:49	-0.14	6.41	-0.08	0.6397
6/5/2011 6:54	-0.14	6.41	-0.08	0.6402
6/5/2011 6:59	-0.14	6.41	-0.08	0.6387
6/5/2011 7:04	-0.14	6.41	-0.08	0.6373
6/5/2011 7:09	-0.14	6.41	-0.08	0.6370
6/5/2011 7:14	-0.14	6.41	-0.08	0.6366
6/5/2011 7:19	-0.14	6.41	-0.08	0.6363
6/5/2011 7:24	-0.14	6.41	-0.08	0.6361
6/5/2011 7:29	-0.14	6.41	-0.08	0.6356
6/5/2011 7:34	-0.14	6.41	-0.08	0.6358
6/5/2011 7:39	-0.14	6.41	-0.08	0.6361
6/5/2011 7:44	-0.14	6.41	-0.08	0.6363
6/5/2011 7:49	-0.14	6.41	-0.08	0.6353
6/5/2011 7:54	-0.14	6.41	-0.08	0.6363
6/5/2011 7:59	-0.14	6.41	-0.08	0.6361
6/5/2011 8:04	-0.14	6.41	-0.08	0.6368
6/5/2011 8:09	-0.14	6.41	-0.08	0.6365
6/5/2011 8:14	-0.14	6.41	-0.08	0.6368
6/5/2011 8:19	-0.14	6.41	-0.08	0.6370
6/5/2011 8:24	-0.14	6.41	-0.08	0.6368
6/5/2011 8:29	-0.14	6.41	-0.08	0.6375
6/5/2011 8:34	-0.14	6.41	-0.08	0.6375
6/5/2011 8:39	-0.14	6.41	-0.08	0.6377
6/5/2011 8:44	-0.14	6.41	-0.08	0.6377
6/5/2011 8:49	-0.14	6.41	-0.08	0.6380
6/5/2011 8:54	-0.14	6.41	-0.08	0.6375
6/5/2011 8:59	-0.14	6.41	-0.08	0.6377
6/5/2011 9:04	-0.14	6.41	-0.08	0.6377
6/5/2011 9:09	-0.14	6.41	-0.08	0.6384
6/5/2011 9:14	-0.14	6.41	-0.08	0.6382
6/5/2011 9:19	-0.14	6.41	-0.08	0.6387
6/5/2011 9:24	-0.14	6.41	-0.08	0.6430
6/5/2011 9:29	-0.14	6.44	-0.08	0.6484
6/5/2011 9:34	-0.14	6.43	-0.08	0.6455
6/5/2011 9:39	-0.14	6.42	-0.08	0.6426
6/5/2011 9:44	-0.14	6.41	-0.08	0.6401
6/5/2011 9:49	-0.14	6.41	-0.08	0.6375
6/5/2011 9:54	-0.14	6.41	-0.08	0.6382
6/5/2011 9:59	-0.14	6.41	-0.08	0.6387
6/5/2011 10:04	-0.14	6.41	-0.08	0.6392
6/5/2011 10:09	-0.14	6.41	-0.08	0.6404
6/5/2011 10:14	-0.14	6.41	-0.08	0.6421
6/5/2011 10:19	-0.14	6.41	-0.08	0.6435

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/5/2011 6:19	4.899	19.343	0.000
6/5/2011 6:24	4.897	19.349	0.006
6/5/2011 6:29	4.897	19.345	0.006
6/5/2011 6:34	4.897	19.348	0.005
6/5/2011 6:39	5.105	19.359	0.474
6/5/2011 6:44	5.150	19.365	0.579
6/5/2011 6:49	5.162	19.368	0.607
6/5/2011 6:54	5.177	19.383	0.64
6/5/2011 6:59	5.184	19.400	0.658
6/5/2011 7:04	5.189	19.416	0.668
6/5/2011 7:09	5.193	19.426	0.677
6/5/2011 7:14	5.197	19.437	0.686
6/5/2011 7:19	5.196	19.458	0.685
6/5/2011 7:24	5.203	19.444	0.701
6/5/2011 7:29	5.205	19.445	0.705
6/5/2011 7:34	5.208	19.446	0.713
6/5/2011 7:39	5.210	19.454	0.717
6/5/2011 7:44	5.212	19.461	0.721
6/5/2011 7:49	5.215	19.467	0.729
6/5/2011 7:54	5.217	19.462	0.733
6/5/2011 7:59	5.219	19.465	0.737
6/5/2011 8:04	5.220	19.471	0.74
6/5/2011 8:09	5.221	19.471	0.743
6/5/2011 8:14	5.222	19.473	0.745
6/5/2011 8:19	5.223	19.474	0.748
6/5/2011 8:24	5.225	19.480	0.751
6/5/2011 8:29	5.227	19.483	0.757
6/5/2011 8:34	5.227	19.482	0.755
6/5/2011 8:39	5.224	19.486	0.749
6/5/2011 8:44	5.226	19.490	0.753
6/5/2011 8:49	5.225	19.493	0.752
6/5/2011 8:54	5.225	19.494	0.752
6/5/2011 8:59	5.226	19.497	0.755
6/5/2011 9:04	5.226	19.507	0.755
6/5/2011 9:09	5.254	19.504	0.818
6/5/2011 9:14	5.238	19.513	0.781
6/5/2011 9:19	5.044	19.465	0.335
6/5/2011 9:24	5.007	19.400	0.249
6/5/2011 9:29	4.985	19.378	0.198
6/5/2011 9:34	4.972	19.368	0.167
6/5/2011 9:39	4.961	19.364	0.142
6/5/2011 9:44	4.954	19.361	0.126
6/5/2011 9:49	4.946	19.358	0.109
6/5/2011 9:54	5.042	19.362	0.328
6/5/2011 9:59	5.151	19.374	0.581
6/5/2011 10:04	5.183	19.384	0.655
6/5/2011 10:09	5.195	19.392	0.683
6/5/2011 10:14	5.204	19.412	0.704
6/5/2011 10:19	5.209	19.427	0.714

TABLE C.21
Monitoring Well Data for 52GW77

Monitoring Well ID:	**52GW77**
Injection Well ID:	IW06
Distance to Injection Well:	14.7-ft

In-Situ Inc.	Troll 9500
Serial number:	48057
Test started on:	6/4/2011
Test stopped on:	6/4/2011
Time Between Data Points:	5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/5/2011 10:24	-0.14	6.41	-0.08	0.6452
6/5/2011 10:29	-0.14	6.42	-0.08	0.6457
6/5/2011 10:34	-0.14	6.42	-0.08	0.6455
6/5/2011 10:39	-0.14	6.42	-0.08	0.6443
6/5/2011 10:44	-0.14	6.42	-0.08	0.6430
6/5/2011 10:49	-0.14	6.42	-0.08	0.6418
6/5/2011 10:54	-0.14	6.42	-0.08	0.6404
6/5/2011 10:59	-0.14	6.42	-0.08	0.6396
6/5/2011 11:04	-0.14	6.42	-0.08	0.6399
6/5/2011 11:09	-0.14	6.42	-0.08	0.6399
6/5/2011 11:14	-0.14	6.42	-0.08	0.6399
6/5/2011 11:19	-0.14	6.41	-0.08	0.6396
6/5/2011 11:24	-0.14	6.41	-0.08	0.6394
6/5/2011 11:29	-0.14	6.41	-0.08	0.6396
6/5/2011 11:34	-0.14	6.41	-0.08	0.6399
6/5/2011 11:39	-0.14	6.41	-0.08	0.6404
6/5/2011 11:44	-0.14	6.41	-0.08	0.6404
6/5/2011 11:49	-0.14	6.41	-0.08	0.6406
6/5/2011 11:54	-0.14	6.41	-0.08	0.6403
6/5/2011 11:59	-0.14	6.41	-0.08	0.6411
6/5/2011 12:04	-0.14	6.41	-0.08	0.6416
6/5/2011 12:09	-0.14	6.41	-0.08	0.6413
6/5/2011 12:14	-0.14	6.41	-0.08	0.6411
6/5/2011 12:19	-0.14	6.41	-0.08	0.6413
6/5/2011 12:24	-0.14	6.41	-0.08	0.6418
6/5/2011 12:29	-0.14	6.41	-0.08	0.6413
6/5/2011 12:34	-0.14	6.41	-0.08	0.6425
6/5/2011 12:39	-0.14	6.41	-0.08	0.6416

In-Situ Inc.	Level Troll 700
Serial number:	134221
Test started on:	6/4/2011
Test stopped on:	6/4/2011
Time Between Data Points:	5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/5/2011 10:24	5.214	19.438	0.727
6/5/2011 10:29	5.219	19.446	0.737
6/5/2011 10:34	5.223	19.457	0.747
6/5/2011 10:39	5.224	19.464	0.75
6/5/2011 10:44	5.228	19.471	0.758
6/5/2011 10:49	5.228	19.486	0.76
6/5/2011 10:54	5.231	19.495	0.765
6/5/2011 10:59	5.231	19.513	0.766
6/5/2011 11:04	5.232	19.522	0.769
6/5/2011 11:09	5.234	19.530	0.771
6/5/2011 11:14	5.234	19.531	0.772
6/5/2011 11:19	5.234	19.537	0.774
6/5/2011 11:24	5.236	19.533	0.776
6/5/2011 11:29	5.234	19.535	0.772
6/5/2011 11:34	5.236	19.536	0.778
6/5/2011 11:39	5.236	19.541	0.777
6/5/2011 11:44	5.236	19.549	0.777
6/5/2011 11:49	5.237	19.556	0.779
6/5/2011 11:54	5.237	19.559	0.78
6/5/2011 11:59	5.240	19.558	0.786
6/5/2011 12:04	5.240	19.560	0.786
6/5/2011 12:09	5.243	19.557	0.794
6/5/2011 12:14	5.241	19.562	0.789
6/5/2011 12:19	5.242	19.558	0.792
6/5/2011 12:24	5.242	19.564	0.792
6/5/2011 12:29	5.241	19.563	0.788
6/5/2011 12:34	5.103	19.566	0.47

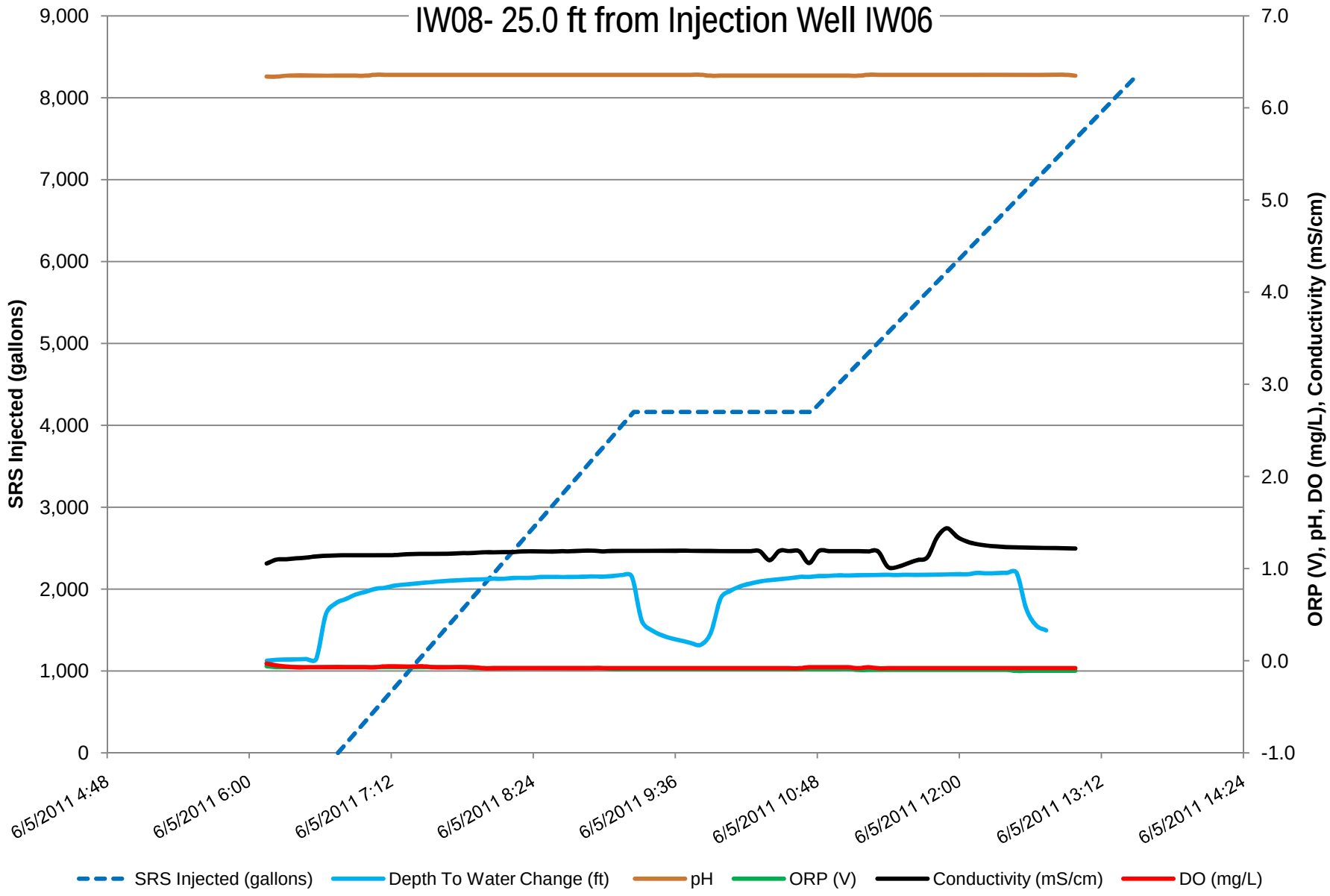

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Figure C.17
SRS Injection Data Timeline - IW08

TABLE C.22
Monitoring Well Data for IW08

Monitoring Well ID: **IW08**
Injection Well ID: IW06
Distance to Injection Well: 25-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/5/2011 6:08	-0.06	6.34	-0.03	1.0550
6/5/2011 6:13	-0.07	6.34	-0.05	1.0979
6/5/2011 6:18	-0.07	6.35	-0.06	1.1024
6/5/2011 6:23	-0.07	6.35	-0.07	1.1115
6/5/2011 6:28	-0.07	6.35	-0.07	1.1193
6/5/2011 6:33	-0.07	6.35	-0.07	1.1335
6/5/2011 6:38	-0.07	6.35	-0.07	1.1404
6/5/2011 6:43	-0.07	6.35	-0.07	1.1439
6/5/2011 6:48	-0.07	6.35	-0.07	1.1450
6/5/2011 6:53	-0.07	6.35	-0.07	1.1465
6/5/2011 6:58	-0.07	6.35	-0.07	1.1465
6/5/2011 7:03	-0.07	6.36	-0.07	1.1463
6/5/2011 7:08	-0.07	6.36	-0.06	1.1471
6/5/2011 7:13	-0.07	6.36	-0.06	1.1474
6/5/2011 7:18	-0.07	6.36	-0.06	1.1567
6/5/2011 7:23	-0.07	6.36	-0.06	1.1600
6/5/2011 7:28	-0.07	6.36	-0.06	1.1600
6/5/2011 7:33	-0.07	6.36	-0.07	1.1619
6/5/2011 7:38	-0.07	6.36	-0.07	1.1625
6/5/2011 7:43	-0.07	6.36	-0.07	1.1634
6/5/2011 7:48	-0.07	6.36	-0.07	1.1688
6/5/2011 7:53	-0.08	6.36	-0.07	1.1694
6/5/2011 7:58	-0.08	6.36	-0.08	1.1781
6/5/2011 8:03	-0.08	6.36	-0.08	1.1776
6/5/2011 8:08	-0.08	6.36	-0.08	1.1786
6/5/2011 8:13	-0.08	6.36	-0.08	1.1794
6/5/2011 8:18	-0.08	6.36	-0.08	1.1887
6/5/2011 8:23	-0.08	6.36	-0.08	1.1867
6/5/2011 8:28	-0.08	6.36	-0.08	1.1875
6/5/2011 8:33	-0.08	6.36	-0.08	1.1860
6/5/2011 8:38	-0.08	6.36	-0.08	1.1888
6/5/2011 8:43	-0.08	6.36	-0.08	1.1888
6/5/2011 8:48	-0.08	6.36	-0.08	1.1961
6/5/2011 8:53	-0.08	6.36	-0.08	1.1949
6/5/2011 8:58	-0.08	6.36	-0.08	1.1886
6/5/2011 9:03	-0.09	6.36	-0.08	1.1921
6/5/2011 9:08	-0.09	6.36	-0.08	1.1938
6/5/2011 9:13	-0.09	6.36	-0.08	1.1928
6/5/2011 9:18	-0.09	6.36	-0.08	1.1923
6/5/2011 9:23	-0.09	6.36	-0.08	1.1943
6/5/2011 9:28	-0.09	6.36	-0.08	1.1934
6/5/2011 9:33	-0.09	6.36	-0.08	1.1929
6/5/2011 9:38	-0.09	6.36	-0.08	1.1943
6/5/2011 9:43	-0.09	6.36	-0.08	1.1936
6/5/2011 9:48	-0.09	6.36	-0.08	1.1939
6/5/2011 9:53	-0.09	6.35	-0.08	1.1915
6/5/2011 9:58	-0.09	6.35	-0.08	1.1909
6/5/2011 10:03	-0.09	6.35	-0.08	1.1900
6/5/2011 10:08	-0.09	6.35	-0.08	1.1892

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/5/2011 6:09	8.974	19.449	0
6/5/2011 6:14	8.979	19.345	0.01
6/5/2011 6:19	8.98	19.329	0.013
6/5/2011 6:24	8.98	19.318	0.014
6/5/2011 6:29	8.982	19.319	0.017
6/5/2011 6:34	8.983	19.341	0.02
6/5/2011 6:39	9.194	19.33	0.509
6/5/2011 6:44	9.244	19.325	0.624
6/5/2011 6:49	9.264	19.336	0.669
6/5/2011 6:54	9.286	19.349	0.719
6/5/2011 6:59	9.298	19.36	0.747
6/5/2011 7:04	9.312	19.373	0.78
6/5/2011 7:09	9.317	19.385	0.792
6/5/2011 7:14	9.327	19.388	0.816
6/5/2011 7:19	9.332	19.398	0.827
6/5/2011 7:24	9.337	19.405	0.837
6/5/2011 7:29	9.341	19.414	0.846
6/5/2011 7:34	9.345	19.425	0.856
6/5/2011 7:39	9.348	19.426	0.864
6/5/2011 7:44	9.352	19.434	0.872
6/5/2011 7:49	9.354	19.439	0.878
6/5/2011 7:54	9.354	19.454	0.878
6/5/2011 7:59	9.356	19.452	0.883
6/5/2011 8:04	9.36	19.458	0.89
6/5/2011 8:09	9.359	19.463	0.889
6/5/2011 8:14	9.363	19.463	0.899
6/5/2011 8:19	9.364	19.473	0.899
6/5/2011 8:24	9.365	19.479	0.902
6/5/2011 8:29	9.368	19.48	0.91
6/5/2011 8:34	9.368	19.49	0.91
6/5/2011 8:39	9.367	19.495	0.908
6/5/2011 8:44	9.368	19.502	0.91
6/5/2011 8:49	9.369	19.504	0.911
6/5/2011 8:54	9.37	19.505	0.915
6/5/2011 8:59	9.369	19.528	0.912
6/5/2011 9:04	9.372	19.512	0.918
6/5/2011 9:09	9.377	19.519	0.93
6/5/2011 9:14	9.369	19.525	0.913
6/5/2011 9:19	9.162	19.503	0.434
6/5/2011 9:24	9.118	19.469	0.331
6/5/2011 9:29	9.094	19.454	0.278
6/5/2011 9:34	9.079	19.422	0.242
6/5/2011 9:39	9.069	19.409	0.218
6/5/2011 9:44	9.057	19.405	0.191
6/5/2011 9:49	9.049	19.391	0.173
6/5/2011 9:54	9.105	19.39	0.302
6/5/2011 9:59	9.267	19.374	0.677
6/5/2011 10:04	9.303	19.378	0.759
6/5/2011 10:09	9.324	19.391	0.808

TABLE C.22
Monitoring Well Data for IW08

Monitoring Well ID: **IW08**
Injection Well ID: IW06
Distance to Injection Well: 25-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/5/2011 10:13	-0.09	6.35	-0.08	1.1896
6/5/2011 10:18	-0.09	6.35	-0.08	1.1897
6/5/2011 10:23	-0.09	6.35	-0.08	1.0914
6/5/2011 10:28	-0.09	6.35	-0.08	1.1931
6/5/2011 10:33	-0.09	6.35	-0.08	1.1907
6/5/2011 10:38	-0.09	6.35	-0.08	1.1887
6/5/2011 10:43	-0.09	6.35	-0.07	1.0605
6/5/2011 10:48	-0.09	6.35	-0.07	1.1925
6/5/2011 10:53	-0.09	6.35	-0.07	1.1906
6/5/2011 10:58	-0.09	6.35	-0.07	1.1905
6/5/2011 11:03	-0.09	6.35	-0.07	1.1894
6/5/2011 11:08	-0.10	6.35	-0.08	1.1888
6/5/2011 11:13	-0.10	6.36	-0.07	1.1878
6/5/2011 11:18	-0.10	6.36	-0.08	1.1866
6/5/2011 11:23	-0.10	6.36	-0.08	1.0176
6/5/2011 11:28	-0.10	6.36	-0.08	1.0193
6/5/2011 11:33	-0.10	6.36	-0.08	1.0569
6/5/2011 11:38	-0.10	6.36	-0.08	1.0935
6/5/2011 11:43	-0.10	6.36	-0.08	1.1237
6/5/2011 11:48	-0.10	6.36	-0.08	1.3441
6/5/2011 11:53	-0.10	6.36	-0.08	1.4394
6/5/2011 11:58	-0.10	6.36	-0.08	1.3471
6/5/2011 12:03	-0.10	6.36	-0.08	1.2951
6/5/2011 12:08	-0.10	6.36	-0.08	1.2664
6/5/2011 12:13	-0.10	6.36	-0.08	1.2497
6/5/2011 12:18	-0.10	6.36	-0.08	1.2412
6/5/2011 12:23	-0.10	6.36	-0.08	1.2351
6/5/2011 12:28	-0.11	6.36	-0.08	1.2310
6/5/2011 12:33	-0.11	6.36	-0.08	1.2288
6/5/2011 12:38	-0.11	6.36	-0.08	1.2258
6/5/2011 12:43	-0.11	6.36	-0.08	1.2244
6/5/2011 12:48	-0.11	6.36	-0.08	1.2235
6/5/2011 12:53	-0.11	6.36	-0.08	1.2221
6/5/2011 12:58	-0.11	6.35	-0.08	1.2193

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/5/2011 10:14	9.336	19.414	0.837
6/5/2011 10:19	9.346	19.427	0.86
6/5/2011 10:24	9.353	19.448	0.876
6/5/2011 10:29	9.357	19.456	0.883
6/5/2011 10:34	9.363	19.47	0.897
6/5/2011 10:39	9.368	19.47	0.91
6/5/2011 10:44	9.368	19.477	0.91
6/5/2011 10:49	9.372	19.488	0.919
6/5/2011 10:54	9.373	19.497	0.921
6/5/2011 10:59	9.376	19.502	0.927
6/5/2011 11:04	9.374	19.513	0.924
6/5/2011 11:09	9.377	19.525	0.929
6/5/2011 11:14	9.376	19.509	0.928
6/5/2011 11:19	9.378	19.509	0.932
6/5/2011 11:24	9.378	19.518	0.932
6/5/2011 11:29	9.377	19.549	0.931
6/5/2011 11:34	9.378	19.556	0.933
6/5/2011 11:39	9.378	19.543	0.933
6/5/2011 11:44	9.379	19.544	0.934
6/5/2011 11:49	9.379	19.545	0.934
6/5/2011 11:54	9.38	19.56	0.937
6/5/2011 11:59	9.381	19.558	0.94
6/5/2011 12:04	9.381	19.561	0.938
6/5/2011 12:09	9.387	19.568	0.954
6/5/2011 12:14	9.385	19.567	0.948
6/5/2011 12:19	9.387	19.572	0.952
6/5/2011 12:24	9.387	19.568	0.953
6/5/2011 12:29	9.387	19.576	0.953
6/5/2011 12:34	9.215	19.58	0.556
6/5/2011 12:39	9.14	19.517	0.382
6/5/2011 12:44	9.117	19.488	0.329

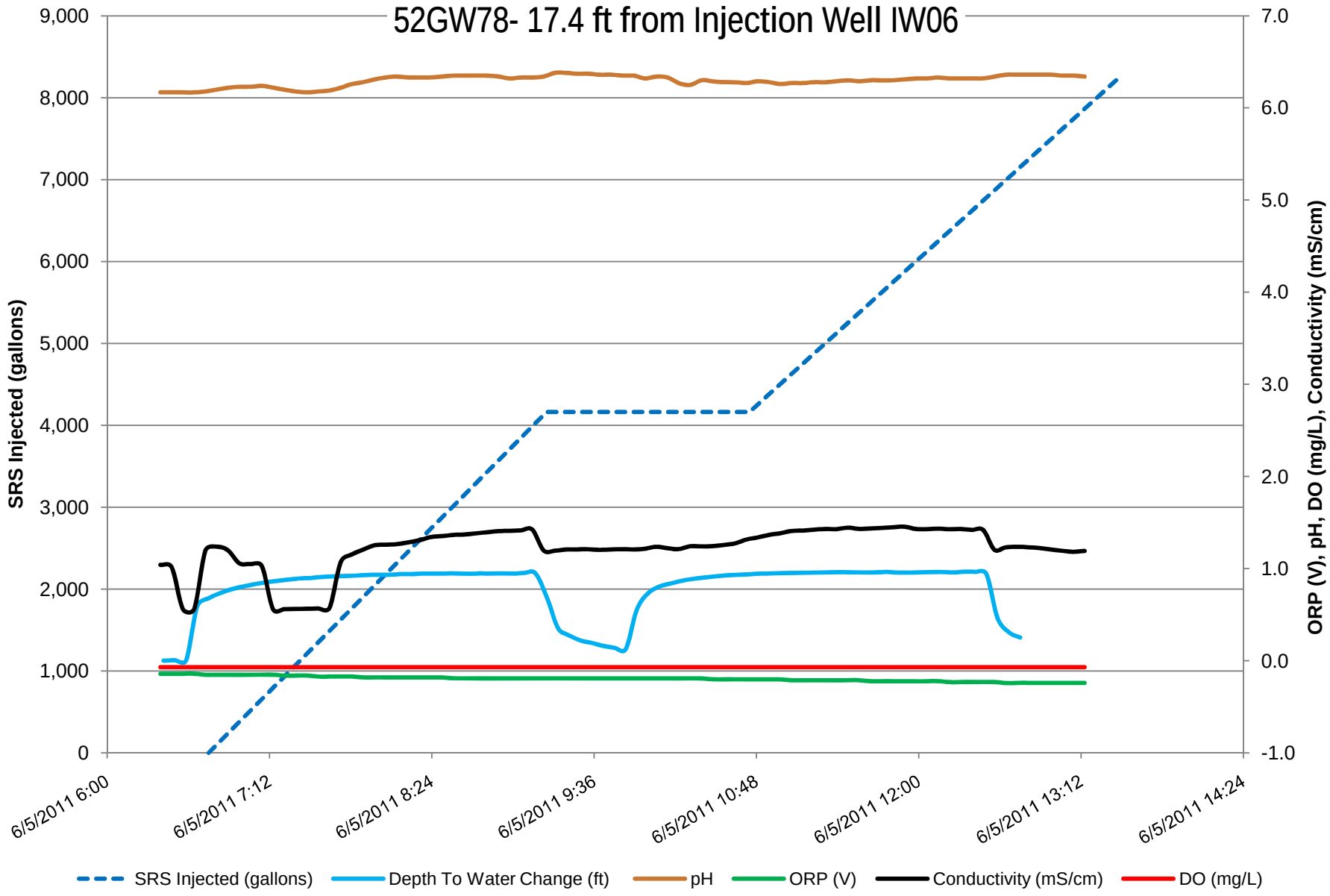

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Figure C.18
SRS Injection Data Timeline - 52GW78

TABLE C.23
Monitoring Well Data for 52GW78

Monitoring Well ID: **52GW78**
Injection Well ID: IW06
Distance to Injection Well: 17.4-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/5/2011 6:23	-0.14	6.17	-0.07	1.0412
6/5/2011 6:28	-0.14	6.17	-0.07	1.0158
6/5/2011 6:33	-0.14	6.17	-0.07	0.5601
6/5/2011 6:38	-0.14	6.17	-0.07	0.5632
6/5/2011 6:43	-0.15	6.18	-0.07	1.1963
6/5/2011 6:48	-0.15	6.20	-0.07	1.2376
6/5/2011 6:53	-0.15	6.22	-0.07	1.1971
6/5/2011 6:58	-0.15	6.23	-0.07	1.0578
6/5/2011 7:03	-0.15	6.23	-0.07	1.0495
6/5/2011 7:08	-0.15	6.24	-0.07	1.0281
6/5/2011 7:13	-0.15	6.22	-0.07	0.5583
6/5/2011 7:18	-0.16	6.20	-0.07	0.5615
6/5/2011 7:23	-0.16	6.18	-0.07	0.5633
6/5/2011 7:28	-0.16	6.17	-0.07	0.5663
6/5/2011 7:33	-0.17	6.18	-0.07	0.5678
6/5/2011 7:38	-0.17	6.19	-0.07	0.5743
6/5/2011 7:43	-0.17	6.22	-0.07	1.0722
6/5/2011 7:48	-0.17	6.26	-0.07	1.1548
6/5/2011 7:53	-0.18	6.28	-0.07	1.2068
6/5/2011 7:58	-0.18	6.31	-0.07	1.2530
6/5/2011 8:03	-0.18	6.33	-0.07	1.2591
6/5/2011 8:08	-0.18	6.34	-0.07	1.2653
6/5/2011 8:13	-0.18	6.33	-0.07	1.2853
6/5/2011 8:18	-0.18	6.33	-0.07	1.3076
6/5/2011 8:23	-0.18	6.33	-0.07	1.3418
6/5/2011 8:28	-0.18	6.34	-0.07	1.3528
6/5/2011 8:33	-0.19	6.35	-0.07	1.3655
6/5/2011 8:38	-0.19	6.35	-0.07	1.3690
6/5/2011 8:43	-0.19	6.35	-0.07	1.3829
6/5/2011 8:48	-0.19	6.35	-0.07	1.3938
6/5/2011 8:53	-0.19	6.34	-0.07	1.4057
6/5/2011 8:58	-0.19	6.32	-0.07	1.4093
6/5/2011 9:03	-0.19	6.33	-0.07	1.4147
6/5/2011 9:08	-0.19	6.33	-0.07	1.4219
6/5/2011 9:13	-0.19	6.34	-0.07	1.1960
6/5/2011 9:18	-0.19	6.38	-0.07	1.1944
6/5/2011 9:23	-0.19	6.38	-0.07	1.2071
6/5/2011 9:28	-0.19	6.37	-0.07	1.2081
6/5/2011 9:33	-0.19	6.37	-0.07	1.2090
6/5/2011 9:38	-0.19	6.36	-0.07	1.2035
6/5/2011 9:43	-0.19	6.36	-0.07	1.2071
6/5/2011 9:48	-0.19	6.35	-0.07	1.2104
6/5/2011 9:53	-0.19	6.35	-0.07	1.2085
6/5/2011 9:58	-0.19	6.32	-0.07	1.2163
6/5/2011 10:03	-0.19	6.34	-0.07	1.2372
6/5/2011 10:08	-0.19	6.33	-0.07	1.2205
6/5/2011 10:13	-0.19	6.27	-0.07	1.2120
6/5/2011 10:18	-0.19	6.25	-0.07	1.2425
6/5/2011 10:23	-0.19	6.30	-0.07	1.2406

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/5/2011 6:25	4.052	19.648	0
6/5/2011 6:30	4.05	19.648	0.006
6/5/2011 6:35	4.051	19.661	0.002
6/5/2011 6:40	4.309	19.678	0.594
6/5/2011 6:45	4.345	19.703	0.678
6/5/2011 6:50	4.369	19.725	0.733
6/5/2011 6:55	4.388	19.73	0.775
6/5/2011 7:00	4.4	19.717	0.804
6/5/2011 7:05	4.411	19.663	0.83
6/5/2011 7:10	4.421	19.645	0.851
6/5/2011 7:15	4.426	19.682	0.865
6/5/2011 7:20	4.433	19.678	0.879
6/5/2011 7:25	4.439	19.664	0.893
6/5/2011 7:30	4.441	19.665	0.898
6/5/2011 7:35	4.446	19.678	0.91
6/5/2011 7:40	4.448	19.672	0.915
6/5/2011 7:45	4.451	19.643	0.921
6/5/2011 7:50	4.452	19.667	0.924
6/5/2011 7:55	4.455	19.689	0.93
6/5/2011 8:00	4.456	19.704	0.934
6/5/2011 8:05	4.457	19.698	0.934
6/5/2011 8:10	4.459	19.685	0.94
6/5/2011 8:15	4.459	19.691	0.941
6/5/2011 8:20	4.462	19.698	0.946
6/5/2011 8:25	4.462	19.696	0.946
6/5/2011 8:30	4.462	19.705	0.947
6/5/2011 8:35	4.462	19.696	0.948
6/5/2011 8:40	4.461	19.709	0.944
6/5/2011 8:45	4.462	19.706	0.948
6/5/2011 8:50	4.461	19.707	0.945
6/5/2011 8:55	4.463	19.704	0.949
6/5/2011 9:00	4.462	19.688	0.946
6/5/2011 9:05	4.465	19.682	0.953
6/5/2011 9:10	4.463	19.672	0.948
6/5/2011 9:15	4.351	19.692	0.691
6/5/2011 9:20	4.205	19.667	0.353
6/5/2011 9:25	4.171	19.653	0.274
6/5/2011 9:30	4.147	19.653	0.22
6/5/2011 9:35	4.136	19.686	0.193
6/5/2011 9:40	4.122	19.68	0.161
6/5/2011 9:45	4.112	19.669	0.14
6/5/2011 9:50	4.106	19.67	0.125
6/5/2011 9:55	4.294	19.666	0.558
6/5/2011 10:00	4.369	19.641	0.733
6/5/2011 10:05	4.401	19.626	0.806
6/5/2011 10:10	4.416	19.612	0.839
6/5/2011 10:15	4.428	19.6	0.869
6/5/2011 10:20	4.437	19.605	0.889
6/5/2011 10:25	4.444	19.604	0.904

TABLE C.23
Monitoring Well Data for 52GW78

Monitoring Well ID: **52GW78**
Injection Well ID: IW06
Distance to Injection Well: 17.4-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/5/2011 10:28	-0.20	6.29	-0.07	1.2448
6/5/2011 10:33	-0.20	6.28	-0.07	1.2566
6/5/2011 10:38	-0.20	6.28	-0.07	1.2738
6/5/2011 10:43	-0.20	6.27	-0.07	1.3155
6/5/2011 10:48	-0.20	6.29	-0.07	1.3379
6/5/2011 10:53	-0.20	6.28	-0.07	1.3652
6/5/2011 10:58	-0.20	6.26	-0.07	1.3840
6/5/2011 11:03	-0.21	6.27	-0.07	1.4080
6/5/2011 11:08	-0.21	6.27	-0.07	1.4123
6/5/2011 11:13	-0.21	6.28	-0.07	1.4211
6/5/2011 11:18	-0.21	6.28	-0.07	1.4298
6/5/2011 11:23	-0.21	6.29	-0.07	1.4280
6/5/2011 11:28	-0.21	6.30	-0.07	1.4439
6/5/2011 11:33	-0.21	6.29	-0.07	1.4305
6/5/2011 11:38	-0.22	6.30	-0.07	1.4345
6/5/2011 11:43	-0.22	6.30	-0.07	1.4412
6/5/2011 11:48	-0.22	6.30	-0.07	1.4487
6/5/2011 11:53	-0.22	6.31	-0.07	1.4542
6/5/2011 11:58	-0.22	6.32	-0.07	1.4298
6/5/2011 12:03	-0.22	6.32	-0.07	1.4278
6/5/2011 12:08	-0.22	6.33	-0.07	1.4327
6/5/2011 12:13	-0.23	6.32	-0.07	1.4261
6/5/2011 12:18	-0.23	6.32	-0.07	1.4290
6/5/2011 12:23	-0.23	6.32	-0.07	1.4197
6/5/2011 12:28	-0.23	6.32	-0.07	1.4181
6/5/2011 12:33	-0.23	6.34	-0.07	1.2042
6/5/2011 12:38	-0.24	6.36	-0.07	1.2313
6/5/2011 12:43	-0.24	6.36	-0.07	1.2365
6/5/2011 12:48	-0.24	6.36	-0.07	1.2312
6/5/2011 12:53	-0.24	6.36	-0.07	1.2223
6/5/2011 12:58	-0.24	6.36	-0.07	1.2085
6/5/2011 13:03	-0.24	6.35	-0.07	1.1932
6/5/2011 13:08	-0.24	6.35	-0.07	1.1824
6/5/2011 13:13	-0.24	6.34	-0.07	1.1913

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/4/2011
Test stopped on: 6/4/2011
Time Between Data Points: 5 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/5/2011 10:30	4.448	19.598	0.915
6/5/2011 10:35	4.454	19.597	0.929
6/5/2011 10:40	4.456	19.606	0.933
6/5/2011 10:45	4.459	19.612	0.939
6/5/2011 10:50	4.462	19.602	0.946
6/5/2011 10:55	4.462	19.602	0.948
6/5/2011 11:00	4.464	19.601	0.951
6/5/2011 11:05	4.465	19.6	0.953
6/5/2011 11:10	4.466	19.603	0.956
6/5/2011 11:15	4.466	19.609	0.957
6/5/2011 11:20	4.467	19.601	0.959
6/5/2011 11:25	4.469	19.596	0.963
6/5/2011 11:30	4.467	19.593	0.959
6/5/2011 11:35	4.468	19.601	0.96
6/5/2011 11:40	4.467	19.601	0.957
6/5/2011 11:45	4.469	19.592	0.964
6/5/2011 11:50	4.467	19.59	0.959
6/5/2011 11:55	4.466	19.592	0.956
6/5/2011 12:00	4.467	19.594	0.958
6/5/2011 12:05	4.469	19.599	0.963
6/5/2011 12:10	4.469	19.593	0.963
6/5/2011 12:15	4.467	19.588	0.959
6/5/2011 12:20	4.47	19.585	0.966
6/5/2011 12:25	4.47	19.594	0.965
6/5/2011 12:30	4.46	19.6	0.942
6/5/2011 12:35	4.251	19.605	0.46
6/5/2011 12:40	4.186	19.59	0.309
6/5/2011 12:45	4.161	19.6	0.252

TABLE C.25
Injection Summary for IW07

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/6/2011 6:28	IW07	0	Begin Injecting SRS - Batch 1/2.
6/6/2011 9:15	IW07	4,140	Finish Injecting SRS - Batch 1/2.
6/6/2011 9:53	IW07	4,135	Begin Injecting SRS - Batch 2/2.
6/6/2011 12:18	IW07	8,275	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW07	20 - 35	52GW78	15.0	38 - 48	top
		52GW79	14.7	38 - 48	top
		52GW80	16.0	22 - 32	middle

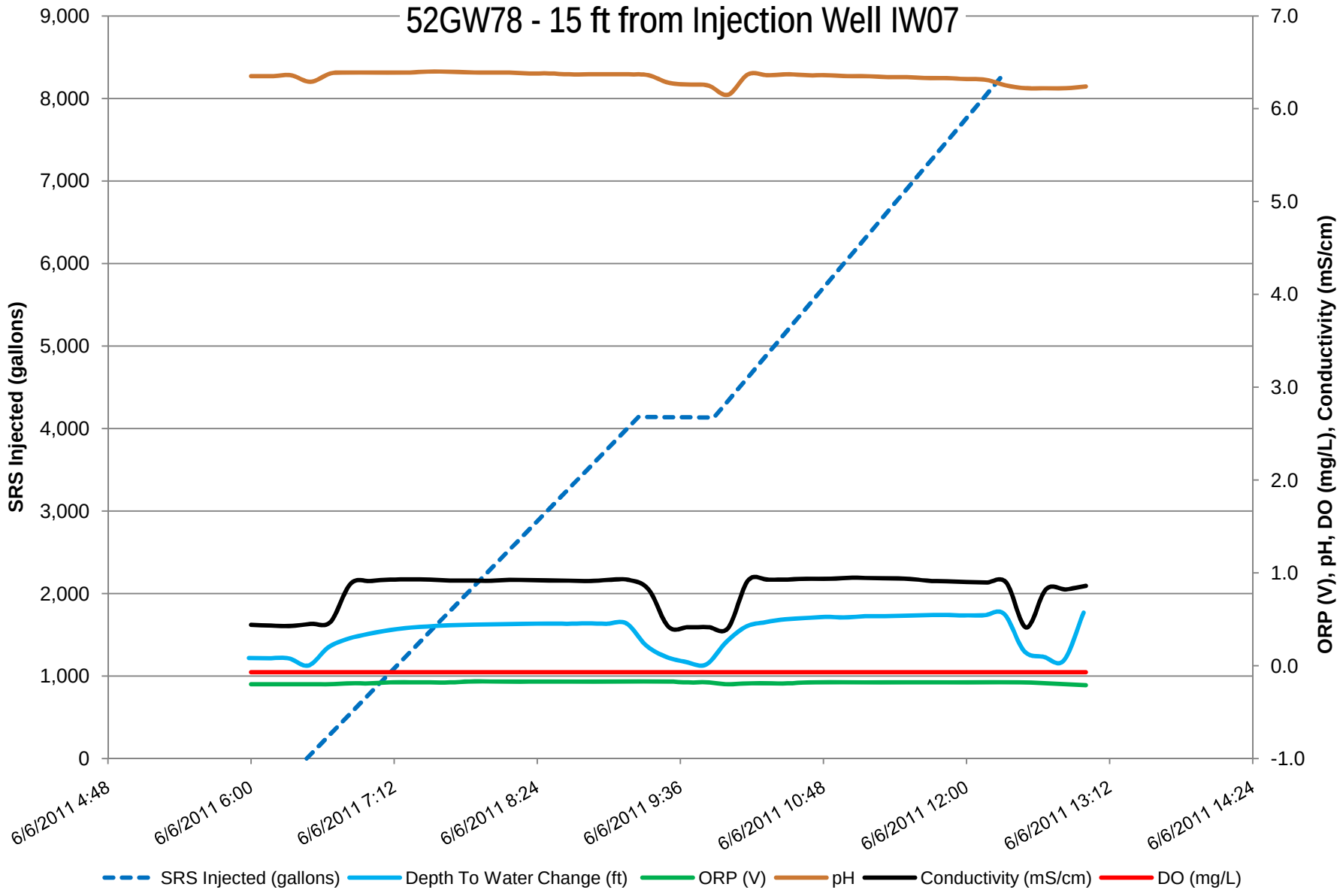

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Figure C.19
SRS Injection Data Timeline - 52GW78

TABLE C.26
Monitoring Well Data for 52GW78

Monitoring Well ID: **52GW78**
Injection Well ID: IW07
Distance to Injection Well: 15-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/6/2011 6:00	-0.20	6.35	-0.07	0.4423
6/6/2011 6:10	-0.20	6.35	-0.07	0.4340
6/6/2011 6:20	-0.20	6.36	-0.07	0.4293
6/6/2011 6:30	-0.20	6.29	-0.07	0.4526
6/6/2011 6:40	-0.20	6.38	-0.07	0.4749
6/6/2011 6:50	-0.19	6.39	-0.07	0.8834
6/6/2011 7:00	-0.19	6.39	-0.07	0.9147
6/6/2011 7:10	-0.18	6.39	-0.07	0.9287
6/6/2011 7:20	-0.18	6.39	-0.07	0.9312
6/6/2011 7:30	-0.18	6.40	-0.07	0.9297
6/6/2011 7:40	-0.18	6.40	-0.07	0.9196
6/6/2011 7:50	-0.17	6.39	-0.07	0.9192
6/6/2011 8:00	-0.17	6.39	-0.07	0.9162
6/6/2011 8:10	-0.17	6.39	-0.07	0.9262
6/6/2011 8:20	-0.17	6.38	-0.07	0.9249
6/6/2011 8:30	-0.17	6.38	-0.07	0.9193
6/6/2011 8:40	-0.17	6.37	-0.07	0.9175
6/6/2011 8:50	-0.17	6.37	-0.07	0.9145
6/6/2011 9:00	-0.17	6.37	-0.07	0.9255
6/6/2011 9:10	-0.17	6.37	-0.07	0.9264
6/6/2011 9:20	-0.17	6.36	-0.07	0.8236
6/6/2011 9:30	-0.17	6.28	-0.07	0.4211
6/6/2011 9:40	-0.18	6.26	-0.07	0.4170
6/6/2011 9:50	-0.18	6.25	-0.07	0.4171
6/6/2011 10:00	-0.20	6.15	-0.07	0.4071
6/6/2011 10:10	-0.19	6.37	-0.07	0.9188
6/6/2011 10:20	-0.19	6.36	-0.07	0.9290
6/6/2011 10:30	-0.19	6.37	-0.07	0.9287
6/6/2011 10:40	-0.18	6.36	-0.07	0.9392
6/6/2011 10:50	-0.18	6.36	-0.07	0.9368
6/6/2011 11:00	-0.18	6.35	-0.07	0.9479
6/6/2011 11:10	-0.18	6.35	-0.07	0.9477
6/6/2011 11:20	-0.18	6.34	-0.07	0.9422
6/6/2011 11:30	-0.18	6.34	-0.07	0.9390
6/6/2011 11:40	-0.18	6.33	-0.07	0.9178
6/6/2011 11:50	-0.18	6.33	-0.07	0.9103
6/6/2011 12:00	-0.18	6.32	-0.07	0.9035
6/6/2011 12:10	-0.18	6.31	-0.07	0.8987
6/6/2011 12:20	-0.18	6.25	-0.07	0.8964
6/6/2011 12:30	-0.18	6.22	-0.07	0.4129
6/6/2011 12:40	-0.19	6.22	-0.07	0.8256
6/6/2011 12:50	-0.20	6.22	-0.07	0.8241
6/6/2011 13:00	-0.21	6.24	-0.07	0.8622

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/6/2011 5:58	4.06	19.709	0.083
6/6/2011 6:08	4.061	19.686	0.081
6/6/2011 6:18	4.062	19.709	0.079
6/6/2011 6:28	4.096	19.704	0.002
6/6/2011 6:38	4.183	19.67	0.199
6/6/2011 6:48	4.222	19.629	0.291
6/6/2011 6:58	4.245	19.619	0.342
6/6/2011 7:08	4.261	19.612	0.381
6/6/2011 7:18	4.274	19.606	0.409
6/6/2011 7:28	4.28	19.617	0.424
6/6/2011 7:38	4.285	19.639	0.436
6/6/2011 7:48	4.287	19.624	0.441
6/6/2011 7:58	4.29	19.635	0.446
6/6/2011 8:08	4.291	19.654	0.449
6/6/2011 8:18	4.292	19.636	0.452
6/6/2011 8:28	4.294	19.622	0.455
6/6/2011 8:38	4.293	19.629	0.453
6/6/2011 8:48	4.295	19.632	0.458
6/6/2011 8:58	4.293	19.669	0.453
6/6/2011 9:08	4.294	19.663	0.456
6/6/2011 9:18	4.19	19.655	0.216
6/6/2011 9:28	4.137	19.645	0.095
6/6/2011 9:38	4.114	19.668	0.04
6/6/2011 9:48	4.102	19.664	0.012
6/6/2011 9:58	4.205	19.65	0.251
6/6/2011 10:08	4.279	19.66	0.421
6/6/2011 10:18	4.3	19.678	0.47
6/6/2011 10:28	4.314	19.7	0.502
6/6/2011 10:38	4.319	19.691	0.515
6/6/2011 10:48	4.325	19.707	0.527
6/6/2011 10:58	4.322	19.692	0.521
6/6/2011 11:08	4.328	19.683	0.534
6/6/2011 11:18	4.328	19.687	0.535
6/6/2011 11:28	4.33	19.693	0.54
6/6/2011 11:38	4.333	19.697	0.546
6/6/2011 11:48	4.334	19.698	0.548
6/6/2011 11:58	4.331	19.695	0.542
6/6/2011 12:08	4.332	19.73	0.545
6/6/2011 12:18	4.338	19.706	0.559
6/6/2011 12:28	4.165	19.66	0.159
6/6/2011 12:38	4.138	19.666	0.095
6/6/2011 12:48	4.12	19.657	0.056
6/6/2011 12:58	4.345	19.659	0.573

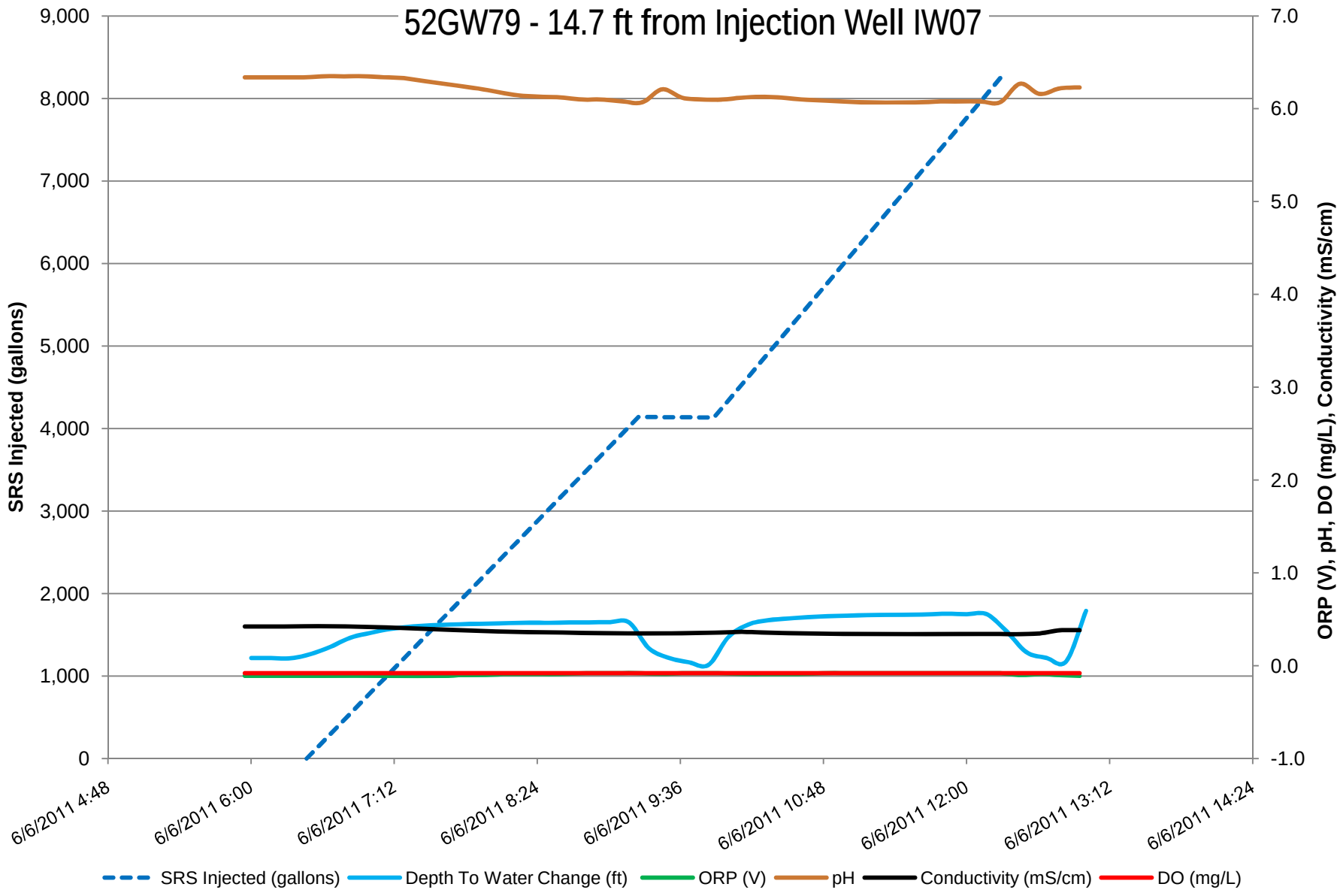

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Figure C.20
SRS Injection Data Timeline - 52GW79

TABLE C.27
Monitoring Well Data for 52GW79

Monitoring Well ID: **52GW79**
Injection Well ID: IW07
Distance to Injection Well: 14.7-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/6/2011 5:56	-0.11	6.34	-0.08	0.4239
6/6/2011 6:06	-0.11	6.34	-0.08	0.4245
6/6/2011 6:16	-0.11	6.34	-0.08	0.4247
6/6/2011 6:26	-0.11	6.34	-0.08	0.4257
6/6/2011 6:36	-0.11	6.35	-0.08	0.4266
6/6/2011 6:46	-0.11	6.35	-0.08	0.4256
6/6/2011 6:56	-0.11	6.35	-0.08	0.4197
6/6/2011 7:06	-0.11	6.34	-0.08	0.4142
6/6/2011 7:16	-0.11	6.33	-0.08	0.4088
6/6/2011 7:26	-0.11	6.30	-0.08	0.4007
6/6/2011 7:36	-0.11	6.27	-0.08	0.3915
6/6/2011 7:46	-0.10	6.24	-0.08	0.3826
6/6/2011 7:56	-0.10	6.21	-0.08	0.3755
6/6/2011 8:06	-0.09	6.17	-0.08	0.3700
6/6/2011 8:16	-0.09	6.14	-0.08	0.3654
6/6/2011 8:26	-0.09	6.13	-0.08	0.3612
6/6/2011 8:36	-0.09	6.12	-0.08	0.3580
6/6/2011 8:46	-0.08	6.10	-0.08	0.3551
6/6/2011 8:56	-0.08	6.10	-0.08	0.3531
6/6/2011 9:06	-0.08	6.08	-0.08	0.3507
6/6/2011 9:16	-0.08	6.07	-0.08	0.3481
6/6/2011 9:26	-0.09	6.21	-0.08	0.3486
6/6/2011 9:36	-0.08	6.12	-0.08	0.3526
6/6/2011 9:46	-0.08	6.10	-0.08	0.3549
6/6/2011 9:56	-0.08	6.10	-0.08	0.3598
6/6/2011 10:06	-0.09	6.12	-0.08	0.3663
6/6/2011 10:16	-0.09	6.13	-0.08	0.3591
6/6/2011 10:26	-0.09	6.12	-0.08	0.3548
6/6/2011 10:36	-0.09	6.10	-0.08	0.3501
6/6/2011 10:46	-0.08	6.09	-0.08	0.3462
6/6/2011 10:56	-0.08	6.08	-0.08	0.3443
6/6/2011 11:06	-0.08	6.07	-0.08	0.3422
6/6/2011 11:16	-0.08	6.07	-0.08	0.3431
6/6/2011 11:26	-0.08	6.07	-0.08	0.3417
6/6/2011 11:36	-0.08	6.07	-0.08	0.3422
6/6/2011 11:46	-0.08	6.08	-0.08	0.3425
6/6/2011 11:56	-0.08	6.08	-0.08	0.3429
6/6/2011 12:06	-0.08	6.08	-0.08	0.3425
6/6/2011 12:16	-0.08	6.07	-0.08	0.3429
6/6/2011 12:26	-0.10	6.27	-0.08	0.3422
6/6/2011 12:36	-0.09	6.16	-0.08	0.3498
6/6/2011 12:46	-0.10	6.22	-0.08	0.3836
6/6/2011 12:56	-0.11	6.23	-0.08	0.3840

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/6/2011 6:00	4.986	19.554	0.083
6/6/2011 6:10	4.986	19.55	0.083
6/6/2011 6:20	4.986	19.561	0.082
6/6/2011 6:30	5.077	19.572	0.127
6/6/2011 6:40	5.111	19.571	0.206
6/6/2011 6:50	5.154	19.574	0.304
6/6/2011 7:00	5.176	19.579	0.355
6/6/2011 7:10	5.194	19.58	0.398
6/6/2011 7:20	5.204	19.588	0.421
6/6/2011 7:30	5.211	19.582	0.436
6/6/2011 7:40	5.214	19.574	0.444
6/6/2011 7:50	5.217	19.566	0.451
6/6/2011 8:00	5.218	19.57	0.454
6/6/2011 8:10	5.221	19.56	0.46
6/6/2011 8:20	5.224	19.562	0.465
6/6/2011 8:30	5.223	19.565	0.463
6/6/2011 8:40	5.224	19.557	0.467
6/6/2011 8:50	5.225	19.558	0.468
6/6/2011 9:00	5.226	19.559	0.47
6/6/2011 9:10	5.225	19.557	0.468
6/6/2011 9:20	5.104	19.567	0.19
6/6/2011 9:30	5.059	19.575	0.086
6/6/2011 9:40	5.039	19.575	0.039
6/6/2011 9:50	5.026	19.575	0.01
6/6/2011 10:00	5.156	19.574	0.309
6/6/2011 10:10	5.214	19.577	0.444
6/6/2011 10:20	5.235	19.565	0.491
6/6/2011 10:30	5.243	19.566	0.509
6/6/2011 10:40	5.249	19.572	0.524
6/6/2011 10:50	5.253	19.579	0.534
6/6/2011 11:00	5.256	19.577	0.54
6/6/2011 11:10	5.259	19.581	0.547
6/6/2011 11:20	5.259	19.579	0.547
6/6/2011 11:30	5.261	19.563	0.551
6/6/2011 11:40	5.262	19.573	0.554
6/6/2011 11:50	5.265	19.569	0.561
6/6/2011 12:00	5.263	19.564	0.557
6/6/2011 12:10	5.263	19.564	0.556
6/6/2011 12:20	5.183	19.568	0.372
6/6/2011 12:30	5.086	19.577	0.147
6/6/2011 12:40	5.059	19.568	0.086
6/6/2011 12:50	5.043	19.554	0.049
6/6/2011 13:00	5.278	19.553	0.592

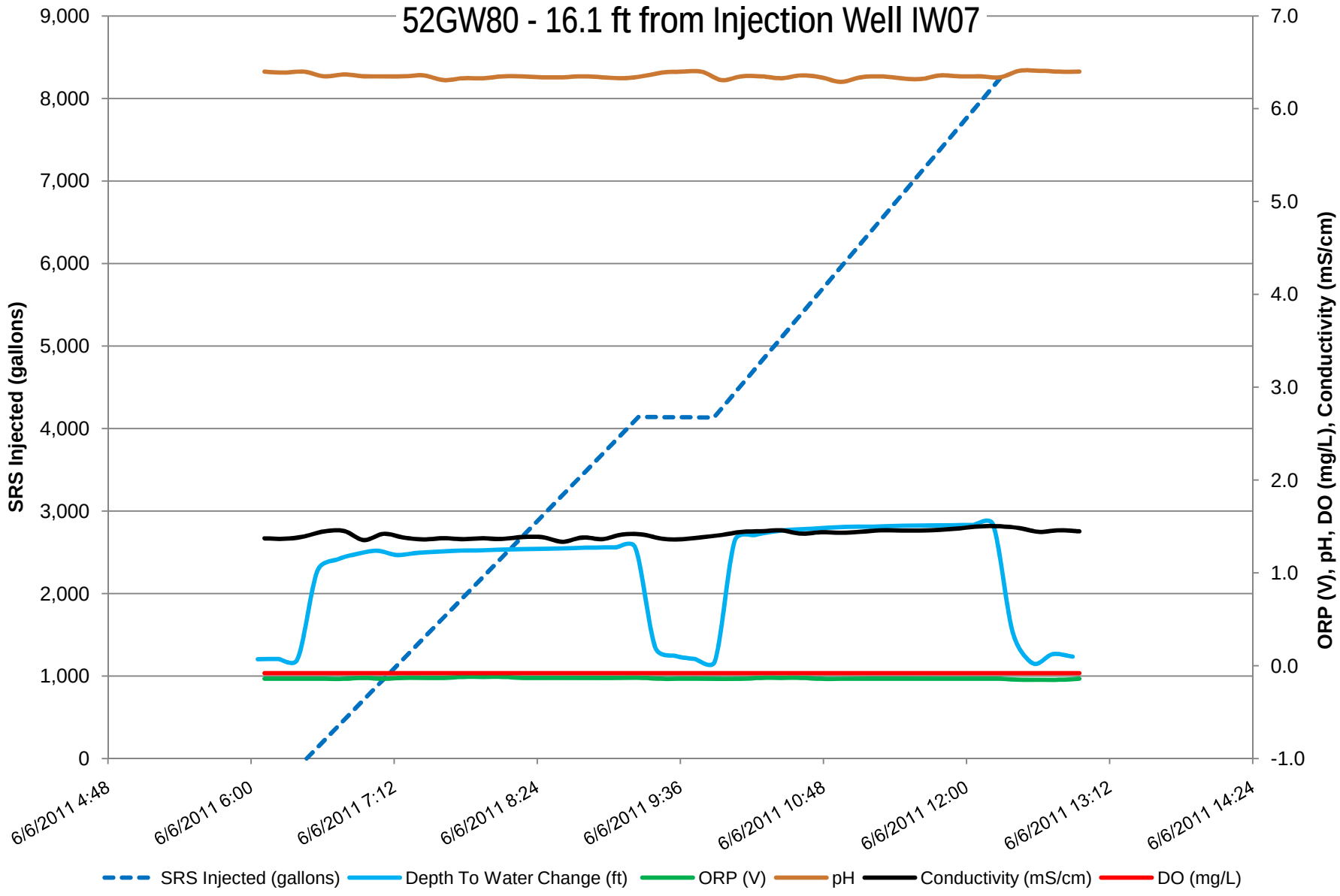

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Figure C.21
SRS Injection Data Timeline - 52GW80

TABLE C.28
Monitoring Well Data for 52GW80

Monitoring Well ID: **52GW80**
Injection Well ID: IW07
Distance to Injection Well: 16-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/6/2011 6:06	-0.14	6.40	-0.08	1.3721
6/6/2011 6:16	-0.14	6.39	-0.08	1.3677
6/6/2011 6:26	-0.14	6.40	-0.08	1.3931
6/6/2011 6:36	-0.14	6.35	-0.08	1.4482
6/6/2011 6:46	-0.14	6.37	-0.08	1.4528
6/6/2011 6:56	-0.13	6.35	-0.08	1.3529
6/6/2011 7:06	-0.14	6.35	-0.08	1.4218
6/6/2011 7:16	-0.13	6.35	-0.08	1.3806
6/6/2011 7:26	-0.13	6.36	-0.08	1.3600
6/6/2011 7:36	-0.13	6.31	-0.08	1.3742
6/6/2011 7:46	-0.12	6.33	-0.08	1.3629
6/6/2011 7:56	-0.12	6.33	-0.08	1.3727
6/6/2011 8:06	-0.12	6.35	-0.08	1.3661
6/6/2011 8:16	-0.13	6.35	-0.08	1.3870
6/6/2011 8:26	-0.13	6.34	-0.08	1.3847
6/6/2011 8:36	-0.13	6.34	-0.08	1.3345
6/6/2011 8:46	-0.13	6.35	-0.08	1.3822
6/6/2011 8:56	-0.13	6.34	-0.08	1.3634
6/6/2011 9:06	-0.13	6.33	-0.08	1.4138
6/6/2011 9:16	-0.13	6.35	-0.08	1.4140
6/6/2011 9:26	-0.14	6.39	-0.08	1.3680
6/6/2011 9:36	-0.14	6.40	-0.08	1.3627
6/6/2011 9:46	-0.14	6.40	-0.08	1.3842
6/6/2011 9:56	-0.14	6.31	-0.08	1.4088
6/6/2011 10:06	-0.14	6.35	-0.08	1.4424
6/6/2011 10:16	-0.13	6.35	-0.08	1.4497
6/6/2011 10:26	-0.13	6.33	-0.08	1.4599
6/6/2011 10:36	-0.13	6.36	-0.08	1.4222
6/6/2011 10:46	-0.14	6.34	-0.08	1.4386
6/6/2011 10:56	-0.14	6.29	-0.08	1.4337
6/6/2011 11:06	-0.14	6.34	-0.08	1.4429
6/6/2011 11:16	-0.14	6.35	-0.08	1.4589
6/6/2011 11:26	-0.14	6.33	-0.08	1.4578
6/6/2011 11:36	-0.14	6.32	-0.08	1.4566
6/6/2011 11:46	-0.14	6.36	-0.08	1.4661
6/6/2011 11:56	-0.14	6.35	-0.08	1.4820
6/6/2011 12:06	-0.14	6.35	-0.08	1.5026
6/6/2011 12:16	-0.14	6.34	-0.08	1.5036
6/6/2011 12:26	-0.15	6.41	-0.08	1.4827
6/6/2011 12:36	-0.15	6.41	-0.08	1.4419
6/6/2011 12:46	-0.15	6.40	-0.08	1.4608
6/6/2011 12:56	-0.14	6.40	-0.08	1.4483

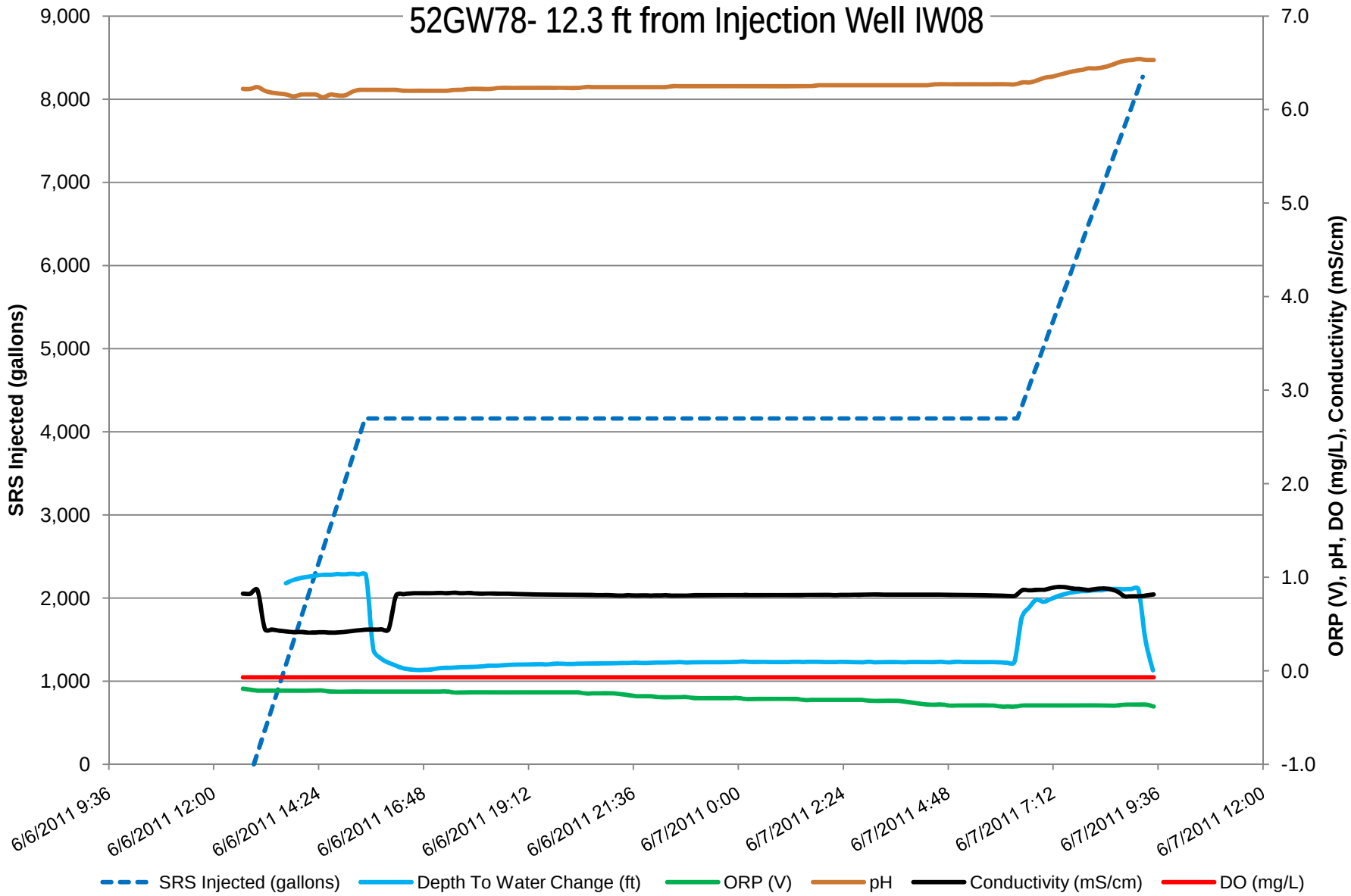
In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/6/2011 6:03	2.874	18.923	0.071
6/6/2011 6:13	2.873	18.921	0.074
6/6/2011 6:23	2.873	18.922	0.072
6/6/2011 6:33	3.348	18.924	1.023
6/6/2011 6:43	3.401	18.925	1.145
6/6/2011 6:53	3.427	18.924	1.205
6/6/2011 7:03	3.441	18.924	1.239
6/6/2011 7:13	3.422	18.921	1.193
6/6/2011 7:23	3.431	18.921	1.216
6/6/2011 7:33	3.437	18.926	1.228
6/6/2011 7:43	3.442	18.919	1.24
6/6/2011 7:53	3.443	18.919	1.243
6/6/2011 8:03	3.446	18.916	1.249
6/6/2011 8:13	3.448	18.914	1.255
6/6/2011 8:23	3.45	18.917	1.26
6/6/2011 8:33	3.451	18.918	1.262
6/6/2011 8:43	3.454	18.917	1.269
6/6/2011 8:53	3.456	18.916	1.274
6/6/2011 9:03	3.457	18.914	1.275
6/6/2011 9:13	3.455	18.916	1.271
6/6/2011 9:23	2.99	18.942	0.197
6/6/2011 9:33	2.951	18.942	0.106
6/6/2011 9:43	2.936	18.933	0.072
6/6/2011 9:53	2.926	18.932	0.048
6/6/2011 10:03	3.489	18.923	1.349
6/6/2011 10:13	3.515	18.922	1.408
6/6/2011 10:23	3.532	18.922	1.448
6/6/2011 10:33	3.541	18.927	1.468
6/6/2011 10:43	3.545	18.92	1.478
6/6/2011 10:53	3.551	18.923	1.491
6/6/2011 11:03	3.554	18.916	1.499
6/6/2011 11:13	3.554	18.914	1.499
6/6/2011 11:23	3.557	18.914	1.506
6/6/2011 11:33	3.56	18.913	1.512
6/6/2011 11:43	3.56	18.916	1.512
6/6/2011 11:53	3.561	18.913	1.514
6/6/2011 12:03	3.562	18.914	1.518
6/6/2011 12:13	3.563	18.914	1.52
6/6/2011 12:23	3.056	18.945	0.349
6/6/2011 12:33	2.894	18.953	0.026
6/6/2011 12:43	2.959	18.952	0.125
6/6/2011 12:53	2.947	18.946	0.098

TABLE C.29
Injection Summary for IW08

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/6/2011 12:55	IW08	0	Begin Injecting SRS - Batch 1/2.
6/6/2011 15:28	IW08	4,160	Finish Injecting SRS - Batch 1/2.
6/7/2011 6:23	IW08	4,160	Begin Injecting SRS - Batch 2/2.
6/7/2011 9:15	IW08	8,270	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW08	30 - 45	52GW78	12.3	38 - 48	top
		52GW79	17.6	38 - 48	top
		52GW80	19.4	22 - 32	middle



CH2MHILL

Figure C.22
SRS Injection Data Timeline - 52GW78

TABLE C.30
Monitoring Well Data for 52GW78

Monitoring Well ID: **52GW78**
Injection Well ID: IW08
Distance to Injection Well: 12.3-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/6/2011 12:40	-0.19	6.22	-0.07	0.8256
6/6/2011 12:50	-0.20	6.22	-0.07	0.8241
6/6/2011 13:00	-0.21	6.24	-0.07	0.8622
6/6/2011 13:10	-0.21	6.20	-0.07	0.4481
6/6/2011 13:20	-0.21	6.18	-0.07	0.4423
6/6/2011 13:30	-0.21	6.17	-0.07	0.4294
6/6/2011 13:40	-0.21	6.16	-0.07	0.4216
6/6/2011 13:50	-0.21	6.14	-0.07	0.4132
6/6/2011 14:00	-0.21	6.16	-0.07	0.4158
6/6/2011 14:10	-0.21	6.16	-0.07	0.4086
6/6/2011 14:20	-0.21	6.16	-0.07	0.4111
6/6/2011 14:30	-0.21	6.13	-0.07	0.4127
6/6/2011 14:40	-0.22	6.16	-0.07	0.4087
6/6/2011 14:50	-0.22	6.15	-0.07	0.4111
6/6/2011 15:00	-0.22	6.15	-0.07	0.4153
6/6/2011 15:10	-0.22	6.19	-0.07	0.4273
6/6/2011 15:20	-0.22	6.21	-0.07	0.4336
6/6/2011 15:30	-0.22	6.21	-0.07	0.4421
6/6/2011 15:40	-0.22	6.21	-0.07	0.4407
6/6/2011 15:50	-0.22	6.21	-0.07	0.4441
6/6/2011 16:00	-0.22	6.21	-0.07	0.4450
6/6/2011 16:10	-0.22	6.21	-0.07	0.8030
6/6/2011 16:20	-0.22	6.20	-0.07	0.8204
6/6/2011 16:30	-0.22	6.20	-0.07	0.8284
6/6/2011 16:40	-0.22	6.20	-0.07	0.8294
6/6/2011 16:50	-0.22	6.20	-0.07	0.8296
6/6/2011 17:00	-0.22	6.20	-0.07	0.8294
6/6/2011 17:10	-0.22	6.20	-0.07	0.8335
6/6/2011 17:20	-0.22	6.20	-0.07	0.8296
6/6/2011 17:30	-0.23	6.21	-0.07	0.8346
6/6/2011 17:40	-0.23	6.21	-0.07	0.8284
6/6/2011 17:50	-0.23	6.22	-0.07	0.8327
6/6/2011 18:00	-0.23	6.22	-0.07	0.8260
6/6/2011 18:10	-0.23	6.22	-0.07	0.8254
6/6/2011 18:20	-0.23	6.22	-0.07	0.8269
6/6/2011 18:30	-0.23	6.23	-0.07	0.8237
6/6/2011 18:40	-0.23	6.23	-0.07	0.8257
6/6/2011 18:50	-0.23	6.23	-0.07	0.8210
6/6/2011 19:00	-0.23	6.23	-0.07	0.8203
6/6/2011 19:10	-0.23	6.23	-0.07	0.8181
6/6/2011 19:20	-0.23	6.23	-0.07	0.8177
6/6/2011 19:30	-0.23	6.23	-0.07	0.8169
6/6/2011 19:40	-0.23	6.23	-0.07	0.8148
6/6/2011 19:50	-0.23	6.23	-0.07	0.8148
6/6/2011 20:00	-0.23	6.23	-0.07	0.8130
6/6/2011 20:10	-0.23	6.23	-0.07	0.8125
6/6/2011 20:20	-0.23	6.23	-0.07	0.8115
6/6/2011 20:30	-0.24	6.24	-0.07	0.8115
6/6/2011 20:40	-0.24	6.24	-0.07	0.8109

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/6/2011 13:38	4.502	19.648	0.936
6/6/2011 13:48	4.517	19.639	0.972
6/6/2011 13:58	4.525	19.625	0.99
6/6/2011 14:08	4.532	19.673	1.006
6/6/2011 14:18	4.537	19.685	1.017
6/6/2011 14:28	4.541	19.664	1.027
6/6/2011 14:38	4.541	19.669	1.026
6/6/2011 14:48	4.544	19.676	1.034
6/6/2011 14:58	4.543	19.652	1.031
6/6/2011 15:08	4.546	19.653	1.038
6/6/2011 15:18	4.543	19.661	1.03
6/6/2011 15:28	4.539	19.666	1.022
6/6/2011 15:38	4.196	19.601	0.231
6/6/2011 15:48	4.155	19.609	0.136
6/6/2011 15:58	4.135	19.611	0.09
6/6/2011 16:08	4.122	19.59	0.06
6/6/2011 16:18	4.109	19.603	0.029
6/6/2011 16:28	4.104	19.596	0.016
6/6/2011 16:38	4.1	19.599	0.008
6/6/2011 16:48	4.092	19.58	0.01
6/6/2011 16:58	4.09	19.587	0.015
6/6/2011 17:08	4.084	19.589	0.028
6/6/2011 17:18	4.082	19.644	0.032
6/6/2011 17:28	4.082	19.642	0.034
6/6/2011 17:38	4.079	19.621	0.039
6/6/2011 17:48	4.079	19.606	0.039
6/6/2011 17:58	4.077	19.588	0.044
6/6/2011 18:08	4.076	19.607	0.048
6/6/2011 18:18	4.072	19.643	0.056
6/6/2011 18:28	4.073	19.624	0.055
6/6/2011 18:38	4.07	19.633	0.06
6/6/2011 18:48	4.068	19.652	0.066
6/6/2011 18:58	4.067	19.647	0.067
6/6/2011 19:08	4.067	19.634	0.067
6/6/2011 19:18	4.067	19.619	0.069
6/6/2011 19:28	4.066	19.633	0.071
6/6/2011 19:38	4.067	19.621	0.068
6/6/2011 19:48	4.063	19.623	0.077
6/6/2011 19:58	4.064	19.638	0.075
6/6/2011 20:08	4.065	19.582	0.073
6/6/2011 20:18	4.063	19.592	0.076
6/6/2011 20:28	4.063	19.63	0.078
6/6/2011 20:38	4.063	19.655	0.078
6/6/2011 20:48	4.062	19.635	0.078
6/6/2011 20:58	4.061	19.622	0.081
6/6/2011 21:08	4.062	19.6	0.08
6/6/2011 21:18	4.06	19.579	0.083
6/6/2011 21:28	4.06	19.599	0.083
6/6/2011 21:38	4.058	19.586	0.088

TABLE C.30
Monitoring Well Data for 52GW78

Monitoring Well ID: **52GW78**
Injection Well ID: IW08
Distance to Injection Well: 12.3-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/6/2011 20:50	-0.24	6.24	-0.07	0.8081
6/6/2011 21:00	-0.24	6.24	-0.07	0.8097
6/6/2011 21:10	-0.24	6.24	-0.07	0.8060
6/6/2011 21:20	-0.25	6.24	-0.07	0.8050
6/6/2011 21:30	-0.26	6.24	-0.07	0.8081
6/6/2011 21:40	-0.27	6.24	-0.07	0.8045
6/6/2011 21:50	-0.27	6.24	-0.07	0.8065
6/6/2011 22:00	-0.27	6.24	-0.07	0.8047
6/6/2011 22:10	-0.28	6.24	-0.07	0.8064
6/6/2011 22:20	-0.28	6.24	-0.07	0.8079
6/6/2011 22:30	-0.28	6.25	-0.07	0.8033
6/6/2011 22:40	-0.28	6.25	-0.07	0.8040
6/6/2011 22:50	-0.28	6.25	-0.07	0.8044
6/6/2011 23:00	-0.29	6.25	-0.07	0.8082
6/6/2011 23:10	-0.29	6.25	-0.07	0.8082
6/6/2011 23:20	-0.29	6.25	-0.07	0.8081
6/6/2011 23:30	-0.29	6.25	-0.07	0.8089
6/6/2011 23:40	-0.29	6.25	-0.07	0.8093
6/6/2011 23:50	-0.29	6.25	-0.07	0.8091
6/7/2011 0:00	-0.29	6.25	-0.07	0.8079
6/7/2011 0:10	-0.30	6.25	-0.07	0.8104
6/7/2011 0:20	-0.30	6.25	-0.07	0.8093
6/7/2011 0:30	-0.30	6.25	-0.07	0.8086
6/7/2011 0:40	-0.30	6.25	-0.07	0.8100
6/7/2011 0:50	-0.30	6.25	-0.07	0.8108
6/7/2011 1:00	-0.30	6.25	-0.07	0.8099
6/7/2011 1:10	-0.30	6.25	-0.07	0.8103
6/7/2011 1:20	-0.30	6.25	-0.07	0.8093
6/7/2011 1:30	-0.31	6.25	-0.07	0.8113
6/7/2011 1:40	-0.31	6.25	-0.07	0.8124
6/7/2011 1:50	-0.31	6.26	-0.07	0.8120
6/7/2011 2:00	-0.31	6.26	-0.07	0.8122
6/7/2011 2:10	-0.31	6.26	-0.07	0.8096
6/7/2011 2:20	-0.31	6.26	-0.07	0.8111
6/7/2011 2:30	-0.31	6.26	-0.07	0.8121
6/7/2011 2:40	-0.31	6.26	-0.07	0.8130
6/7/2011 2:50	-0.31	6.26	-0.07	0.8129
6/7/2011 3:00	-0.32	6.26	-0.07	0.8159
6/7/2011 3:10	-0.32	6.26	-0.07	0.8161
6/7/2011 3:20	-0.32	6.26	-0.07	0.8149
6/7/2011 3:30	-0.32	6.26	-0.07	0.8134
6/7/2011 3:40	-0.32	6.26	-0.07	0.8136
6/7/2011 3:50	-0.33	6.26	-0.07	0.8132
6/7/2011 4:00	-0.34	6.26	-0.07	0.8135
6/7/2011 4:10	-0.35	6.26	-0.07	0.8145
6/7/2011 4:20	-0.36	6.26	-0.07	0.8133
6/7/2011 4:30	-0.36	6.27	-0.07	0.8149
6/7/2011 4:40	-0.36	6.27	-0.07	0.8135
6/7/2011 4:50	-0.37	6.27	-0.07	0.8126

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/6/2011 21:48	4.06	19.586	0.084
6/6/2011 21:58	4.059	19.639	0.086
6/6/2011 22:08	4.058	19.626	0.088
6/6/2011 22:18	4.058	19.615	0.089
6/6/2011 22:28	4.057	19.634	0.091
6/6/2011 22:38	4.056	19.602	0.093
6/6/2011 22:48	4.057	19.612	0.09
6/6/2011 22:58	4.057	19.612	0.092
6/6/2011 23:08	4.056	19.587	0.093
6/6/2011 23:18	4.056	19.586	0.092
6/6/2011 23:28	4.057	19.608	0.092
6/6/2011 23:38	4.056	19.598	0.093
6/6/2011 23:48	4.056	19.58	0.094
6/6/2011 23:58	4.055	19.625	0.096
6/7/2011 0:08	4.053	19.6	0.1
6/7/2011 0:18	4.055	19.615	0.095
6/7/2011 0:28	4.055	19.631	0.095
6/7/2011 0:38	4.055	19.639	0.096
6/7/2011 0:48	4.056	19.607	0.094
6/7/2011 0:58	4.055	19.587	0.095
6/7/2011 1:08	4.055	19.597	0.095
6/7/2011 1:18	4.055	19.62	0.096
6/7/2011 1:28	4.055	19.588	0.095
6/7/2011 1:38	4.055	19.613	0.096
6/7/2011 1:48	4.055	19.619	0.096
6/7/2011 1:58	4.055	19.618	0.095
6/7/2011 2:08	4.056	19.623	0.094
6/7/2011 2:18	4.055	19.643	0.096
6/7/2011 2:28	4.055	19.644	0.095
6/7/2011 2:38	4.055	19.64	0.095
6/7/2011 2:48	4.057	19.643	0.091
6/7/2011 2:58	4.055	19.65	0.097
6/7/2011 3:08	4.057	19.629	0.091
6/7/2011 3:18	4.056	19.612	0.094
6/7/2011 3:28	4.056	19.628	0.093
6/7/2011 3:38	4.056	19.627	0.093
6/7/2011 3:48	4.057	19.586	0.092
6/7/2011 3:58	4.056	19.627	0.094
6/7/2011 4:08	4.056	19.596	0.093
6/7/2011 4:18	4.055	19.597	0.095
6/7/2011 4:28	4.056	19.609	0.093
6/7/2011 4:38	4.055	19.578	0.096
6/7/2011 4:48	4.057	19.576	0.09
6/7/2011 4:58	4.054	19.613	0.097
6/7/2011 5:08	4.056	19.592	0.094
6/7/2011 5:18	4.055	19.579	0.095
6/7/2011 5:28	4.056	19.62	0.092
6/7/2011 5:38	4.056	19.609	0.094
6/7/2011 5:48	4.056	19.613	0.094

TABLE C.30
Monitoring Well Data for 52GW78

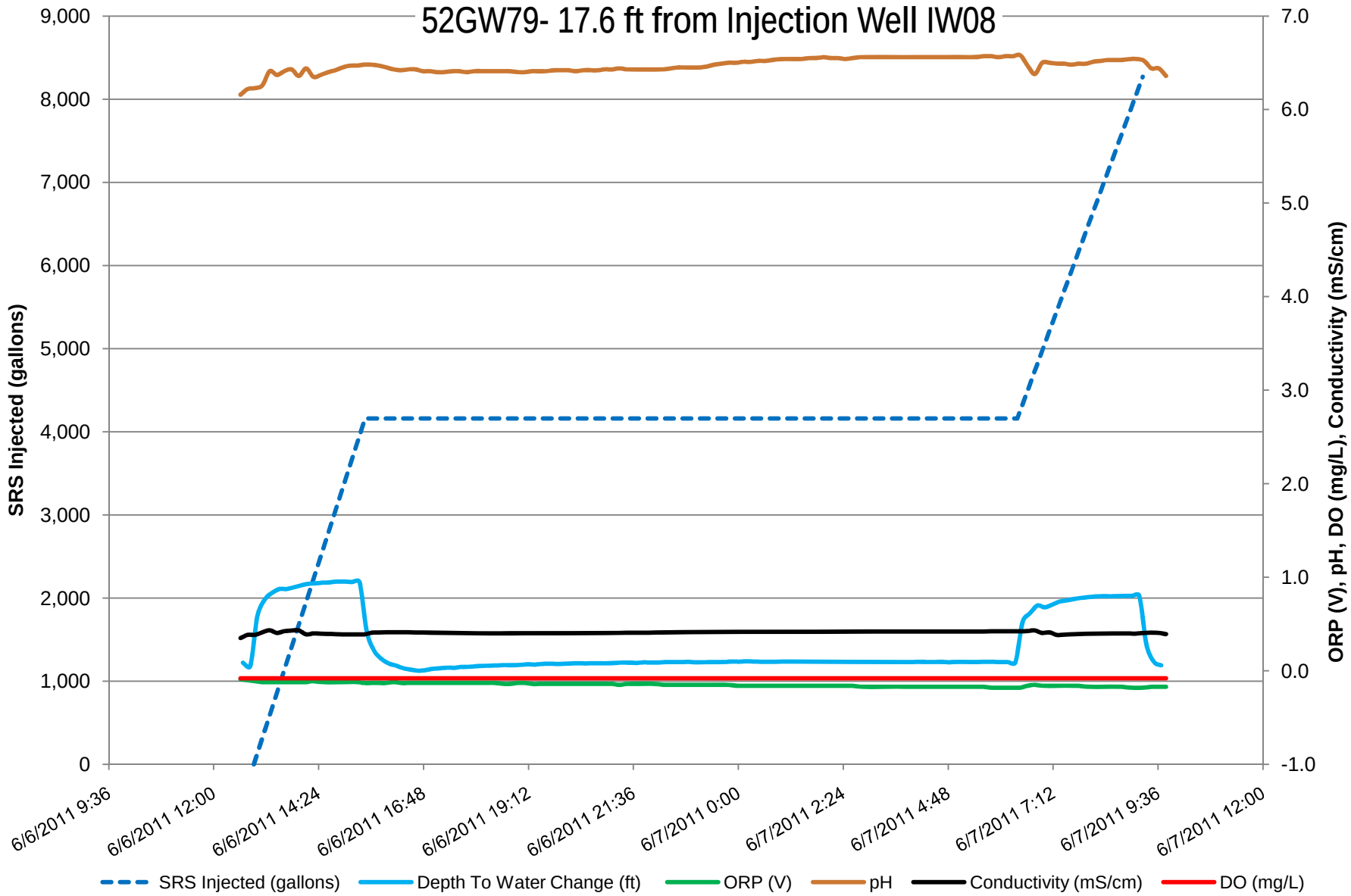
Monitoring Well ID:	**52GW78**
Injection Well ID:	IW08
Distance to Injection Well:	12.3-ft

In-Situ Inc.	Troll 9500
Serial number:	48173
Test started on:	6/6/2011
Test stopped on:	6/6/2011
Time Between Data Points:	10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/7/2011 5:00	-0.37	6.27	-0.07	0.8119
6/7/2011 5:10	-0.37	6.27	-0.07	0.8110
6/7/2011 5:20	-0.37	6.27	-0.07	0.8095
6/7/2011 5:30	-0.37	6.27	-0.07	0.8101
6/7/2011 5:40	-0.37	6.27	-0.07	0.8090
6/7/2011 5:50	-0.37	6.27	-0.07	0.8057
6/7/2011 6:00	-0.38	6.27	-0.07	0.8044
6/7/2011 6:10	-0.38	6.27	-0.07	0.8002
6/7/2011 6:20	-0.38	6.27	-0.07	0.8032
6/7/2011 6:30	-0.37	6.29	-0.07	0.8629
6/7/2011 6:40	-0.37	6.29	-0.07	0.8595
6/7/2011 6:50	-0.37	6.31	-0.07	0.8665
6/7/2011 7:00	-0.37	6.34	-0.07	0.8670
6/7/2011 7:10	-0.37	6.35	-0.07	0.8858
6/7/2011 7:20	-0.37	6.37	-0.07	0.8981
6/7/2011 7:30	-0.37	6.39	-0.07	0.8919
6/7/2011 7:40	-0.37	6.41	-0.07	0.8784
6/7/2011 7:50	-0.37	6.42	-0.07	0.8746
6/7/2011 8:00	-0.37	6.44	-0.07	0.8641
6/7/2011 8:10	-0.37	6.44	-0.07	0.8735
6/7/2011 8:20	-0.37	6.45	-0.07	0.8811
6/7/2011 8:30	-0.37	6.47	-0.07	0.8731
6/7/2011 8:40	-0.37	6.50	-0.07	0.8497
6/7/2011 8:50	-0.36	6.52	-0.07	0.7969
6/7/2011 9:00	-0.36	6.53	-0.07	0.7987
6/7/2011 9:10	-0.36	6.54	-0.07	0.7967
6/7/2011 9:20	-0.36	6.53	-0.07	0.8062
6/7/2011 9:30	-0.38	6.53	-0.07	0.8164

In-Situ Inc.	Level Troll 700
Serial number:	135710
Test started on:	6/6/2011
Test stopped on:	6/6/2011
Time Between Data Points:	10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/7/2011 5:58	4.057	19.608	0.091
6/7/2011 6:08	4.059	19.593	0.087
6/7/2011 6:18	4.055	19.622	0.096
6/7/2011 6:28	4.343	19.656	0.569
6/7/2011 6:38	4.39	19.649	0.677
6/7/2011 6:48	4.426	19.645	0.76
6/7/2011 6:58	4.416	19.643	0.738
6/7/2011 7:08	4.429	19.651	0.768
6/7/2011 7:18	4.443	19.65	0.8
6/7/2011 7:28	4.453	19.62	0.824
6/7/2011 7:38	4.46	19.641	0.839
6/7/2011 7:48	4.465	19.63	0.851
6/7/2011 7:58	4.466	19.637	0.853
6/7/2011 8:08	4.47	19.658	0.862
6/7/2011 8:18	4.47	19.657	0.862
6/7/2011 8:28	4.475	19.656	0.875
6/7/2011 8:38	4.475	19.653	0.874
6/7/2011 8:48	4.474	19.62	0.872
6/7/2011 8:58	4.475	19.612	0.874
6/7/2011 9:08	4.475	19.637	0.873
6/7/2011 9:18	4.235	19.608	0.321
6/7/2011 9:28	4.094	19.612	0.006



CH2MHILL

Figure C.23
SRS Injection Data Timeline - 52GW79

TABLE C.31
Monitoring Well Data for 52GW79

Monitoring Well ID: **52GW79**
Injection Well ID: IW08
Distance to Injection Well: 17.6-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/6/2011 12:36	-0.09	6.16	-0.08	0.3498
6/6/2011 12:46	-0.10	6.22	-0.08	0.3836
6/6/2011 12:56	-0.11	6.23	-0.08	0.3840
6/6/2011 13:06	-0.12	6.26	-0.08	0.4112
6/6/2011 13:16	-0.12	6.41	-0.08	0.4327
6/6/2011 13:26	-0.12	6.37	-0.08	0.4045
6/6/2011 13:36	-0.12	6.41	-0.08	0.4232
6/6/2011 13:46	-0.12	6.43	-0.08	0.4297
6/6/2011 13:56	-0.12	6.36	-0.08	0.4310
6/6/2011 14:06	-0.12	6.44	-0.08	0.3897
6/6/2011 14:16	-0.11	6.35	-0.08	0.3989
6/6/2011 14:26	-0.12	6.37	-0.08	0.3969
6/6/2011 14:36	-0.12	6.40	-0.08	0.3937
6/6/2011 14:46	-0.12	6.42	-0.08	0.3919
6/6/2011 14:56	-0.12	6.45	-0.08	0.3891
6/6/2011 15:06	-0.12	6.47	-0.08	0.3877
6/6/2011 15:16	-0.12	6.47	-0.08	0.3885
6/6/2011 15:26	-0.13	6.48	-0.08	0.3888
6/6/2011 15:36	-0.13	6.48	-0.08	0.4072
6/6/2011 15:46	-0.13	6.47	-0.08	0.4098
6/6/2011 15:56	-0.13	6.45	-0.08	0.4116
6/6/2011 16:06	-0.12	6.43	-0.08	0.4115
6/6/2011 16:16	-0.13	6.42	-0.08	0.4111
6/6/2011 16:26	-0.13	6.43	-0.08	0.4108
6/6/2011 16:36	-0.13	6.43	-0.08	0.4097
6/6/2011 16:46	-0.13	6.41	-0.08	0.4086
6/6/2011 16:56	-0.13	6.41	-0.08	0.4079
6/6/2011 17:06	-0.13	6.40	-0.08	0.4075
6/6/2011 17:16	-0.13	6.40	-0.08	0.4059
6/6/2011 17:26	-0.13	6.41	-0.08	0.4037
6/6/2011 17:36	-0.13	6.41	-0.08	0.4029
6/6/2011 17:46	-0.13	6.40	-0.08	0.4015
6/6/2011 17:56	-0.13	6.41	-0.08	0.4004
6/6/2011 18:06	-0.13	6.41	-0.08	0.3999
6/6/2011 18:16	-0.13	6.41	-0.08	0.3994
6/6/2011 18:26	-0.13	6.41	-0.08	0.4003
6/6/2011 18:36	-0.14	6.41	-0.08	0.4000
6/6/2011 18:46	-0.14	6.41	-0.08	0.4004
6/6/2011 18:56	-0.13	6.40	-0.08	0.4015
6/6/2011 19:06	-0.13	6.40	-0.08	0.4020
6/6/2011 19:16	-0.14	6.41	-0.08	0.4016
6/6/2011 19:26	-0.14	6.41	-0.08	0.4019
6/6/2011 19:36	-0.14	6.41	-0.08	0.4018
6/6/2011 19:46	-0.14	6.42	-0.08	0.4015
6/6/2011 19:56	-0.14	6.42	-0.08	0.4016
6/6/2011 20:06	-0.14	6.42	-0.08	0.4021
6/6/2011 20:16	-0.14	6.41	-0.08	0.4023
6/6/2011 20:26	-0.14	6.42	-0.08	0.4025
6/6/2011 20:36	-0.14	6.42	-0.08	0.4029

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/6/2011 12:40	5.059	19.568	0.086
6/6/2011 12:50	5.043	19.554	0.049
6/6/2011 13:00	5.278	19.553	0.592
6/6/2011 13:10	5.352	19.55	0.763
6/6/2011 13:20	5.384	19.532	0.835
6/6/2011 13:30	5.401	19.543	0.875
6/6/2011 13:40	5.401	19.541	0.876
6/6/2011 13:50	5.409	19.542	0.894
6/6/2011 14:00	5.418	19.541	0.915
6/6/2011 14:10	5.425	19.552	0.931
6/6/2011 14:20	5.428	19.546	0.937
6/6/2011 14:30	5.431	19.539	0.944
6/6/2011 14:40	5.432	19.54	0.947
6/6/2011 14:50	5.436	19.543	0.956
6/6/2011 15:00	5.435	19.554	0.954
6/6/2011 15:10	5.434	19.547	0.951
6/6/2011 15:20	5.433	19.532	0.949
6/6/2011 15:30	5.203	19.53	0.418
6/6/2011 15:40	5.115	19.521	0.215
6/6/2011 15:50	5.077	19.513	0.128
6/6/2011 16:00	5.056	19.509	0.078
6/6/2011 16:10	5.046	19.524	0.055
6/6/2011 16:20	5.034	19.538	0.027
6/6/2011 16:30	5.028	19.541	0.013
6/6/2011 16:40	5.023	19.512	0.001
6/6/2011 16:50	5.019	19.532	0.006
6/6/2011 17:00	5.013	19.535	0.021
6/6/2011 17:10	5.011	19.541	0.026
6/6/2011 17:20	5.008	19.542	0.033
6/6/2011 17:30	5.008	19.545	0.032
6/6/2011 17:40	5.004	19.543	0.042
6/6/2011 17:50	5.004	19.53	0.042
6/6/2011 18:00	5.001	19.533	0.049
6/6/2011 18:10	4.999	19.53	0.052
6/6/2011 18:20	4.998	19.522	0.055
6/6/2011 18:30	4.997	19.515	0.057
6/6/2011 18:40	4.995	19.53	0.061
6/6/2011 18:50	4.996	19.544	0.059
6/6/2011 19:00	4.995	19.537	0.062
6/6/2011 19:10	4.992	19.538	0.069
6/6/2011 19:20	4.994	19.541	0.066
6/6/2011 19:30	4.991	19.527	0.073
6/6/2011 19:40	4.99	19.544	0.075
6/6/2011 19:50	4.991	19.537	0.073
6/6/2011 20:00	4.99	19.552	0.075
6/6/2011 20:10	4.989	19.531	0.077
6/6/2011 20:20	4.987	19.554	0.081
6/6/2011 20:30	4.988	19.552	0.079
6/6/2011 20:40	4.987	19.549	0.08

TABLE C.31
Monitoring Well Data for 52GW79

Monitoring Well ID: **52GW79**
Injection Well ID: IW08
Distance to Injection Well: 17.6-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/6/2011 20:46	-0.14	6.42	-0.08	0.4037
6/6/2011 20:56	-0.14	6.43	-0.08	0.4040
6/6/2011 21:06	-0.14	6.43	-0.08	0.4045
6/6/2011 21:16	-0.15	6.44	-0.08	0.4050
6/6/2011 21:26	-0.14	6.43	-0.08	0.4060
6/6/2011 21:36	-0.14	6.43	-0.08	0.4068
6/6/2011 21:46	-0.14	6.43	-0.08	0.4072
6/6/2011 21:56	-0.14	6.43	-0.08	0.4077
6/6/2011 22:06	-0.14	6.43	-0.08	0.4092
6/6/2011 22:16	-0.15	6.43	-0.08	0.4101
6/6/2011 22:26	-0.15	6.44	-0.08	0.4113
6/6/2011 22:36	-0.15	6.45	-0.08	0.4120
6/6/2011 22:46	-0.15	6.45	-0.08	0.4129
6/6/2011 22:56	-0.15	6.45	-0.08	0.4133
6/6/2011 23:06	-0.15	6.45	-0.08	0.4138
6/6/2011 23:16	-0.15	6.46	-0.08	0.4147
6/6/2011 23:26	-0.15	6.48	-0.08	0.4147
6/6/2011 23:36	-0.15	6.49	-0.08	0.4154
6/6/2011 23:46	-0.15	6.50	-0.08	0.4157
6/6/2011 23:56	-0.16	6.50	-0.08	0.4156
6/7/2011 0:06	-0.16	6.51	-0.08	0.4161
6/7/2011 0:16	-0.16	6.51	-0.08	0.4160
6/7/2011 0:26	-0.16	6.52	-0.08	0.4167
6/7/2011 0:36	-0.16	6.52	-0.08	0.4166
6/7/2011 0:46	-0.16	6.53	-0.08	0.4168
6/7/2011 0:56	-0.16	6.54	-0.08	0.4167
6/7/2011 1:06	-0.16	6.54	-0.08	0.4168
6/7/2011 1:16	-0.16	6.54	-0.08	0.4168
6/7/2011 1:26	-0.16	6.54	-0.08	0.4170
6/7/2011 1:36	-0.16	6.55	-0.08	0.4172
6/7/2011 1:46	-0.16	6.55	-0.08	0.4171
6/7/2011 1:56	-0.16	6.56	-0.08	0.4170
6/7/2011 2:06	-0.16	6.55	-0.08	0.4175
6/7/2011 2:16	-0.16	6.55	-0.08	0.4175
6/7/2011 2:26	-0.16	6.54	-0.08	0.4176
6/7/2011 2:36	-0.16	6.55	-0.08	0.4181
6/7/2011 2:46	-0.17	6.56	-0.08	0.4184
6/7/2011 2:56	-0.17	6.56	-0.08	0.4183
6/7/2011 3:06	-0.17	6.56	-0.08	0.4184
6/7/2011 3:16	-0.17	6.56	-0.08	0.4185
6/7/2011 3:26	-0.17	6.56	-0.08	0.4186
6/7/2011 3:36	-0.17	6.56	-0.08	0.4190
6/7/2011 3:46	-0.17	6.56	-0.08	0.4191
6/7/2011 3:56	-0.17	6.56	-0.08	0.4190
6/7/2011 4:06	-0.17	6.56	-0.08	0.4192
6/7/2011 4:16	-0.17	6.56	-0.08	0.4190
6/7/2011 4:26	-0.17	6.56	-0.08	0.4189
6/7/2011 4:36	-0.17	6.56	-0.08	0.4187
6/7/2011 4:46	-0.17	6.56	-0.08	0.4191

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/6/2011 20:50	4.987	19.556	0.081
6/6/2011 21:00	4.987	19.564	0.08
6/6/2011 21:10	4.986	19.544	0.083
6/6/2011 21:20	4.984	19.539	0.088
6/6/2011 21:30	4.985	19.547	0.086
6/6/2011 21:40	4.985	19.543	0.084
6/6/2011 21:50	4.983	19.533	0.09
6/6/2011 22:00	4.984	19.53	0.088
6/6/2011 22:10	4.983	19.532	0.089
6/6/2011 22:20	4.982	19.531	0.093
6/6/2011 22:30	4.982	19.525	0.092
6/6/2011 22:40	4.982	19.542	0.093
6/6/2011 22:50	4.981	19.543	0.095
6/6/2011 23:00	4.982	19.532	0.091
6/6/2011 23:10	4.983	19.536	0.09
6/6/2011 23:20	4.981	19.528	0.094
6/6/2011 23:30	4.981	19.532	0.094
6/6/2011 23:40	4.982	19.531	0.093
6/6/2011 23:50	4.979	19.528	0.099
6/7/2011 0:00	4.98	19.518	0.097
6/7/2011 0:10	4.978	19.522	0.101
6/7/2011 0:20	4.98	19.53	0.098
6/7/2011 0:30	4.98	19.532	0.097
6/7/2011 0:40	4.98	19.532	0.096
6/7/2011 0:50	4.98	19.521	0.097
6/7/2011 1:00	4.98	19.534	0.098
6/7/2011 1:10	4.979	19.541	0.099
6/7/2011 1:20	4.981	19.543	0.096
6/7/2011 1:30	4.98	19.547	0.097
6/7/2011 1:40	4.98	19.545	0.097
6/7/2011 1:50	4.98	19.53	0.098
6/7/2011 2:00	4.98	19.548	0.098
6/7/2011 2:10	4.98	19.542	0.097
6/7/2011 2:20	4.981	19.546	0.095
6/7/2011 2:30	4.981	19.553	0.094
6/7/2011 2:40	4.98	19.551	0.097
6/7/2011 2:50	4.981	19.534	0.095
6/7/2011 3:00	4.981	19.543	0.095
6/7/2011 3:10	4.982	19.535	0.092
6/7/2011 3:20	4.981	19.539	0.094
6/7/2011 3:30	4.982	19.556	0.092
6/7/2011 3:40	4.982	19.55	0.093
6/7/2011 3:50	4.982	19.541	0.092
6/7/2011 4:00	4.981	19.542	0.094
6/7/2011 4:10	4.98	19.539	0.097
6/7/2011 4:20	4.982	19.544	0.093
6/7/2011 4:30	4.981	19.543	0.094
6/7/2011 4:40	4.981	19.525	0.095
6/7/2011 4:50	4.983	19.529	0.09

TABLE C.31
Monitoring Well Data for 52GW79

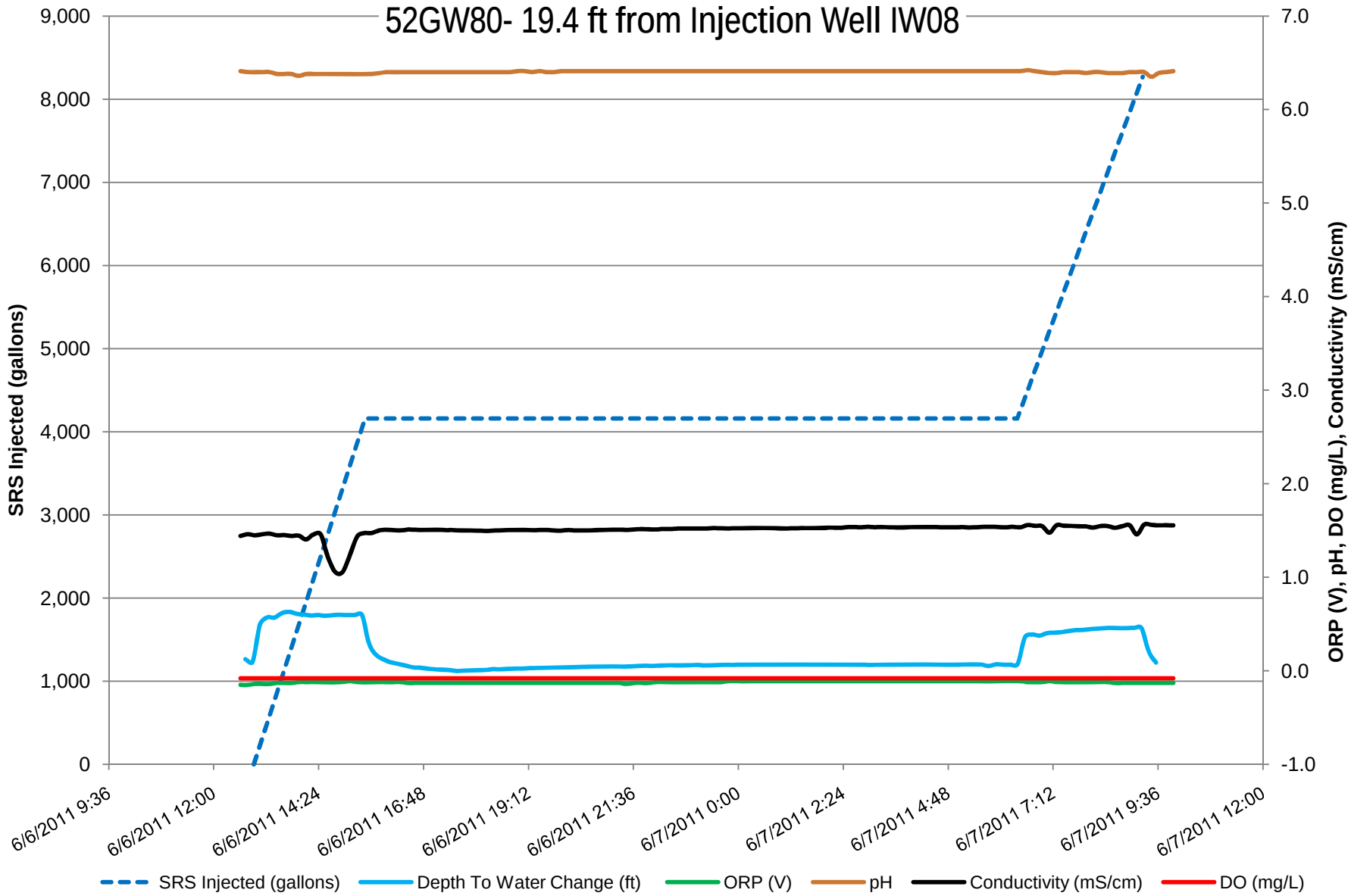
Monitoring Well ID: **52GW79**
Injection Well ID: IW08
Distance to Injection Well: 17.6-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/7/2011 4:56	-0.17	6.56	-0.08	0.4190
6/7/2011 5:06	-0.17	6.56	-0.08	0.4193
6/7/2011 5:16	-0.17	6.56	-0.08	0.4197
6/7/2011 5:26	-0.17	6.56	-0.08	0.4201
6/7/2011 5:36	-0.17	6.57	-0.08	0.4204
6/7/2011 5:46	-0.18	6.57	-0.08	0.4211
6/7/2011 5:56	-0.18	6.56	-0.08	0.4210
6/7/2011 6:06	-0.18	6.57	-0.08	0.4214
6/7/2011 6:16	-0.18	6.57	-0.08	0.4217
6/7/2011 6:26	-0.18	6.58	-0.08	0.4219
6/7/2011 6:36	-0.16	6.47	-0.08	0.4236
6/7/2011 6:46	-0.15	6.38	-0.08	0.4310
6/7/2011 6:56	-0.16	6.50	-0.08	0.4037
6/7/2011 7:06	-0.16	6.50	-0.08	0.4106
6/7/2011 7:16	-0.16	6.49	-0.08	0.3829
6/7/2011 7:26	-0.16	6.49	-0.08	0.3863
6/7/2011 7:36	-0.16	6.48	-0.08	0.3895
6/7/2011 7:46	-0.16	6.49	-0.08	0.3926
6/7/2011 7:56	-0.17	6.49	-0.08	0.3950
6/7/2011 8:06	-0.17	6.51	-0.08	0.3964
6/7/2011 8:16	-0.17	6.52	-0.08	0.3976
6/7/2011 8:26	-0.17	6.53	-0.08	0.3980
6/7/2011 8:36	-0.17	6.53	-0.08	0.3980
6/7/2011 8:46	-0.17	6.53	-0.08	0.3980
6/7/2011 8:56	-0.18	6.54	-0.08	0.3978
6/7/2011 9:06	-0.18	6.54	-0.08	0.3975
6/7/2011 9:16	-0.18	6.52	-0.08	0.4052
6/7/2011 9:26	-0.17	6.44	-0.08	0.4063
6/7/2011 9:36	-0.17	6.44	-0.08	0.4050
6/7/2011 9:46	-0.17	6.36	-0.08	0.3919

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/7/2011 5:00	4.98	19.528	0.096
6/7/2011 5:10	4.981	19.523	0.094
6/7/2011 5:20	4.982	19.534	0.092
6/7/2011 5:30	4.981	19.544	0.095
6/7/2011 5:40	4.981	19.529	0.095
6/7/2011 5:50	4.981	19.529	0.095
6/7/2011 6:00	4.982	19.532	0.093
6/7/2011 6:10	4.982	19.532	0.092
6/7/2011 6:20	4.983	19.517	0.091
6/7/2011 6:30	5.251	19.541	0.528
6/7/2011 6:40	5.289	19.553	0.616
6/7/2011 6:50	5.324	19.553	0.698
6/7/2011 7:00	5.317	19.553	0.68
6/7/2011 7:10	5.328	19.533	0.706
6/7/2011 7:20	5.342	19.527	0.74
6/7/2011 7:30	5.348	19.532	0.753
6/7/2011 7:40	5.355	19.54	0.769
6/7/2011 7:50	5.36	19.531	0.78
6/7/2011 8:00	5.363	19.536	0.788
6/7/2011 8:10	5.367	19.53	0.796
6/7/2011 8:20	5.368	19.541	0.799
6/7/2011 8:30	5.368	19.536	0.798
6/7/2011 8:40	5.368	19.529	0.8
6/7/2011 8:50	5.369	19.535	0.802
6/7/2011 9:00	5.369	19.536	0.802
6/7/2011 9:10	5.369	19.531	0.802
6/7/2011 9:20	5.14	19.537	0.273
6/7/2011 9:30	5.063	19.534	0.096
6/7/2011 9:40	5.048	19.531	0.059



CH2MHILL

Figure C.24
SRS Injection Data Timeline - 52GW80

TABLE C.32
Monitoring Well Data for 52GW80

Monitoring Well ID:	**52GW80**
Injection Well ID:	IW08
Distance to Injection Well:	19.4-ft

In-Situ Inc.	Troll 9500
Serial number:	48060
Test started on:	6/6/2011
Test stopped on:	6/6/2011
Time Between Data Points:	10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/6/2011 12:36	-0.15	6.41	-0.08	1.4419
6/6/2011 12:46	-0.15	6.40	-0.08	1.4608
6/6/2011 12:56	-0.14	6.40	-0.08	1.4483
6/6/2011 13:06	-0.14	6.40	-0.08	1.4606
6/6/2011 13:16	-0.14	6.40	-0.08	1.4668
6/6/2011 13:26	-0.13	6.38	-0.08	1.4484
6/6/2011 13:36	-0.13	6.38	-0.08	1.4506
6/6/2011 13:46	-0.13	6.38	-0.08	1.4422
6/6/2011 13:56	-0.12	6.36	-0.08	1.4450
6/6/2011 14:06	-0.12	6.38	-0.08	1.4047
6/6/2011 14:16	-0.12	6.38	-0.08	1.4578
6/6/2011 14:26	-0.12	6.38	-0.08	1.4596
6/6/2011 14:36	-0.12	6.38	-0.08	1.2144
6/6/2011 14:46	-0.12	6.38	-0.08	1.0569
6/6/2011 14:56	-0.12	6.38	-0.08	1.0569
6/6/2011 15:06	-0.11	6.38	-0.08	1.2360
6/6/2011 15:16	-0.12	6.38	-0.08	1.4346
6/6/2011 15:26	-0.12	6.38	-0.08	1.4725
6/6/2011 15:36	-0.12	6.38	-0.08	1.4726
6/6/2011 15:46	-0.12	6.39	-0.08	1.5005
6/6/2011 15:56	-0.12	6.40	-0.08	1.5085
6/6/2011 16:06	-0.12	6.40	-0.08	1.5039
6/6/2011 16:16	-0.12	6.40	-0.08	1.5010
6/6/2011 16:26	-0.13	6.40	-0.08	1.5107
6/6/2011 16:36	-0.13	6.40	-0.08	1.5073
6/6/2011 16:46	-0.13	6.40	-0.08	1.5050
6/6/2011 16:56	-0.13	6.40	-0.08	1.5065
6/6/2011 17:06	-0.13	6.40	-0.08	1.5094
6/6/2011 17:16	-0.13	6.40	-0.08	1.5038
6/6/2011 17:26	-0.13	6.40	-0.08	1.5049
6/6/2011 17:36	-0.13	6.40	-0.08	1.5000
6/6/2011 17:46	-0.13	6.40	-0.08	1.5015
6/6/2011 17:56	-0.13	6.40	-0.08	1.4984
6/6/2011 18:06	-0.13	6.40	-0.08	1.4971
6/6/2011 18:16	-0.13	6.40	-0.08	1.4960
6/6/2011 18:26	-0.13	6.40	-0.08	1.5006
6/6/2011 18:36	-0.13	6.40	-0.08	1.5022
6/6/2011 18:46	-0.13	6.40	-0.08	1.5054
6/6/2011 18:56	-0.13	6.41	-0.08	1.5049
6/6/2011 19:06	-0.13	6.41	-0.08	1.5071
6/6/2011 19:16	-0.13	6.40	-0.08	1.5030
6/6/2011 19:26	-0.13	6.41	-0.08	1.5054
6/6/2011 19:36	-0.13	6.40	-0.08	1.5063
6/6/2011 19:46	-0.13	6.40	-0.08	1.5007
6/6/2011 19:56	-0.13	6.41	-0.08	1.4994
6/6/2011 20:06	-0.13	6.41	-0.08	1.5052
6/6/2011 20:16	-0.13	6.41	-0.08	1.4995
6/6/2011 20:26	-0.13	6.41	-0.08	1.5008
6/6/2011 20:36	-0.13	6.41	-0.08	1.5016

In-Situ Inc.	Level Troll 700
Serial number:	134219
Test started on:	6/6/2011
Test stopped on:	6/6/2011
Time Between Data Points:	10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/6/2011 12:43	2.959	18.952	0.125
6/6/2011 12:53	2.947	18.946	0.098
6/6/2011 13:03	3.118	18.932	0.493
6/6/2011 13:13	3.152	18.924	0.57
6/6/2011 13:23	3.151	18.92	0.568
6/6/2011 13:33	3.171	18.918	0.615
6/6/2011 13:43	3.178	18.943	0.63
6/6/2011 13:53	3.169	18.95	0.61
6/6/2011 14:03	3.165	18.939	0.6
6/6/2011 14:13	3.161	18.914	0.591
6/6/2011 14:23	3.162	18.915	0.595
6/6/2011 14:33	3.16	18.914	0.588
6/6/2011 14:43	3.163	18.924	0.595
6/6/2011 14:53	3.164	18.925	0.597
6/6/2011 15:03	3.163	18.925	0.595
6/6/2011 15:13	3.162	18.924	0.595
6/6/2011 15:23	3.163	18.928	0.597
6/6/2011 15:33	3.028	18.928	0.285
6/6/2011 15:43	2.978	18.927	0.168
6/6/2011 15:53	2.958	18.925	0.122
6/6/2011 16:03	2.944	18.925	0.09
6/6/2011 16:13	2.937	18.921	0.075
6/6/2011 16:23	2.929	18.923	0.057
6/6/2011 16:33	2.921	18.923	0.038
6/6/2011 16:43	2.92	18.92	0.035
6/6/2011 16:53	2.916	18.921	0.025
6/6/2011 17:03	2.912	18.92	0.016
6/6/2011 17:13	2.911	18.919	0.014
6/6/2011 17:23	2.909	18.918	0.009
6/6/2011 17:33	2.905	18.919	0
6/6/2011 17:43	2.904	18.917	0.003
6/6/2011 17:53	2.903	18.919	0.004
6/6/2011 18:03	2.901	18.916	0.009
6/6/2011 18:13	2.901	18.916	0.01
6/6/2011 18:23	2.897	18.913	0.019
6/6/2011 18:33	2.897	18.915	0.017
6/6/2011 18:43	2.896	18.912	0.021
6/6/2011 18:53	2.894	18.918	0.025
6/6/2011 19:03	2.893	18.916	0.026
6/6/2011 19:13	2.892	18.914	0.029
6/6/2011 19:23	2.891	18.913	0.032
6/6/2011 19:33	2.891	18.916	0.032
6/6/2011 19:43	2.889	18.915	0.036
6/6/2011 19:53	2.889	18.915	0.038
6/6/2011 20:03	2.888	18.917	0.038
6/6/2011 20:13	2.888	18.914	0.04
6/6/2011 20:23	2.887	18.913	0.041
6/6/2011 20:33	2.886	18.916	0.044
6/6/2011 20:43	2.885	18.917	0.045

TABLE C.32
Monitoring Well Data for 52GW80

Monitoring Well ID: **52GW80**
Injection Well ID: IW08
Distance to Injection Well: 19.4-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/6/2011 20:46	-0.13	6.41	-0.08	1.5049
6/6/2011 20:56	-0.13	6.41	-0.08	1.5063
6/6/2011 21:06	-0.13	6.41	-0.08	1.5086
6/6/2011 21:16	-0.13	6.41	-0.08	1.5095
6/6/2011 21:26	-0.14	6.41	-0.08	1.5069
6/6/2011 21:36	-0.13	6.41	-0.08	1.5100
6/6/2011 21:46	-0.13	6.41	-0.08	1.5150
6/6/2011 21:56	-0.13	6.41	-0.08	1.5126
6/6/2011 22:06	-0.12	6.41	-0.08	1.5101
6/6/2011 22:16	-0.12	6.41	-0.08	1.5169
6/6/2011 22:26	-0.12	6.41	-0.08	1.5153
6/6/2011 22:36	-0.12	6.41	-0.08	1.5208
6/6/2011 22:46	-0.12	6.41	-0.08	1.5217
6/6/2011 22:56	-0.12	6.41	-0.08	1.5217
6/6/2011 23:06	-0.12	6.41	-0.08	1.5214
6/6/2011 23:16	-0.12	6.41	-0.08	1.5216
6/6/2011 23:26	-0.12	6.41	-0.08	1.5255
6/6/2011 23:36	-0.12	6.41	-0.08	1.5245
6/6/2011 23:46	-0.11	6.41	-0.08	1.5227
6/6/2011 23:56	-0.11	6.41	-0.08	1.5233
6/7/2011 0:06	-0.11	6.41	-0.08	1.5229
6/7/2011 0:16	-0.11	6.41	-0.08	1.5270
6/7/2011 0:26	-0.11	6.41	-0.08	1.5271
6/7/2011 0:36	-0.11	6.41	-0.08	1.5274
6/7/2011 0:46	-0.11	6.41	-0.08	1.5273
6/7/2011 0:56	-0.11	6.41	-0.08	1.5219
6/7/2011 1:06	-0.11	6.41	-0.08	1.5216
6/7/2011 1:16	-0.11	6.41	-0.08	1.5248
6/7/2011 1:26	-0.11	6.41	-0.08	1.5255
6/7/2011 1:36	-0.11	6.41	-0.08	1.5259
6/7/2011 1:46	-0.11	6.41	-0.08	1.5262
6/7/2011 1:56	-0.11	6.41	-0.08	1.5265
6/7/2011 2:06	-0.11	6.41	-0.08	1.5320
6/7/2011 2:16	-0.11	6.41	-0.08	1.5280
6/7/2011 2:26	-0.11	6.41	-0.08	1.5332
6/7/2011 2:36	-0.11	6.41	-0.08	1.5375
6/7/2011 2:46	-0.11	6.41	-0.08	1.5341
6/7/2011 2:56	-0.11	6.41	-0.08	1.5388
6/7/2011 3:06	-0.11	6.41	-0.08	1.5350
6/7/2011 3:16	-0.11	6.41	-0.08	1.5369
6/7/2011 3:26	-0.11	6.41	-0.08	1.5353
6/7/2011 3:36	-0.11	6.41	-0.08	1.5330
6/7/2011 3:46	-0.11	6.41	-0.08	1.5330
6/7/2011 3:56	-0.11	6.41	-0.08	1.5367
6/7/2011 4:06	-0.11	6.41	-0.08	1.5376
6/7/2011 4:16	-0.11	6.41	-0.08	1.5362
6/7/2011 4:26	-0.11	6.41	-0.08	1.5369
6/7/2011 4:36	-0.11	6.41	-0.08	1.5346
6/7/2011 4:46	-0.11	6.41	-0.08	1.5343

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/6/2011 20:53	2.885	18.916	0.047
6/6/2011 21:03	2.884	18.916	0.047
6/6/2011 21:13	2.884	18.917	0.049
6/6/2011 21:23	2.885	18.916	0.046
6/6/2011 21:33	2.883	18.916	0.049
6/6/2011 21:43	2.882	18.919	0.053
6/6/2011 21:53	2.881	18.916	0.055
6/6/2011 22:03	2.881	18.917	0.054
6/6/2011 22:13	2.88	18.915	0.057
6/6/2011 22:23	2.879	18.919	0.061
6/6/2011 22:33	2.879	18.914	0.059
6/6/2011 22:43	2.879	18.915	0.059
6/6/2011 22:53	2.878	18.92	0.061
6/6/2011 23:03	2.878	18.917	0.063
6/6/2011 23:13	2.879	18.92	0.059
6/6/2011 23:23	2.879	18.919	0.061
6/6/2011 23:33	2.878	18.919	0.062
6/6/2011 23:43	2.876	18.919	0.066
6/6/2011 23:53	2.877	18.919	0.064
6/7/2011 0:03	2.876	18.92	0.067
6/7/2011 0:13	2.877	18.917	0.065
6/7/2011 0:23	2.877	18.918	0.065
6/7/2011 0:33	2.877	18.919	0.065
6/7/2011 0:43	2.876	18.92	0.067
6/7/2011 0:53	2.876	18.92	0.067
6/7/2011 1:03	2.876	18.923	0.066
6/7/2011 1:13	2.876	18.919	0.066
6/7/2011 1:23	2.875	18.921	0.069
6/7/2011 1:33	2.876	18.919	0.067
6/7/2011 1:43	2.876	18.923	0.067
6/7/2011 1:53	2.876	18.923	0.066
6/7/2011 2:03	2.875	18.923	0.069
6/7/2011 2:13	2.876	18.919	0.066
6/7/2011 2:23	2.876	18.922	0.067
6/7/2011 2:33	2.876	18.921	0.067
6/7/2011 2:43	2.876	18.922	0.067
6/7/2011 2:53	2.876	18.923	0.066
6/7/2011 3:03	2.877	18.924	0.064
6/7/2011 3:13	2.876	18.921	0.067
6/7/2011 3:23	2.876	18.922	0.066
6/7/2011 3:33	2.876	18.923	0.067
6/7/2011 3:43	2.875	18.922	0.068
6/7/2011 3:53	2.877	18.922	0.065
6/7/2011 4:03	2.875	18.925	0.07
6/7/2011 4:13	2.875	18.921	0.068
6/7/2011 4:23	2.875	18.924	0.069
6/7/2011 4:33	2.877	18.923	0.065
6/7/2011 4:43	2.876	18.924	0.067
6/7/2011 4:53	2.876	18.925	0.066

TABLE C.32
Monitoring Well Data for 52GW80

Monitoring Well ID: **52GW80**
Injection Well ID: IW08
Distance to Injection Well: 19.4-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/7/2011 4:56	-0.11	6.41	-0.08	1.5346
6/7/2011 5:06	-0.11	6.41	-0.08	1.5359
6/7/2011 5:16	-0.11	6.41	-0.08	1.5326
6/7/2011 5:26	-0.11	6.41	-0.08	1.5347
6/7/2011 5:36	-0.11	6.41	-0.08	1.5384
6/7/2011 5:46	-0.11	6.41	-0.08	1.5408
6/7/2011 5:56	-0.11	6.41	-0.08	1.5366
6/7/2011 6:06	-0.11	6.41	-0.08	1.5347
6/7/2011 6:16	-0.11	6.41	-0.08	1.5396
6/7/2011 6:26	-0.11	6.41	-0.08	1.5340
6/7/2011 6:36	-0.12	6.42	-0.08	1.5588
6/7/2011 6:46	-0.12	6.41	-0.08	1.5504
6/7/2011 6:56	-0.12	6.40	-0.08	1.5468
6/7/2011 7:06	-0.11	6.39	-0.08	1.4768
6/7/2011 7:16	-0.12	6.39	-0.08	1.5573
6/7/2011 7:26	-0.12	6.40	-0.08	1.5505
6/7/2011 7:36	-0.12	6.40	-0.08	1.5489
6/7/2011 7:46	-0.12	6.40	-0.08	1.5459
6/7/2011 7:56	-0.12	6.39	-0.08	1.5441
6/7/2011 8:06	-0.12	6.40	-0.08	1.5311
6/7/2011 8:16	-0.12	6.40	-0.08	1.5476
6/7/2011 8:26	-0.12	6.39	-0.08	1.5469
6/7/2011 8:36	-0.13	6.39	-0.08	1.5294
6/7/2011 8:46	-0.13	6.39	-0.08	1.5467
6/7/2011 8:56	-0.13	6.40	-0.08	1.5568
6/7/2011 9:06	-0.13	6.40	-0.08	1.4589
6/7/2011 9:16	-0.13	6.40	-0.08	1.5640
6/7/2011 9:26	-0.13	6.35	-0.08	1.5608
6/7/2011 9:36	-0.13	6.39	-0.08	1.5551
6/7/2011 9:46	-0.13	6.40	-0.08	1.5566
6/7/2011 9:56	-0.13	6.41	-0.08	1.5554

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/6/2011
Test stopped on: 6/6/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/7/2011 5:03	2.876	18.926	0.067
6/7/2011 5:13	2.874	18.925	0.07
6/7/2011 5:23	2.876	18.93	0.068
6/7/2011 5:33	2.875	18.926	0.069
6/7/2011 5:43	2.883	18.926	0.052
6/7/2011 5:53	2.875	18.926	0.07
6/7/2011 6:03	2.876	18.925	0.067
6/7/2011 6:13	2.876	18.927	0.067
6/7/2011 6:23	2.873	18.926	0.074
6/7/2011 6:33	3.06	18.927	0.359
6/7/2011 6:43	3.073	18.934	0.388
6/7/2011 6:53	3.068	18.939	0.376
6/7/2011 7:03	3.079	18.947	0.402
6/7/2011 7:13	3.081	18.94	0.408
6/7/2011 7:23	3.084	18.942	0.413
6/7/2011 7:33	3.089	18.944	0.426
6/7/2011 7:43	3.093	18.947	0.435
6/7/2011 7:53	3.094	18.95	0.437
6/7/2011 8:03	3.098	18.957	0.445
6/7/2011 8:13	3.101	18.961	0.452
6/7/2011 8:23	3.102	18.958	0.456
6/7/2011 8:33	3.103	18.959	0.458
6/7/2011 8:43	3.102	18.96	0.455
6/7/2011 8:53	3.103	18.956	0.457
6/7/2011 9:03	3.104	18.975	0.459
6/7/2011 9:13	3.102	18.953	0.455
6/7/2011 9:23	2.994	18.954	0.205
6/7/2011 9:33	2.943	18.956	0.089

TABLE C.33
Injection Summary for IW09

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/7/2011 11:05	IW09	0	Begin Injecting SRS - Batch 1/2.
6/7/2011 13:42	IW09	4,135	Finish Injecting SRS - Batch 1/2.
6/7/2011 14:23	IW09	4,135	Begin Injecting SRS - Batch 2/2.
6/7/2011 17:05	IW09	8,270	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW09	20 - 35	52GW79	17.9	38 - 48	top
		52GW80	12.7	22 - 32	middle
		52GW81	14.5	38 - 48	top

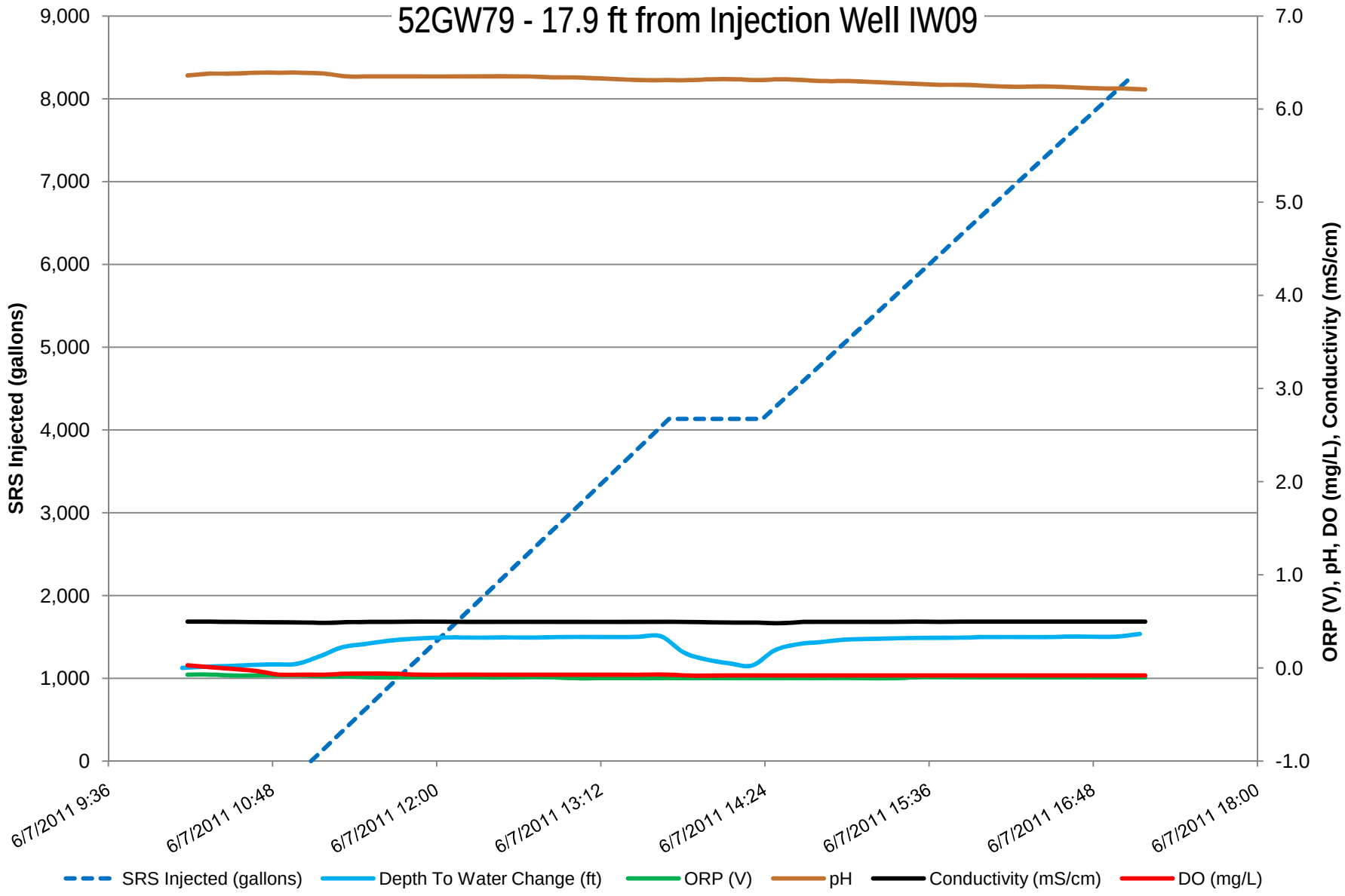


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Figure C.25
SRS Injection Data Timeline - 52GW79

TABLE C.34
Monitoring Well Data for 52GW79

Monitoring Well ID: **52GW79**
Injection Well ID: IW09
Distance to Injection Well: 17.9-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/7/2011
Test stopped on: 6/7/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/7/2011 10:10	-0.07	6.36	0.03	0.4984
6/7/2011 10:20	-0.07	6.38	0.01	0.4979
6/7/2011 10:30	-0.08	6.38	-0.01	0.4949
6/7/2011 10:40	-0.08	6.39	-0.03	0.4926
6/7/2011 10:50	-0.08	6.39	-0.07	0.4908
6/7/2011 11:00	-0.08	6.39	-0.07	0.4893
6/7/2011 11:10	-0.09	6.38	-0.07	0.4848
6/7/2011 11:20	-0.09	6.35	-0.06	0.4924
6/7/2011 11:30	-0.10	6.35	-0.06	0.4957
6/7/2011 11:40	-0.10	6.35	-0.06	0.4973
6/7/2011 11:50	-0.10	6.35	-0.07	0.4985
6/7/2011 12:00	-0.10	6.35	-0.07	0.4980
6/7/2011 12:10	-0.10	6.35	-0.07	0.4963
6/7/2011 12:20	-0.10	6.35	-0.07	0.4960
6/7/2011 12:30	-0.10	6.35	-0.07	0.4956
6/7/2011 12:40	-0.10	6.35	-0.07	0.4954
6/7/2011 12:50	-0.10	6.34	-0.07	0.4955
6/7/2011 13:00	-0.11	6.34	-0.07	0.4955
6/7/2011 13:10	-0.11	6.33	-0.07	0.4958
6/7/2011 13:20	-0.11	6.32	-0.07	0.4962
6/7/2011 13:30	-0.11	6.31	-0.07	0.4962
6/7/2011 13:40	-0.11	6.31	-0.07	0.4967
6/7/2011 13:50	-0.11	6.31	-0.08	0.4951
6/7/2011 14:00	-0.11	6.32	-0.08	0.4905
6/7/2011 14:10	-0.11	6.32	-0.08	0.4877
6/7/2011 14:20	-0.11	6.31	-0.08	0.4863
6/7/2011 14:30	-0.11	6.32	-0.08	0.4805
6/7/2011 14:40	-0.11	6.31	-0.08	0.4945
6/7/2011 14:50	-0.11	6.30	-0.08	0.4963
6/7/2011 15:00	-0.11	6.30	-0.08	0.4968
6/7/2011 15:10	-0.11	6.29	-0.08	0.4970
6/7/2011 15:20	-0.11	6.28	-0.08	0.4967
6/7/2011 15:30	-0.10	6.27	-0.08	0.4974
6/7/2011 15:40	-0.10	6.26	-0.08	0.4969
6/7/2011 15:50	-0.10	6.26	-0.08	0.4973
6/7/2011 16:00	-0.10	6.25	-0.08	0.4974
6/7/2011 16:10	-0.10	6.24	-0.08	0.4976
6/7/2011 16:20	-0.10	6.24	-0.08	0.4976
6/7/2011 16:30	-0.10	6.24	-0.08	0.4981
6/7/2011 16:40	-0.10	6.23	-0.08	0.4977
6/7/2011 16:50	-0.10	6.22	-0.08	0.4976
6/7/2011 17:00	-0.10	6.22	-0.08	0.4980
6/7/2011 17:10	-0.10	6.21	-0.08	0.4976

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/7/2011
Test stopped on: 6/7/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/7/2011 10:08	5.012	24.133	0
6/7/2011 10:18	5.006	19.952	0.013
6/7/2011 10:28	5.002	19.648	0.022
6/7/2011 10:38	4.998	19.6	0.032
6/7/2011 10:48	4.995	19.585	0.038
6/7/2011 10:58	4.993	19.566	0.043
6/7/2011 11:08	5.064	19.561	0.122
6/7/2011 11:18	5.107	19.567	0.221
6/7/2011 11:28	5.123	19.574	0.257
6/7/2011 11:38	5.138	19.542	0.291
6/7/2011 11:48	5.146	19.527	0.311
6/7/2011 11:58	5.151	19.525	0.323
6/7/2011 12:08	5.154	19.537	0.328
6/7/2011 12:18	5.153	19.528	0.325
6/7/2011 12:28	5.154	19.528	0.328
6/7/2011 12:38	5.153	19.525	0.326
6/7/2011 12:48	5.154	19.527	0.328
6/7/2011 12:58	5.156	19.534	0.333
6/7/2011 13:08	5.156	19.52	0.333
6/7/2011 13:18	5.155	19.53	0.332
6/7/2011 13:28	5.156	19.532	0.334
6/7/2011 13:38	5.159	19.512	0.34
6/7/2011 13:48	5.084	19.532	0.166
6/7/2011 13:58	5.05	19.519	0.09
6/7/2011 14:08	5.033	19.523	0.05
6/7/2011 14:18	5.023	19.504	0.027
6/7/2011 14:28	5.094	19.518	0.191
6/7/2011 14:38	5.122	19.517	0.255
6/7/2011 14:48	5.132	19.506	0.278
6/7/2011 14:58	5.143	19.502	0.303
6/7/2011 15:08	5.146	19.501	0.311
6/7/2011 15:18	5.149	19.523	0.317
6/7/2011 15:28	5.151	19.524	0.322
6/7/2011 15:38	5.152	19.521	0.325
6/7/2011 15:48	5.152	19.504	0.324
6/7/2011 15:58	5.155	19.499	0.331
6/7/2011 16:08	5.156	19.494	0.333
6/7/2011 16:18	5.155	19.492	0.332
6/7/2011 16:28	5.155	19.499	0.331
6/7/2011 16:38	5.158	19.508	0.337
6/7/2011 16:48	5.157	19.499	0.335
6/7/2011 16:58	5.157	19.513	0.336
6/7/2011 17:08	5.17	19.519	0.365

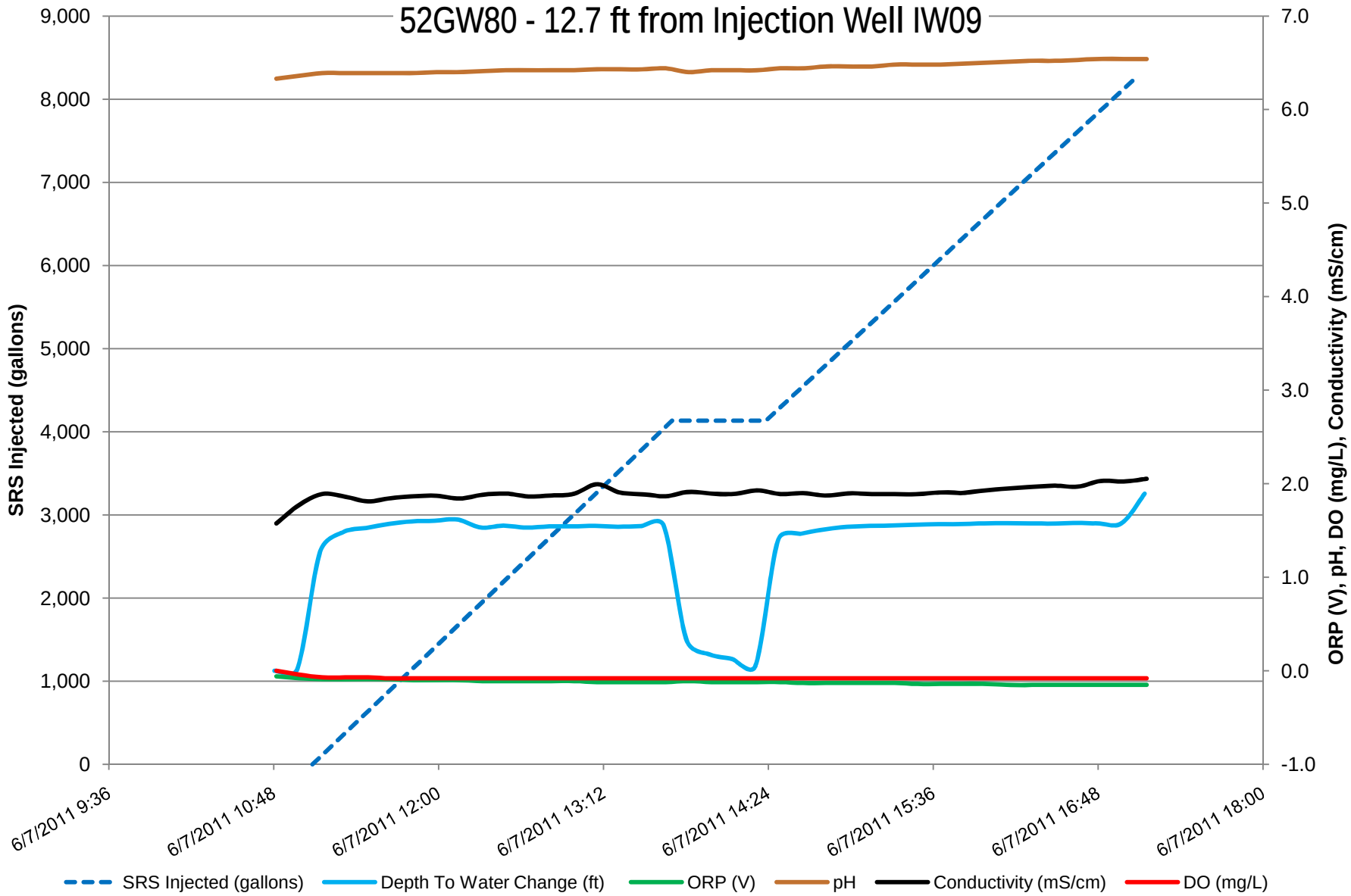

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Figure C.26
SRS Injection Data Timeline - 52GW80

TABLE C.35
Monitoring Well Data for 52GW80

Monitoring Well ID: **52GW80**
Injection Well ID: IW09
Distance to Injection Well: 12.7-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/7/2011
Test stopped on: 6/7/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/7/2011 10:49	-0.06	6.33	0.00	1.5761
6/7/2011 10:59	-0.08	6.36	-0.04	1.7741
6/7/2011 11:09	-0.09	6.39	-0.07	1.8900
6/7/2011 11:19	-0.09	6.39	-0.07	1.8615
6/7/2011 11:29	-0.09	6.39	-0.07	1.8110
6/7/2011 11:39	-0.09	6.39	-0.08	1.8462
6/7/2011 11:49	-0.10	6.39	-0.08	1.8658
6/7/2011 11:59	-0.10	6.40	-0.08	1.8709
6/7/2011 12:09	-0.10	6.40	-0.08	1.8413
6/7/2011 12:19	-0.11	6.41	-0.08	1.8818
6/7/2011 12:29	-0.11	6.42	-0.08	1.8950
6/7/2011 12:39	-0.11	6.42	-0.08	1.8645
6/7/2011 12:49	-0.11	6.42	-0.08	1.8738
6/7/2011 12:59	-0.11	6.42	-0.08	1.8926
6/7/2011 13:09	-0.12	6.43	-0.08	1.9943
6/7/2011 13:19	-0.12	6.43	-0.08	1.9054
6/7/2011 13:29	-0.12	6.43	-0.08	1.8870
6/7/2011 13:39	-0.12	6.44	-0.08	1.8664
6/7/2011 13:49	-0.11	6.40	-0.08	1.9129
6/7/2011 13:59	-0.12	6.42	-0.08	1.8935
6/7/2011 14:09	-0.12	6.42	-0.08	1.8910
6/7/2011 14:19	-0.12	6.42	-0.08	1.9285
6/7/2011 14:29	-0.12	6.44	-0.08	1.8900
6/7/2011 14:39	-0.13	6.44	-0.08	1.8987
6/7/2011 14:49	-0.13	6.46	-0.08	1.8737
6/7/2011 14:59	-0.13	6.46	-0.08	1.8966
6/7/2011 15:09	-0.13	6.46	-0.08	1.8887
6/7/2011 15:19	-0.13	6.48	-0.08	1.8880
6/7/2011 15:29	-0.14	6.48	-0.08	1.8889
6/7/2011 15:39	-0.14	6.48	-0.08	1.9068
6/7/2011 15:49	-0.14	6.49	-0.08	1.9014
6/7/2011 15:59	-0.14	6.50	-0.08	1.9302
6/7/2011 16:09	-0.15	6.51	-0.08	1.9510
6/7/2011 16:19	-0.15	6.52	-0.08	1.9652
6/7/2011 16:29	-0.15	6.52	-0.08	1.9788
6/7/2011 16:39	-0.15	6.53	-0.08	1.9682
6/7/2011 16:49	-0.15	6.54	-0.08	2.0291
6/7/2011 16:59	-0.15	6.54	-0.08	2.0229
6/7/2011 17:09	-0.15	6.54	-0.08	2.0521

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/7/2011
Test stopped on: 6/7/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/7/2011 10:48	2.966	26.436	0
6/7/2011 10:58	2.958	19.708	0.019
6/7/2011 11:08	3.519	19.122	1.278
6/7/2011 11:18	3.608	19.026	1.483
6/7/2011 11:28	3.628	19.008	1.528
6/7/2011 11:38	3.646	18.989	1.571
6/7/2011 11:48	3.658	18.981	1.598
6/7/2011 11:58	3.661	18.974	1.605
6/7/2011 12:08	3.666	18.966	1.617
6/7/2011 12:18	3.63	18.962	1.533
6/7/2011 12:28	3.638	18.959	1.552
6/7/2011 12:38	3.629	18.956	1.531
6/7/2011 12:48	3.635	18.949	1.544
6/7/2011 12:58	3.635	18.943	1.545
6/7/2011 13:08	3.637	18.949	1.55
6/7/2011 13:18	3.633	18.938	1.541
6/7/2011 13:28	3.636	18.933	1.547
6/7/2011 13:38	3.638	18.931	1.552
6/7/2011 13:48	3.106	18.982	0.325
6/7/2011 13:58	3.042	18.985	0.176
6/7/2011 14:08	3.02	18.972	0.125
6/7/2011 14:18	2.988	18.96	0.052
6/7/2011 14:28	3.573	18.929	1.403
6/7/2011 14:38	3.601	18.92	1.466
6/7/2011 14:48	3.621	18.921	1.512
6/7/2011 14:58	3.632	18.917	1.539
6/7/2011 15:08	3.637	18.915	1.55
6/7/2011 15:18	3.639	18.917	1.554
6/7/2011 15:28	3.642	18.913	1.562
6/7/2011 15:38	3.645	18.912	1.569
6/7/2011 15:48	3.645	18.911	1.569
6/7/2011 15:58	3.649	18.908	1.577
6/7/2011 16:08	3.649	18.905	1.578
6/7/2011 16:18	3.649	18.903	1.577
6/7/2011 16:28	3.648	18.902	1.574
6/7/2011 16:38	3.651	18.906	1.581
6/7/2011 16:48	3.648	18.901	1.575
6/7/2011 16:58	3.649	18.904	1.579
6/7/2011 17:08	3.786	18.897	1.895

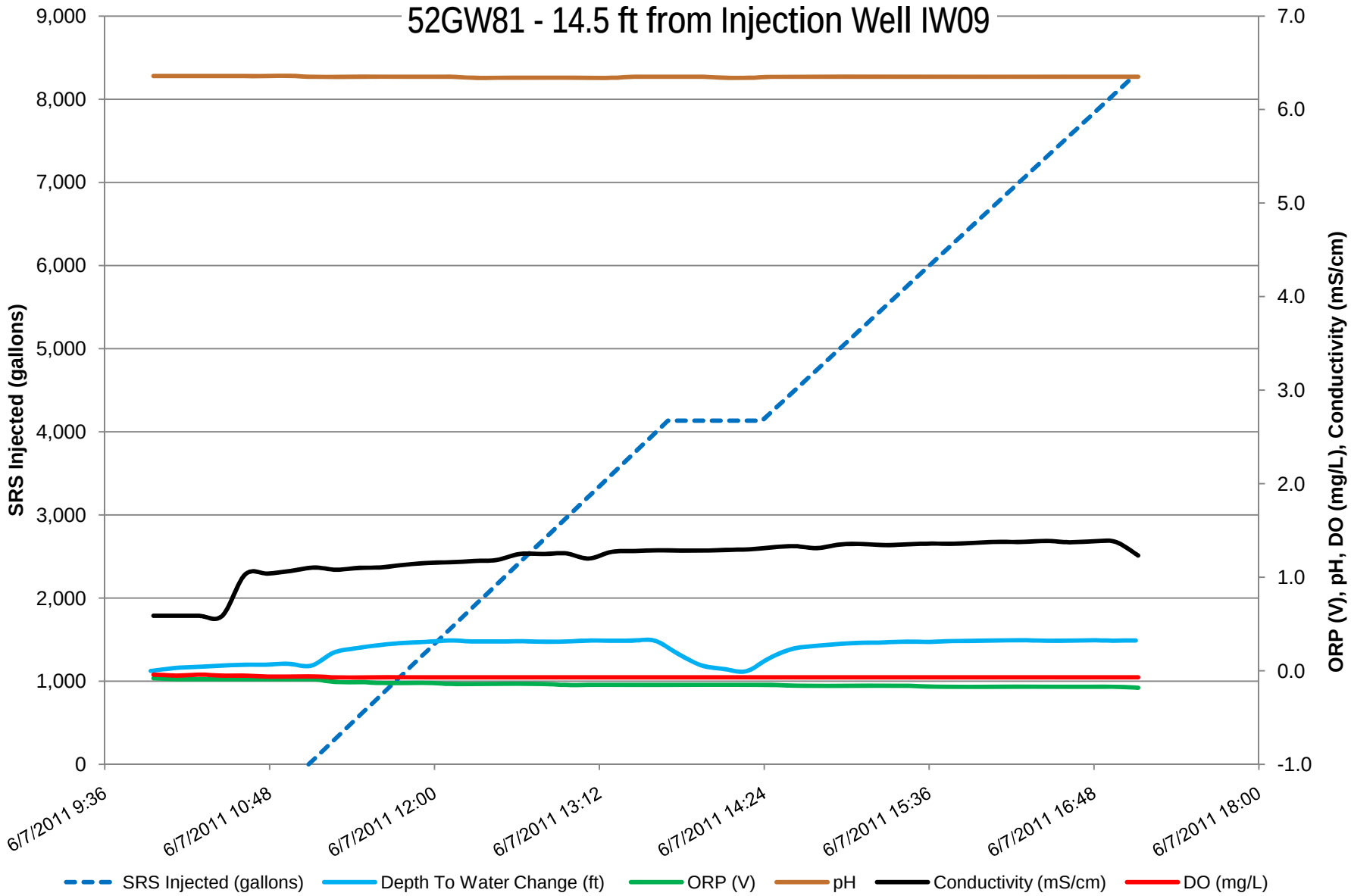

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Figure C.27
SRS Injection Data Timeline - 52GW81

TABLE C.36
Monitoring Well Data for 52GW81

Monitoring Well ID: **52GW81**
Injection Well ID: IW09
Distance to Injection Well: 14.5ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/7/2011
Test stopped on: 6/7/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/7/2011 9:57	-0.08	6.36	-0.04	0.5901
6/7/2011 10:07	-0.09	6.36	-0.05	0.5894
6/7/2011 10:17	-0.09	6.36	-0.04	0.5887
6/7/2011 10:27	-0.09	6.36	-0.05	0.5877
6/7/2011 10:37	-0.09	6.36	-0.05	1.0303
6/7/2011 10:47	-0.09	6.36	-0.06	1.0412
6/7/2011 10:57	-0.09	6.36	-0.06	1.0688
6/7/2011 11:07	-0.09	6.35	-0.06	1.1049
6/7/2011 11:17	-0.12	6.35	-0.07	1.0818
6/7/2011 11:27	-0.12	6.35	-0.07	1.1014
6/7/2011 11:37	-0.13	6.35	-0.07	1.1069
6/7/2011 11:47	-0.13	6.35	-0.07	1.1371
6/7/2011 11:57	-0.13	6.35	-0.07	1.1557
6/7/2011 12:07	-0.14	6.35	-0.07	1.1625
6/7/2011 12:17	-0.14	6.34	-0.07	1.1751
6/7/2011 12:27	-0.14	6.34	-0.07	1.1860
6/7/2011 12:37	-0.14	6.34	-0.07	1.2510
6/7/2011 12:47	-0.14	6.34	-0.07	1.2496
6/7/2011 12:57	-0.15	6.34	-0.07	1.2570
6/7/2011 13:07	-0.15	6.34	-0.07	1.2017
6/7/2011 13:17	-0.15	6.34	-0.07	1.2724
6/7/2011 13:27	-0.15	6.35	-0.07	1.2818
6/7/2011 13:37	-0.15	6.35	-0.07	1.2888
6/7/2011 13:47	-0.15	6.35	-0.07	1.2866
6/7/2011 13:57	-0.15	6.35	-0.07	1.2862
6/7/2011 14:07	-0.15	6.34	-0.07	1.2946
6/7/2011 14:17	-0.15	6.34	-0.07	1.2991
6/7/2011 14:27	-0.15	6.35	-0.07	1.3211
6/7/2011 14:37	-0.16	6.35	-0.07	1.3335
6/7/2011 14:47	-0.16	6.35	-0.07	1.3134
6/7/2011 14:57	-0.16	6.35	-0.07	1.3522
6/7/2011 15:07	-0.16	6.35	-0.07	1.3571
6/7/2011 15:17	-0.16	6.35	-0.07	1.3444
6/7/2011 15:27	-0.16	6.35	-0.07	1.3538
6/7/2011 15:37	-0.17	6.35	-0.07	1.3611
6/7/2011 15:47	-0.17	6.35	-0.07	1.3588
6/7/2011 15:57	-0.17	6.35	-0.07	1.3716
6/7/2011 16:07	-0.17	6.35	-0.07	1.3795
6/7/2011 16:17	-0.17	6.35	-0.07	1.3792
6/7/2011 16:27	-0.17	6.35	-0.07	1.3900
6/7/2011 16:37	-0.17	6.35	-0.07	1.3762
6/7/2011 16:47	-0.17	6.35	-0.07	1.3853
6/7/2011 16:57	-0.17	6.35	-0.07	1.3808
6/7/2011 17:07	-0.18	6.35	-0.07	1.2337

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/7/2011
Test stopped on: 6/7/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/7/2011 9:56	4.372	21.377	0
6/7/2011 10:06	4.36	19.277	0.029
6/7/2011 10:16	4.354	19.154	0.043
6/7/2011 10:26	4.348	19.125	0.055
6/7/2011 10:36	4.344	19.108	0.066
6/7/2011 10:46	4.343	19.078	0.067
6/7/2011 10:56	4.339	19.069	0.076
6/7/2011 11:06	4.396	19.087	0.055
6/7/2011 11:16	4.457	19.076	0.196
6/7/2011 11:26	4.477	19.068	0.243
6/7/2011 11:36	4.492	19.082	0.276
6/7/2011 11:46	4.502	19.071	0.299
6/7/2011 11:56	4.506	19.068	0.309
6/7/2011 12:06	4.513	19.06	0.324
6/7/2011 12:16	4.509	19.05	0.315
6/7/2011 12:26	4.508	19.048	0.314
6/7/2011 12:36	4.509	19.038	0.316
6/7/2011 12:46	4.507	19.036	0.312
6/7/2011 12:56	4.507	19.03	0.312
6/7/2011 13:06	4.512	19.031	0.323
6/7/2011 13:16	4.512	19.017	0.323
6/7/2011 13:26	4.512	19.043	0.323
6/7/2011 13:36	4.512	19.047	0.322
6/7/2011 13:46	4.452	19.054	0.185
6/7/2011 13:56	4.399	19.041	0.062
6/7/2011 14:06	4.381	19.031	0.021
6/7/2011 14:16	4.371	19.015	-0.003
6/7/2011 14:26	4.431	19.029	0.135
6/7/2011 14:36	4.474	19.058	0.234
6/7/2011 14:46	4.487	19.047	0.266
6/7/2011 14:56	4.497	19.05	0.287
6/7/2011 15:06	4.502	19.056	0.299
6/7/2011 15:16	4.503	19.049	0.303
6/7/2011 15:26	4.507	19.047	0.312
6/7/2011 15:36	4.506	19.045	0.309
6/7/2011 15:46	4.51	19.042	0.319
6/7/2011 15:56	4.511	19.035	0.321
6/7/2011 16:06	4.513	19.046	0.325
6/7/2011 16:16	4.514	19.029	0.327
6/7/2011 16:26	4.512	19.012	0.322
6/7/2011 16:36	4.512	19.047	0.322
6/7/2011 16:46	4.514	19.039	0.326
6/7/2011 16:56	4.512	19.038	0.323
6/7/2011 17:06	4.513	19.051	0.325

TABLE C.37
Injection Summary for IW10

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/8/2011 6:25	IW10	0	Begin Injecting SRS - Batch 1/2.
6/8/2011 9:16	IW10	4,135	Finish Injecting SRS - Batch 1/2.
6/8/2011 9:53	IW10	4,135	Begin Injecting SRS - Batch 2/2.
6/8/2011 12:28	IW10	8,270	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW10	32 - 47	52GW79	15.5	38 - 48	middle
		52GW80	10.2	22 - 32	top
		52GW81	17.7	38 - 48	middle

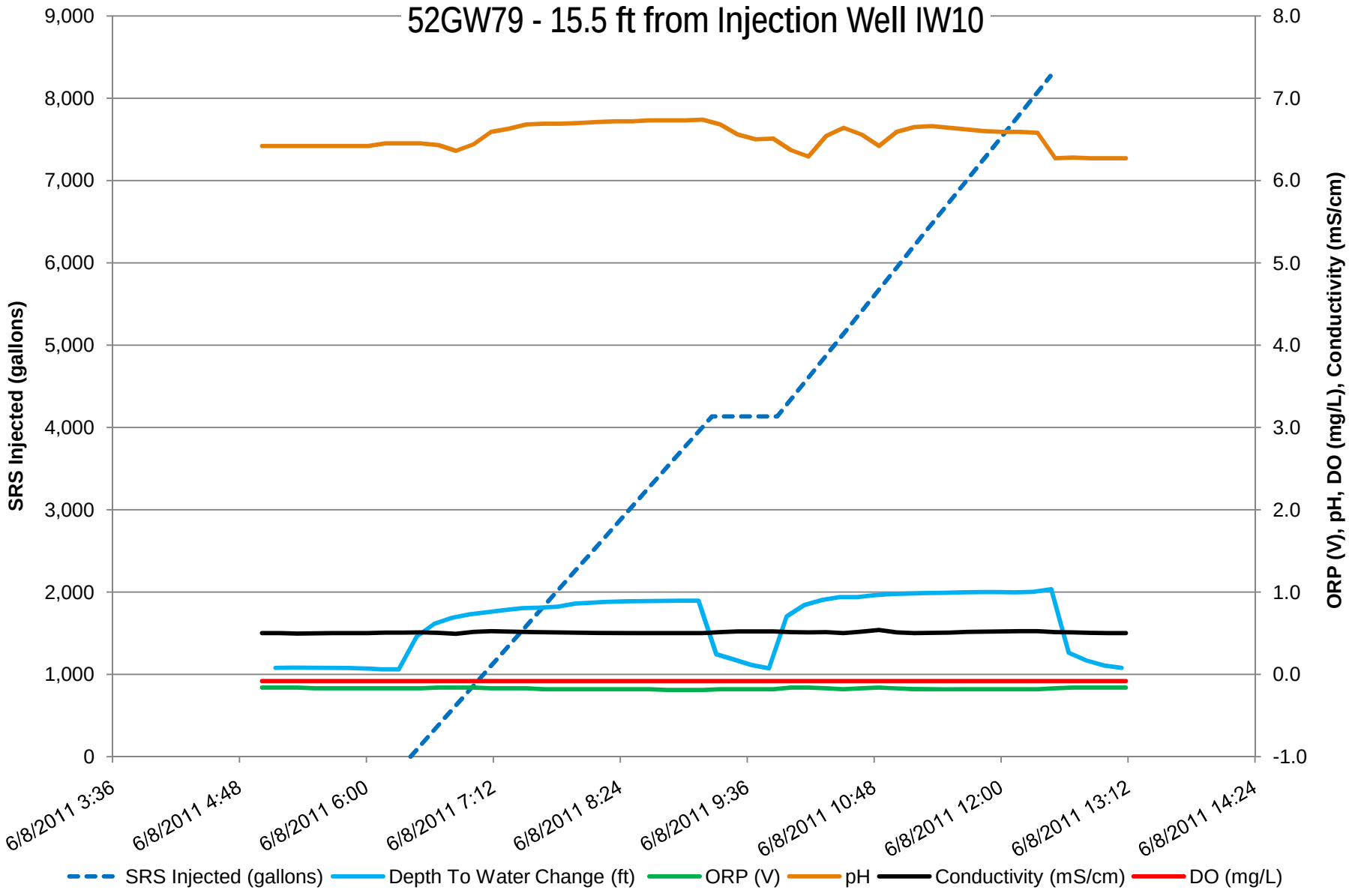

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Figure C.28
SRS Injection Data Timeline - 52GW79

TABLE C.38
Monitoring Well Data for 52GW79

Monitoring Well ID: **52GW79**
Injection Well ID: IW10
Distance to Injection Well: 15.5-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/8/2011
Test stopped on: 6/8/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/8/2011 5:00	-0.16	6.42	-0.08	0.5025
6/8/2011 5:10	-0.16	6.42	-0.08	0.5008
6/8/2011 5:20	-0.16	6.42	-0.08	0.4968
6/8/2011 5:30	-0.17	6.42	-0.08	0.4976
6/8/2011 5:40	-0.17	6.42	-0.08	0.5005
6/8/2011 5:50	-0.17	6.42	-0.08	0.5005
6/8/2011 6:00	-0.17	6.42	-0.08	0.5009
6/8/2011 6:10	-0.17	6.45	-0.08	0.5083
6/8/2011 6:20	-0.17	6.45	-0.08	0.5082
6/8/2011 6:30	-0.17	6.45	-0.08	0.5092
6/8/2011 6:40	-0.16	6.43	-0.08	0.5036
6/8/2011 6:50	-0.16	6.36	-0.08	0.4923
6/8/2011 7:00	-0.16	6.44	-0.08	0.5173
6/8/2011 7:10	-0.17	6.59	-0.08	0.5237
6/8/2011 7:20	-0.17	6.63	-0.08	0.5229
6/8/2011 7:30	-0.17	6.68	-0.08	0.5152
6/8/2011 7:40	-0.18	6.69	-0.08	0.5101
6/8/2011 7:50	-0.18	6.69	-0.08	0.5076
6/8/2011 8:00	-0.18	6.70	-0.08	0.5060
6/8/2011 8:10	-0.18	6.71	-0.08	0.5049
6/8/2011 8:20	-0.18	6.72	-0.08	0.5034
6/8/2011 8:30	-0.18	6.72	-0.08	0.5019
6/8/2011 8:40	-0.18	6.73	-0.08	0.5018
6/8/2011 8:50	-0.19	6.73	-0.08	0.5012
6/8/2011 9:00	-0.19	6.73	-0.08	0.5016
6/8/2011 9:10	-0.19	6.74	-0.08	0.5022
6/8/2011 9:20	-0.18	6.68	-0.08	0.5133
6/8/2011 9:30	-0.18	6.56	-0.08	0.5211
6/8/2011 9:40	-0.18	6.50	-0.08	0.5231
6/8/2011 9:50	-0.18	6.51	-0.08	0.5235
6/8/2011 10:00	-0.16	6.37	-0.08	0.5120
6/8/2011 10:10	-0.16	6.29	-0.08	0.5114
6/8/2011 10:20	-0.17	6.54	-0.08	0.5124
6/8/2011 10:30	-0.18	6.64	-0.08	0.5031
6/8/2011 10:40	-0.17	6.56	-0.08	0.5182
6/8/2011 10:50	-0.16	6.42	-0.08	0.5387
6/8/2011 11:00	-0.17	6.59	-0.08	0.5114
6/8/2011 11:10	-0.18	6.65	-0.08	0.5031
6/8/2011 11:20	-0.18	6.66	-0.08	0.5043
6/8/2011 11:30	-0.18	6.64	-0.08	0.5089
6/8/2011 11:40	-0.18	6.62	-0.08	0.5151
6/8/2011 11:50	-0.18	6.60	-0.08	0.5196
6/8/2011 12:00	-0.18	6.59	-0.08	0.5224
6/8/2011 12:10	-0.18	6.59	-0.08	0.5248
6/8/2011 12:20	-0.18	6.58	-0.08	0.5248
6/8/2011 12:30	-0.17	6.27	-0.08	0.5142
6/8/2011 12:40	-0.16	6.28	-0.08	0.5115
6/8/2011 12:50	-0.16	6.27	-0.08	0.5042
6/8/2011 13:00	-0.16	6.27	-0.08	0.5029
6/8/2011 13:10	-0.16	6.27	-0.08	0.5023

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/8/2011
Test stopped on: 6/8/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/8/2011 5:08	4.977	19.51	0.079
6/8/2011 5:18	4.976	19.524	0.083
6/8/2011 5:28	4.978	19.5	0.078
6/8/2011 5:38	4.976	19.49	0.081
6/8/2011 5:48	4.979	19.507	0.075
6/8/2011 5:58	4.981	19.482	0.072
6/8/2011 6:08	4.984	19.494	0.063
6/8/2011 6:18	4.984	19.517	0.063
6/8/2011 6:28	5.209	19.507	0.457
6/8/2011 6:38	5.277	19.512	0.613
6/8/2011 6:48	5.308	19.503	0.685
6/8/2011 6:58	5.328	19.494	0.73
6/8/2011 7:08	5.339	19.489	0.755
6/8/2011 7:18	5.35	19.487	0.782
6/8/2011 7:28	5.36	19.495	0.804
6/8/2011 7:38	5.363	19.483	0.812
6/8/2011 7:48	5.367	19.475	0.821
6/8/2011 7:58	5.384	19.497	0.859
6/8/2011 8:08	5.39	19.499	0.873
6/8/2011 8:18	5.395	19.5	0.884
6/8/2011 8:28	5.395	19.484	0.886
6/8/2011 8:38	5.397	19.489	0.891
6/8/2011 8:48	5.398	19.491	0.891
6/8/2011 8:58	5.399	19.475	0.894
6/8/2011 9:08	5.399	19.484	0.896
6/8/2011 9:18	5.118	19.476	0.246
6/8/2011 9:28	5.091	19.454	0.182
6/8/2011 9:38	5.061	19.468	0.115
6/8/2011 9:48	5.044	19.472	0.074
6/8/2011 9:58	5.317	19.496	0.705
6/8/2011 10:08	5.377	19.481	0.843
6/8/2011 10:18	5.403	19.482	0.904
6/8/2011 10:28	5.418	19.482	0.939
6/8/2011 10:38	5.418	19.49	0.938
6/8/2011 10:48	5.429	19.487	0.963
6/8/2011 10:58	5.435	19.488	0.977
6/8/2011 11:08	5.438	19.486	0.984
6/8/2011 11:18	5.439	19.481	0.988
6/8/2011 11:28	5.441	19.49	0.992
6/8/2011 11:38	5.443	19.488	0.996
6/8/2011 11:48	5.445	19.484	1
6/8/2011 11:58	5.445	19.486	1.001
6/8/2011 12:08	5.443	19.488	0.997
6/8/2011 12:18	5.445	19.485	1.002
6/8/2011 12:28	5.46	19.494	1.035
6/8/2011 12:38	5.126	19.475	0.263
6/8/2011 12:48	5.084	19.467	0.168
6/8/2011 12:58	5.058	19.486	0.108
6/8/2011 13:08	5.046	19.481	0.079

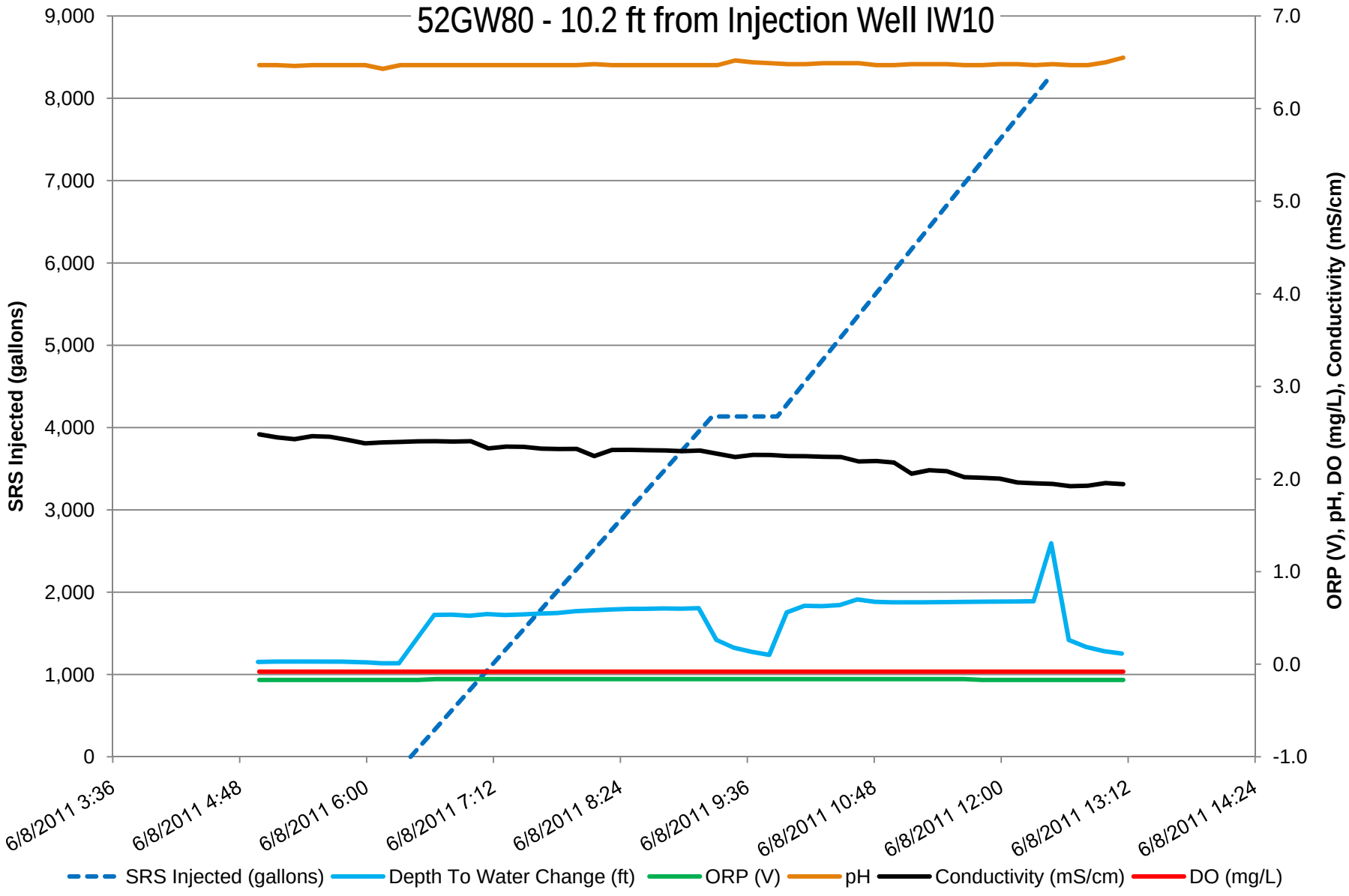

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Figure C.29
SRS Injection Data Timeline - 52GW80

TABLE C.39
Monitoring Well Data for 52GW80

Monitoring Well ID: **52GW80**
Injection Well ID: IW10
Distance to Injection Well: 10.2-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/8/2011
Test stopped on: 6/8/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/8/2011 4:59	-0.17	6.47	-0.08	2.4816
6/8/2011 5:09	-0.17	6.47	-0.08	2.4503
6/8/2011 5:19	-0.17	6.46	-0.08	2.4305
6/8/2011 5:29	-0.17	6.47	-0.08	2.4623
6/8/2011 5:39	-0.17	6.47	-0.08	2.4563
6/8/2011 5:49	-0.17	6.47	-0.08	2.4219
6/8/2011 5:59	-0.17	6.47	-0.08	2.3851
6/8/2011 6:09	-0.17	6.43	-0.08	2.3948
6/8/2011 6:19	-0.17	6.47	-0.08	2.4006
6/8/2011 6:29	-0.17	6.47	-0.08	2.4069
6/8/2011 6:39	-0.16	6.47	-0.08	2.4078
6/8/2011 6:49	-0.16	6.47	-0.08	2.4042
6/8/2011 6:59	-0.16	6.47	-0.08	2.4083
6/8/2011 7:09	-0.16	6.47	-0.08	2.3311
6/8/2011 7:19	-0.16	6.47	-0.08	2.3499
6/8/2011 7:29	-0.16	6.47	-0.08	2.3473
6/8/2011 7:39	-0.16	6.47	-0.08	2.3277
6/8/2011 7:49	-0.16	6.47	-0.08	2.3246
6/8/2011 7:59	-0.16	6.47	-0.08	2.3255
6/8/2011 8:09	-0.16	6.48	-0.08	2.2480
6/8/2011 8:19	-0.16	6.47	-0.08	2.3136
6/8/2011 8:29	-0.16	6.47	-0.08	2.3148
6/8/2011 8:39	-0.16	6.47	-0.08	2.3110
6/8/2011 8:49	-0.16	6.47	-0.08	2.3091
6/8/2011 8:59	-0.16	6.47	-0.08	2.3002
6/8/2011 9:09	-0.16	6.47	-0.08	2.3077
6/8/2011 9:19	-0.16	6.47	-0.08	2.2720
6/8/2011 9:29	-0.16	6.52	-0.08	2.2372
6/8/2011 9:39	-0.16	6.50	-0.08	2.2609
6/8/2011 9:49	-0.16	6.49	-0.08	2.2596
6/8/2011 9:59	-0.16	6.48	-0.08	2.2473
6/8/2011 10:09	-0.16	6.48	-0.08	2.2465
6/8/2011 10:19	-0.16	6.49	-0.08	2.2404
6/8/2011 10:29	-0.16	6.49	-0.08	2.2377
6/8/2011 10:39	-0.16	6.49	-0.08	2.1891
6/8/2011 10:49	-0.16	6.47	-0.08	2.1951
6/8/2011 10:59	-0.16	6.47	-0.08	2.1778
6/8/2011 11:09	-0.16	6.48	-0.08	2.0573
6/8/2011 11:19	-0.16	6.48	-0.08	2.0948
6/8/2011 11:29	-0.16	6.48	-0.08	2.0839
6/8/2011 11:39	-0.16	6.47	-0.08	2.0194
6/8/2011 11:49	-0.17	6.47	-0.08	2.0127
6/8/2011 11:59	-0.17	6.48	-0.08	2.0043
6/8/2011 12:09	-0.17	6.48	-0.08	1.9632
6/8/2011 12:19	-0.17	6.47	-0.08	1.9535
6/8/2011 12:29	-0.17	6.48	-0.08	1.9474
6/8/2011 12:39	-0.17	6.47	-0.08	1.9224
6/8/2011 12:49	-0.17	6.47	-0.08	1.9279
6/8/2011 12:59	-0.17	6.50	-0.08	1.9564
6/8/2011 13:09	-0.17	6.55	-0.08	1.9446

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/8/2011
Test stopped on: 6/8/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/8/2011 4:58	2.955	18.884	0.025
6/8/2011 5:08	2.953	18.882	0.029
6/8/2011 5:18	2.954	18.883	0.028
6/8/2011 5:28	2.953	18.885	0.028
6/8/2011 5:38	2.952	18.881	0.031
6/8/2011 5:48	2.955	18.883	0.025
6/8/2011 5:58	2.956	18.888	0.022
6/8/2011 6:08	2.962	18.885	0.01
6/8/2011 6:18	2.961	18.886	0.01
6/8/2011 6:28	3.083	18.88	0.272
6/8/2011 6:38	3.196	18.866	0.532
6/8/2011 6:48	3.197	18.873	0.535
6/8/2011 6:58	3.193	18.873	0.524
6/8/2011 7:08	3.2	18.878	0.541
6/8/2011 7:18	3.196	18.876	0.531
6/8/2011 7:28	3.199	18.88	0.538
6/8/2011 7:38	3.202	18.883	0.547
6/8/2011 7:48	3.205	18.88	0.553
6/8/2011 7:58	3.213	18.883	0.572
6/8/2011 8:08	3.218	18.89	0.582
6/8/2011 8:18	3.222	18.883	0.591
6/8/2011 8:28	3.224	18.88	0.597
6/8/2011 8:38	3.225	18.882	0.599
6/8/2011 8:48	3.226	18.886	0.602
6/8/2011 8:58	3.225	18.883	0.6
6/8/2011 9:08	3.228	18.884	0.605
6/8/2011 9:18	3.08	18.892	0.263
6/8/2011 9:28	3.043	18.902	0.178
6/8/2011 9:38	3.024	18.904	0.134
6/8/2011 9:48	3.01	18.899	0.101
6/8/2011 9:58	3.208	18.883	0.56
6/8/2011 10:08	3.239	18.877	0.631
6/8/2011 10:18	3.237	18.88	0.627
6/8/2011 10:28	3.242	18.885	0.639
6/8/2011 10:38	3.269	18.884	0.699
6/8/2011 10:48	3.257	18.885	0.673
6/8/2011 10:58	3.255	18.885	0.668
6/8/2011 11:08	3.255	18.891	0.668
6/8/2011 11:18	3.256	18.888	0.669
6/8/2011 11:28	3.257	18.889	0.672
6/8/2011 11:38	3.257	18.889	0.672
6/8/2011 11:48	3.258	18.888	0.674
6/8/2011 11:58	3.259	18.888	0.677
6/8/2011 12:08	3.259	18.887	0.678
6/8/2011 12:18	3.26	18.893	0.68
6/8/2011 12:28	3.531	18.886	1.306
6/8/2011 12:38	3.079	18.913	0.262
6/8/2011 12:48	3.046	18.915	0.185
6/8/2011 12:58	3.026	18.912	0.14
6/8/2011 13:08	3.015	18.908	0.115

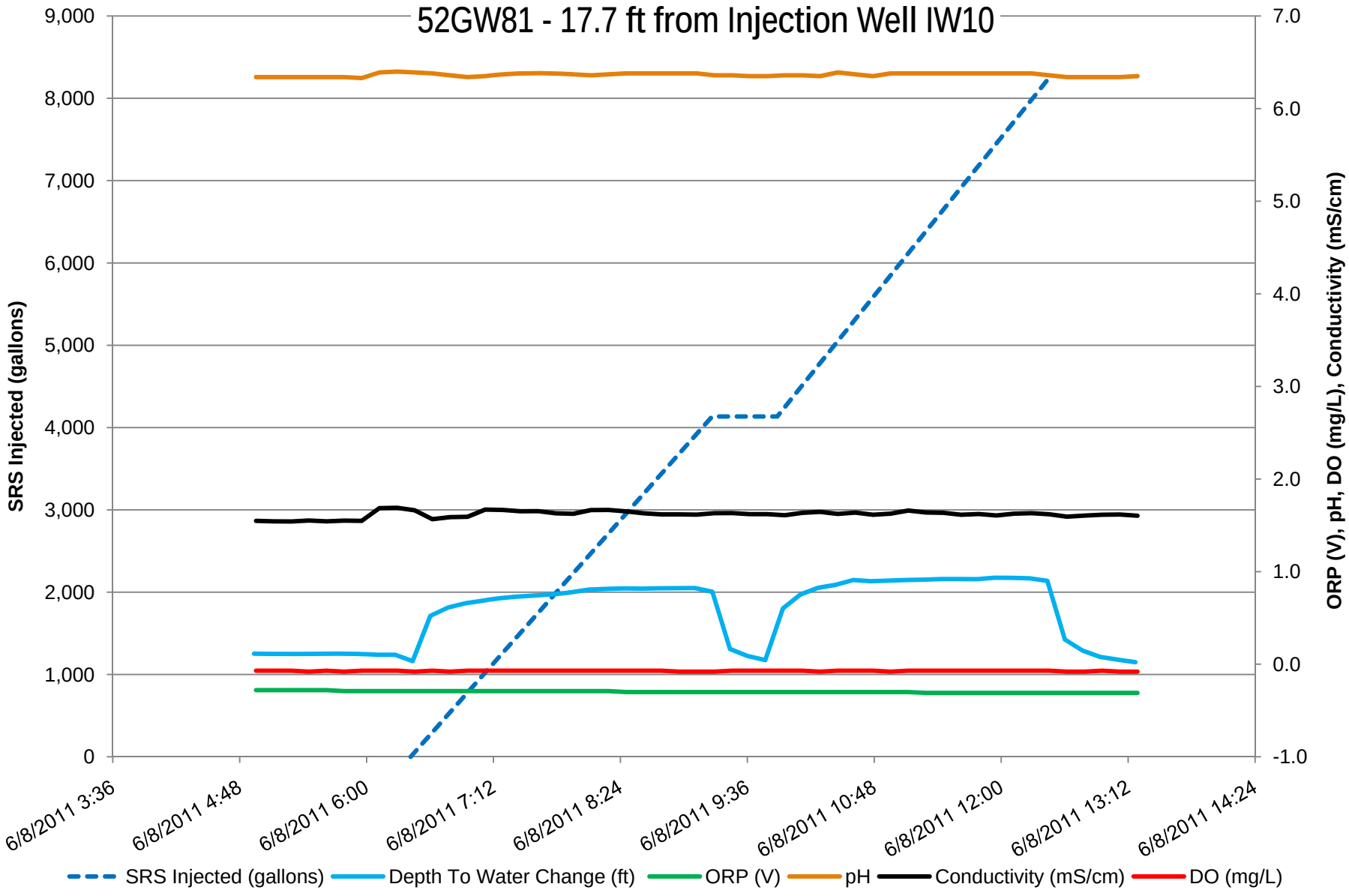

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Figure C.30
SRS Injection Data Timeline - 52GW81

TABLE C.40

Monitoring Well Data for 52GW81

Monitoring Well ID: **52GW81**
Injection Well ID: IW10
Distance to Injection Well: 17.7-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/8/2011
Test stopped on: 6/8/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/8/2011 4:57	-0.28	6.34	-0.07	1.5485
6/8/2011 5:07	-0.28	6.34	-0.07	1.5431
6/8/2011 5:17	-0.28	6.34	-0.07	1.5414
6/8/2011 5:27	-0.28	6.34	-0.08	1.5515
6/8/2011 5:37	-0.28	6.34	-0.07	1.5427
6/8/2011 5:47	-0.29	6.34	-0.08	1.5508
6/8/2011 5:57	-0.29	6.33	-0.07	1.5484
6/8/2011 6:07	-0.29	6.39	-0.07	1.6850
6/8/2011 6:17	-0.29	6.40	-0.07	1.6895
6/8/2011 6:27	-0.29	6.39	-0.08	1.6627
6/8/2011 6:37	-0.29	6.38	-0.07	1.5665
6/8/2011 6:47	-0.29	6.36	-0.08	1.5879
6/8/2011 6:57	-0.29	6.34	-0.07	1.5927
6/8/2011 7:07	-0.29	6.35	-0.07	1.6702
6/8/2011 7:17	-0.29	6.37	-0.07	1.6656
6/8/2011 7:27	-0.29	6.38	-0.07	1.6513
6/8/2011 7:37	-0.29	6.38	-0.07	1.6530
6/8/2011 7:47	-0.29	6.38	-0.07	1.6292
6/8/2011 7:57	-0.29	6.37	-0.07	1.6239
6/8/2011 8:07	-0.29	6.36	-0.07	1.6649
6/8/2011 8:17	-0.29	6.37	-0.07	1.6658
6/8/2011 8:27	-0.30	6.38	-0.07	1.6505
6/8/2011 8:37	-0.30	6.38	-0.07	1.6292
6/8/2011 8:47	-0.30	6.38	-0.07	1.6182
6/8/2011 8:57	-0.30	6.38	-0.08	1.6181
6/8/2011 9:07	-0.30	6.38	-0.08	1.6148
6/8/2011 9:17	-0.30	6.36	-0.08	1.6310
6/8/2011 9:27	-0.30	6.36	-0.07	1.6318
6/8/2011 9:37	-0.30	6.35	-0.07	1.6209
6/8/2011 9:47	-0.30	6.35	-0.07	1.6201
6/8/2011 9:57	-0.30	6.36	-0.07	1.6089
6/8/2011 10:07	-0.30	6.36	-0.07	1.6348
6/8/2011 10:17	-0.30	6.35	-0.08	1.6458
6/8/2011 10:27	-0.30	6.39	-0.07	1.6234
6/8/2011 10:37	-0.30	6.37	-0.07	1.6381
6/8/2011 10:47	-0.30	6.35	-0.07	1.6136
6/8/2011 10:57	-0.30	6.38	-0.08	1.6257
6/8/2011 11:07	-0.30	6.38	-0.07	1.6601
6/8/2011 11:17	-0.31	6.38	-0.07	1.6387
6/8/2011 11:27	-0.31	6.38	-0.07	1.6349
6/8/2011 11:37	-0.31	6.38	-0.07	1.6142
6/8/2011 11:47	-0.31	6.38	-0.07	1.6221
6/8/2011 11:57	-0.31	6.38	-0.07	1.6066
6/8/2011 12:07	-0.31	6.38	-0.07	1.6256
6/8/2011 12:17	-0.31	6.38	-0.07	1.6309
6/8/2011 12:27	-0.31	6.36	-0.07	1.6194
6/8/2011 12:37	-0.31	6.34	-0.08	1.5936
6/8/2011 12:47	-0.31	6.34	-0.08	1.6046
6/8/2011 12:57	-0.31	6.34	-0.07	1.6142
6/8/2011 13:07	-0.31	6.34	-0.08	1.6162
6/8/2011 13:17	-0.31	6.35	-0.08	1.6037

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/8/2011
Test stopped on: 6/8/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/8/2011 4:56	4.323	19.034	0.114
6/8/2011 5:06	4.324	19.029	0.112
6/8/2011 5:16	4.324	19.028	0.111
6/8/2011 5:26	4.324	19.053	0.111
6/8/2011 5:36	4.323	19.06	0.114
6/8/2011 5:46	4.323	19.061	0.113
6/8/2011 5:56	4.324	19.066	0.111
6/8/2011 6:06	4.328	19.056	0.102
6/8/2011 6:16	4.328	19.044	0.102
6/8/2011 6:26	4.387	19.039	0.034
6/8/2011 6:36	4.598	19.088	0.522
6/8/2011 6:46	4.637	19.068	0.612
6/8/2011 6:56	4.657	19.072	0.658
6/8/2011 7:06	4.669	19.062	0.686
6/8/2011 7:16	4.681	19.076	0.712
6/8/2011 7:26	4.689	19.06	0.732
6/8/2011 7:36	4.694	19.068	0.743
6/8/2011 7:46	4.699	19.059	0.755
6/8/2011 7:56	4.709	19.062	0.777
6/8/2011 8:06	4.721	19.069	0.806
6/8/2011 8:16	4.725	19.08	0.813
6/8/2011 8:26	4.727	19.092	0.819
6/8/2011 8:36	4.726	19.047	0.816
6/8/2011 8:46	4.728	19.041	0.82
6/8/2011 8:56	4.728	19.057	0.821
6/8/2011 9:06	4.728	19.06	0.822
6/8/2011 9:16	4.711	19.056	0.783
6/8/2011 9:26	4.444	19.003	0.165
6/8/2011 9:36	4.41	19.028	0.088
6/8/2011 9:46	4.391	19.024	0.044
6/8/2011 9:56	4.633	19.059	0.603
6/8/2011 10:06	4.699	19.075	0.754
6/8/2011 10:16	4.729	19.078	0.825
6/8/2011 10:26	4.744	19.059	0.858
6/8/2011 10:36	4.766	19.028	0.909
6/8/2011 10:46	4.761	19.053	0.897
6/8/2011 10:56	4.763	19.074	0.903
6/8/2011 11:06	4.766	19.042	0.909
6/8/2011 11:16	4.768	19.044	0.913
6/8/2011 11:26	4.771	19.049	0.92
6/8/2011 11:36	4.771	19.061	0.92
6/8/2011 11:46	4.77	19.043	0.919
6/8/2011 11:56	4.777	19.076	0.934
6/8/2011 12:06	4.776	19.052	0.933
6/8/2011 12:16	4.774	19.008	0.928
6/8/2011 12:26	4.762	19.045	0.9
6/8/2011 12:36	4.488	19.012	0.267
6/8/2011 12:46	4.436	19.022	0.148
6/8/2011 12:56	4.406	19.04	0.079
6/8/2011 13:06	4.393	19.026	0.049
6/8/2011 13:16	4.382	19.057	0.022

TABLE C.41
Injection Summary for IW11

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/9/2011 6:33	IW11	0	Begin Injecting SRS - Batch 1/2.
6/9/2011 9:24	IW11	4,135	Finish Injecting SRS - Batch 1/2.
6/9/2011 9:58	IW11	4,135	Begin Injecting SRS - Batch 2/2.
6/9/2011 12:40	IW11	8,270	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW11	20 - 35	52GW81	13.0	38 - 48	top
		IW13	24.7	20 - 35	middle
		IW14	24.1	30 - 45	top

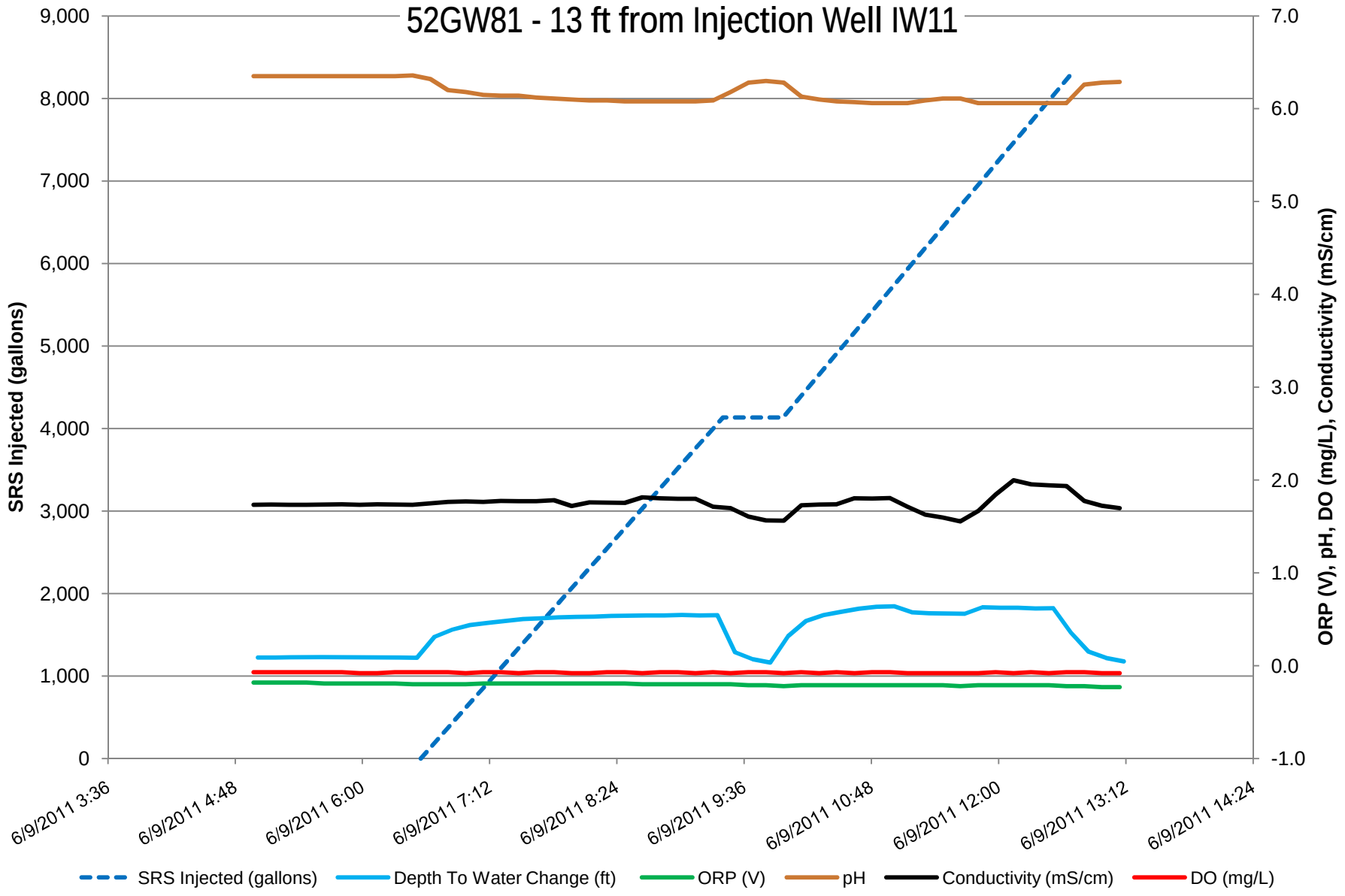

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Figure C.31
SRS Injection Data Timeline - 52GW81

TABLE C.42
Monitoring Well Data for 52GW81

Monitoring Well ID: **52GW81**
Injection Well ID: IW11
Distance to Injection Well: 13-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/9/2011
Test stopped on: 6/9/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 4:58	-0.18	6.35	-0.07	1.7328
6/9/2011 5:08	-0.18	6.35	-0.07	1.7367
6/9/2011 5:18	-0.18	6.35	-0.07	1.7352
6/9/2011 5:28	-0.18	6.35	-0.07	1.7332
6/9/2011 5:38	-0.19	6.35	-0.07	1.7357
6/9/2011 5:48	-0.19	6.35	-0.07	1.7394
6/9/2011 5:58	-0.19	6.35	-0.08	1.7339
6/9/2011 6:08	-0.19	6.35	-0.08	1.7389
6/9/2011 6:18	-0.19	6.35	-0.07	1.7367
6/9/2011 6:28	-0.20	6.36	-0.07	1.7343
6/9/2011 6:38	-0.20	6.32	-0.07	1.7502
6/9/2011 6:48	-0.20	6.20	-0.07	1.7653
6/9/2011 6:58	-0.20	6.18	-0.08	1.7690
6/9/2011 7:08	-0.19	6.15	-0.07	1.7640
6/9/2011 7:18	-0.19	6.14	-0.07	1.7743
6/9/2011 7:28	-0.19	6.14	-0.08	1.7734
6/9/2011 7:38	-0.19	6.12	-0.07	1.7739
6/9/2011 7:48	-0.19	6.11	-0.07	1.7824
6/9/2011 7:58	-0.19	6.10	-0.08	1.7214
6/9/2011 8:08	-0.19	6.09	-0.08	1.7587
6/9/2011 8:18	-0.19	6.09	-0.07	1.7575
6/9/2011 8:28	-0.19	6.08	-0.07	1.7557
6/9/2011 8:38	-0.20	6.08	-0.08	1.8143
6/9/2011 8:48	-0.20	6.08	-0.07	1.8036
6/9/2011 8:58	-0.20	6.08	-0.07	1.7983
6/9/2011 9:08	-0.20	6.08	-0.08	1.7976
6/9/2011 9:18	-0.20	6.09	-0.07	1.7125
6/9/2011 9:28	-0.20	6.18	-0.08	1.6988
6/9/2011 9:38	-0.21	6.28	-0.07	1.6082
6/9/2011 9:48	-0.21	6.30	-0.07	1.5661
6/9/2011 9:58	-0.22	6.28	-0.08	1.5635
6/9/2011 10:08	-0.21	6.13	-0.07	1.7295
6/9/2011 10:18	-0.21	6.10	-0.08	1.7365
6/9/2011 10:28	-0.21	6.08	-0.07	1.7401
6/9/2011 10:38	-0.21	6.07	-0.08	1.8027
6/9/2011 10:48	-0.21	6.06	-0.07	1.8026
6/9/2011 10:58	-0.21	6.06	-0.07	1.8053
6/9/2011 11:08	-0.21	6.06	-0.08	1.7120
6/9/2011 11:18	-0.21	6.09	-0.08	1.6279
6/9/2011 11:28	-0.21	6.11	-0.08	1.5968
6/9/2011 11:38	-0.22	6.11	-0.08	1.5557
6/9/2011 11:48	-0.21	6.06	-0.08	1.6656
6/9/2011 11:58	-0.21	6.06	-0.07	1.8466
6/9/2011 12:08	-0.21	6.06	-0.08	1.9971
6/9/2011 12:18	-0.21	6.06	-0.07	1.9549
6/9/2011 12:28	-0.21	6.06	-0.08	1.9445
6/9/2011 12:38	-0.22	6.06	-0.07	1.9368
6/9/2011 12:48	-0.22	6.26	-0.07	1.7756
6/9/2011 12:58	-0.23	6.28	-0.08	1.7242

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/9/2011
Test stopped on: 6/9/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 5:00	4.413	19.044	0.09
6/9/2011 5:10	4.413	19.066	0.09
6/9/2011 5:20	4.411	19.08	0.094
6/9/2011 5:30	4.412	19.085	0.092
6/9/2011 5:40	4.412	19.064	0.091
6/9/2011 5:50	4.411	19.071	0.093
6/9/2011 6:00	4.412	19.073	0.091
6/9/2011 6:10	4.413	19.059	0.09
6/9/2011 6:20	4.413	19.041	0.089
6/9/2011 6:30	4.414	19.067	0.087
6/9/2011 6:40	4.587	19.077	0.311
6/9/2011 6:50	4.621	19.071	0.39
6/9/2011 7:00	4.641	19.087	0.438
6/9/2011 7:10	4.652	19.056	0.463
6/9/2011 7:20	4.66	19.049	0.482
6/9/2011 7:30	4.669	19.113	0.503
6/9/2011 7:40	4.673	19.122	0.51
6/9/2011 7:50	4.678	19.106	0.521
6/9/2011 8:00	4.68	19.083	0.527
6/9/2011 8:10	4.681	19.111	0.529
6/9/2011 8:20	4.685	19.129	0.538
6/9/2011 8:30	4.686	19.093	0.54
6/9/2011 8:40	4.686	19.071	0.541
6/9/2011 8:50	4.687	19.086	0.542
6/9/2011 9:00	4.688	19.043	0.547
6/9/2011 9:10	4.686	19.038	0.541
6/9/2011 9:20	4.688	19.08	0.546
6/9/2011 9:30	4.516	19.037	0.147
6/9/2011 9:40	4.482	19.069	0.07
6/9/2011 9:50	4.466	19.113	0.034
6/9/2011 10:00	4.59	19.088	0.32
6/9/2011 10:10	4.66	19.059	0.48
6/9/2011 10:20	4.688	19.033	0.546
6/9/2011 10:30	4.704	19.049	0.582
6/9/2011 10:40	4.718	19.035	0.615
6/9/2011 10:50	4.727	19.056	0.635
6/9/2011 11:00	4.73	19.021	0.641
6/9/2011 11:10	4.702	19.043	0.577
6/9/2011 11:20	4.697	19.046	0.566
6/9/2011 11:30	4.695	19.031	0.562
6/9/2011 11:40	4.694	19.039	0.56
6/9/2011 11:50	4.725	19.035	0.63
6/9/2011 12:00	4.722	19.048	0.624
6/9/2011 12:10	4.723	19.013	0.626
6/9/2011 12:20	4.72	19.033	0.618
6/9/2011 12:30	4.72	19.041	0.619
6/9/2011 12:40	4.607	19.029	0.358
6/9/2011 12:50	4.517	19.014	0.15
6/9/2011 13:00	4.488	19.018	0.083

TABLE C.42
Monitoring Well Data for 52GW81

Monitoring Well ID:	**52GW81**
Injection Well ID:	IW11
Distance to Injection Well:	13-ft

In-Situ Inc.	Troll 9500
Serial number:	48173
Test started on:	6/9/2011
Test stopped on:	6/9/2011
Time Between Data Points:	10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 13:08	-0.23	6.29	-0.08	1.6965

In-Situ Inc.	Level Troll 700
Serial number:	135710
Test started on:	6/9/2011
Test stopped on:	6/9/2011
Time Between Data Points:	10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 13:10	4.472	19.016	0.047

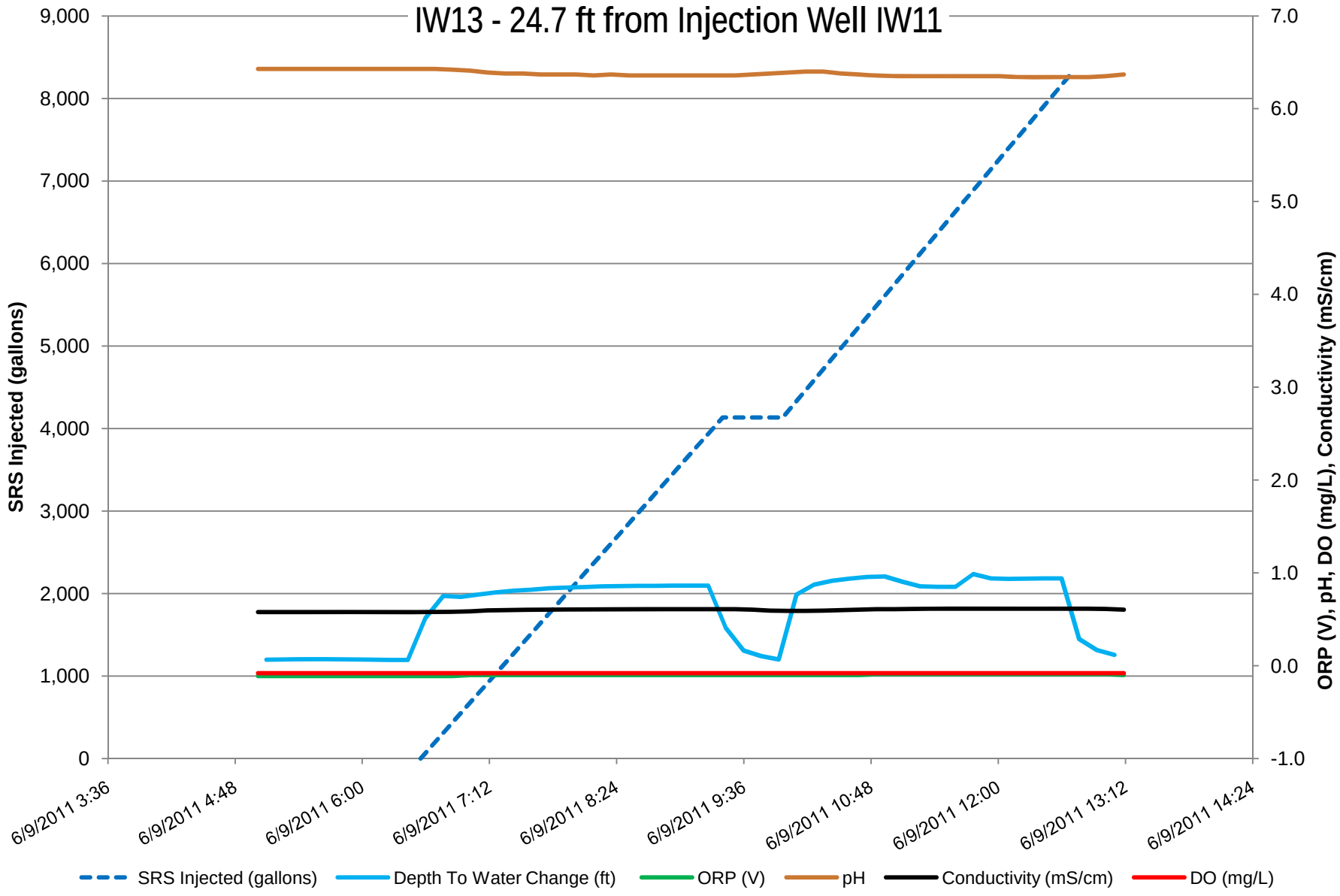

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Figure C.32
SRS Injection Data Timeline - IW13

TABLE C.43

Monitoring Well Data for IW13

Monitoring Well ID: **IW13**
Injection Well ID: IW11
Distance to Injection Well: 24.7-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/9/2011
Test stopped on: 6/9/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 5:01	-0.11	6.43	-0.08	0.5793
6/9/2011 5:11	-0.11	6.43	-0.08	0.5795
6/9/2011 5:21	-0.11	6.43	-0.08	0.5793
6/9/2011 5:31	-0.11	6.43	-0.08	0.5793
6/9/2011 5:41	-0.11	6.43	-0.08	0.5793
6/9/2011 5:51	-0.11	6.43	-0.08	0.5795
6/9/2011 6:01	-0.11	6.43	-0.08	0.5790
6/9/2011 6:11	-0.11	6.43	-0.08	0.5788
6/9/2011 6:21	-0.11	6.43	-0.08	0.5788
6/9/2011 6:31	-0.11	6.43	-0.08	0.5788
6/9/2011 6:41	-0.11	6.43	-0.08	0.5791
6/9/2011 6:51	-0.11	6.42	-0.08	0.5798
6/9/2011 7:01	-0.10	6.41	-0.08	0.5871
6/9/2011 7:11	-0.10	6.39	-0.08	0.5957
6/9/2011 7:21	-0.10	6.38	-0.08	0.6000
6/9/2011 7:31	-0.10	6.38	-0.08	0.6027
6/9/2011 7:41	-0.10	6.37	-0.08	0.6050
6/9/2011 7:51	-0.10	6.37	-0.08	0.6066
6/9/2011 8:01	-0.10	6.37	-0.08	0.6066
6/9/2011 8:11	-0.10	6.36	-0.08	0.6078
6/9/2011 8:21	-0.10	6.37	-0.08	0.6080
6/9/2011 8:31	-0.10	6.36	-0.08	0.6084
6/9/2011 8:41	-0.10	6.36	-0.08	0.6084
6/9/2011 8:51	-0.10	6.36	-0.08	0.6087
6/9/2011 9:01	-0.10	6.36	-0.08	0.6089
6/9/2011 9:11	-0.10	6.36	-0.08	0.6089
6/9/2011 9:21	-0.10	6.36	-0.08	0.6087
6/9/2011 9:31	-0.10	6.36	-0.08	0.6085
6/9/2011 9:41	-0.10	6.37	-0.08	0.6032
6/9/2011 9:51	-0.10	6.38	-0.08	0.5949
6/9/2011 10:01	-0.10	6.39	-0.08	0.5918
6/9/2011 10:11	-0.10	6.40	-0.08	0.5919
6/9/2011 10:21	-0.10	6.40	-0.08	0.5933
6/9/2011 10:31	-0.10	6.38	-0.08	0.5986
6/9/2011 10:41	-0.10	6.37	-0.08	0.6050
6/9/2011 10:51	-0.09	6.36	-0.08	0.6084
6/9/2011 11:01	-0.09	6.35	-0.08	0.6105
6/9/2011 11:11	-0.09	6.35	-0.08	0.6127
6/9/2011 11:21	-0.09	6.35	-0.08	0.6136
6/9/2011 11:31	-0.09	6.35	-0.08	0.6140
6/9/2011 11:41	-0.09	6.35	-0.08	0.6145
6/9/2011 11:51	-0.09	6.35	-0.08	0.6147
6/9/2011 12:01	-0.09	6.35	-0.08	0.6154
6/9/2011 12:11	-0.09	6.34	-0.08	0.6153
6/9/2011 12:21	-0.09	6.34	-0.08	0.6156
6/9/2011 12:31	-0.09	6.34	-0.08	0.6158
6/9/2011 12:41	-0.09	6.34	-0.08	0.6156
6/9/2011 12:51	-0.09	6.34	-0.08	0.6154
6/9/2011 13:01	-0.09	6.35	-0.08	0.6114
6/9/2011 13:11	-0.10	6.37	-0.08	0.6032

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/9/2011
Test stopped on: 6/9/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 5:05	3.58	18.43	0.066
6/9/2011 5:15	3.579	18.427	0.069
6/9/2011 5:25	3.578	18.429	0.07
6/9/2011 5:35	3.579	18.431	0.07
6/9/2011 5:45	3.578	18.423	0.07
6/9/2011 5:55	3.579	18.435	0.068
6/9/2011 6:05	3.58	18.428	0.066
6/9/2011 6:15	3.581	18.426	0.063
6/9/2011 6:25	3.581	18.426	0.064
6/9/2011 6:35	3.831	18.43	0.514
6/9/2011 6:45	3.934	18.423	0.752
6/9/2011 6:55	3.929	18.43	0.741
6/9/2011 7:05	3.941	18.433	0.767
6/9/2011 7:15	3.951	18.435	0.791
6/9/2011 7:25	3.96	18.438	0.81
6/9/2011 7:35	3.964	18.445	0.82
6/9/2011 7:45	3.971	18.445	0.835
6/9/2011 7:55	3.974	18.454	0.843
6/9/2011 8:05	3.976	18.451	0.848
6/9/2011 8:15	3.979	18.447	0.855
6/9/2011 8:25	3.98	18.453	0.857
6/9/2011 8:35	3.982	18.455	0.862
6/9/2011 8:45	3.982	18.463	0.862
6/9/2011 8:55	3.983	18.451	0.864
6/9/2011 9:05	3.983	18.459	0.863
6/9/2011 9:15	3.982	18.461	0.863
6/9/2011 9:25	3.785	18.472	0.407
6/9/2011 9:35	3.68	18.462	0.165
6/9/2011 9:45	3.654	18.459	0.104
6/9/2011 9:55	3.638	18.458	0.067
6/9/2011 10:05	3.941	18.455	0.768
6/9/2011 10:15	3.987	18.465	0.874
6/9/2011 10:25	4.005	18.45	0.915
6/9/2011 10:35	4.016	18.466	0.939
6/9/2011 10:45	4.023	18.463	0.956
6/9/2011 10:55	4.026	18.485	0.963
6/9/2011 11:05	4.001	18.462	0.905
6/9/2011 11:15	3.979	18.457	0.855
6/9/2011 11:25	3.977	18.461	0.85
6/9/2011 11:35	3.977	18.453	0.85
6/9/2011 11:45	4.036	18.475	0.987
6/9/2011 11:55	4.016	18.45	0.94
6/9/2011 12:05	4.014	18.451	0.937
6/9/2011 12:15	4.015	18.459	0.939
6/9/2011 12:25	4.017	18.454	0.942
6/9/2011 12:35	4.016	18.449	0.941
6/9/2011 12:45	3.734	18.453	0.289
6/9/2011 12:55	3.682	18.45	0.17
6/9/2011 13:05	3.659	18.459	0.116

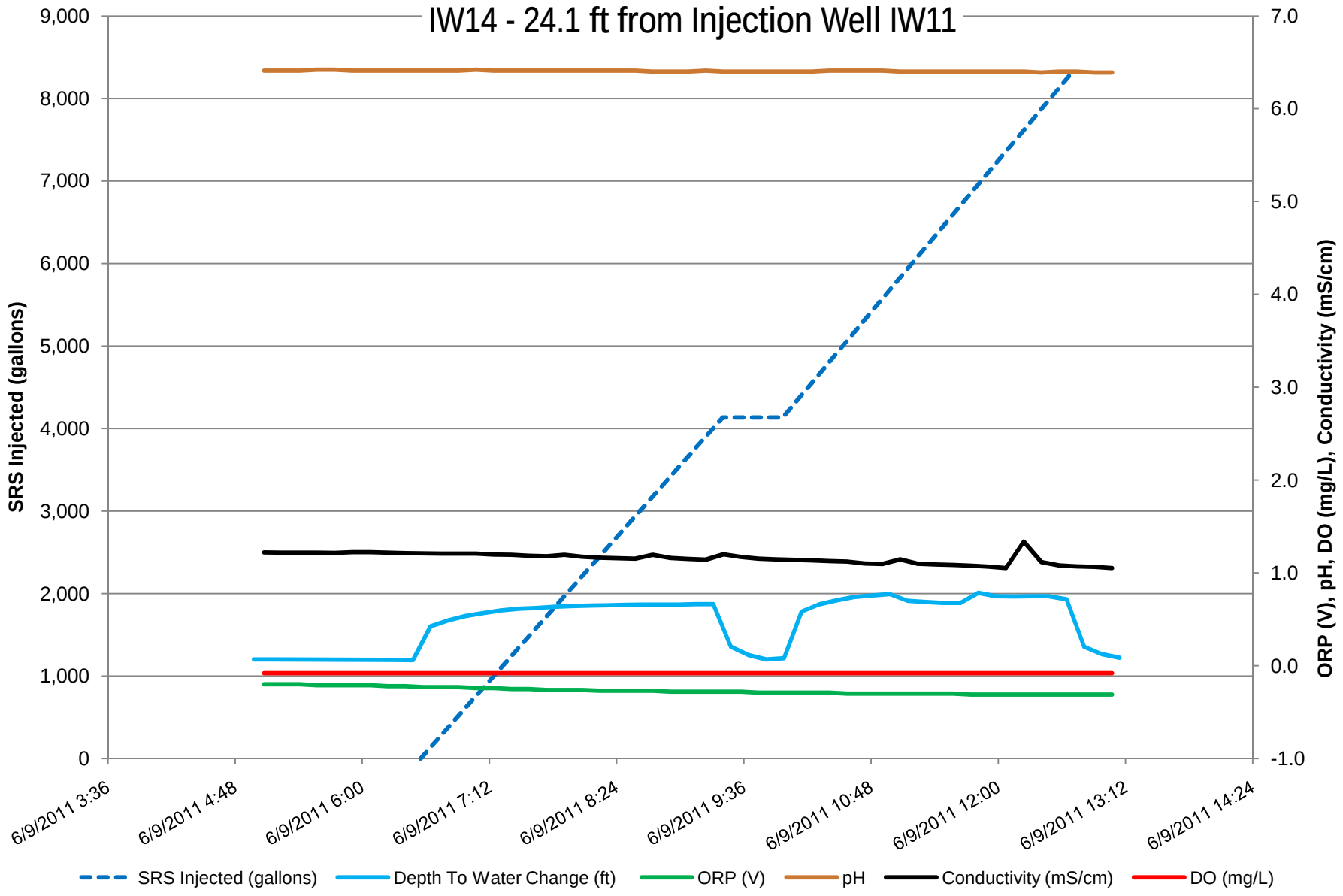

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Figure C.33
SRS Injection Data Timeline - IW14

TABLE C.44

Monitoring Well Data for IW14

Monitoring Well ID: **IW14**
Injection Well ID: IW11
Distance to Injection Well: 24.1-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 5:04	-0.20	6.41	-0.08	1.2201
6/9/2011 5:14	-0.20	6.41	-0.08	1.2181
6/9/2011 5:24	-0.20	6.41	-0.08	1.2174
6/9/2011 5:34	-0.21	6.42	-0.08	1.2174
6/9/2011 5:44	-0.21	6.42	-0.08	1.2165
6/9/2011 5:54	-0.21	6.41	-0.08	1.2224
6/9/2011 6:04	-0.21	6.41	-0.08	1.2242
6/9/2011 6:14	-0.22	6.41	-0.08	1.2190
6/9/2011 6:24	-0.22	6.41	-0.08	1.2128
6/9/2011 6:34	-0.23	6.41	-0.08	1.2098
6/9/2011 6:44	-0.23	6.41	-0.08	1.2081
6/9/2011 6:54	-0.23	6.41	-0.08	1.2083
6/9/2011 7:04	-0.24	6.42	-0.08	1.2082
6/9/2011 7:14	-0.24	6.41	-0.08	1.1988
6/9/2011 7:24	-0.25	6.41	-0.08	1.1941
6/9/2011 7:34	-0.25	6.41	-0.08	1.1856
6/9/2011 7:44	-0.26	6.41	-0.08	1.1794
6/9/2011 7:54	-0.26	6.41	-0.08	1.1945
6/9/2011 8:04	-0.26	6.41	-0.08	1.1733
6/9/2011 8:14	-0.27	6.41	-0.08	1.1627
6/9/2011 8:24	-0.27	6.41	-0.08	1.1580
6/9/2011 8:34	-0.27	6.41	-0.08	1.1529
6/9/2011 8:44	-0.27	6.40	-0.08	1.1950
6/9/2011 8:54	-0.28	6.40	-0.08	1.1618
6/9/2011 9:04	-0.28	6.40	-0.08	1.1520
6/9/2011 9:14	-0.28	6.41	-0.08	1.1438
6/9/2011 9:24	-0.28	6.40	-0.08	1.1996
6/9/2011 9:34	-0.28	6.40	-0.08	1.1713
6/9/2011 9:44	-0.29	6.40	-0.08	1.1546
6/9/2011 9:54	-0.29	6.40	-0.08	1.1457
6/9/2011 10:04	-0.29	6.40	-0.08	1.1413
6/9/2011 10:14	-0.29	6.40	-0.08	1.1348
6/9/2011 10:24	-0.29	6.41	-0.08	1.1275
6/9/2011 10:34	-0.30	6.41	-0.08	1.1236
6/9/2011 10:44	-0.30	6.41	-0.08	1.1028
6/9/2011 10:54	-0.30	6.41	-0.08	1.0975
6/9/2011 11:04	-0.30	6.40	-0.08	1.1463
6/9/2011 11:14	-0.30	6.40	-0.08	1.0986
6/9/2011 11:24	-0.30	6.40	-0.08	1.0914
6/9/2011 11:34	-0.30	6.40	-0.08	1.0863
6/9/2011 11:44	-0.31	6.40	-0.08	1.0777
6/9/2011 11:54	-0.31	6.40	-0.08	1.0683
6/9/2011 12:04	-0.31	6.40	-0.08	1.0526
6/9/2011 12:14	-0.31	6.40	-0.08	1.3385
6/9/2011 12:24	-0.31	6.39	-0.08	1.1169
6/9/2011 12:34	-0.31	6.40	-0.08	1.0822
6/9/2011 12:44	-0.31	6.40	-0.08	1.0714
6/9/2011 12:54	-0.31	6.39	-0.08	1.0651
6/9/2011 13:04	-0.31	6.39	-0.08	1.0522

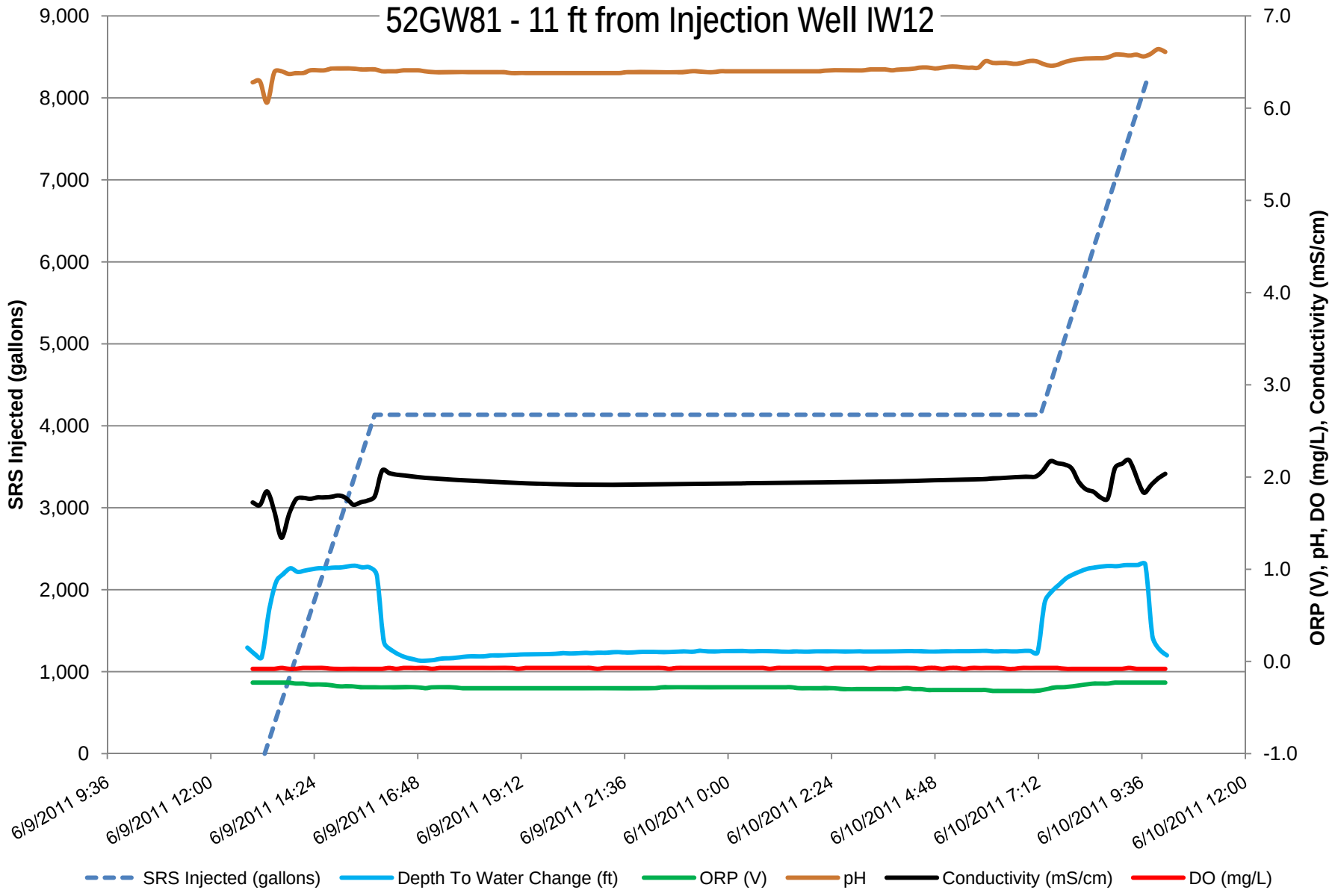
In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 4:58	5.137	18.768	0.069
6/9/2011 5:08	5.138	18.755	0.067
6/9/2011 5:18	5.138	18.768	0.067
6/9/2011 5:28	5.139	18.747	0.065
6/9/2011 5:38	5.139	18.763	0.065
6/9/2011 5:48	5.139	18.742	0.065
6/9/2011 5:58	5.139	18.765	0.065
6/9/2011 6:08	5.14	18.754	0.062
6/9/2011 6:18	5.14	18.75	0.062
6/9/2011 6:28	5.141	18.755	0.059
6/9/2011 6:38	5.35	18.778	0.423
6/9/2011 6:48	5.379	18.778	0.489
6/9/2011 6:58	5.399	18.784	0.536
6/9/2011 7:08	5.413	18.767	0.568
6/9/2011 7:18	5.425	18.776	0.596
6/9/2011 7:28	5.433	18.787	0.614
6/9/2011 7:38	5.437	18.772	0.623
6/9/2011 7:48	5.443	18.787	0.636
6/9/2011 7:58	5.446	18.799	0.644
6/9/2011 8:08	5.447	18.772	0.648
6/9/2011 8:18	5.449	18.777	0.651
6/9/2011 8:28	5.452	18.761	0.657
6/9/2011 8:38	5.452	18.777	0.658
6/9/2011 8:48	5.452	18.77	0.658
6/9/2011 8:58	5.453	18.766	0.66
6/9/2011 9:08	5.454	18.761	0.663
6/9/2011 9:18	5.454	18.79	0.663
6/9/2011 9:28	5.256	18.747	0.205
6/9/2011 9:38	5.217	18.753	0.115
6/9/2011 9:48	5.197	18.725	0.069
6/9/2011 9:58	5.202	18.752	0.08
6/9/2011 10:08	5.42	18.794	0.583
6/9/2011 10:18	5.453	18.791	0.661
6/9/2011 10:28	5.472	18.783	0.705
6/9/2011 10:38	5.488	18.809	0.741
6/9/2011 10:48	5.494	18.791	0.756
6/9/2011 10:58	5.501	18.78	0.772
6/9/2011 11:08	5.47	18.792	0.699
6/9/2011 11:18	5.465	18.784	0.687
6/9/2011 11:28	5.46	18.786	0.677
6/9/2011 11:38	5.46	18.774	0.676
6/9/2011 11:48	5.507	18.805	0.785
6/9/2011 11:58	5.491	18.785	0.749
6/9/2011 12:08	5.49	18.776	0.746
6/9/2011 12:18	5.492	18.776	0.75
6/9/2011 12:28	5.491	18.772	0.749
6/9/2011 12:38	5.477	18.768	0.715
6/9/2011 12:48	5.256	18.756	0.205
6/9/2011 12:58	5.222	18.749	0.126
6/9/2011 13:08	5.205	18.763	0.087

TABLE C.45
Injection Summary for IW12

Date/Time	Injection Well ID	SRS Injected (gallons)	Comments
6/9/2011 13:15	IW12	0	Begin Injecting SRS - Batch 1/2.
6/9/2011 15:48	IW12	4,135	Finish Injecting SRS - Batch 1/2.
6/10/2011 7:15	IW12	4,135	Begin Injecting SRS - Batch 2/2.
6/10/2011 9:45	IW12	8,270	Finish Injecting SRS - Batch 2/2.

Injection Well ID	Injection Well Screened Interval (ft bgs)	Monitoring Well ID	Distance to Injection Well (ft)	Monitoring Well Screened Interval (ft bgs)	Sensor Placement Within Screened Interval
IW12	30 - 45	52GW81	11.0	38 - 48	top
		IW13	24.2	20 - 35	top
		IW14	24.3	30 - 45	middle



CH2MHILL

Figure C.34
SRS Injection Data Timeline - 52GW81

TABLE C.46
Monitoring Well Data for 52GW81

Monitoring Well ID: **52GW81**
Injection Well ID: IW12
Distance to Injection Well: 11-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 12:58	-0.23	6.28	-0.08	1.7242
6/9/2011 13:08	-0.23	6.29	-0.08	1.6965
6/9/2011 13:18	-0.23	6.06	-0.08	1.8439
6/9/2011 13:28	-0.23	6.39	-0.08	1.6295
6/9/2011 13:38	-0.23	6.40	-0.07	1.3418
6/9/2011 13:48	-0.23	6.37	-0.08	1.5838
6/9/2011 13:58	-0.24	6.38	-0.08	1.7559
6/9/2011 14:08	-0.24	6.38	-0.07	1.7740
6/9/2011 14:18	-0.25	6.41	-0.07	1.7639
6/9/2011 14:28	-0.25	6.41	-0.07	1.7790
6/9/2011 14:38	-0.25	6.41	-0.07	1.7789
6/9/2011 14:48	-0.26	6.43	-0.08	1.7864
6/9/2011 14:58	-0.27	6.43	-0.08	1.8002
6/9/2011 15:08	-0.27	6.43	-0.08	1.7704
6/9/2011 15:18	-0.27	6.43	-0.08	1.6994
6/9/2011 15:28	-0.28	6.42	-0.08	1.7255
6/9/2011 15:38	-0.28	6.42	-0.08	1.7454
6/9/2011 15:48	-0.28	6.42	-0.08	1.7942
6/9/2011 15:58	-0.28	6.40	-0.08	2.0687
6/9/2011 16:08	-0.28	6.40	-0.07	2.0421
6/9/2011 16:18	-0.28	6.40	-0.08	2.0261
6/9/2011 16:28	-0.28	6.41	-0.07	2.0183
6/9/2011 16:38	-0.28	6.41	-0.07	2.0084
6/9/2011 16:48	-0.28	6.41	-0.07	1.9988
6/9/2011 16:58	-0.29	6.40	-0.07	1.9920
6/9/2011 17:08	-0.28	6.39	-0.08	1.9867
6/9/2011 17:18	-0.28	6.39	-0.07	1.9809
6/9/2011 17:28	-0.28	6.39	-0.07	1.9755
6/9/2011 17:38	-0.28	6.39	-0.07	1.9706
6/9/2011 17:48	-0.29	6.39	-0.07	1.9666
6/9/2011 17:58	-0.29	6.39	-0.07	1.9616
6/9/2011 18:08	-0.29	6.39	-0.07	1.9573
6/9/2011 18:18	-0.29	6.39	-0.07	1.9537
6/9/2011 18:28	-0.29	6.39	-0.07	1.9501
6/9/2011 18:38	-0.29	6.39	-0.07	1.9459
6/9/2011 18:48	-0.29	6.39	-0.07	1.9420
6/9/2011 18:58	-0.29	6.38	-0.07	1.9388
6/9/2011 19:08	-0.29	6.38	-0.08	1.9364
6/9/2011 19:18	-0.29	6.38	-0.07	1.9321
6/9/2011 19:28	-0.29	6.38	-0.07	1.9288
6/9/2011 19:38	-0.29	6.38	-0.07	1.9276
6/9/2011 19:48	-0.29	6.38	-0.07	1.9260
6/9/2011 19:58	-0.29	6.38	-0.07	1.9239
6/9/2011 20:08	-0.29	6.38	-0.07	1.9213
6/9/2011 20:18	-0.29	6.38	-0.07	1.9200
6/9/2011 20:28	-0.29	6.38	-0.07	1.9183
6/9/2011 20:38	-0.29	6.38	-0.07	1.9171
6/9/2011 20:48	-0.29	6.38	-0.07	1.9166
6/9/2011 20:58	-0.29	6.38	-0.08	1.9170

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 12:50	4.517	19.014	0.15
6/9/2011 13:00	4.488	19.018	0.083
6/9/2011 13:10	4.472	19.016	0.047
6/9/2011 13:20	4.686	19.107	0.542
6/9/2011 13:30	4.825	19.134	0.862
6/9/2011 13:40	4.862	19.094	0.948
6/9/2011 13:50	4.889	19.091	1.01
6/9/2011 14:00	4.872	19.08	0.971
6/9/2011 14:10	4.878	19.061	0.985
6/9/2011 14:20	4.885	19.087	1
6/9/2011 14:30	4.89	19.049	1.011
6/9/2011 14:40	4.889	19.019	1.009
6/9/2011 14:50	4.893	19.004	1.018
6/9/2011 15:00	4.893	19.044	1.019
6/9/2011 15:10	4.898	19.069	1.031
6/9/2011 15:20	4.901	19.07	1.038
6/9/2011 15:30	4.893	19.099	1.02
6/9/2011 15:40	4.893	19.062	1.02
6/9/2011 15:50	4.859	19.021	0.941
6/9/2011 16:00	4.545	19.009	0.215
6/9/2011 16:10	4.507	19.028	0.127
6/9/2011 16:20	4.485	19.042	0.078
6/9/2011 16:30	4.471	19.048	0.045
6/9/2011 16:40	4.463	19.04	0.026
6/9/2011 16:50	4.455	19.071	0.008
6/9/2011 17:00	4.448	19.067	0.009
6/9/2011 17:10	4.445	19.009	0.016
6/9/2011 17:20	4.438	19.011	0.031
6/9/2011 17:30	4.437	18.992	0.034
6/9/2011 17:40	4.435	18.995	0.04
6/9/2011 17:50	4.43	18.995	0.049
6/9/2011 18:00	4.427	19.025	0.056
6/9/2011 18:10	4.428	19.036	0.055
6/9/2011 18:20	4.427	19.068	0.056
6/9/2011 18:30	4.423	19.05	0.066
6/9/2011 18:40	4.423	19.067	0.065
6/9/2011 18:50	4.422	19.055	0.068
6/9/2011 19:00	4.421	19.059	0.071
6/9/2011 19:10	4.419	19.053	0.075
6/9/2011 19:20	4.418	19.039	0.077
6/9/2011 19:30	4.418	19.012	0.078
6/9/2011 19:40	4.418	19.028	0.079
6/9/2011 19:50	4.417	19.021	0.08
6/9/2011 20:00	4.416	18.999	0.083
6/9/2011 20:10	4.413	19.004	0.09
6/9/2011 20:20	4.415	19.032	0.086
6/9/2011 20:30	4.413	19.009	0.089
6/9/2011 20:40	4.411	19.011	0.093
6/9/2011 20:50	4.412	19.045	0.091

TABLE C.46
Monitoring Well Data for 52GW81

Monitoring Well ID: **52GW81**
Injection Well ID: IW12
Distance to Injection Well: 11-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 21:08	-0.29	6.38	-0.07	1.9162
6/9/2011 21:18	-0.29	6.38	-0.07	1.9161
6/9/2011 21:28	-0.29	6.38	-0.07	1.9153
6/9/2011 21:38	-0.29	6.39	-0.07	1.9155
6/9/2011 21:48	-0.29	6.39	-0.07	1.9159
6/9/2011 21:58	-0.29	6.39	-0.07	1.9162
6/9/2011 22:08	-0.29	6.39	-0.07	1.9173
6/9/2011 22:18	-0.29	6.39	-0.07	1.9198
6/9/2011 22:28	-0.28	6.39	-0.07	1.9212
6/9/2011 22:38	-0.28	6.39	-0.08	1.9219
6/9/2011 22:48	-0.28	6.39	-0.07	1.9232
6/9/2011 22:58	-0.28	6.39	-0.07	1.9249
6/9/2011 23:08	-0.28	6.40	-0.07	1.9265
6/9/2011 23:18	-0.28	6.40	-0.07	1.9264
6/9/2011 23:28	-0.28	6.39	-0.07	1.9266
6/9/2011 23:38	-0.28	6.39	-0.07	1.9274
6/9/2011 23:48	-0.28	6.40	-0.07	1.9287
6/9/2011 23:58	-0.28	6.40	-0.07	1.9300
6/10/2011 0:08	-0.28	6.40	-0.07	1.9302
6/10/2011 0:18	-0.28	6.40	-0.07	1.9306
6/10/2011 0:28	-0.28	6.40	-0.07	1.9341
6/10/2011 0:38	-0.28	6.40	-0.07	1.9341
6/10/2011 0:48	-0.28	6.40	-0.07	1.9348
6/10/2011 0:58	-0.28	6.40	-0.08	1.9368
6/10/2011 1:08	-0.28	6.40	-0.07	1.9368
6/10/2011 1:18	-0.28	6.40	-0.07	1.9373
6/10/2011 1:28	-0.28	6.40	-0.07	1.9396
6/10/2011 1:38	-0.29	6.40	-0.07	1.9396
6/10/2011 1:48	-0.29	6.40	-0.07	1.9405
6/10/2011 1:58	-0.29	6.40	-0.07	1.9402
6/10/2011 2:08	-0.29	6.40	-0.07	1.9404
6/10/2011 2:18	-0.29	6.41	-0.08	1.9419
6/10/2011 2:28	-0.29	6.41	-0.07	1.9437
6/10/2011 2:38	-0.30	6.41	-0.07	1.9452
6/10/2011 2:48	-0.30	6.41	-0.07	1.9450
6/10/2011 2:58	-0.30	6.41	-0.07	1.9481
6/10/2011 3:08	-0.30	6.41	-0.07	1.9490
6/10/2011 3:18	-0.30	6.42	-0.08	1.9505
6/10/2011 3:28	-0.30	6.42	-0.07	1.9515
6/10/2011 3:38	-0.30	6.42	-0.07	1.9523
6/10/2011 3:48	-0.30	6.41	-0.07	1.9526
6/10/2011 3:58	-0.30	6.42	-0.07	1.9538
6/10/2011 4:08	-0.29	6.42	-0.07	1.9561
6/10/2011 4:18	-0.30	6.43	-0.07	1.9581
6/10/2011 4:28	-0.30	6.44	-0.08	1.9597
6/10/2011 4:38	-0.31	6.44	-0.07	1.9632
6/10/2011 4:48	-0.31	6.43	-0.07	1.9658
6/10/2011 4:58	-0.31	6.44	-0.08	1.9678
6/10/2011 5:08	-0.31	6.45	-0.07	1.9690

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 21:00	4.41	19.059	0.095
6/9/2011 21:10	4.411	19.027	0.094
6/9/2011 21:20	4.408	19.008	0.101
6/9/2011 21:30	4.409	19.013	0.1
6/9/2011 21:40	4.41	19.003	0.096
6/9/2011 21:50	4.408	19.043	0.1
6/9/2011 22:00	4.407	19.035	0.103
6/9/2011 22:10	4.407	19.004	0.103
6/9/2011 22:20	4.407	19.032	0.103
6/9/2011 22:30	4.408	19.028	0.101
6/9/2011 22:40	4.407	19.055	0.104
6/9/2011 22:50	4.406	19.034	0.106
6/9/2011 23:00	4.404	19.008	0.109
6/9/2011 23:10	4.406	18.997	0.105
6/9/2011 23:20	4.402	19.006	0.116
6/9/2011 23:30	4.404	19.011	0.11
6/9/2011 23:40	4.405	18.985	0.107
6/9/2011 23:50	4.403	19.021	0.112
6/10/2011 0:00	4.403	19.006	0.113
6/10/2011 0:10	4.403	19.024	0.113
6/10/2011 0:20	4.402	19.044	0.114
6/10/2011 0:30	4.404	19.018	0.11
6/10/2011 0:40	4.404	19.003	0.111
6/10/2011 0:50	4.403	19.009	0.113
6/10/2011 1:00	4.404	19.059	0.11
6/10/2011 1:10	4.405	19.035	0.109
6/10/2011 1:20	4.407	19.027	0.104
6/10/2011 1:30	4.404	19.016	0.109
6/10/2011 1:40	4.405	19.001	0.107
6/10/2011 1:50	4.406	19.034	0.106
6/10/2011 2:00	4.404	19.016	0.11
6/10/2011 2:10	4.405	19.042	0.109
6/10/2011 2:20	4.404	19.078	0.11
6/10/2011 2:30	4.404	19.053	0.11
6/10/2011 2:40	4.405	19.049	0.108
6/10/2011 2:50	4.406	19.064	0.107
6/10/2011 3:00	4.404	19.061	0.111
6/10/2011 3:10	4.405	19.042	0.107
6/10/2011 3:20	4.405	19.043	0.108
6/10/2011 3:30	4.405	19.069	0.107
6/10/2011 3:40	4.404	19.081	0.11
6/10/2011 3:50	4.405	19.05	0.108
6/10/2011 4:00	4.404	19.05	0.111
6/10/2011 4:10	4.403	19.063	0.113
6/10/2011 4:20	4.404	19.028	0.111
6/10/2011 4:30	4.404	19.006	0.111
6/10/2011 4:40	4.406	19.023	0.106
6/10/2011 4:50	4.406	19.07	0.107
6/10/2011 5:00	4.404	19.05	0.111

TABLE C.46
Monitoring Well Data for 52GW81

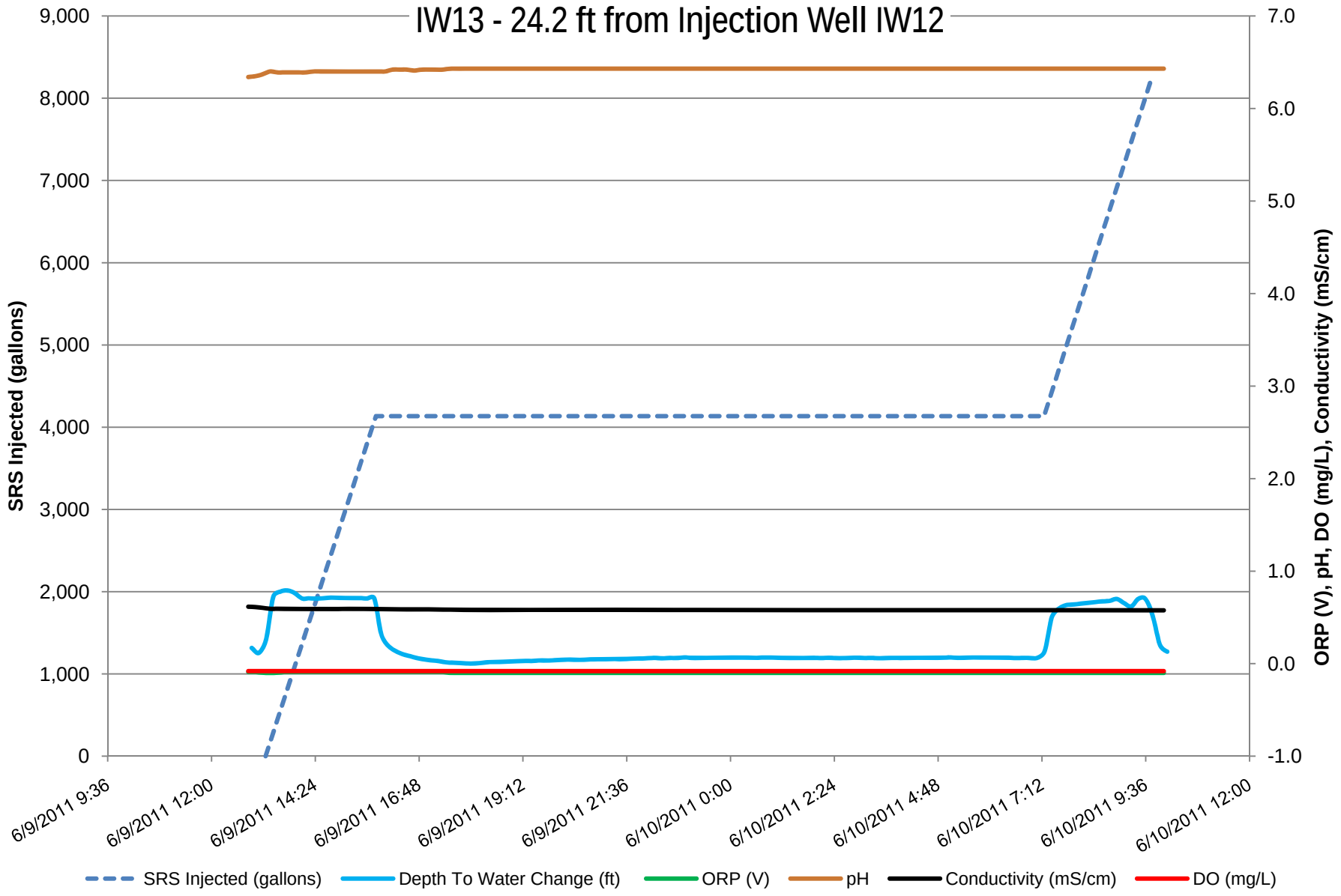
Monitoring Well ID: **52GW81**
Injection Well ID: IW12
Distance to Injection Well: 11-ft

In-Situ Inc. Troll 9500
Serial number: 48173
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/10/2011 5:18	-0.31	6.45	-0.07	1.9707
6/10/2011 5:28	-0.31	6.44	-0.08	1.9717
6/10/2011 5:38	-0.31	6.44	-0.07	1.9743
6/10/2011 5:48	-0.31	6.44	-0.07	1.9743
6/10/2011 5:58	-0.31	6.51	-0.07	1.9781
6/10/2011 6:08	-0.32	6.49	-0.07	1.9858
6/10/2011 6:18	-0.32	6.49	-0.07	1.9881
6/10/2011 6:28	-0.32	6.49	-0.08	1.9929
6/10/2011 6:38	-0.32	6.48	-0.08	1.9984
6/10/2011 6:48	-0.32	6.49	-0.07	2.0018
6/10/2011 6:58	-0.32	6.51	-0.07	2.0033
6/10/2011 7:08	-0.32	6.51	-0.07	2.0063
6/10/2011 7:18	-0.31	6.48	-0.07	2.0715
6/10/2011 7:28	-0.29	6.46	-0.07	2.1710
6/10/2011 7:38	-0.28	6.47	-0.07	2.1499
6/10/2011 7:48	-0.28	6.50	-0.08	2.1358
6/10/2011 7:58	-0.27	6.52	-0.08	2.0921
6/10/2011 8:08	-0.26	6.53	-0.08	1.9438
6/10/2011 8:18	-0.25	6.54	-0.08	1.8658
6/10/2011 8:28	-0.24	6.54	-0.08	1.8411
6/10/2011 8:38	-0.24	6.54	-0.08	1.7789
6/10/2011 8:48	-0.24	6.55	-0.08	1.7667
6/10/2011 8:58	-0.23	6.58	-0.08	2.0956
6/10/2011 9:08	-0.23	6.58	-0.08	2.1450
6/10/2011 9:18	-0.23	6.57	-0.07	2.1816
6/10/2011 9:28	-0.23	6.58	-0.08	2.0021
6/10/2011 9:38	-0.23	6.56	-0.08	1.8313
6/10/2011 9:48	-0.23	6.59	-0.08	1.9098
6/10/2011 9:58	-0.23	6.64	-0.08	1.9841
6/10/2011 10:08	-0.23	6.61	-0.08	2.0352

In-Situ Inc. Level Troll 700
Serial number: 135710
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/10/2011 5:10	4.404	19.046	0.11
6/10/2011 5:20	4.404	19.009	0.111
6/10/2011 5:30	4.403	19.02	0.111
6/10/2011 5:40	4.403	19.02	0.113
6/10/2011 5:50	4.402	19.058	0.114
6/10/2011 6:00	4.402	19.072	0.115
6/10/2011 6:10	4.405	19.08	0.108
6/10/2011 6:20	4.404	19.066	0.111
6/10/2011 6:30	4.404	19.056	0.11
6/10/2011 6:40	4.404	19.065	0.109
6/10/2011 6:50	4.403	19.045	0.114
6/10/2011 7:00	4.403	19.031	0.114
6/10/2011 7:10	4.409	19.027	0.099
6/10/2011 7:20	4.73	19.074	0.642
6/10/2011 7:30	4.781	19.121	0.76
6/10/2011 7:40	4.813	19.075	0.833
6/10/2011 7:50	4.843	19.065	0.903
6/10/2011 8:00	4.861	19.09	0.945
6/10/2011 8:10	4.876	19.108	0.979
6/10/2011 8:20	4.888	19.078	1.006
6/10/2011 8:30	4.893	19.057	1.019
6/10/2011 8:40	4.898	19.051	1.03
6/10/2011 8:50	4.9	19.068	1.035
6/10/2011 9:00	4.899	19.068	1.032
6/10/2011 9:10	4.903	19.058	1.043
6/10/2011 9:20	4.904	19.039	1.045
6/10/2011 9:30	4.905	19.041	1.046
6/10/2011 9:40	4.907	19.046	1.051
6/10/2011 9:50	4.569	19.045	0.271
6/10/2011 10:00	4.507	19.029	0.128
6/10/2011 10:10	4.48	19.048	0.066



CH2MHILL

Figure C.35
SRS Injection Data Timeline - IW13

TABLE C.47
Monitoring Well Data for IW13

Monitoring Well ID: **IW13**
Injection Well ID: IW12
Distance to Injection Well: 24.2-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 12:51	-0.09	6.34	-0.08	0.6154
6/9/2011 13:01	-0.09	6.35	-0.08	0.6114
6/9/2011 13:11	-0.10	6.37	-0.08	0.6032
6/9/2011 13:21	-0.10	6.40	-0.08	0.5938
6/9/2011 13:31	-0.10	6.39	-0.08	0.5931
6/9/2011 13:41	-0.09	6.39	-0.08	0.5923
6/9/2011 13:51	-0.09	6.39	-0.08	0.5919
6/9/2011 14:01	-0.09	6.39	-0.08	0.5916
6/9/2011 14:11	-0.09	6.39	-0.08	0.5918
6/9/2011 14:21	-0.09	6.40	-0.08	0.5916
6/9/2011 14:31	-0.09	6.40	-0.08	0.5914
6/9/2011 14:41	-0.09	6.40	-0.08	0.5914
6/9/2011 14:51	-0.09	6.40	-0.08	0.5909
6/9/2011 15:01	-0.09	6.40	-0.08	0.5918
6/9/2011 15:11	-0.09	6.40	-0.08	0.5918
6/9/2011 15:21	-0.09	6.40	-0.08	0.5913
6/9/2011 15:31	-0.09	6.40	-0.08	0.5913
6/9/2011 15:41	-0.09	6.40	-0.08	0.5914
6/9/2011 15:51	-0.09	6.40	-0.08	0.5916
6/9/2011 16:01	-0.09	6.40	-0.08	0.5908
6/9/2011 16:11	-0.09	6.42	-0.08	0.5881
6/9/2011 16:21	-0.09	6.42	-0.08	0.5866
6/9/2011 16:31	-0.09	6.42	-0.08	0.5874
6/9/2011 16:41	-0.09	6.41	-0.08	0.5871
6/9/2011 16:51	-0.09	6.42	-0.08	0.5874
6/9/2011 17:01	-0.09	6.42	-0.08	0.5871
6/9/2011 17:11	-0.09	6.42	-0.08	0.5864
6/9/2011 17:21	-0.09	6.42	-0.08	0.5852
6/9/2011 17:31	-0.10	6.43	-0.08	0.5842
6/9/2011 17:41	-0.10	6.43	-0.08	0.5818
6/9/2011 17:51	-0.10	6.43	-0.08	0.5808
6/9/2011 18:01	-0.10	6.43	-0.08	0.5803
6/9/2011 18:11	-0.10	6.43	-0.08	0.5809
6/9/2011 18:21	-0.10	6.43	-0.08	0.5814
6/9/2011 18:31	-0.10	6.43	-0.08	0.5813
6/9/2011 18:41	-0.10	6.43	-0.08	0.5813
6/9/2011 18:51	-0.10	6.43	-0.08	0.5809
6/9/2011 19:01	-0.10	6.43	-0.08	0.5813
6/9/2011 19:11	-0.10	6.43	-0.08	0.5814
6/9/2011 19:21	-0.10	6.43	-0.08	0.5818
6/9/2011 19:31	-0.10	6.43	-0.08	0.5818
6/9/2011 19:41	-0.10	6.43	-0.08	0.5821
6/9/2011 19:51	-0.10	6.43	-0.08	0.5823
6/9/2011 20:01	-0.10	6.43	-0.08	0.5826
6/9/2011 20:11	-0.10	6.43	-0.08	0.5823
6/9/2011 20:21	-0.10	6.43	-0.08	0.5823
6/9/2011 20:31	-0.10	6.43	-0.08	0.5821
6/9/2011 20:41	-0.10	6.43	-0.08	0.5824
6/9/2011 20:51	-0.10	6.43	-0.08	0.5821

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 12:55	3.682	18.45	0.17
6/9/2011 13:05	3.659	18.459	0.116
6/9/2011 13:15	3.721	18.447	0.26
6/9/2011 13:25	3.922	18.457	0.724
6/9/2011 13:35	3.946	18.444	0.779
6/9/2011 13:45	3.951	18.44	0.791
6/9/2011 13:55	3.938	18.442	0.761
6/9/2011 14:05	3.914	18.433	0.704
6/9/2011 14:15	3.915	18.435	0.707
6/9/2011 14:25	3.913	18.434	0.702
6/9/2011 14:35	3.916	18.433	0.708
6/9/2011 14:45	3.918	18.435	0.713
6/9/2011 14:55	3.917	18.435	0.712
6/9/2011 15:05	3.916	18.429	0.709
6/9/2011 15:15	3.916	18.431	0.709
6/9/2011 15:25	3.916	18.429	0.709
6/9/2011 15:35	3.914	18.427	0.704
6/9/2011 15:45	3.914	18.424	0.706
6/9/2011 15:55	3.743	18.421	0.311
6/9/2011 16:05	3.69	18.424	0.189
6/9/2011 16:15	3.667	18.427	0.135
6/9/2011 16:25	3.653	18.436	0.101
6/9/2011 16:35	3.643	18.435	0.08
6/9/2011 16:45	3.634	18.441	0.059
6/9/2011 16:55	3.628	18.445	0.045
6/9/2011 17:05	3.624	18.442	0.035
6/9/2011 17:15	3.62	18.448	0.027
6/9/2011 17:25	3.614	18.444	0.013
6/9/2011 17:35	3.613	18.45	0.01
6/9/2011 17:45	3.611	18.449	0.006
6/9/2011 17:55	3.608	18.453	0.002
6/9/2011 18:05	3.608	18.452	0.002
6/9/2011 18:15	3.605	18.446	0.009
6/9/2011 18:25	3.601	18.449	0.017
6/9/2011 18:35	3.601	18.445	0.018
6/9/2011 18:45	3.6	18.45	0.02
6/9/2011 18:55	3.599	18.448	0.023
6/9/2011 19:05	3.597	18.447	0.027
6/9/2011 19:15	3.596	18.447	0.029
6/9/2011 19:25	3.596	18.452	0.029
6/9/2011 19:35	3.593	18.448	0.035
6/9/2011 19:45	3.594	18.451	0.033
6/9/2011 19:55	3.593	18.448	0.037
6/9/2011 20:05	3.591	18.448	0.041
6/9/2011 20:15	3.59	18.445	0.044
6/9/2011 20:25	3.591	18.442	0.041
6/9/2011 20:35	3.59	18.44	0.042
6/9/2011 20:45	3.589	18.441	0.046
6/9/2011 20:55	3.589	18.445	0.047

TABLE C.47
Monitoring Well Data for IW13

Monitoring Well ID: **IW13**
Injection Well ID: IW12
Distance to Injection Well: 24.2-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 21:01	-0.10	6.43	-0.08	0.5823
6/9/2011 21:11	-0.10	6.43	-0.08	0.5823
6/9/2011 21:21	-0.10	6.43	-0.08	0.5821
6/9/2011 21:31	-0.10	6.43	-0.08	0.5819
6/9/2011 21:41	-0.10	6.43	-0.08	0.5819
6/9/2011 21:51	-0.10	6.43	-0.08	0.5813
6/9/2011 22:01	-0.10	6.43	-0.08	0.5814
6/9/2011 22:11	-0.10	6.43	-0.08	0.5813
6/9/2011 22:21	-0.10	6.43	-0.08	0.5814
6/9/2011 22:31	-0.10	6.43	-0.08	0.5808
6/9/2011 22:41	-0.10	6.43	-0.08	0.5809
6/9/2011 22:51	-0.10	6.43	-0.08	0.5808
6/9/2011 23:01	-0.10	6.43	-0.08	0.5809
6/9/2011 23:11	-0.10	6.43	-0.08	0.5806
6/9/2011 23:21	-0.10	6.43	-0.08	0.5806
6/9/2011 23:31	-0.10	6.43	-0.08	0.5806
6/9/2011 23:41	-0.10	6.43	-0.08	0.5809
6/9/2011 23:51	-0.10	6.43	-0.08	0.5806
6/10/2011 0:01	-0.10	6.43	-0.08	0.5804
6/10/2011 0:11	-0.10	6.43	-0.08	0.5800
6/10/2011 0:21	-0.10	6.43	-0.08	0.5801
6/10/2011 0:31	-0.10	6.43	-0.08	0.5800
6/10/2011 0:41	-0.10	6.43	-0.08	0.5800
6/10/2011 0:51	-0.10	6.43	-0.08	0.5798
6/10/2011 1:01	-0.10	6.43	-0.08	0.5798
6/10/2011 1:11	-0.10	6.43	-0.08	0.5800
6/10/2011 1:21	-0.10	6.43	-0.08	0.5800
6/10/2011 1:31	-0.10	6.43	-0.08	0.5800
6/10/2011 1:41	-0.10	6.43	-0.08	0.5798
6/10/2011 1:51	-0.10	6.43	-0.08	0.5796
6/10/2011 2:01	-0.10	6.43	-0.08	0.5795
6/10/2011 2:11	-0.10	6.43	-0.08	0.5791
6/10/2011 2:21	-0.10	6.43	-0.08	0.5791
6/10/2011 2:31	-0.10	6.43	-0.08	0.5790
6/10/2011 2:41	-0.10	6.43	-0.08	0.5793
6/10/2011 2:51	-0.10	6.43	-0.08	0.5785
6/10/2011 3:01	-0.10	6.43	-0.08	0.5790
6/10/2011 3:11	-0.10	6.43	-0.08	0.5788
6/10/2011 3:21	-0.10	6.43	-0.08	0.5787
6/10/2011 3:31	-0.10	6.43	-0.08	0.5785
6/10/2011 3:41	-0.10	6.43	-0.08	0.5787
6/10/2011 3:51	-0.10	6.43	-0.08	0.5787
6/10/2011 4:01	-0.10	6.43	-0.08	0.5785
6/10/2011 4:11	-0.10	6.43	-0.08	0.5783
6/10/2011 4:21	-0.10	6.43	-0.08	0.5787
6/10/2011 4:31	-0.10	6.43	-0.08	0.5785
6/10/2011 4:41	-0.10	6.43	-0.08	0.5785
6/10/2011 4:51	-0.10	6.43	-0.08	0.5780
6/10/2011 5:01	-0.10	6.43	-0.08	0.5785

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 21:05	3.588	18.448	0.047
6/9/2011 21:15	3.587	18.445	0.05
6/9/2011 21:25	3.588	18.447	0.048
6/9/2011 21:35	3.587	18.448	0.05
6/9/2011 21:45	3.585	18.446	0.055
6/9/2011 21:55	3.585	18.446	0.055
6/9/2011 22:05	3.583	18.446	0.059
6/9/2011 22:15	3.582	18.448	0.062
6/9/2011 22:25	3.584	18.446	0.057
6/9/2011 22:35	3.582	18.449	0.062
6/9/2011 22:45	3.583	18.445	0.06
6/9/2011 22:55	3.58	18.446	0.067
6/9/2011 23:05	3.582	18.446	0.062
6/9/2011 23:15	3.582	18.442	0.061
6/9/2011 23:25	3.581	18.445	0.063
6/9/2011 23:35	3.582	18.45	0.063
6/9/2011 23:45	3.581	18.449	0.065
6/9/2011 23:55	3.581	18.446	0.065
6/10/2011 0:05	3.581	18.444	0.064
6/10/2011 0:15	3.581	18.445	0.064
6/10/2011 0:25	3.581	18.451	0.065
6/10/2011 0:35	3.582	18.452	0.062
6/10/2011 0:45	3.58	18.449	0.066
6/10/2011 0:55	3.581	18.449	0.065
6/10/2011 1:05	3.58	18.45	0.066
6/10/2011 1:15	3.583	18.447	0.06
6/10/2011 1:25	3.582	18.447	0.061
6/10/2011 1:35	3.583	18.451	0.06
6/10/2011 1:45	3.581	18.451	0.063
6/10/2011 1:55	3.581	18.452	0.063
6/10/2011 2:05	3.583	18.446	0.06
6/10/2011 2:15	3.581	18.447	0.063
6/10/2011 2:25	3.583	18.45	0.06
6/10/2011 2:35	3.583	18.449	0.06
6/10/2011 2:45	3.582	18.447	0.062
6/10/2011 2:55	3.581	18.45	0.064
6/10/2011 3:05	3.582	18.451	0.061
6/10/2011 3:15	3.582	18.454	0.062
6/10/2011 3:25	3.583	18.458	0.058
6/10/2011 3:35	3.582	18.457	0.061
6/10/2011 3:45	3.582	18.455	0.062
6/10/2011 3:55	3.582	18.456	0.061
6/10/2011 4:05	3.582	18.455	0.062
6/10/2011 4:15	3.582	18.457	0.063
6/10/2011 4:25	3.581	18.449	0.063
6/10/2011 4:35	3.582	18.447	0.063
6/10/2011 4:45	3.581	18.446	0.063
6/10/2011 4:55	3.581	18.451	0.064
6/10/2011 5:05	3.58	18.449	0.067

TABLE C.47
Monitoring Well Data for IW13

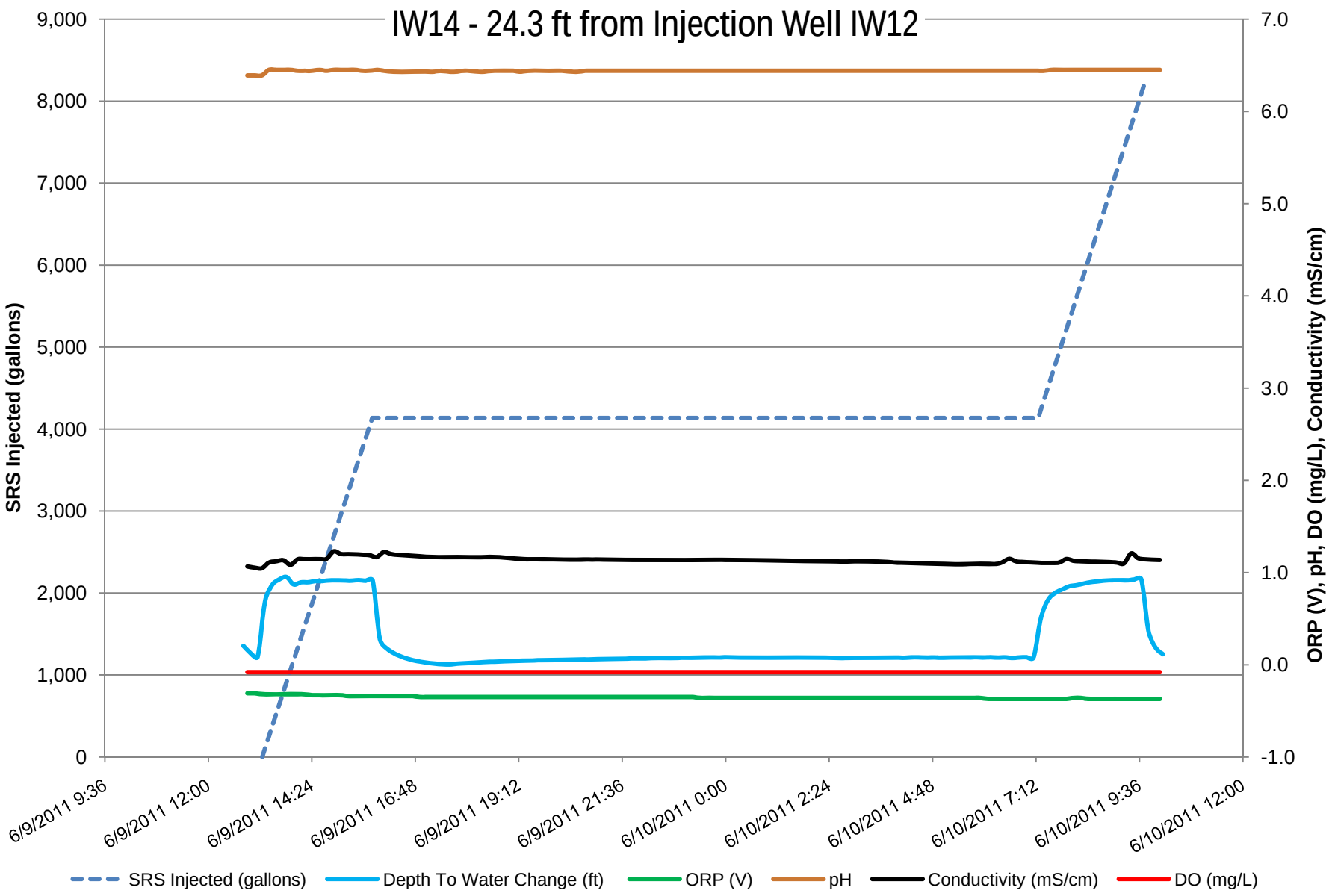
Monitoring Well ID: **IW13**
Injection Well ID: IW12
Distance to Injection Well: 24.2-ft

In-Situ Inc. Troll 9500
Serial number: 48057
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/10/2011 5:11	-0.10	6.43	-0.08	0.5785
6/10/2011 5:21	-0.10	6.43	-0.08	0.5783
6/10/2011 5:31	-0.10	6.43	-0.08	0.5782
6/10/2011 5:41	-0.10	6.43	-0.08	0.5780
6/10/2011 5:51	-0.10	6.43	-0.08	0.5783
6/10/2011 6:01	-0.10	6.43	-0.08	0.5783
6/10/2011 6:11	-0.10	6.43	-0.08	0.5782
6/10/2011 6:21	-0.10	6.43	-0.08	0.5778
6/10/2011 6:31	-0.10	6.43	-0.08	0.5783
6/10/2011 6:41	-0.10	6.43	-0.08	0.5783
6/10/2011 6:51	-0.10	6.43	-0.08	0.5780
6/10/2011 7:01	-0.10	6.43	-0.08	0.5780
6/10/2011 7:11	-0.10	6.43	-0.08	0.5782
6/10/2011 7:21	-0.10	6.43	-0.08	0.5782
6/10/2011 7:31	-0.10	6.43	-0.08	0.5780
6/10/2011 7:41	-0.10	6.43	-0.08	0.5782
6/10/2011 7:51	-0.10	6.43	-0.08	0.5778
6/10/2011 8:01	-0.10	6.43	-0.08	0.5780
6/10/2011 8:11	-0.10	6.43	-0.08	0.5777
6/10/2011 8:21	-0.10	6.43	-0.08	0.5780
6/10/2011 8:31	-0.10	6.43	-0.08	0.5780
6/10/2011 8:41	-0.10	6.43	-0.08	0.5778
6/10/2011 8:51	-0.10	6.43	-0.08	0.5782
6/10/2011 9:01	-0.10	6.43	-0.08	0.5777
6/10/2011 9:11	-0.10	6.43	-0.08	0.5778
6/10/2011 9:21	-0.10	6.43	-0.08	0.5777
6/10/2011 9:31	-0.10	6.43	-0.08	0.5778
6/10/2011 9:41	-0.10	6.43	-0.08	0.5777
6/10/2011 9:51	-0.10	6.43	-0.08	0.5780
6/10/2011 10:01	-0.10	6.43	-0.08	0.5770

In-Situ Inc. Level Troll 700
Serial number: 134219
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/10/2011 5:15	3.582	18.45	0.062
6/10/2011 5:25	3.581	18.449	0.064
6/10/2011 5:35	3.58	18.448	0.066
6/10/2011 5:45	3.58	18.446	0.065
6/10/2011 5:55	3.58	18.447	0.066
6/10/2011 6:05	3.581	18.444	0.064
6/10/2011 6:15	3.581	18.45	0.064
6/10/2011 6:25	3.581	18.446	0.064
6/10/2011 6:35	3.583	18.442	0.06
6/10/2011 6:45	3.582	18.444	0.062
6/10/2011 6:55	3.582	18.441	0.061
6/10/2011 7:05	3.581	18.444	0.063
6/10/2011 7:15	3.667	18.444	0.135
6/10/2011 7:25	3.827	18.45	0.503
6/10/2011 7:35	3.867	18.453	0.596
6/10/2011 7:45	3.883	18.448	0.633
6/10/2011 7:55	3.885	18.446	0.639
6/10/2011 8:05	3.89	18.448	0.649
6/10/2011 8:15	3.893	18.441	0.657
6/10/2011 8:25	3.897	18.44	0.665
6/10/2011 8:35	3.9	18.436	0.673
6/10/2011 8:45	3.902	18.445	0.678
6/10/2011 8:55	3.911	18.448	0.699
6/10/2011 9:05	3.892	18.434	0.655
6/10/2011 9:15	3.876	18.438	0.618
6/10/2011 9:25	3.912	18.444	0.701
6/10/2011 9:35	3.911	18.44	0.698
6/10/2011 9:45	3.831	18.438	0.512
6/10/2011 9:55	3.695	18.431	0.2
6/10/2011 10:05	3.665	18.432	0.129



CH2MHILL

Figure C.36
SRS Injection Data Timeline - IW14

TABLE C.48
Monitoring Well Data for IW14

Monitoring Well ID: **IW14**
Injection Well ID: IW12
Distance to Injection Well: 24.3-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 12:54	-0.31	6.39	-0.08	1.0651
6/9/2011 13:04	-0.31	6.39	-0.08	1.0522
6/9/2011 13:14	-0.32	6.39	-0.08	1.0454
6/9/2011 13:24	-0.32	6.45	-0.08	1.1080
6/9/2011 13:34	-0.32	6.45	-0.08	1.1219
6/9/2011 13:44	-0.32	6.45	-0.08	1.1332
6/9/2011 13:54	-0.32	6.45	-0.08	1.0834
6/9/2011 14:04	-0.32	6.44	-0.08	1.1435
6/9/2011 14:14	-0.32	6.44	-0.08	1.1443
6/9/2011 14:24	-0.33	6.44	-0.08	1.1456
6/9/2011 14:34	-0.33	6.45	-0.08	1.1461
6/9/2011 14:44	-0.33	6.44	-0.08	1.1480
6/9/2011 14:54	-0.33	6.45	-0.08	1.2302
6/9/2011 15:04	-0.33	6.45	-0.08	1.2018
6/9/2011 15:14	-0.34	6.45	-0.08	1.1998
6/9/2011 15:24	-0.34	6.45	-0.08	1.1986
6/9/2011 15:34	-0.34	6.44	-0.08	1.1935
6/9/2011 15:44	-0.34	6.44	-0.08	1.1882
6/9/2011 15:54	-0.34	6.45	-0.08	1.1689
6/9/2011 16:04	-0.34	6.44	-0.08	1.2234
6/9/2011 16:14	-0.34	6.43	-0.08	1.2002
6/9/2011 16:24	-0.34	6.43	-0.08	1.1922
6/9/2011 16:34	-0.34	6.43	-0.08	1.1870
6/9/2011 16:44	-0.34	6.43	-0.08	1.1824
6/9/2011 16:54	-0.35	6.43	-0.08	1.1767
6/9/2011 17:04	-0.35	6.43	-0.08	1.1704
6/9/2011 17:14	-0.35	6.43	-0.08	1.1681
6/9/2011 17:24	-0.35	6.44	-0.08	1.1671
6/9/2011 17:34	-0.35	6.43	-0.08	1.1671
6/9/2011 17:44	-0.35	6.43	-0.08	1.1670
6/9/2011 17:54	-0.35	6.44	-0.08	1.1678
6/9/2011 18:04	-0.35	6.44	-0.08	1.1668
6/9/2011 18:14	-0.35	6.43	-0.08	1.1662
6/9/2011 18:24	-0.35	6.43	-0.08	1.1670
6/9/2011 18:34	-0.35	6.44	-0.08	1.1674
6/9/2011 18:44	-0.35	6.44	-0.08	1.1671
6/9/2011 18:54	-0.35	6.44	-0.08	1.1608
6/9/2011 19:04	-0.35	6.44	-0.08	1.1529
6/9/2011 19:14	-0.35	6.43	-0.08	1.1472
6/9/2011 19:24	-0.35	6.44	-0.08	1.1440
6/9/2011 19:34	-0.35	6.44	-0.08	1.1437
6/9/2011 19:44	-0.35	6.44	-0.08	1.1435
6/9/2011 19:54	-0.35	6.44	-0.08	1.1426
6/9/2011 20:04	-0.35	6.44	-0.08	1.1427
6/9/2011 20:14	-0.35	6.44	-0.08	1.1404
6/9/2011 20:24	-0.35	6.43	-0.08	1.1389
6/9/2011 20:34	-0.35	6.43	-0.08	1.1394
6/9/2011 20:44	-0.35	6.44	-0.08	1.1418
6/9/2011 20:54	-0.35	6.44	-0.08	1.1407

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 12:48	5.256	18.756	0.205
6/9/2011 12:58	5.222	18.749	0.126
6/9/2011 13:08	5.205	18.763	0.087
6/9/2011 13:18	5.462	18.772	0.682
6/9/2011 13:28	5.541	18.79	0.864
6/9/2011 13:38	5.568	18.785	0.925
6/9/2011 13:48	5.579	18.789	0.952
6/9/2011 13:58	5.544	18.772	0.871
6/9/2011 14:08	5.554	18.796	0.894
6/9/2011 14:18	5.555	18.798	0.895
6/9/2011 14:28	5.56	18.782	0.907
6/9/2011 14:38	5.56	18.793	0.908
6/9/2011 14:48	5.563	18.789	0.915
6/9/2011 14:58	5.563	18.788	0.916
6/9/2011 15:08	5.563	18.774	0.914
6/9/2011 15:18	5.562	18.775	0.912
6/9/2011 15:28	5.565	18.77	0.918
6/9/2011 15:38	5.561	18.776	0.911
6/9/2011 15:48	5.562	18.771	0.913
6/9/2011 15:58	5.287	18.762	0.278
6/9/2011 16:08	5.242	18.759	0.174
6/9/2011 16:18	5.22	18.739	0.123
6/9/2011 16:28	5.205	18.724	0.087
6/9/2011 16:38	5.193	18.756	0.061
6/9/2011 16:48	5.185	18.762	0.042
6/9/2011 16:58	5.18	18.728	0.03
6/9/2011 17:08	5.174	18.746	0.016
6/9/2011 17:18	5.171	18.742	0.01
6/9/2011 17:28	5.168	18.727	0.002
6/9/2011 17:38	5.165	18.755	0.004
6/9/2011 17:48	5.161	18.751	0.013
6/9/2011 17:58	5.16	18.745	0.016
6/9/2011 18:08	5.158	18.75	0.022
6/9/2011 18:18	5.156	18.752	0.025
6/9/2011 18:28	5.153	18.765	0.032
6/9/2011 18:38	5.153	18.752	0.032
6/9/2011 18:48	5.151	18.764	0.036
6/9/2011 18:58	5.15	18.766	0.038
6/9/2011 19:08	5.148	18.754	0.043
6/9/2011 19:18	5.148	18.757	0.044
6/9/2011 19:28	5.148	18.758	0.044
6/9/2011 19:38	5.146	18.756	0.049
6/9/2011 19:48	5.146	18.746	0.049
6/9/2011 19:58	5.145	18.755	0.05
6/9/2011 20:08	5.144	18.77	0.053
6/9/2011 20:18	5.144	18.771	0.054
6/9/2011 20:28	5.144	18.78	0.054
6/9/2011 20:38	5.142	18.749	0.059
6/9/2011 20:48	5.142	18.752	0.057

TABLE C.48
Monitoring Well Data for IW14

Monitoring Well ID: **IW14**
Injection Well ID: IW12
Distance to Injection Well: 24.3-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/9/2011 21:04	-0.35	6.44	-0.08	1.1413
6/9/2011 21:14	-0.35	6.44	-0.08	1.1393
6/9/2011 21:24	-0.35	6.44	-0.08	1.1378
6/9/2011 21:34	-0.35	6.44	-0.08	1.1384
6/9/2011 21:44	-0.35	6.44	-0.08	1.1378
6/9/2011 21:54	-0.35	6.44	-0.08	1.1358
6/9/2011 22:04	-0.35	6.44	-0.08	1.1350
6/9/2011 22:14	-0.35	6.44	-0.08	1.1349
6/9/2011 22:24	-0.35	6.44	-0.08	1.1358
6/9/2011 22:34	-0.35	6.44	-0.08	1.1365
6/9/2011 22:44	-0.35	6.44	-0.08	1.1369
6/9/2011 22:54	-0.35	6.44	-0.08	1.1350
6/9/2011 23:04	-0.35	6.44	-0.08	1.1353
6/9/2011 23:14	-0.35	6.44	-0.08	1.1352
6/9/2011 23:24	-0.36	6.44	-0.08	1.1360
6/9/2011 23:34	-0.36	6.44	-0.08	1.1369
6/9/2011 23:44	-0.36	6.44	-0.08	1.1381
6/9/2011 23:54	-0.36	6.44	-0.08	1.1370
6/10/2011 0:04	-0.36	6.44	-0.08	1.1360
6/10/2011 0:14	-0.36	6.44	-0.08	1.1376
6/10/2011 0:24	-0.36	6.44	-0.08	1.1360
6/10/2011 0:34	-0.36	6.44	-0.08	1.1341
6/10/2011 0:44	-0.36	6.44	-0.08	1.1325
6/10/2011 0:54	-0.36	6.44	-0.08	1.1329
6/10/2011 1:04	-0.36	6.44	-0.08	1.1313
6/10/2011 1:14	-0.36	6.44	-0.08	1.1298
6/10/2011 1:24	-0.36	6.44	-0.08	1.1302
6/10/2011 1:34	-0.36	6.44	-0.08	1.1288
6/10/2011 1:44	-0.36	6.44	-0.08	1.1269
6/10/2011 1:54	-0.36	6.44	-0.08	1.1234
6/10/2011 2:04	-0.36	6.44	-0.08	1.1214
6/10/2011 2:14	-0.36	6.44	-0.08	1.1221
6/10/2011 2:24	-0.36	6.44	-0.08	1.1216
6/10/2011 2:34	-0.36	6.44	-0.08	1.1208
6/10/2011 2:44	-0.36	6.44	-0.08	1.1194
6/10/2011 2:54	-0.36	6.44	-0.08	1.1209
6/10/2011 3:04	-0.36	6.44	-0.08	1.1226
6/10/2011 3:14	-0.36	6.44	-0.08	1.1213
6/10/2011 3:24	-0.36	6.44	-0.08	1.1201
6/10/2011 3:34	-0.36	6.44	-0.08	1.1178
6/10/2011 3:44	-0.36	6.44	-0.08	1.1159
6/10/2011 3:54	-0.36	6.44	-0.08	1.1083
6/10/2011 4:04	-0.36	6.44	-0.08	1.1060
6/10/2011 4:14	-0.36	6.44	-0.08	1.1046
6/10/2011 4:24	-0.36	6.44	-0.08	1.1018
6/10/2011 4:34	-0.36	6.44	-0.08	1.0994
6/10/2011 4:44	-0.36	6.44	-0.08	1.0962
6/10/2011 4:54	-0.36	6.44	-0.08	1.0949
6/10/2011 5:04	-0.36	6.44	-0.08	1.0931

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/9/2011 20:58	5.141	18.759	0.06
6/9/2011 21:08	5.141	18.772	0.06
6/9/2011 21:18	5.14	18.765	0.062
6/9/2011 21:28	5.139	18.761	0.065
6/9/2011 21:38	5.14	18.768	0.063
6/9/2011 21:48	5.138	18.751	0.068
6/9/2011 21:58	5.138	18.758	0.068
6/9/2011 22:08	5.137	18.763	0.069
6/9/2011 22:18	5.136	18.765	0.073
6/9/2011 22:28	5.136	18.767	0.072
6/9/2011 22:38	5.135	18.761	0.074
6/9/2011 22:48	5.136	18.759	0.072
6/9/2011 22:58	5.134	18.752	0.076
6/9/2011 23:08	5.135	18.766	0.074
6/9/2011 23:18	5.134	18.78	0.077
6/9/2011 23:28	5.132	18.757	0.08
6/9/2011 23:38	5.133	18.773	0.079
6/9/2011 23:48	5.134	18.767	0.077
6/9/2011 23:58	5.132	18.767	0.081
6/10/2011 0:08	5.133	18.765	0.079
6/10/2011 0:18	5.133	18.771	0.079
6/10/2011 0:28	5.134	18.765	0.076
6/10/2011 0:38	5.134	18.762	0.075
6/10/2011 0:48	5.133	18.749	0.078
6/10/2011 0:58	5.133	18.77	0.078
6/10/2011 1:08	5.134	18.79	0.077
6/10/2011 1:18	5.133	18.783	0.079
6/10/2011 1:28	5.133	18.779	0.079
6/10/2011 1:38	5.133	18.777	0.078
6/10/2011 1:48	5.133	18.805	0.078
6/10/2011 1:58	5.134	18.783	0.077
6/10/2011 2:08	5.134	18.771	0.076
6/10/2011 2:18	5.134	18.76	0.076
6/10/2011 2:28	5.134	18.758	0.076
6/10/2011 2:38	5.136	18.765	0.072
6/10/2011 2:48	5.135	18.761	0.074
6/10/2011 2:58	5.134	18.786	0.075
6/10/2011 3:08	5.135	18.778	0.075
6/10/2011 3:18	5.134	18.783	0.076
6/10/2011 3:28	5.135	18.782	0.075
6/10/2011 3:38	5.133	18.769	0.077
6/10/2011 3:48	5.134	18.77	0.076
6/10/2011 3:58	5.133	18.772	0.078
6/10/2011 4:08	5.134	18.766	0.075
6/10/2011 4:18	5.132	18.755	0.08
6/10/2011 4:28	5.132	18.755	0.08
6/10/2011 4:38	5.134	18.755	0.077
6/10/2011 4:48	5.133	18.768	0.079
6/10/2011 4:58	5.134	18.753	0.076

TABLE C.48
Monitoring Well Data for IW14

Monitoring Well ID: **IW14**
Injection Well ID: IW12
Distance to Injection Well: 24.3-ft

In-Situ Inc. Troll 9500
Serial number: 48060
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	ORP (V)	pH	DO (mg/L)	Conductivity (mS/cm)
6/10/2011 5:14	-0.36	6.44	-0.08	1.0902
6/10/2011 5:24	-0.36	6.44	-0.08	1.0894
6/10/2011 5:34	-0.36	6.44	-0.08	1.0909
6/10/2011 5:44	-0.36	6.44	-0.08	1.0933
6/10/2011 5:54	-0.36	6.44	-0.08	1.0942
6/10/2011 6:04	-0.37	6.44	-0.08	1.0940
6/10/2011 6:14	-0.37	6.44	-0.08	1.0908
6/10/2011 6:24	-0.37	6.44	-0.08	1.1085
6/10/2011 6:34	-0.37	6.44	-0.08	1.1488
6/10/2011 6:44	-0.37	6.44	-0.08	1.1207
6/10/2011 6:54	-0.37	6.44	-0.08	1.1143
6/10/2011 7:04	-0.37	6.44	-0.08	1.1097
6/10/2011 7:14	-0.37	6.44	-0.08	1.1059
6/10/2011 7:24	-0.37	6.44	-0.08	1.1032
6/10/2011 7:34	-0.37	6.45	-0.08	1.1041
6/10/2011 7:44	-0.37	6.45	-0.08	1.1085
6/10/2011 7:54	-0.37	6.45	-0.08	1.1467
6/10/2011 8:04	-0.36	6.45	-0.08	1.1271
6/10/2011 8:14	-0.36	6.45	-0.08	1.1221
6/10/2011 8:24	-0.37	6.45	-0.08	1.1192
6/10/2011 8:34	-0.37	6.45	-0.08	1.1176
6/10/2011 8:44	-0.37	6.45	-0.08	1.1152
6/10/2011 8:54	-0.37	6.45	-0.08	1.1133
6/10/2011 9:04	-0.37	6.45	-0.08	1.1076
6/10/2011 9:14	-0.37	6.45	-0.08	1.0986
6/10/2011 9:24	-0.37	6.45	-0.08	1.2080
6/10/2011 9:34	-0.37	6.45	-0.08	1.1542
6/10/2011 9:44	-0.37	6.45	-0.08	1.1433
6/10/2011 9:54	-0.37	6.45	-0.08	1.1389
6/10/2011 10:04	-0.37	6.45	-0.08	1.1367

In-Situ Inc. Level Troll 700
Serial number: 134221
Test started on: 6/9/2011
Test stopped on: 6/10/2011
Time Between Data Points: 10 minutes

Date/Time	Pressure (PSI)	Temperature (C)	Depth To Water Change (ft)
6/10/2011 5:08	5.133	18.77	0.078
6/10/2011 5:18	5.133	18.774	0.079
6/10/2011 5:28	5.132	18.767	0.08
6/10/2011 5:38	5.133	18.79	0.079
6/10/2011 5:48	5.132	18.76	0.081
6/10/2011 5:58	5.133	18.76	0.078
6/10/2011 6:08	5.132	18.763	0.081
6/10/2011 6:18	5.133	18.778	0.077
6/10/2011 6:28	5.132	18.78	0.08
6/10/2011 6:38	5.135	18.767	0.073
6/10/2011 6:48	5.133	18.772	0.079
6/10/2011 6:58	5.132	18.776	0.082
6/10/2011 7:08	5.133	18.755	0.079
6/10/2011 7:18	5.384	18.771	0.501
6/10/2011 7:28	5.471	18.809	0.702
6/10/2011 7:38	5.504	18.787	0.779
6/10/2011 7:48	5.521	18.813	0.818
6/10/2011 7:58	5.536	18.797	0.852
6/10/2011 8:08	5.541	18.796	0.864
6/10/2011 8:18	5.549	18.8	0.881
6/10/2011 8:28	5.555	18.781	0.897
6/10/2011 8:38	5.559	18.765	0.905
6/10/2011 8:48	5.563	18.78	0.914
6/10/2011 8:58	5.564	18.768	0.917
6/10/2011 9:08	5.564	18.767	0.918
6/10/2011 9:18	5.563	18.789	0.915
6/10/2011 9:28	5.567	18.759	0.925
6/10/2011 9:38	5.568	18.772	0.927
6/10/2011 9:48	5.326	18.752	0.366
6/10/2011 9:58	5.247	18.747	0.184
6/10/2011 10:08	5.216	18.752	0.114

Appendix D
Injection Concurrence Letter

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Quality

Beverly Eaves Perdue
Governor

Coleen H. Sullins
Director

Dee Freeman
Secretary

May 3, 2011

Will Potter, IR Program Manager
Marine Corps Air Station Cherry Point
Environmental Affairs Dept.
PSC Box 8006
Cherry Point, NC 28533

RE: Operable Unit 1, Central Groundwater Plume
In Situ Groundwater Remediation Project

Dear Mr. Potter:

The Underground Injection Control Program of the Aquifer Protection Section has reviewed the subject proposal, received on March 24, 2011, for injection of SRS™ slow release substrate, TSI DC™ microbial culture, sodium bicarbonate, and sodium sulfite to stimulate biodegradation of chlorinated solvents. The proposed injection project as presented in the work plan meets relevant state regulatory requirements (15A NCAC 2C.0200) for construction and operation of injection wells. Due to the site's coverage under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the state's administrative permitting requirements have been waived for this project. However, well construction and abandonment records should be submitted, and a technical report summarizing the project including monitoring data should be submitted to the UIC Program upon completion of the injection project.

If you have any questions regarding this letter or the UIC Program, please contact me at 919-715-6164 or thomas.slusser@ncdenr.gov.

Best Regards,

Thomas Slusser

Thomas Slusser, L.G.
Underground Injection Control Program Manager

cc: George Lane – Division of Waste Management, Superfund Section
Keri Hallberg – CH2M HILL (via email)
David May – Washington Regional Office (via email)
UIC files

AQUIFER PROTECTION SECTION
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