# U.S. Department of Energy

**Livermore Site Office, Livermore, California 94551**

## Lawrence Livermore National Laboratory

**Lawrence Livermore National Security, LLC, Livermore, California 94551**

**UCRL-AR-206319-11**

# 2011 Annual
# Compliance Monitoring Report
# Lawrence Livermore National Laboratory
# Site 300

**Technical Editors**

**V. Dibley**
**L. Ferry**
**M. Buscheck***

**Contributing Authors**

| | |
|---|---|
| A. Anderson* | A. Helmig* |
| T. Carlsen | V. Madrid |
| S. Chamberlain | P. McKereghan |
| Z. Demir | J. Radyk* |
| S. Gregory | M. Taffet |
| R. Goodrich | J. Valett* |


## March 31, 2012

*Weiss Associates, Emeryville, California

## Environmental Restoration Department

**This work performed under the auspices of the U. S. Department of Energy by Livermore National Laboratory under Contract DE-AC52-07NA27344.**

UCRL-AR-206319-11

# 2011 Annual
# Compliance Monitoring Report
# Lawrence Livermore National Laboratory
# Site 300

## March 31, 2012

# Table of Contents

# List of Figures

# List of Tables

# Appendices

# Acknowledgements

Many people support the Lawrence Livermore National Laboratory Site 300 Environmental Restoration Project. The dedication and diverse skills of all these individuals have contributed to the ongoing success of the Environmental Restoration Department activities. The editors wish to collectively thank all the contributing people and companies.

# 1. Introduction

This Compliance Monitoring Report (CMR) summarizes the Lawrence Livermore National Laboratory (LLNL) Site 300 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Remedial Action compliance monitoring activities performed during January through December 2011. The report is submitted in compliance with the Compliance Monitoring Plan (CMP)/Contingency Plan (CP) for Environmental Restoration at Lawrence Livermore National Laboratory Site 300 (Dibley et al., 2009a). The Eastern GSA post-shutdown monitoring requirements (Holtzapple, 2007) are also included in this report.

During the reporting period of January through December 2011, 10.6 million gallons of ground water and 45.3 million cubic feet of soil vapor were treated at Site 300, removing approximately 11 kilograms (kg) of volatile organic compounds (VOCs), 140 grams (g) of perchlorate, 1,600 kg of nitrate, 140 g of Research Department Explosive (RDX), 0.85 g of a mixture of tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) and 4.8 g of total uranium (Table Summ-1).

Since remediation began in 1991, approximately 396 million gallons of ground water and over 621 million cubic feet of soil vapor have been treated, removing approximately 560 kg of VOCs, 1.2 kg of perchlorate, 11,000 kg of nitrate, 1.6 kg of RDX, 9.5 kg of TBOS/TKEBs, and 0.013 kg of total uranium (Table Summ-2).

# 2. Extraction and Treatment System Monitoring and Ground and Surface Water Monitoring Programs

Section 2 presents the monitoring results for the Site 300 remediation systems, ground water monitoring network, and surface water sampling and analyses. These results are presented and discussed by operable unit (OU) as follows:

2.1. General Services Area OU 1

2.2. Building 834 OU 2

2.3. Pit 6 Landfill OU 3

2.4. High Explosives Process Area (HEPA) OU 4

2.5. Building 850/Pit 7 Complex OU 5

2.6. Building 854 OU 6

2.7. Building 832 Canyon OU 7

2.8. Site-Wide OU 8 (Building 833, Building 801/Pit 8, Building 845/Pit 9, and Building 851)

The locations of the Site 300 OUs 2 through 8 are shown on Figure 2-1. The Pit 2, 8, and 9 Landfills (OU 8) are discussed in Section 3.

Total VOC isoconcentration contour maps and post-only maps were constructed by summing the results of the following VOCs: trichloroethene (TCE); tetrachloroethene (PCE); cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); carbon tetrachloride; chloroform; 1,1-dichlorethane (1,1-DCA); 1,2-dichlorethane (1,2-DCA); 1,1-dichloroethene (1,1-DCE); 1,1,1-trichloroethane (1,1,1-TCA); trichlorofluoromethane (Freon 11); 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113); 1,1,2-trichloroethane (1,1,2-TCA); and vinyl chloride. The resultant sums were rounded to two significant figures before plotting on the maps. VOC concentrations presented in the text are total VOCs described above unless a specific VOC is indicated.

Isoconcentration contour maps and post-only maps for the primary contaminants of concern (COCs) were constructed using second semester 2011 data. Isoconcentration contour maps and post-only maps for the secondary COCs were constructed using first semester 2011 data. To create a snapshot in time, hydraulic capture zones and extents of saturation are based on ground water elevation data collected during the same semester as the same COC data. For collocated wells, the highest concentration was used for contouring.

As a result, in some rare instances, the maximum COC concentrations reported in the text might not agree with the value posted on the contour map. The two values would not agree if the annual maximum concentration sample was collected during a different semester. The two values would also not agree if the maximum concentration sample was collected during the same semester, but during a different quarter. All COC and ground water elevation maps were constructed using a single quarterly sampling data set selected because it contained the most complete geographic coverage for the 6-month reporting period. Specific ground water monitoring data are discussed within each OU section and all ground water analytical data are included in the data tables presented in Appendix B of this report.

Hydraulic capture and injection zones are also presented in this report. The capture zones are defined only for extraction and injection wells that were active during the time period when the ground water elevations were measured. The CMR capture zones are based primarily on the equipotentials of the ground water elevation contour maps. These equipotential-based CMR capture zones may differ from the capture zones presented in the Site-Wide Remediation Evaluation Summary Report (SWRSR) (Ferry et al., 2006), because the SWRSR capture zones were estimated using computer models such as Winflow or FEFLOW. As a general rule, the CMR capture zones were extended to two upgradient ground water elevation contours. For cases where there were few observation wells located nearby, a Thiem solution for steady-state radial flow in the vicinity of a pumping well was used to control the ground water elevation contours. Hydraulic capture and injection zones are displayed on ground water elevation contour maps and primary and secondary COC isoconcentration contour maps for all OUs where active ground water remediation is occurring (i.e., OU 1, OU 2, OU 4, OU 5, OU 6 and OU 7). As previously mentioned, hydraulic capture zones are based on ground water elevation data collected during the same semester as the same COC data.

Treatment facility operations and maintenance issues that occurred during the second semester 2011 and influent and effluent analytical data collected during the second semester 2011 are included in this report. Treatment facility pH data collected during the second semester 2011 are presented in Appendix A. Ground and surface water monitoring analytical data and ground water elevation measurements for the entire calendar year 2011 are presented in Appendices B and C, respectively. No soil samples were collected during drilling operations performed during 2011, therefore there is no new analytical data for soil samples to present. New wells and boreholes installed during 2011 are presented in Table 2-1. The Institutional Control Monitoring Performed in 2011 is included in Appendix D. An acronym list is located in the Table Section of this report.

## 2.1. General Services Area (GSA) OU 1

The GSA OU consists of the Eastern and Central GSA areas.

The source of contamination in the Eastern GSA is an abandoned debris burial trench that received craft shop debris. Leaching of solvents in the debris resulted in the release of contaminants to ground water.

A ground water extraction and treatment system (GWTS) operated in the Eastern GSA from 1991 to 2007 to remove VOCs from ground water. VOC-contaminated ground water was extracted from three wells (W-26R-03, W-25N01, and W-25N-24), located downgradient from the debris burial trenches, at a combined flow rate of 45 gallons per minute (gpm). The extracted ground water was treated in three 1,000-pound (lb) granular activated carbon (GAC) units that removed VOCs through adsorption. The treated effluent water was discharged to nearby Corral Hollow Creek.

Remediation efforts in the Eastern GSA have successfully reduced concentrations of TCE and other VOCs in ground water to below their respective cleanup standards set in the GSA Record of Decision (ROD) (United States [U.S.] Department of Energy [DOE], 1997). The Eastern GSA ground water extraction and treatment system was shut off on February 15, 2007 with the U.S. Environmental Protection Agency (EPA), Regional Water Quality Control Board (RWQCB), and California Department of Toxic Substances Control (DTSC) approval. As required by the GSA ROD, ground water monitoring will be conducted for five years after shutdown to determine if VOC concentrations rise or "rebound" above cleanup standards. With one exception described in subsection 2.1.3.3 below, VOC concentrations remain below their cleanup standards.

A map of the Eastern GSA, showing the locations of monitor and extraction wells and the treatment facility is presented on Figure 2.1-1.

At the Central GSA, chlorinated solvents, mainly trichloroethylene (TCE), were used as degreasing agents in craft shops, such as Building 875. Rinse water from these degreasing operations was disposed of in dry wells. Typically, dry wells were gravel-filled holes about three to four feet (ft) deep and two ft in diameter. The Central GSA dry wells were used until 1982. In 1983 and 1984, these dry wells were decommissioned and excavated.

The Central GSA GWTS has been operating since 1992 removing VOCs from ground water. Contaminated ground water is extracted from eight wells (W-7I, W-875-07, W-875-08, W-873-07, W-872-02, W-7O, W-7P, and W-7R) at an approximate combined flow rate of approximately 2.0 to 3.0 gpm. The Central GSA GWTS began receiving partially treated water from the Building 830-Distal South (830-DISS) facility at the end of the first semester 2007, increasing the flow rate to approximately 5.0 to 6.0 gpm. The current GWTS configuration includes particulate filtration, air stripping to remove VOCs from extracted water, and GAC to treat vapor effluent from the air stripper. Treated ground water is discharged to the surrounding natural vegetation using misting towers. Treated vapors are discharged to the atmosphere under permit from the San Joaquin Valley Unified Air Pollution Control District.

The Central GSA soil vapor extraction and treatment system (SVTS) began operation in the GSA adjacent to the Building 875 dry well contaminant source area in 1994 removing VOCs from soil vapor. Soil vapor is extracted from wells W-875-07, W-875-08, W-875-09, W-875-10, W-875-11, W-875-15 and W-7I, and at a combined total flow rate of approximately 35 standard cubic feet per minute (scfm). Simultaneous ground water extraction in the vicinity lowers the elevation of the water table and maximizes the volume of unsaturated soil influenced by vapor extraction. The current SVTS configuration includes a water knockout chamber, a rotary vane blower, and four 140-lb vapor-phase GAC columns arranged in series. Treated vapors are discharged to the atmosphere under a regulatory permit from the San Joaquin Valley Unified Air Pollution Control District.

A map of the Central GSA, showing the locations of monitor and extraction wells and treatment facilities is presented on Figure 2.1-2.

### 2.1.1. GSA Ground Water and Soil Vapor Extraction and Treatment System Operations and Monitoring

This section is organized into five subsections: facility performance assessment; operations and maintenance issues; receiving water monitoring; compliance summary; and sampling plan evaluation and modifications. As discussed above, the Eastern GSA GWTS has been shut down since February 15, 2007. Therefore, only the Central GSA treatment system operations and monitoring information and data are presented and discussed in this section.

#### *2.1.1.1. GSA Facility Performance Assessment*

The monthly ground water and soil vapor discharge volumes and rates and operational hours for the second semester of 2011 are summarized in Table 2.1-1. The total volume of ground water and vapor extracted and treated and masses removed during 2011 is presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and masses removed are summarized in Table Summ-2. Analytical results for influent and effluent samples collected during the second semester of 2011 are shown in Table 2.1-2. The pH measurement results are presented in Appendix A.

#### *2.1.1.2. GSA Operations and Maintenance Issues*

The following maintenance and operational issues interrupted continuous operations of the Central GSA GWTS and SVTS during the second semester of 2011:

- The GWTS compressor failed on July 8, shutting down the system. The compressor was repaired and reinstalled, and the system was restarted on July 18.
- The pumps in extraction wells W-7O, W-7P, and W-872-02 were repaired and restarted on August 17, August 23, and August 30, respectively.
- Misting of the GWTS effluent was switched from the lower misting towers to the upper towers on October 31.
- The pump in ground water extraction well W-873-07 failed on November 2.
- Failed pumps were replaced in monitor wells W-25N-22 and W-25N-23 on December 21. The pump was removed from W-25N-20 in preparation for a video inspection to determine if sloughing is occurring. This work is being scheduled.
- The transfer pump to the misting towers failed, shutting down the GWTS on November 28. The SVTS was shut down on November 29 to prevent upconing of ground water. The misting tower heads were replaced on December 7. The discharge pump was sent offsite for repairs. The systems were offline for the remainder of the reporting period.

#### *2.1.1.3. GSA Compliance Summary*

The Central GSA GWTS operated in compliance with the RWQCB Substantive Requirements for Wastewater Discharge during the second semester 2011. The Central GSA SVTS system operated in compliance with San Joaquin Valley Unified Air Pollution Control District permit limitations.

#### *2.1.1.4. GSA Facility Sampling Plan Evaluation and Modifications*

The Central GSA treatment facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The treatment facility sampling and analysis plan is presented in Table 2.1-3. The only modification made to the plan during this reporting period included no compliance monitoring conducted in December since it was non-operational.

#### *2.1.1.5. GSA Treatment Facility and Extraction Wellfield Modifications*

No modifications were made to the CGSA GWTS, SVTS, or the extraction wellfield during this reporting period.

### 2.1.2. GSA Surface Water and Ground Water Monitoring

The sampling and analysis plans for ground water monitoring at the Central and Eastern GSA are presented in Tables 2.1-4 and 2.1-5, respectively. These tables also delineate and explain deviations from the sampling plan and indicate any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the Eastern GSA post-shutdown monitoring requirements with the following exceptions: four required analyses were not performed due to inoperable pumps and two required analyses were not performed because personnel could not sample the wells due to access restrictions. During the reporting period, ground water monitoring was conducted in accordance with the Central GSA CMP monitoring requirements with the following exceptions; nine required analyses were not performed due to inoperable pumps, fourteen required analyses were not performed because there was insufficient water in the wells to collect the samples, and one required analysis was not performed due to unsafe conditions at the well.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

For the Eastern GSA, ground water elevations and potentiometric surface contour map for the Qal-$Tnbs_1$ HSU are presented on Figure 2.1-3. For the Central GSA, ground water elevations and potentiometric surface contour map for the Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSUs are presented on Figure 2.1-4.

### 2.1.3. GSA Remediation Progress Analysis

This section is organized into four subsections: mass removal; analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

#### *2.1.3.1. GSA Mass Removal*

The monthly ground water and soil vapor mass removal estimates for the second semester of 2011 are summarized in Table 2.1-6. The total mass removed during 2011 and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

#### *2.1.3.2. GSA Contaminant Concentrations and Distribution*

The COCs in GSA ground water consist of the following VOCs: TCE, PCE, 1,1-DCA, 1,2-DCA, 1,1-DCE, 1,2-DCE, 1,1,1-TCA, bromodichloromethane, chloroform, and trichlorofluoromethane (Freon 11). TCE is the most prevalent VOC in GSA ground water, comprising 85-95% of the total VOCs detected.

In the Eastern GSA, VOCs are present at very low concentrations in ground water within Quaternary alluvial deposits (Qal) that directly overlie the $Tnbs_1$ bedrock. A total VOC isoconcentration contour map for this shallow Qal-$Tnbs_1$ hydrostratigraphic unit (HSU) is presented on Figure 2.1.5. Since extraction and treatment began at the Eastern GSA in 1991, TCE concentrations in ground water have decreased from a historic maximum of 74 micrograms per liter (µg/L) (W-26R-03, January 1992) to below its reporting limit (0.5 µg/L) in the majority of wells and to below the 5 µg/L MCL cleanup standard for TCE in all wells. Within the Qal-$Tnbs_1$ hydrostratigraphic unit (HSU), VOC concentrations detected in samples during 2011 ranged from 3.9 µg/L (W-26R-04, June) to <0.5 µg/L. TCE is the only VOC currently detected in Eastern GSA ground water with the exception of 0.5 µg/L of PCE detected in well W-26R-06 and 0.8 µg/L of Freon 11 detected in well W-26R-03. These 2011 data indicate that TCE and other VOCs have not rebounded significantly and, with one exception described in subsection 2.1.3.3 below, continue to remain below their cleanup standards in all wells since the Eastern GSA GWTS was shut down in February 2007.

At the Central GSA, VOCs are the only COCs in ground water and soil vapor. There are three primary HSUs in the Central GSA:

- Qt-$Tnsc_1$ HSU, a shallow water bearing zone in the western portion of the Central GSA. This HSU includes saturated Qt deposits, and the $Tnbs_2$ sandstone and $Tnsc_1$ siltstone/claystone bedrock units that subcrop beneath the Qt.
- $Tnbs_1$ HSU, a deeper regional aquifer within the western portion of the Central GSA which consists of $Tnbs_1$ sandstone bedrock.
- Qal-$Tnbs_1$ HSU, a shallow water bearing zone within the eastern portion of the Central GSA. In the eastern portion of the Central GSA (near the sewage treatment pond), Qt deposits and the $Tnbs_2$ and $Tnsc_1$ bedrock units are not present. Qal deposits directly overlie the shallow $Tnbs_1$ bedrock that comprises the Qal-$Tnbs_1$ HSU in this area.

A VOC plume exists within the Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSUs in the Central GSA. A total VOC isoconcentration contour map for these HSUs is presented on Figure 2.1.6. Prior to remediation, the maximum VOC concentration detected in Central GSA ground water was 272,000 µg/L (Building 875 dry well pad area well W-875-07, 1992). The maximum VOC concentration detected during 2011 was 1,162 µg/L (Building 875 dry well pad area well W-875-08, March). While the majority of VOCs detected in the sample from this and other Building 875 dry well pad area wells consists of TCE, other VOCs detected in these wells in 2011 include PCE, 1,2-DCE, 1,1-DCE, 1,1-DCA, 1,2-DCA, 1,1,2-TCA, and chloroform. These additional VOCs were limited to wells W-7I, W-875-01, W-875-07, W-875-08, and W-875-15, all of which are located in the Building 875 dry well pad area, with the exception of W-875-01 that is located in the VOC plume north of Building 875. Trans-1,2-DCE was detected in well W-875-01, but at a concentration below its 10 µg/L MCL cleanup standard. Of the VOCs detected in Central GSA ground water in 2011, TCE, PCE cis-1,2-DCE, 1,1-DCE, and 1,2-DCA were detected at concentrations above their MCL cleanup standards. Chloroform, trans-1,2-DCE, 1,1-DCA, and 1,1,1-TCA, while present in dry well pad wells, were not detected at concentrations above their MCL cleanup standards.

TCE soil vapor concentrations in the Central GSA Building 875 dry well pad area ranged from 0.099 to 72 parts per million on a volume per volume basis ($ppm_{v/v}$) during 2011. These TCE vapor concentrations have decreased significantly from the historic maximum of 600 $ppm_{v/v}$ at SVTS startup, in 1994.

Outside the dry well pad area, the majority of VOCs consist of TCE, with minor PCE, 1,2-DCE, 1,1-DCE, and Freon 11 detected during 2011. VOC concentrations (primarily TCE with minor PCE) in downgradient monitor well W-CGSA-1736 continue to decrease from a historic maximum of 14.1 µg/L in 2002 to 5.07 µg/L in 2011. Concentrations of bromoform (0.61 µg/L) and dibromochloromethane (2.1 µg/L) were detected in well W-35A-04 (below the 80 µg/L Maximum Contaminant Level [MCL] for total trihalomethanes [THMs]). This well is part of the sewage treatment pond monitoring network, and these THMs are due to incomplete purging of this well after chlorination prior to sampling. During 2011, VOCs were detected in only one offsite monitor well W-35A-10 at a maximum concentration of 25.6 µg/L, consisting of TCE (19 µg/L) and Freon 11 (6.6 µg/L). However, a ground water sample could not be collected from offsite well W-35A-01 during 2011, due to an inoperable pump. A sample collected from this well in 2010 contained 65 µg/L VOCs, most of which consisted of TCE but also included minor amounts of PCE, 1,1-DCE, and Freon 11.

VOCs were detected in only one ground water sample from a well in the deeper $Tnbs_1$ HSU (chloroform in well W-7E at 0.53 µg/L, slightly above the reporting limit).

#### *2.1.3.3. GSA Remediation Optimization Evaluation*

By 2007, ground water extraction and treatment had reduced VOC concentrations in all Eastern GSA wells to below the GSA ground water cleanup standards and TCE concentrations to below the reporting limit (0.5 µg/L) in the majority of wells. In January 2007, DOE/LLNL proposed to initiate the "Requirements for Closeout" described in the Remedial Design document for the GSA OU (Rueth et al., 1998). These requirements specify: *when VOC concentrations in ground water have been reduced to cleanup standards, the ground water extraction and treatment system will be shut off and placed on standby*. The U.S. EPA, RWQCB, and DTSC approved this proposal and the Eastern GSA ground water extraction and treatment system was turned off and effluent discharge to Corral Hollow Creek was discontinued on February 15, 2007, thereby meeting the Substantive Requirements. As required by the GSA ROD, ground water monitoring is being conducted to determine if VOC concentrations rebound above cleanup standards. By the end of 2011, TCE had been detected only once above the MCL cleanup standard (6.9 µg/L in well W-26R-01, in May 2009). This well and nearby well W-26R-04 were re-sampled in June 2009 with no TCE detections above the cleanup standard (Dibley et al., 2009b). These results were discussed with the U.S. EPA, DTSC, and RWQCB at the July 8, 2009 Remedial Project Managers (RPM) Meeting. The regulatory agencies concurred with continued monitoring and evaluation of TCE concentrations in Eastern GSA wells to determine if TCE concentrations are rebounding. As mentioned in the previous subsection, TCE concentrations were below the 5 µg/L MCL cleanup standard for all Eastern GSA ground water samples collected during 2011. On February 15, 2012, five years elapsed since post shutdown monitoring began. As mentioned in the GSA requirements for closeout, cleanup will be considered complete when contaminant concentrations remain below the cleanup standards for five years. All Eastern GSA wells were recently sampled one final time (prior to February 15, 2012) by DOE. If TCE concentrations remain below the cleanup standard (5 µg/L), DOE will initiate conversations with the regulators to decommission the Eastern GSA treatment facility and abandon Eastern GSA wells.

At the Central GSA, ground water extraction continues to adequately capture the highest concentrations in ground water. The leading edge of the plume continues to exhibit decreasing VOC trends in well W-CGSA-1736. VOC trends in offsite well W-35A-10 have generally declined from a historic maximum of 86 µg/L (1994) to a 2011 maximum of 9.8 µg/L. Although a ground water sample could not be collected from offsite well W-35A-01 during 2011, VOC concentrations in this well have generally declined from a historic maximum of 545 µg/L (1991) to a 2010 maximum of 65.08 µg/L. During 2011, extraction well W-7R removed most of the ground water, and wells W-875-07, W-875-08, and W-7O removed most of the dissolved VOC mass. VOC concentrations within the northern plume area (in the vicinity of well W-889-01) remained generally stable and a ground water extraction well (W-CGSA-2708) was installed in this area during 2011. The borehole for this well was drilled to 70 ft below ground surface (bgs) and the well (8-in diameter Schedule 80 PVC) was screened at approximately the same interval as nearby well W-889-01, from 40 to 55 ft bgs in the $Tnsc_{1b}$ (sandy siltstone) portion of the Qt-$Tnsc_1$ HSU. Water was encountered during drilling at 40.7 ft bgs. This well was sampled for VOCs in November 2011 after final well development, yielding a total VOC concentration (all TCE) of 2 µg/L. This well will be added to the Central GSA sampling and analysis plan (Table 2.1-4), starting in 2012. A decision whether to connect this well to the CGSA treatment facility as an extraction well will be made based on future TCE trends. The overall decline in VOCs within the Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSUs and the absence of VOCs in the deeper $Tnbs_1$ HSU, demonstrates the efficacy of ongoing cleanup operations at the Central GSA.

Significantly more VOC mass is being removed by soil vapor extraction than by ground water extraction. During 2011, 0.37 kg of VOCs were removed from ground water and 1.76 kg of VOCs were removed from vapor. Based on individual well vapor flow monitoring for 2011, SVE wells W-7I, W-875-07, and W-875-08 removed most of the vapor mass. As mentioned in the recently submitted Draft Final GSA Five-Year Review (Valett et al., 2011a), further optimization of the Central GSA vapor treatment system during the next five years will include conducting pneumatic communication and additional rebound testing, and periodic reconfiguration of extraction and air inlet wells.

#### *2.1.3.4. GSA OU Remedy Performance Issues*

There were no new issues that affect the performance of the cleanup remedy for the GSA OU during this reporting period. The remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

## 2.2. Building 834 OU 2

The Building 834 Complex has been used to test the stability of weapons and weapon components under various environmental conditions since the 1950s. Past spills and piping leaks at the Building 834 Complex have resulted in soil and ground water contamination with VOCs and TBOS/TKEBs. Nitrate concentrations in Building 834 ground water that exceed the MCL cleanup standard (45 milligrams per liter [mg/L]) are likely the result of a combination of natural sources and septic system leachate. In addition, a former underground diesel storage tank released diesel to the subsurface.

The Building 834 OU is informally divided into three areas: the core, leachfield (septic system), and distal areas (Figure 2.2-1). The core area generally refers to the vicinity of the buildings and test cells in the center of the Building 834 Complex where the majority of contaminant releases occurred. The leachfield area is located immediately southwest of the core area. The distal (T2) area refers to the area downgradient (south) of the core and leachfield areas. A map of Building 834 OU showing the locations of monitor and extraction wells and treatment facilities is presented on Figure 2.2-1.

The Building 834 GWTS and SVTS began operation in 1995 and 1998, respectively. These systems are located in the Building 834 core area. The GWTS removes VOCs and TBOS/TKEBs from ground water within the Tpsg HSU and the SVTS removes VOCs from soil vapor. Due to the very low ground water yield from individual ground water extraction wells (<0.1 gpm), the GWTS and SVTS have been operated simultaneously in batch mode. Although the GWTS can be operated alone, the SVTS is not operational without ground water extraction due to the upconing of the ground water in the well that covers the well screen and prevents soil vapor flow.

The current extraction wellfield consists of 13 dual extraction wells for both ground water and soil vapor. Ten extraction wells (W-834-B2, -B3, -D4, -D5, -D6, -D7, -D12, -D13, -J1, and -2001) are located within the core area and three (W-834-S1, -S12A, and -S13) in the leachfield area. Extraction well W-834-D5 is connected to the facility but has not been used for extraction since the facility was restarted in October 2004 because the capture area is similar to the capture area of extraction well W-834-D13. Ground water and soil vapor extraction well W-834-2001 was added to the system in March 2007. Extracted ground water from this well contains dissolved-phase diesel related to the former underground diesel storage tank. The GWTS extracts ground water at an approximate combined flow rate of 0.23 gpm and the SVTS extracts soil vapor at a combined flow rate of approximately 103 scfm. The current GWTS configuration includes floating hydrocarbon adsorption devices to remove the floating silicon oil, TBOS/TKEBs, and floating diesel (if any), followed by aqueous-phase GAC to remove VOCs, dissolved-phase TBOS/TKEBs, and diesel from ground water. Nitrate-bearing treated effluent is then discharged via a misting tower onto the landscape for uptake and utilization of the nitrate by indigenous grasses. The current SVTS configuration includes vapor-phase GAC for VOC removal. Treated vapors are discharged to the atmosphere under an air permit issued by the San Joaquin Valley Unified Air Pollution Control District.

### 2.2.1. Building 834 OU Ground Water and Soil Vapor Extraction and Treatment System Operations and Monitoring

This section is organized into four subsections: facility performance assessment; operations and maintenance issues; compliance summary; and sampling plan evaluation and modification.

### *2.2.1.1. Building 834 OU Facility Performance Assessment*

The monthly ground water and soil vapor discharge volumes and rates and operational hours for the second semester of 2011 are summarized in Table 2.2-1. The total volumes of ground water and vapor extracted and treated and masses removed during 2011 are presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and masses removed are summarized in Table Summ-2. Analytical results for influent and effluent samples are shown in Tables 2.2-2 through 2.2-4. The pH measurement results are presented in Appendix A.

### *2.2.1.2. Building 834 OU Operations and Maintenance Issues*

The following maintenance and operational issues interrupted continuous operations of the Building 834 GWTS and SVTS during the second semester of 2011:

- The GWTS and SVTS were secured May 25 while the compressor was rebuilt. The systems were restarted on July 19, extracting from the core area wells only. On July 20, the systems were found offline due to a tripped circuit breaker and were restarted. The systems operated intermittently due to compressor issues until a new breaker for the compressor was installed. A malfunctioning starting contactor was also found and replaced. The systems were restarted on August 18.
- The pump in well W-834-B3 was repaired and restarted on November 7.
- The misting tower heads were replaced on November 16.
- The GWTS and SVTS were secured on November 29 for the remainder of the reporting period to protect against damage caused by freezing temperatures.

### *2.2.1.3. Building 834 OU Compliance Summary*

The Building 834 GWTS operated in compliance with the RWQCB Substantive Requirements for Wastewater Discharge. The Building 834 SVTS operated in compliance with the San Joaquin Valley Unified Air Pollution Control District permit limitations.

### *2.2.1.4. Building 834 OU Facility Sampling Plan Evaluation and Modifications*

The Building 834 treatment facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.2-5. The only modification made to the plan during this reporting period included no compliance monitoring in December due to the systems being offline for freeze protection.

### *2.2.1.5. Building 834 OU Treatment Facility and Extraction Wellfield Modifications*

No modifications to the treatment facility or to the extraction wellfield were made during this reporting period.

## 2.2.2. Building 834 OU Ground Water Monitoring

The sampling and analysis plan for ground water monitoring is presented in Table 2.2-6. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

During this reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; ninety-six required analyses were not performed because there was insufficient water in the wells to collect the samples.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

For the Building 834 Operable Unit, ground water elevations and the potentiometric surface for the Tpsg HSU are presented on Figure 2.2-2. For the Building 834 Operable Unit, ground water elevations for the Tps-Tnsc$_2$ HSU are posted on Figure 2.2-3.

### 2.2.3. Building 834 OU Remediation Progress Analysis

This section is organized into four subsections: mass removal, analysis of contaminant distribution and concentration trends, remediation optimization evaluation, and performance issues.

#### *2.2.3.1. Building 834 OU Mass Removal*

The monthly ground water and soil vapor mass removal estimates for the second semester of 2011 are summarized in Table 2.2-7. The total mass removed during 2011 and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

#### *2.2.3.2. Building 834 OU Contaminant Concentrations and Distribution*

At the Building 834 OU, VOCs (mainly TCE, but also PCE, cis-1,2-DCE, 1,1,1-TCA, and chloroform) are the primary COCs detected in ground water; TBOS/TKEBs and nitrate are the secondary COCs. These COCs have been identified in two shallow HSUs: 1) the Tpsg perched water-bearing gravel zone, and 2) the underlying Tps-Tnsc$_2$ perching horizon.

Total VOC concentration data are contoured for the Tpsg HSU (Figure 2.2-4) and posted for the Tps-Tnsc$_2$ HSU (Figure 2.2-3). Secondary ground water COC concentrations are posted for the Tpsg HSU (Figure 2.2-5, Figure 2.2-6) and the Tps-Tnsc$_2$ HSU (Figure 2.2-3).

##### *2.2.3.2.1. VOCs Concentrations and Distribution*

Although the overall extent of VOCs in the Building 834 OU ground water and soil vapor has not changed significantly, the maximum concentrations have decreased by more than one order-of-magnitude since remediation began in the mid 1990s. The highest VOC concentrations in ground water and soil vapor continue to be detected in the 834 core area. Active remediation has reduced VOC ground water concentrations in the more permeable Tpsg HSU from a historic maximum concentration of 1,060,000 µg/L (well W-834-D3, 1993) to a 2011 maximum concentration of 53,000 µg/L in a nearby core area well (W-834-C5, July). The underlying Tps-Tnsc$_2$ HSU continues to exhibit the highest VOC ground water concentrations in the Building 834 OU and at Site 300. The maximum concentration during 2011 was 210,000 µg/L (well W-834-A1, February) in this HSU. VOCs in ground water in well W-834-A1 have remained stable since this well began monitoring the Tps-Tnsc$_2$ HSU in 2000. Another monitor well screened in the Tps-Tnsc$_2$ HSU, W-834-U1, has a maximum concentration of 55,000 µg/L total VOCs in 2011. Since 2000, this well has also generally shown decreasing VOC concentrations trends.

VOCs detected in Building 834 area ground water consist primarily of TCE. Other VOCs, including PCE, cis-1,2-DCE and chloroform have also been detected. During 2011, vinyl chloride was detected where *in situ* bioremediation is occurring in the core and the T2 distal areas. In the core area, cis-1,2-DCE and vinyl chloride are degradation products of TCE during anaerobic intrinsic biodegradation. For example, after core area well W-834-D3 was converted from a dual extraction to a monitor well in 2002, vinyl chloride has been consistently detected in this well at concentrations ranging from 37 to 520 µg/L, including a maximum of 149 µg/L in 2011. The electron donor for this degradation is TBOS/TKEBS. In the T2 distal area, vinyl chloride (and ethene) are the result of an enhanced bioremediation treatability study that began in 2005.

In the Tpsg HSU, TCE has decreased in ground water from a historic maximum concentration of 800,000 µg/L (well W-834-D3 in 1993) to a 2011 maximum concentration of 31,000 µg/L (well W-834-C5, July). These wells have also exhibited the highest VOC concentrations. PCE has decreased from a historic maximum concentration of 10,000 µg/L (W-834-D3, 1993) to a 2011 maximum concentration of 150 µg/L (well W-834-D13, March). Cis-1,2-DCE has decreased from a historic maximum concentration of 540,000 µg/L (well W-834-D4, 1990) to a 2011 maximum concentration of 22,000 µg/L (well W-834-C5, July). Chloroform has decreased from a historic maximum concentration of 950 µg/L (well W-834-S1, 1989) to a 2011 maximum concentration of 1.5 µg/L (well W-834-D6, March). This concentration is below the MCL cleanup standard of 80 µg/L.

In the Tps-Tnsc$_2$ HSU, TCE has decreased from a historic maximum concentration of 250,000 µg/L (well W-834-A1, 2001) to a 2011 maximum concentration of 210,000 µg/L (well W-834-A1, February). PCE has decreased from a historic maximum concentration of 7,900 µg/L (well W-834-A1, 2001) to a 2011 maximum concentration of 980 µg/L (well W-834-A1, July). Cis-1,2-DCE has decreased from a historic maximum concentration of 11,000 µg/L (well W-834-U1, 2001) to a 2011 maximum concentration of 2,800 µg/L (well W-834-U1, February). Chloroform has not been detected above the MCL cleanup standard of 80 µg/L.

During 2011, TCE soil vapor concentrations from the core area SVE wells ranged from 0.021 to 30 ppm$_{v/v}$. These TCE vapor concentrations have decreased by two orders-of-magnitude from the maximum pre-remediation core area concentration of 3,200 ppm$_{v/v}$ (well W-834-D4, 1989). Well W-834-D4 is located approximately 10 ft from well W-834-D3, where the historic maximum ground water VOC concentration in the Tpsg HSU was detected.

In the leachfield area, VOCs in the Tpsg HSU have decreased by an order-of-magnitude, from a pre-remediation maximum of 179,200 µg/L (well W-834-S1, 1988) to a 2011 maximum concentration of 12,000 µg/L (well W-834-2113, February). VOCs in the underlying Tps-Tnsc$_2$ HSU in the leachfield area are significantly lower than in the core area. In the leachfield area, the 2011 maximum VOC concentration in Tps-Tnsc$_2$ HSU ground water was 3,100 µg/L (well W-834-S8, August). This HSU has exhibited decreasing or stable VOC trends since monitoring began in 1989. During 2011, TCE soil vapor concentrations from the Tpsg HSU in the leachfield area ranged from 0.024 to 5.6 ppm$_{v/v}$, significantly lower than the 710 ppm$_{v/v}$ maximum pre-remediation concentration measured in 2004.

In the distal area, VOC concentrations in the Tpsg HSU have decreased from a historic maximum of 86,000 µg/L (well W-834-T2A, 1988) to a 2011 maximum of 11,000 µg/L (well W-834-T2A, February). Since 2005, this area has been the site of a long term enhanced *in situ* bioremediation treatability study, including biostimulation using sodium lactate and bioaugmentation using KB-1, a consortium of dechlorinating bacteria that contain Dehalococcoides. The underlying Tps-Tnsc$_2$ HSU is monitored by one well, W-834-2119, which contained a 2011 maximum VOC concentration of 13,000 µg/L (August); historic VOC concentrations in this well have not changed significantly.

#### *2.2.3.2.2. TBOS/TKEBS Concentrations and Distribution*

TBOS/TKEBS concentrations in ground water have decreased from a historic maximum of 7,300,000 µg/L (well W-834-D3, 1995) to a 2011 maximum of 4,800 µg/L (well W-834-D3, February). This compound is found exclusively in the core area. TBOS/TKEBS concentrations vary from one sampling event to the next, probably because of varying amounts of free-phase TBOS/TKEBS in the subsurface. Historically, floating product has been measured intermittently in some core area wells; however, no floating product was observed during 2011. Because TBOS/TKEBS concentrations in Tpsg HSU wells in the leachfield and distal areas have historically been below reporting limits, sampling for TBOS/TKEBS in the leachfield and distal areas are performed biennial, with approximately half the wells sampled during even numbered years and half sampled during odd numbered years. In those leachfield and distal area wells sampled during 2011, TBOS/TKEBS concentrations were below reporting limits.

Both the concentration and extent of TBOS/TKEBS in ground water are greater in the Tpsg HSU than in the underlying Tps-$Tnsc_2$ HSU. During 2011, TBOS/TKEBS was detected in the Tps-$Tnsc_2$ HSU at a maximum concentration of 24 µg/L (well W-834-U1, February). TBOS/TKEBS continues to be below the reporting limit in guard wells W-834-T1 and W-834-T3.

#### *2.2.3.2.3. Nitrate Concentrations and Distribution*

During 2011, nitrate was detected in ground water at concentrations exceeding the 45 mg/L MCL cleanup standard in the Building 834 core, leachfield, and distal areas in the Tpsg and Tps-$Tnsc_2$ HSUs. Nitrate in Tpsg HSU ground water ranged from a maximum concentration of 300 mg/L (well W-834-M1, February) to below the 0.5 mg/L reporting limit. In the core area, nitrate in the Tpsg HSU varies spatially and temporally due to denitrification associated with the ongoing intrinsic *in situ* biodegradation of TCE. The introduction of oxygen into the subsurface during SVTS operation subdues intrinsic biodegradation and denitrification in some portions of the core area. In the underlying Tps-$Tnsc_2$ HSU, nitrate concentrations during 2011 ranged from a maximum of 100 mg/L (well W-834-S8, February) to 0.73 mg/L (well W-834-U1, February).

Although nitrate concentrations in ground water have decreased from a historic maximum of 749 mg/L (well W-834-K1A, 2000), the continued presence of nitrate above the MCL cleanup standard indicates an ongoing source of nitrate to ground water via a combination of natural and anthropogenic sources. Nitrate was not detected in guard wells W-834-T1 and W-834-T3 during 2011.

#### *2.2.3.2.4. Other Contaminant Concentrations and Distribution*

The extent of diesel in ground water in the Building 834 area is limited to the vicinity of a former underground storage tank located beneath the paved portion of the core area. During 2011, diesel concentrations were measured in ground water from well W-834-2001 at 480 µg/L (March) and from well W-834-U1 at 290 µg/L and 304 µg/L (February). Diesel concentrations measured in ground water vary from one sampling event to the next, likely due to varying amounts of free-phase product in the subsurface. No floating product or diesel odor was detected in ground water during 2011.

During 2011, perchlorate was detected in ground water from well W-834-2118 at a concentration of 4.9 µg/L (February and August); slightly above the 4 µg/L reporting limit but below the 6 µg/L MCL cleanup standard. Perchlorate concentrations in this well have decreased from a historic maximum of 11 µg/L in 2005. During 2011, attempts to sample ground water for perchlorate from wells W-834-S7 and W-834-A2 were unsuccessful due to insufficient water. Ground water from well W-834-S7 has historic perchlorate concentrations ranging from 8.8 to 11 µg/L; ground water from well W-834-A2 has not been analyzed for perchlorate. Semi-annual ground water monitoring for perchlorate will continue for wells W-834-2118, W-834-S7 and W-834-A2.

### *2.2.3.3. Building 834 OU Remediation Optimization Evaluation*

Throughout 2011, the Building 834 ground water and soil vapor treatment systems continued to operate on an intermittent basis as described in the First Semester 2011 CMR (Dibley et al., 2011b) and in Section 2.2.1.2. During the reporting period, no modifications were made to the core or leachfield area extraction wellfields. Substantially more VOC mass is being removed by soil vapor extraction than by ground water extraction. Of the 5.5 kg of VOCs removed during 2011, 4.3 kg was removed in the vapor phase.

TCE biodegradation continues within the core area where significant amounts of TBOS/TKEBS are present. TBOS/TKEBS serves as an electron donor for intrinsic *in situ* biodegradation in this area. Historically, the primary byproduct of this biodegradation has been cis-1,2-DCE, although vinyl chloride has also been detected in some wells. In 2011, both cis-1,2-DCE and vinyl chloride were detected in core area ground water, at maximum concentrations of 22,000 µg/L and 149 µg/L, respectively. Building 834 treatment facilities will periodically be shut down and after restart, changes in oxidation-reduction (redox) conditions and cis-1,2-DCE concentration trends in rebound samples will be monitored to assess the effectiveness of intrinsic bioremediation in this area.

The extraction wellfield for the Tpsg HSU within the core area continues to adequately capture the highest VOC concentrations in ground water. Per the recommendations presented in the Five Year Review Report for the Building 834 Operable Unit (Valett et al., 2011b), VOC concentrations in well W-834-C5 and nearby well W-834-B4 will continue to be monitored closely during the next five years. If these wells exhibit stable or increasing VOC trends, installation of extraction wells in the vicinity of these wells may be considered. In the leachfield area, the extraction wellfield continues to capture some portions of the VOC plume in ground water. However, the areas with the highest concentrations (in the vicinity of monitor well W-834-2113) are not fully captured. VOC concentrations in well W-834-2113 will be monitored closely during the next five years. If this well exhibits stable or increasing VOC trends, additional actions, including conversion of this well to an extraction well, installation of an extraction well in the vicinity of well W-834-2113, or implementing *in situ* bioremediation in this area, may be considered.

As described in Section 2.2.3.4, enhanced *in situ* bioremediation is being evaluated as a long-term treatability test in the T2 distal area. Overall, VOC concentrations in the area impacted by the bioremediation experiment have decreased significantly due to a combination of *in situ* biostimulation, bioaugmentation and dilution.

VOC concentration trends in the underlying Tps-$Tnsc_2$ HSU will also continue to be monitored closely during the next five years. Per the recommendations presented in the Building 834 Five Year Review, if wells W-834-A1 and W-834-2119 exhibit stable or increasing VOC trends, installation of additional extraction wells in this area may be considered.

VOCs in ground water are expected to continue to decrease as remediation progresses. The deep regional $Tnbs_1$ aquifer continues to be free of contaminants as demonstrated by quarterly analyses of ground water from guard wells W-834-T1 and W-834-T3. These guard wells are both screened in the lower $Tnbs_1$ HSU.

#### *2.2.3.4. T2 Treatability Study*

The T2 treatability study began in 2005 and post-test rebound monitoring continued during 2011. The primary objective of this pilot-scale treatability test was to assess the performance of enhanced *in situ* bioremediation of TCE at concentrations greater than 10,000 µg/L in a heterogeneous, anisotropic, water-bearing zone typical of contaminant source areas at Site 300. Since 2005, progress of this test has been reported semi-annually in the CMRs. A detailed description of the test results, including procedures, performance assessment, conclusions, and recommendations were recently submitted as Appendix A of the Draft Building 834 Five Year Review. As mentioned in the Five Year Review, the cost-benefit of expanding *in situ* bioremediation at the T2 Area is being assessed.

#### *2.2.3.5. Building 834 OU Remedy Performance Issues*

During the reporting period, there were no new issues that affect the performance of the cleanup remedy for the Building 834 OU. Although the remedy continues to be protective of human health and the environment, and effective in cleaning up the Tpsg HSU, it has not significantly decreased VOC concentrations in the underlying Tps-$Tnsc_2$ HSU beneath the core area.

## 2.3. Pit 6 Landfill (Pit 6) OU 3

The Pit 6 Landfill covers an area of 2.6 acres near the southern boundary of Site 300. This landfill was used from 1964 to 1973 to bury waste in nine unlined debris trenches and animal pits. The buried waste, which includes laboratory equipment, craft shop debris, and biomedical waste is located on or adjacent to the Corral Hollow-Carnegie Fault. Farther east, the fault trends to the south of two nearby water-supply wells CARNRW1 and CARNRW2. These active water-supply wells are located about 1,000 ft east of the Pit 6 Landfill. They provide water for the nearby Carnegie State Vehicular Recreation Area and are monitored on a monthly basis.

The Pit 6 Landfill was capped and closed in 1997 under CERCLA to prevent further leaching of contaminants resulting from percolation of rainwater through the buried waste. The engineered, multi-layer cap is intended to prevent rainwater infiltration into the landfill, mitigate potential damage by burrowing animals and vegetation, prevent potential hazards from the collapse of void spaces in the buried waste, and prevent the potential flux of VOC vapors through the soil. Surface water flow onto the landfill is minimized by a diversion channel on the north side and drainage channels on the east, west, and south sides of the engineered cap. A map of Pit 6 Landfill OU showing the locations of monitor and water supply wells is presented on Figure 2.3-1.

### 2.3.1. Pit 6 Landfill OU Surface Water and Ground Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.3-1. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring and post-closure requirements with the following exceptions; fifty-six required analyses were not performed because there was insufficient water in the wells to collect the samples.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

For the Pit 6 Landfill Operable Unit, ground water elevations and contour map for the Qt-Tnbs$_1$ HSU are presented on Figure 2.3-2.

### 2.3.2. Pit 6 Landfill OU Remediation Progress Analysis

This section is organized into three subsections: analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

#### *2.3.2.1. Pit 6 Landfill OU Contaminant Distribution and Concentration*

At the Pit 6 Landfill OU, VOCs and tritium are the primary COCs detected in ground water. Perchlorate and nitrate are secondary COCs. These constituents have historically been identified within the Qt-Tnbs$_1$ HSU. Pit 6 COCs have significantly declined below historic maximum levels.

Total VOC concentration and tritium activity data are contoured for the Qt-Tnbs$_1$ HSU based on data collected during the second semester of 2011 and are presented on Figures 2.3-3 and 2.3-4, respectively. Secondary COC maps are not presented because perchlorate was not detected during 2011 and nitrate was detected above the MCL cleanup standard in only two wells.

##### *2.3.2.1.1. VOC Concentrations and Distribution*

Pit 6 Landfill COCs in ground water are VOCs including chloroform, 1,2-DCA, cis-1,2-DCE, trans-1,2-DCE, PCE, 1,1,1-TCA, and TCE. Of these VOCs, only TCE and cis-1,2-DCE were detected in Pit 6 Landfill ground water monitor wells at concentrations above the 0.5 µg/L reporting limit during 2011.

TCE concentrations have decreased from a historic maximum of 250 µg/L (K6-19, 1988) to a 2011 maximum concentration of 9.3 µg/L (EP6-09, April). The historic maximum TCE ground water concentration detected in EP6-09 is 28 µg/L in January 1995. For two months in late 1998, ground water was extracted from EP6-09 to determine the effect on TCE trends. During this period, TCE concentrations decreased from 14 to 1.4 µg/L. Since 1998, TCE concentrations in EP6-09 have rebounded to 10 µg/L and have remained relatively stable.

In 2011, TCE was detected in four wells (EP6-09, K6-16, K6-18 and K6-19) at concentrations above the reporting limit, but exceeded the 5 µg/L MCL cleanup standard in only one well (EP6-09). Cis-1,2-DCE was detected in ground water samples from a single Pit 6 Landfill OU well at a maximum concentration of 3.0 µg/L (K6-01S, January); below the 6 µg/L MCL cleanup standard. The presence of cis-1,2-DCE, a degradation product of TCE, suggests that some natural dechlorination may be occurring.

During 2011, VOCs were not detected in samples collected from guard wells W-PIT6-1819, K6-17, K6-22 and K6-34. Bromoform, bromodichloromethane, and dibromochloromethane were detected in samples collected from CARNRW2, a water-supply well for the Carnegie State Vehicular Recreation Area (SVRA) Park during January, February and March 2011. The total THM concentrations for these samples were below the applicable MCL of 80 µg/L for total THMs. The THMs detected in well CARNRW2 are likely the result of intermittent backflow of chlorinated water from the SVRA chlorination system into the well. No other VOCs were detected in the four CARNRW wells during 2011.

During the first quarter of 2011, 57 µg/L of acetone was detected in a sample collected from well EP6-09. From July 2008 to present, acetone concentrations ranging from 18 to 220 µg/L have been detected sporadically in seven routine and two duplicate samples from well EP6-09. Acetone concentrations ranging from 5.4 to 78 µg/L have also been measured in seven discrete one-time samples from seven other wells near Pit 6. Of these seven samples, four were collected in late October 1990 and may be the result of laboratory contamination. One of the three remaining samples, collected from well K6-01S on February 17, 2008, contained 28 µg/L of acetone. The duplicate sample collected from this well on the same date contained no acetone above the 20 µg/L reporting limit. Of the two other samples, the most recent sample collected contained 78 µg/L of acetone in a sample from well EP6-08 (October 2003). As a result of the acetone detection in well EP6-09 in the first quarter of 2011 and sporadic acetone detections in some historical samples, DOE/LLNL has been collecting two quarterly ground water samples (a routine and a duplicate) from well EP6-09 since second quarter 2011, with each sample analyzed for acetone at a different laboratory. During second quarter 2011, acetone was not detected in either sample; however, it was noted that the trip blank accompanying the routine sample yielded acetone at a concentration of 26 µg/L. Similarly, during third quarter 2011, acetone was not detected in either sample; however, it was noted that the trip blank accompanying the routine sample yielded acetone at a concentration of 14 µg/L. During fourth quarter 2011, acetone was detected in the duplicate sample at a concentration of 12 µg/L, but not detected in the routine sample. DOE/LLNL will continue to collect quarterly duplicate samples for acetone analysis from well EP6-09 over the next year to evaluate the possible occurrence of acetone in Pit 6 ground water. An evaluation of acetone detections will be presented in the upcoming Five-Year Review Report for Pit 6 (scheduled for September 2012). No cleanup standards for acetone were selected in the Site 300 ROD, there is no State or Federal MCL for acetone, and the concentrations detected are well below the taste and odor threshold for acetone of 300,000 µg/L.

#### *2.3.2.1.2. Tritium Concentrations and Distribution*

Tritium was detected above the 100 picoCuries per liter (pCi/L) background activity in samples from several wells completed in the Qt-Tnbs$_1$ HSU both north of and within the fault zone. Tritium activities have decreased from a historic maximum of 3,420 pCi/L (well BC6-13, 2000) to a 2011 maximum concentration of 403 pCi/L (well K6-18, January). Tritium has never been detected in Pit 6 Landfill ground water at activities exceeding the 20,000 pCi/L MCL cleanup standard.

During 2011, tritium activities were detected in ground water samples from guard well W-PIT6-1819 ranging from 116 pCi/L (January) to 270 pCi/L (July). Prior to 2011, tritium activities in well W-PIT6-1819 ranged from <100 pCi/L to 295 pCi/L. This well is used to define the downgradient extent of tritium in ground water with activities above the 100 pCi/L background level. It is located approximately 100 ft west of the Site 300 boundary within the Carnegie SVRA residence area and approximately 200 ft west of the CARNRW1 and CARNRW2 water supply wells.

Tritium activities in ground water sampled from the four CARNRW offsite wells during 2011 were below 100 pCi/L in all monthly ground water samples. Based on these analyses and the analytical results from other wells, the tritium plume appears to be relatively stable to declining in extent.

#### *2.3.2.1.3. Perchlorate Concentrations and Distribution*

During 2011, perchlorate was not detected at or above the 4 µg/L reporting limit in any Pit 6 Landfill OU ground water samples, including samples collected from guard wells and the CARNRW water supply wells. Perchlorate concentrations in ground water have steadily decreased from a historic maximum concentration of 65.2 µg/L (well K6-19, 1998) to below the 4 µg/L reporting limit in all wells.

#### *2.3.2.1.4. Nitrate Concentrations and Distribution*

During 2011, nitrate was detected in samples collected from wells completed within the $Qt\text{-}Tnbs_1$ HSU, within and north of the fault zone. Nitrate was detected in ground water above the 45 mg/L MCL cleanup standard in two Pit 6 Landfill OU wells (K6-23 and K6-24). During 2011, well K6-23 contained nitrate concentrations of 130 mg/L (January) and 150 mg/L (July). Well K6-23 consistently yields ground water nitrate concentrations in excess of the nitrate MCL cleanup standard and is located in close proximity to the Building 899 septic system, which may be a potential source of the nitrate at this location. In January 2011, 62 mg/L of nitrate was detected in ground water from well K6-24; because this well has historically yielded nitrate concentrations less than 45 mg/L, it was resampled in April 2011, with nitrate detected at 63 mg/L. Well K6-24 could not be sampled for nitrate during second semester 2011 due to dry conditions. The source of the high nitrate concentrations in the vicinity of well K6-24 is currently unknown. Nitrate will continue to be closely monitored in this well.

Nitrate was not detected above the 0.5 mg/L reporting limit in any of the monthly ground water samples collected during 2011 from water-supply well CARNRW1.

#### *2.3.2.1.5. Status of Uranium Statistical Limit Exceedence at Well EP6-08*

When sufficient ground water is available, samples from the six detection monitor wells at Pit 6 (EP6-06, EP6-08, EP6-09, K6-01S, K6-19, and K6-36) are collected and analyzed quarterly for total uranium by alpha spectrometry as part of the detection monitoring performed by the LLNL Water Guidance and Monitoring Group (WGMG). The resulting data are compared to Statistical Limits for each respective well. The Statistical Limits are calculated based on a statistical analysis of the historic uranium data for each well and are meant to define evidence of a potential release of the chemical from the landfill. These data and the corresponding comparison to the Statistical Limits are documented in the quarterly Pit 6 Post-Closure Monitoring Reports.

During January 2008, total uranium in a ground water sample from well EP6-08 exceeded its 1.5 pCi/L Statistical Limit with an initial activity of 2.8 pCi/L. As required by regulation, a 7-day letter indicating Statistically Significant Evidence of Release from the landfill was submitted to the RWQCB (Jackson, 2008) and the responsibility for determining if an actual release of uranium from Pit 6 had occurred was transferred to CERCLA investigations (Blake and Taffet, 2008a). Well EP6-08 was re-sampled twice later in January 2008 revealing uranium activities of 2.1 and 2.6 pCi/L. In April 2008, samples collected from well EP6-08 were analyzed for uranium by mass and alpha spectrometry. The mass spectrometry sample yielded a uranium-235/uranium-238 ($^{235}U/^{238}U$) atom ratio indicative of natural uranium (0.0072) and a total activity of 3 pCi/L (Blake and Taffet, 2008b). The alpha spectrometry sample yielded 2.2 pCi/L uranium. Although continued analysis of uranium samples was planned for well EP6-08, the well went dry after the April 2008 sampling episode and subsequent sampling has not been possible. LLNL will continue to attempt to collect samples from well EP6-08 every quarter. When sufficient water becomes available due to rising ground water levels, additional ground water samples will be collected for uranium analysis.

At present, the water table north of the fault zone has declined so that several monitor wells are dry or cannot yield sufficient water for sampling. When sufficient water has been available, samples from the other five monitor wells at Pit 6 have continued to yield total uranium activities below their respective Statistical Limit for total uranium. During 2011, sufficient water to collect ground water samples for alpha spectrometric analysis of uranium was available from four detection monitor wells, EP6-06, EP6-09, K6-01S, and K6-19, yielding maximum total uranium activities of 0.61, 3.0, 4.7, and 3.4 pCi/L, respectively. All these uranium activities are below the Statistical Limits for each respective well.

Although total uranium activities in samples from well EP6-08 were increasing slightly in the months leading up to the well going dry, all historic uranium data collected in the Pit 6 area are well below the 20 pCi/L uranium MCL cleanup standard, have a $^{235}U/^{238}U$ atom ratio indicative of natural uranium (for all mass spectrometric analyses), and are well within the range of natural background levels for uranium. Therefore, these uranium activities do not indicate a release of uranium from the landfill. Once water levels rise, samples for uranium analysis will be collected from all of the performance monitor wells at Pit 6 to supplement the 2008-present monitoring data.

#### *2.3.2.2. Pit 6 Landfill OU Remediation Optimization Evaluation*

The remedy for tritium and VOCs in ground water at the Pit 6 Landfill is Monitored Natural Attenuation (MNA). Ground water levels and contaminants are monitored on a regular basis to: (1) evaluate the efficacy of the natural attenuation remedy in reducing contaminant concentrations, and (2) detect any new chemical releases from the landfill. In general, the primary ground water COCs at the Pit 6 Landfill OU exhibit stable to decreasing trends and ground water levels beneath the landfill remain well below the buried waste. Ground water has declined beneath two key wells north of the fault (EP6-08 and K6-24). Two new wells are planned for 2012. Tritium activities in ground water continue to decrease toward background levels and remain far below the 20,000 pCi/L MCL cleanup standard. The maximum tritium activity detected in Pit 6 wells in 2011 was 403 pCi/L; the duplicate sample tritium activity was 186 pCi/L. TCE concentrations in ground water remain above the 5 µg/L MCL cleanup standard in samples from only one well (9.3 µg/L, EP6-09). The concentrations of other VOCs are below their cleanup standards in all Pit 6 Landfill ground water monitor wells; and only cis-1,2-DCE is detected above the 0.5 µg/L reporting limit in a single well. The concentrations and extent of VOCs in ground water are declining from the historic maximum of 250 µg/L.

There has been a decline in perchlorate concentrations in Pit 6 area ground water from a maximum of 65.2 µg/L, measured in 1998. During 2011, perchlorate was not detected in ground water above the reporting limit (4 µg/L) in samples from Pit 6 wells. Nitrate continues to be detected above the 45 mg/L MCL cleanup standard in well K6-23. During 2011, nitrate was also detected for the first time above the 45 mg/L MCL cleanup standard in the sample from well K6-24. Nitrate concentrations are within the range of background levels in all other Pit 6 wells.

#### *2.3.2.3. Pit 6 Landfill OU Performance Issues*

Low ground water levels north of the fault have impacted the monitoring component of the cleanup remedy for the Pit 6 Landfill OU during this reporting period. The installation of two new $Qt\text{-}Tnbs_1$ HSU ground water monitor wells, located north of the fault, are planned for 2012. All scheduled samples were collected from guard well W-PIT6-1819 and water-supply wells CARNRW1 and

CARNRW2. Based on these results, the remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

## 2.4. High Explosives Process Area (HEPA) OU 4

The HEPA has been used since the 1950s for the chemical formulation, mechanical pressing, and machining of high explosives (HE) compounds into shaped detonation charges. Surface spills from 1958 to 1986 resulted in the release of contaminants at the former Building 815 steam plant. Subsurface contamination is also attributed to HE waste water discharges into former unlined rinse water lagoons. Another minor source of contamination in ground water resulted from leaking contaminated waste stored at the former Building 829 Waste Accumulation Area (WAA) located near Building 829.

Six GWTSs operate in the HEPA: Building 815-Source (815-SRC), Building 815-Proximal (815-PRX), Building 815-Distal Site Boundary (815-DSB), Building 817-Source (817-SRC), Building 817-Proximal (817-PRX), and Building 829-Source (829-SRC). A map of the HEPA OU showing the locations of monitor and extraction wells and treatment facilities is presented on Figure 2.4-1.

The 815-SRC GWTS began operation in September 2000 removing VOCs (primarily TCE), HE compounds (RDX and High Melting Explosive [HMX]), and perchlorate from ground water. Initially, the system extracted from one extraction well, W-815-02 and consisted of aqueous-phase GAC, an ion-exchange system, and an anaerobic bioreactor for nitrate destruction. The treated effluent was discharged to a misting system. The anaerobic bioreactor was decommissioned in 2003. In 2005, the wellfield was expanded to include extraction well W-815-04, with a current combined flow rate of approximately 1.2 gpm. The current GWTS configuration includes a Cuno filter to remove particulates, two ion-exchange resin columns connected in series for perchlorate removal, and three aqueous-phase GAC canisters (also connected in series) for VOC and HE compound removal. In 2005, the discharge method of misting was replaced by injection of the treated effluent into well W-815-1918 for *in situ* denitrification in the $Tnbs_2$ HSU.

The 815-PRX GWTS began operation in October 2002 removing TCE and perchlorate from ground water. Ground water is extracted from wells W-818-08 and W-818-09 at a current combined flow rate of approximately 2.25 gpm. The current GWTS configuration includes a Cuno filter to remove particulates, two ion-exchange resin columns connected in series for perchlorate removal, and three aqueous-phase GAC canisters (also connected in series) for TCE removal. In 2005, the discharge method of misting was replaced by injection of the treated effluent into well W-815-2134 where an *in situ* natural denitrification process reduces the nitrate to nitrogen in the $Tnbs_2$ HSU.

The 815-DSB GWTS began operation in September 1999 removing low concentrations (less than 10 µg/L) of TCE from ground water extracted near the Site 300 boundary. Ground water is currently extracted from wells W-35C-04 and W-6ER at a combined flow rate of approximately 3 to 4 gpm. The GWTS originally operated intermittently on solar-power until site power was installed in 2005 when 24-hour operations began. The current GWTS configuration includes a Cuno filter to remove particulates and three aqueous-phase GAC canisters connected in series for TCE removal. The treated effluent is discharged to an infiltration trench.

The 817-SRC GWTS began operation in September 2003 removing HE compounds (RDX and HMX) and perchlorate from ground water. Well W-817-01 extracts ground water from a very low yield portion of the $Tnbs_2$ aquifer. It pumps ground water intermittently using solar power at current flow rates ranging from 40 to 160 gallons per month. The current GWTS configuration includes a Cuno filter to remove particulates, two ion-exchange resin columns connected in series for perchlorate removal, and three aqueous-phase GAC canisters (also connected in series) for HE compound removal.

Treated ground water is injected into upgradient injection well W-817-06A where an *in situ* natural denitrification process reduces the nitrate to nitrogen in the $Tnbs_2$ HSU.

The 817-PRX GWTS began operation in September 2005 removing VOCs, RDX, and perchlorate from ground water. Initially, ground water was extracted from wells W-817-03 and W-817-04 at a combined flow rate of approximately 1.0 gpm, although the vast majority of ground water was extracted from well W-817-03. In 2007, the extraction wellfield was expanded to include extraction well, W-817-2318. Due to the low yield from ground water extraction well W-817-04, extraction from this well was discontinued in December 2007. Ground water is currently extracted at a combined flow rate of approximately 2.0 gpm. The current GWTS configuration includes a Cuno filter to remove particulates, two aqueous-phase GAC canisters connected in series for TCE and RDX removal, and three ion-exchange resin columns (also connected in series) for perchlorate removal. A third aqueous-phase GAC canister completes the treatment chain, and is placed in this position to remove any residual organic compounds that may be emitted from new ion-exchange resin. Treated ground water containing nitrate is injected into upgradient injection wells W-817-2109 and W-817-02 that were added in 2007. The treated effluent is split between the two injection wells where an *in situ* denitrification process reduces the nitrate to nitrogen in the $Tnbs_2$ HSU.

The 829-SRC GWTS began operation in August 2005 removing VOCs, nitrate, and perchlorate from ground water. The GWTS configuration included two ion-exchange columns containing ion-exchange resin connected in series for perchlorate removal, three aqueous phase GAC canisters (also connected in series) for VOC removal, and a biotreatment unit to treat nitrate. However, the biotreatment unit was not effectively removing nitrate. An Explanation of Significant Difference (ESD) (Ferry et al., 2010) was submitted to the regulatory agencies in 2010. The ESD documented the decision to use ion-exchange treatment media to remove nitrate from ground water, rather than the existing biotreatment unit. Modifications to 829-SRC were initiated in 2010 and were completed June 2011. Solar power continues to be used to extract ground water from well W-829-06 at a flow rate of approximately 1 to 10 gallons per day (gpd). The current configuration includes two ion-exchange resin columns connected in series for perchlorate and nitrate removal and three aqueous phase GAC canisters (also connected in series) for VOC removal. Treated effluent is injected into upgradient well W-829-08.

### 2.4.1. HEPA OU Ground Water Extraction and Treatment System Operations and Monitoring

This section is organized into four subsections: facility performance assessment; operations and maintenance issues; compliance summary; and sampling plan evaluation and modifications.

#### *2.4.1.1. HEPA OU Facility Performance Assessment*

The monthly ground water discharge volumes, extraction flow rates, and operational hours in the second semester of 2011 are summarized in Tables 2.4-1 through 2.4-6. The total volume of ground water extracted and treated and the total contaminant mass removed during 2011 is presented in Table Summ-1. The total volume of ground water treated and discharged and the total contaminant mass removed are summarized in Table Summ-2.

Analytical results for influent and effluent samples are presented in Tables 2.4-7 through 2.4-9. The pH measurement results are presented in Appendix A.

#### *2.4.1.2. HEPA OU Operations and Maintenance Issues*

The following maintenance activities and operational issues occurred at the 815-SRC, 815-PRX, 815-DSB, 817-SRC, 817-PRX, and 829-SRC GWTSs during the reporting period:

815-SRC GWTS

- The GWTS shut down on July 11 due to interlock problems. A white substance was clogging the filters and resin columns. The substance was determined to be aluminum oxide from the filter housing corroding. The filters were replaced and the aluminum filter housing was replaced with a stainless steel filter housing. The GWTS was restarted on July 20.
- The transducer in extraction well W-815-02 failed, shutting down extraction from this well on September 19. The transducer was replaced and extraction was restarted on September 20.
- The GWTS shut down December 18 due to a site power outage and was restarted on December 19.
- Interlock checks were performed at the Building 815-Source facility on October 24.

815-PRX GWTS

- The GWTS was found offline on September 6 and restarted. No issues could be identified.
- An interlock check was performed on November 8.
- The GWTS was secured on November 28 for the remainder of the reporting period to protect against damage caused by freezing temperatures.

815-DSB GWTS

- Construction of the GWTS modifications is complete (see Section 2.4.1.5). The GWTS was offline from August 16 until the Testing and Verification phase began on October 18. The GWTS began full-time (24/7) operation on November 8.
- The GWTS went down temporarily on November 8 due to a site power outage.
- The GWTS was secured over the weekend of December 3 and 4 due to the freezing temperature forecast.
- The GWTS shut down December 18 due to a site-wide power outage. The system was restarted December 19, but shut down due to an interlock issue. The system was restarted December 20, however, due to the interlock failure the system was shut down and secured for the remainder of the reporting period.

817-SRC GWTS

- The GWTS was shut down on September 19 due to rodent damage to wiring and a failing battery. The wiring and batteries were replaced and the facility was restarted on September 20.
- An interlock check was performed on November 8.
- The GWTS was secured on November 28 for the remainder of the reporting period to protect against damage caused by freezing temperatures.

817-PRX GWTS

- Three new GAC canisters and two new ion-exchange resin columns were installed on July 6.
- The GWTS was restarted on July 12 after reinjection well piping upgrades were completed (see Section 2.4.1.5), extracting from well W-817-2318 after new transducers were installed.
- The GWTS was shut down due to access issues caused by programmatic work on July 19 and was restarted on July 25.

- The GWTS shut down December 18 due to a site power outage and was restarted on December 19.

<u>829-SRC GWTS</u>

- The GWTS was offline for the majority of the reporting period due to issues with the ion-exchange resin (see Section 2.4.1.3).

#### *2.4.1.3. HEPA OU Compliance Summary*

The 815-SRC, 815-PRX, 815-DSB, 817-SRC, and 817-PRX GWTSs operated in compliance with the RWQCB Substantive Requirements for Wastewater Discharge.

The 829-SRC GWTS was restarted on June 20, 2011. This GWTS had been offline since May 2010, initially due to equipment problems, followed by an engineering evaluation, obtaining permission to change the prescribed nitrate treatment method, and performing the necessary system reconfigurations. Due to the GWTS being offline for an extended period of time, and with the installation of new treatment media, the start-up plan specified that the treated effluent water be initially collected in a bubble tank (not discharged into the injection well) until approximately 3 pore volumes (~150 gallons) had been purged through the system, and treatment system performance had been verified. On July 12, 2011, samples were collected from the GWTS after approximately half the planned purging having taken place. Methylene chloride was detected in the effluent sample at a concentration of 1.4 µg/L. No methylene chloride was detected in the influent sample, nor had it ever been detected at this GWTS or in this area. Since this compound is often associated with analytical laboratory contamination, a second effluent sample was collected on July 27, 2011. No methylene chloride was detected in this sample above the detection limit of 0.5 µg/L. Upon reaching the desired water volume purged through the system, samples for all COCs were collected from the water collected in the bubble tank. No COCs, including any VOCs, were detected in the samples collected. Therefore, due to no VOC detections in the second effluent sample, or the sample collected from the bubble tank, the planned system restart was initiated on August 15, 2011, with the treated water now being discharged directly into the injection well W-829-08.

The first official restart compliance monitoring was conducted on the day of restart. The results from these samples were obtained on August 16, 2011 and methylene chloride was again detected in the effluent sample at a concentration of 2.2 µg/L, and the system was immediately shut down. Due to the extremely low flow rates at this system (~10 gallons/day), it is estimated that approximately 16 gallons of water was discharged into the injection well by the time the system was shut down. Following this detection, the effluent was again connected to a bubble tank, the system was restarted, and additional samples were collected from intermediate ports at the facility to evaluate possible sources of the methylene chloride. In addition to a detection of methylene chloride at 1.5 µg/L, 1,2-DCA and chloromethane were detected at 879 and 4.3 µg/L, respectively, in samples collected between the ion-exchange resin and the GAC. None of these compounds were detected is samples collected between the 1$^{st}$ and 2$^{nd}$ ion-exchange columns, indicating that the ion-exchange resin in the 2$^{nd}$ column was the possible source of these compounds. In order to test whether the resin was the source of the contamination, a sample was collected from unused resin in storage, which was the source of the resin placed in the 2$^{nd}$ column, and a soak/leachate test was conducted. It was found that the leachate from the resin contained over 1,000 µg/L of 1,2-DCA and 1.2 µg/L of chloromethane. A second test was conducted with similar results. No methylene chloride was detected in either test, but due to the dilution of the samples required because of the high 1,2-DCA concentrations, there was an elevated reporting limit of 5.0 µg/L for several compounds. The resin is believed to be the source of the methylene chloride, and because of the presence of 1,2-DCA in the unused resin in storage, ion-exchange change-out was not performed. Although the detections of methylene chloride did not exceed the maximum daily discharge limit, it did exceed the monthly median discharge limit. The manufacturer of the resin was informed of this problem and performed testing, which resulted in confirmation of LLNL's results. LLNL is currently trying to obtain ion-exchange resin free of VOC contamination. The 829-SRC GWTS remained offline for the remainder of the second semester of 2011 while the resin issue was worked.

#### *2.4.1.4. HEPA OU Facility Sampling Plan Evaluation and Modifications*

The HEPA OU facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.4-10. The only modifications made to the plan included the following:

1) No compliance monitoring was conducted at the 815-PRX GWTS in December since it was shut down for freeze protection.
2) Additional monitoring was conducted at the 815-DSB GWTS in November as part of the re-start monitoring conducted due to the system modifications and installation of new treatment media.
3) A second effluent perchlorate sample was collected in July due to matrix interference in the 1$^{st}$ sample collected, which resulted in the reporting limit exceeding the discharge limit.
4) No compliance monitoring was conducted at the 817-SRC GWTS in December since it was shut down for freeze protection.
5) No compliance monitoring was conducted at 829-SRC GWTS from September through December due to shutdown from the resin contamination issue.

#### *2.4.1.5. HEPA OU Treatment Facility and Extraction Wellfield Modifications*

As mention above, the 815-DSB GWTS underwent major modifications during this reporting period, which included the replacement of practically all components of the system (control system, pipelines, electronics, treatment media vessels and media, etc.). These modifications were made to: (1) replace aging system components, (2) increase the facility's treatment capacity to accommodate additional extraction wells, and (3) improve the facility's operational efficiency. As discussed previously, an ESD for the removal of the biotreatment unit was submitted to and approved by the regulatory agencies in 2010. DOE requested and was granted permission to remove the biotreatment unit by the regulatory agencies at the August 30 Remedial Project Managers (RPM) meeting prior to the finalization of the ESD. The 829-SRC reconfiguration, including minor equipment upgrades, was initiated in 2010 and completed in June 2011. No substantial modifications were made to any of the other HEPA GWTSs.

### 2.4.2. HEPA OU Ground Water and Surface Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.4-11. This table also explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; thirty-seven required analyses were not performed because there was insufficient water in the wells to collect the samples, four required analyses were not performed due to access restrictions, one required analysis was not performed because the artesian well not flowing at the time of the sampling event, five required analyses were not performed due to unsafe conditions at the well, and forty-two required analyses were not performed due to inoperable pumps or treatment unit.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

Ground water elevations for the Tpsg-Tps and $Tnsc_{1b}$ HSUs are posted on Figures 2.4-2 and 2.4-11, respectively. The ground water elevation contour map including hydraulic capture zones for the $Tnbs_2$ HSU is presented on Figure 2.4-6.

### 2.4.3. HEPA OU Remediation Progress Analysis

This section is organized into four subsections: mass removal; contaminant concentrations and distribution; remediation optimization evaluation; and performance issues.

#### *2.4.3.1. HEPA OU Mass Removal*

The monthly ground water mass removal estimates for the second semester of 2011 are summarized in Tables 2.4-12 through 2.4-17. The total mass removed during 2011 and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

#### *2.4.3.2. HEPA OU Contaminant Concentrations and Distribution*

At the HEPA OU, VOCs (mainly TCE, but also including 1,1-DCE, cis-1,2-DCE, and chloroform) are the primary COCs detected in ground water; RDX, HMX, 4-amino-2,6-dinitrotoluene (4-ADNT), perchlorate, and nitrate are secondary COCs. Most of the HEPA ground water contamination occurs in the $Tnbs_2$ HSU. Some COCs (TCE, RDX, perchlorate, and nitrate) have also been detected in the perched ground water of the Tpsg-Tps HSU in the vicinity of Buildings 815 and 817. Minor concentrations of VOCs, perchlorate and nitrate are also present in perched ground water located in the $Tnsc_{1b}$ HSU beneath the former Building 829 Waste Accumulation Area (WAA). The WAA is located in the northwest portion of HEPA. No contamination has been detected in the Upper and Lower $Tnbs_1$ HSUs in the HEPA OU. Figure 2.4-1 shows the location of existing and new wells in the HEPA OU.

Total VOC concentration data are contoured for the $Tnbs_2$ HSU (Figure 2.4-7) and posted for Tpsg-Tps and $Tnsc_{1b}$ HSUs on Figures 2.4-3 and 2.4-11, respectively. Isoconcentration contour and posted concentration maps for the secondary COCs are presented on: (1) Figures 2.4-4 and 2.4-5 for the Tpsg-Tps HSU, (2) Figures 2.4-8 through 2.4-10 for the $Tnbs_2$ HSU, and (3) Figure 2.4-11 for the $Tnsc_{1b}$ HSU located in the Building 829 former burn pit area.

##### *2.4.3.2.1. VOC Concentrations and Distribution*

VOCs (mainly TCE) have been detected in the sands and gravels of the Tpsg-Tps HSU near the 815-SRC, 815-PRX and 817-PRX treatment facilities. Overall, these VOC concentrations have been decreasing over time. During 2011, the maximum VOC concentration detected in samples from Tpsg-Tps wells was 54 µg/L in 817-PRX extraction well W-817-2318 (July). Limited recharge has led to insufficient water for sampling in some wells screened in the Tps-Tpsg HSU. VOCs have remained below the 0.5 µg/L reporting limit in Tpsg-Tps well W-35C-05, located near the site boundary.

Of all the wells sampled during 2011 in the HE Process Area, the VOCs detected in most wells were comprised entirely of TCE, except for twelve wells (W-809-01, W-814-01, W-814-2138, W-815-01, W-815-02, W-815-03, W-815-04, W-815-07, W-815-1918, W-818-11, W-6CI and W-827-02). 1,1-DCE was detected at concentrations below its 6 µg/L MCL cleanup standard in wells W-809-01, W-815-02, W-815-03, W-815-04, W-815-07, and W-818-11. These wells are all located in the vicinity of the Building 815 source area. Chloroform was detected at concentrations of 2.1 µg/L or less in wells W-815-1918, W-815-01, W-815-03, W-815-07, W-809-01, W-814-01, W-818-11, and W-827-02. These concentrations are considerably below the 80 µg/L MCL cleanup standard. Methylene chloride, chloroethane, bromodichloromethane and 1,2-DCE were occasionally detected at low concentrations (<1.2 µg/L) in some HEPA wells. Samples from two wells located near the former Building 814 lagoon (W-814-01 and W-814-2318) contained 1,2-DCA at concentrations of less than 0.8 µg/L; slightly above the 0.5 µg/L MCL cleanup standard. Cis-1,2-DCE was detected in samples from W-814-01 and W-829-06; although their concentrations of 1.2 µg/L or less were well below the MCL cleanup standard. During 2011, carbon tetrachloride was also detected on three occasions in well W-814-01 at concentrations of 0.7 µg/L; slightly above the 0.5 µg/L State MCL but below the 5 µg/L Federal MCL. Vinyl chloride was detected in ground water on one occasion in monitor well W-6CI at a concentration of 0.7 µg/L (September); slightly above the 0.5 µg/L State MCL but below the 2 µg/L Federal MCL.

In the $Tnbs_2$ HSU, the VOC plume is detached and has migrated from its source near Building 815. As a result, the highest VOC concentrations are currently found downgradient of Building 815 in the 815-PRX extraction wellfield. VOC concentrations in $Tnbs_2$ HSU ground water have decreased from a historic maximum concentration of 110 µg/L in extraction well W-818-08 (May 1992) to a 2011 maximum VOC concentration of 44 µg/L in the same well (October).

VOCs continue to be detected in ground water samples collected from $Tnbs_2$ HSU extraction well W-830-2216, located at the southern end of Building 832 Canyon. Contamination detected in this well may originate from sources in both the Building 832 Canyon OU and in the HEPA OU. In June 2007, monitor well W-830-2216 was connected to the 830-DISS treatment facility as an extraction well. After pumping was initiated, VOC concentrations in this well decreased from a historic maximum concentration of 20 µg/L in May 2007 to a 2011 maximum concentration of 6.7 µg/L (January). VOC concentrations in nearby monitor well W-830-13 have also decreased from a historic maximum of 26 µg/L in September 2002 to a 2011 maximum concentration of 5.7 µg/L (August).

During 2011, low VOC concentrations (<3 µg/L) were detected in samples from $Tnbs_2$ guard wells W-815-2110 and W-815-2111. These guard wells are located near the southern site boundary. VOCs were not detected in samples taken from any other onsite or offsite HEPA $Tnbs_2$ HSU guard wells. During 2011, VOC concentrations were below the 0.5 µg/L reporting limit in 31 routine and duplicate monthly samples collected from offsite water-supply well GALLO1. Duplicate GALLO1 samples are collected for quality assurance/quality control purposes. Both the routine and duplicate samples were collected on the same date and were sent to different laboratories for analysis.

At the 829-SRC treatment facility, VOC concentrations in ground water collected from extraction well W-829-06 ($Tnsc_{1b}$ HSU) have decreased from a historic maximum of 1,013 µg/L (August 1993) to a 2011 maximum VOC concentration of 17 µg/L (July). The VOCs detected in well W-829-06 in July 2011 were comprised entirely of TCE. TCE concentrations detected in ground water in extraction well W-829-06 during 2011 were above the 5 µg/L MCL cleanup standard. In March 2011, cis-1,2-DCE was observed in this well at a low concentration (1.2 µg/L). Cis-1,2-DCE concentrations detected in ground water in extraction well W-829-06 during 2011 were below the 6 µg/L MCL cleanup standard. VOCs have never been detected in ground water from nearby monitor well W-829-1940 or in nearby monitor wells screened in the Lower $Tnbs_1$ HSU.

#### *2.4.3.2.2. HE Compound Concentrations and Distribution*

During 2011, RDX was not detected at concentrations above the 1 µg/L reporting limit in any ground water samples collected from the Tpsg-Tps HSU. Because this HSU is only periodically saturated, monitor wells screened in this HSU are frequently dry. The historic maximum RDX concentration detected in ground water collected from the Tpsg-Tps HSU was 350 µg/L (March 1988) from well W-815-01; this well has been dry since 1999.

The maximum historic RDX concentration detected in $Tnbs_2$ HSU groundwater was 204 µg/L measured in 1992 in 817-SRC extraction well W-817-01. Since that time, decreasing maximum RDX concentrations have generally been observed in $Tnbs_2$ HSU near both the Building 815 and 817 source areas, with a maximum 2011 RDX concentration of 163 µg/L detected in August in monitor well W-809-03. RDX concentrations in monitor well W-809-03, located slightly north and upgradient of injection well W-815-1918, have been increasing, possibly due to the mobilization of RDX in the vadose zone by injection of treated ground water.

To the southwest, the extent of the RDX plume has remained relatively stable and any future downgradient migration should be mitigated as pumping from existing extraction well W-817-03 has recently been increased (see Figure 2.4-1). HE compounds are relatively immobile and due to remediation efforts, the extent of RDX contamination at the leading edge of the $Tnbs_2$ HSU plume (east of 817-PRX) has also remained relatively stable. During 2011, RDX was not detected at concentrations above the 1 µg/L reporting limit in any samples collected from $Tnbs_2$ HSU guard wells.

In March 2011, RDX was detected for the first time at a low concentration (2 µg/L) in 815-PRX extraction well W-818-09. RDX was not detected in subsequent samples collected from extraction well W-818-09 during 2011 at concentrations above the reporting limit of 2 µg/L. No HE compounds were found in nearby extraction well W-818-08. In the future, monitoring for HE compounds will continue in these extraction wells and the frequency of sampling may be increased if detections in ground water continue.

During 2011, RDX was not detected at concentrations above the 1 µg/L reporting limit in any ground water samples collected from wells located near the 829-SRC treatment facility in the $Tnsc_{1b}$ HSU.

HMX detections in the $Tnbs_2$ HSU have occurred near the 815-SRC and 817-SRC treatment facilities. HMX concentrations in $Tnbs_2$ HSU ground water have decreased from a historic maximum of 57 µg/L in October 1995 (well W-817-01) to a maximum of 21 µg/L in July 2011 (well W-817-01). HMX was also detected during 2011 at lower concentrations in several ground water samples collected from 815-SRC wells, including extraction well W-815-02.

During 2011, nitrobenzene was not detected above the 2 µg/L reporting limit in any HEPA ground water samples. Previously, nitrobenzene was detected in the 817-SRC extraction well W-817-01, at a concentration of 6.2 µg/L (April 2008) and in one sample 4.1 µg/L collected from the influent to the 815-SRC GWTS. These samples were the first time nitrobenzene had been detected in ground water in the HEPA. Additional samples taken from extraction well W-817-01 and from the 815-SRC influent have all been below the reporting limit for nitrobenzene. During 2011, 1,3,5-trinitrobenzene was detected in ground water at a concentration of 7.4 µg/L in monitor well W-809-03. HMX was also detected in ground water in this monitor well.

During 2011, 4-amino-2,6-dinitrotoluene (4-ADNT) was detected above its 2 µg/L reporting limit on three occasions: twice in W-809-03 (9.3 µg/L and 13 µg/L) and once in W-818-11 (2.4 µg/L). The highest historic concentration of 4-ADNT detected in HEPA was 24 µg/L, measured in extraction well W-817-01 in September 1997. 4-ADNT was also detected at a concentration of 7.5 µg/L in an influent sample to the 815-SRC GWTS in July 2008. No HE compounds other than RDX and HMX were detected in any HEPA treatment facility samples during 2011. In the HEPA, non-RDX compounds such as 4-ADNT have only been detected in wells where RDX is also present.

#### *2.4.3.2.3. Perchlorate Concentrations and Distribution*

During 2011, the maximum perchlorate concentration detected in Tpsg-Tps HSU ground water was 14 µg/L in 817-PRX extraction well W-817-2318 (April). The historic maximum perchlorate concentration detected in this well was 17 µg/L in March 2008.

In the $Tnbs_2$ HSU, perchlorate concentrations have decreased from a historic maximum of 50 µg/L (February 1998) in extraction well W-817-01 to a 2011 maximum concentration of 29 µg/L in the same well (May). Overall, perchlorate concentrations continue to decline and the southwestern plume front has been receding due to continued 817-PRX and 817-SRC operations. To the north, the $Tnbs_2$ HSU perchlorate plume has been declining based on concentration trends observed in nearby monitor well W-809-03 and in 815-SRC extraction wells W-815-02 and W-815-04. Previously, an increasing trend was observed in this area as a result of the mobilization of perchlorate by injection of treated ground water into nearby 815-SRC injection well W-815-1918. Perchlorate was not detected in any of the $Tnbs_2$ HSU guard wells during 2011.

During 2011, perchlorate concentrations in $Tnsc_{1b}$ HSU extraction well W-829-06 have decreased from a historic maximum of 29 µg/L (December 2000) to a concentration of 7.4 µg/L (July). Perchlorate was not detected above its reporting limit in monitor well W-829-1940.

#### *2.4.3.2.4. Nitrate Concentrations and Distribution*

During 2011, the maximum nitrate concentration detected in ground water from Tpsg-Tps HSU was 550 mg/L (well W-6CS, February). Because there are no known septic systems or other Site 300 operations representing potential nitrate sources near this well, these elevated nitrate levels are probably related to a pre-Site 300 sheep ranch that was discovered in a historic photo of the area. Ground water sampled from all other wells screened in this HSU had significantly lower nitrate concentrations. During 2011, the highest nitrate concentration found in other wells screened in this HSU was 160 mg/L (817-PRX extraction well W-817-2318, April).

During 2011, nitrate concentrations in ground water collected from the $Tnbs_2$ HSU ranged from <0.5 mg/L in the vicinity of the Site 300 boundary to a maximum of 100 mg/L (W-815-02 and W-815-04, February). Nitrate was not detected above the 45 mg/L MCL cleanup standard in ground water from any of the $Tnbs_2$ HSU guard wells sampled during this reporting period.

During 2011, the maximum nitrate concentration detected in a sample from the $Tnsc_{1b}$ HSU was 74 mg/L (extraction well W-829-06, July). The maximum nitrate concentration detected in monitor well W-829-1940 during 2011 was 24 mg/L (March).

Throughout the reporting period, nitrate concentrations measured in ground water in the HEPA OU continue to support the interpretation that nitrate is being degraded *in situ* by natural processes. Due to microbial denitrification, nitrate concentrations remain below the 45 mg/L MCL cleanup standard in all wells near the southern site boundary where ground water is present under confined conditions.

### *2.4.3.3. HEPA OU Remediation Optimization Evaluation*

Remediation at the HEPA OU is managed by balancing ground water extraction at the site boundary designed to capture the leading edge of the TCE plume with upgradient pumping in the source and proximal areas designed to target multiple, comingled plumes. Engineering evaluations and upgrades were conducted at the 829-SRC and 815-DSB treatment facilities during 2010 and 2011.

Contaminants in the Tpsg-Tps HSU, although limited in areal extent and concentration, include VOCs, perchlorate, high explosives compounds and nitrate. To remediate this HSU, efforts have been focused in the area with the highest concentrations located near 817-PRX extraction well W-817-2318. This extraction well removes ground water from the Tpsg-Tps HSU near Spring 5. Although remediation efforts are hampered by limited recharge, low ground water yield and dry conditions, concentrations of all COCs in the Tpsg-Tps HSU continue to decline.

In the $Tnbs_2$ HSU, extraction wells W-818-08 and W-818-09 capture the areas with the highest VOC concentrations. This extracted groundwater is treated at the 815-PRX treatment facility. During the early part of 2011, extraction flow rates were slightly increased at this facility. A larger zone of hydraulic capture is expected as a result.

The flow rate of the 817-PRX extraction well W-817-03 was increased by 1.5 gpm for a total treatment facility rate of 2 gpm and concentration trends will be observed over time. Extraction well flow rates at the 817-PRX facility are limited by the discharge capacity of the two injection wells: W-817-02 and W-87-2109. To maximize injection capacity, treated ground water is now injected under pressurized conditions into these two injection wells. Mass removal will be evaluated under these increased pumping conditions during the next 2 years to determine whether further modifications should be made to accommodate increased pumping at this facility. As described in previous CMRs, one new $Tnbs_2$ HSU well, W-817-2609, was installed during 2010 (Figure 2.4-1). This monitor well was initially planned to be an extraction well; however, due to low yields it will remain a monitor well for the foreseeable future.

Located near the 815-DSB treatment facility, extraction wells W-6ER and W-35C-04 capture VOCs along the southern site boundary at the leading edge of the plume. As described in previous CMRs, two new wells (W-815-2608 and W-815-2621) were installed during 2010 in this area. These wells are being evaluated for possible conversion to extraction wells to increase the areas of hydraulic capture and help to prevent contaminants from migrating offsite in the $Tnbs_2$ HSU.

Overall, the extent of the primary and secondary COC plumes in the HEPA did not change significantly during 2011, yet the VOC and RDX concentrations within the plumes continue to decline. HE compounds are relatively immobile and declining trends of these COCs are due to focused remediation efforts in the source and proximal areas of this OU. RDX concentrations continue to increase in monitor well W-809-03. This trend is probably due to the mobilization of RDX near 815-SRC injection well W-815-1918. RDX concentration trends in the 815-SRC extraction wells, W-815-02 and W-815-04, continue to decline.

Perchlorate concentrations in the $Tnbs_2$ HSU have decreased steadily since monitoring for this COC began in 1998. Historically, the 817-SRC (W-817-01) and 817-PRX (W-817-03 and W-817-04) extraction wells have had the highest perchlorate concentrations in the HEPA. Pumping from extraction well W-817-03 was increased during 2011 and the treated water is now injected under pressure into upgradient wells W-817-02 and W-817-2109. Perchlorate concentrations measured in ground water upgradient of the 815-SRC extraction wellfield and near monitor well W-809-03 remain stable; these areas are within hydraulic capture zones. Nitrate concentrations in the $Tnbs_2$ HSU near the Site 300 boundary continue to be at or near the reporting limit, demonstrating the continued effectiveness of monitored natural attenuation of nitrate in this area.

The 829-SRC GWTS is a small facility that extracts and treats perched ground water located beneath the WAA in the $Tnsc_{1b}$ HSU. In 2010, an ESD was submitted to regulatory agencies to request a change in the 829-SRC treatment facility technology. The ESD documents the decision to use ion-exchange treatment media to remove nitrate from ground water, rather than the existing biotreatment unit. Modifications to 829-SRC were completed in early 2011.

Throughout the reporting period, pumping from HEPA extraction wells has been effective in capturing COCs and preventing contaminated ground water from reaching the Site 300 southern boundary. During 2011, the total VOC mass removed from all HEPA treatment facilities was 169 g; the total nitrate mass removed was 791 kg; the total perchlorate mass removed was 99 g; the total RDX removed was 144 g. Nitrate re-injected into the $Tnbs_2$ HSU undergoes *in situ* biotransformation to benign nitrogen gas by anaerobic denitrifying bacteria. During 2011, no VOCs or other COCs were detected in offsite water supply well, GALLO1. Upgradient reinjection of treated ground water has also been important in flushing out contaminants in many portions of the HEPA OU. In the future, upgradient and downgradient pumping will continue to be balanced. Close monitoring of VOC concentrations in the southern site boundary area will also continue, especially near offsite water-supply well GALLO1.

#### *2.4.3.4. HEPA OU Remedy Performance Issues*

There were no new issues that affect the performance of the cleanup remedy for the HEPA OU during this reporting period. The remedy continues to be effective and protective of human health and the environment.

## 2.5. Building 850/Pit 7 Complex OU 5

High explosive experiments were conducted at the Building 850 Firing Table from the 1950s until 2008. While explosives tests were conducted at Building 850, the firing table was covered with gravel to absorb the shock. The Building 850 firing table was routinely rinsed down with water after each experiment to reduce dust. Infiltrating water mobilized chemicals from the contaminated gravel to the underlying bedrock and ground water, however this practice was discontinued in 2004. Until 1989, gravels from the firing table surface were periodically removed and disposed of in several pits in the northwest part of the site.

A Corrective Action Management Unit (CAMU) was constructed in the Building 850 area of OU 5 in 2009 as part of the Building 850 Removal Action. A total of 27,592 cubic yards of polychlorinated biphenyl-, dioxin-, and furan-contaminated soil were excavated from the Building 850 Firing Table area, mixed with Portland cement and water, and consolidated and compacted to form the CAMU. Additional information on the Building 850 Removal Action is presented in the Building 850 Action Memorandum (Dibley et al., 2008). Design information for the CAMU is presented in the construction subcontractor's 100% design submittal (SCS Engineers, 2009). The inspection and maintenance program for the CAMU program is described in Section 3. A map of the Building 850 area within OU 5 showing the locations of Building 850, the CAMU, and monitor wells are presented on Figure 2.5-1.

An *in situ* bioremediation treatability study for reduction of perchlorate in ground water immediately downgradient of Building 850 commenced in September 2011. A summary of the current status and preliminary results of the treatability study is presented in Section 2.5.2.2. Preliminary results indicate that the injection of ethyl lactate has resulted in bacterially-motivated reduction of perchlorate and nitrate in the treatment zone to concentrations below reporting limits. Uranium activities in ground water in the treatment zone have also declined as a result of reactions that promote uranium precipitation as a solid.

The Pit 7 Complex area within OU 5 consists of the Pit 3, 4, 5, and 7 Landfills. The Pit 7 Complex landfills were used to dispose of firing table debris and gravel. These pits were constructed by excavating topsoil and alluvial materials to an average depth of 15 to 20 ft (Taffet et al., 1989). The majority of the waste material in the pits came from the firing tables at Buildings 850 and 851, where aboveground detonations were conducted. The waste placed in the pits included wood, plastic, material and debris from tent structures, pea gravel, and exploded test assemblies, some of which contained tritium and depleted uranium.

When rainfall increased to above normal levels, such as during El Niño years, the pit waste and underlying bedrock were often inundated and residual contamination came into contact with shallow subsurface ground water. Ground water contaminants include tritium, uranium, perchlorate, nitrate, and VOCs.

In 1992, an engineered cap was constructed over the Pit 7 Landfill (referred to as the Pit 7 Cap) in compliance with Resource Conservation and Recovery Act (RCRA) requirements. The design included interceptor trenches and surface water drainage channels, a top vegetative layer to prevent erosion, a biotic barrier layer to minimize animal burrowing, and a clay layer of very low permeability to prevent infiltration of precipitation and shallow subsurface interflow that could result in leaching of contaminants. The Pit 7 cap also covers 100% of Pit 4 and approximately 25 to 30% of Pit 3. The original compacted native soil cover on most of Pit 3 and all of Pit 5 remains intact.

The Pit 7 Drainage Diversion System, completed in March 2008, was designed to prevent further releases of COCs from the pits and underlying bedrock to ground water. There are four components that comprise the drainage diversion system:

1. A subsurface drainage network on the western hillslope.
2. Upgraded riprap at the end of the existing north-flowing concrete channel for the Pit 7 Landfill cap.
3. A vegetated surface water diversion swale along the base of the eastern hill-slope, along the paved road (Route 4), including several culverts under Route 4 and dirt fire trails.
4. An upgraded surface water-settling basin at the south end of the existing south-flowing concrete channel for the Pit 7 Landfill cap.

Additional information on the Pit 7 cap and Drainage Diversion System design is presented in the Remedial Design Document for the Pit 7 Complex (Taffet et al., 2008). The detection monitoring, inspection, and maintenance program for the Pit 7 Complex Landfills and the inspection and maintenance program for the Drainage Diversion System are described in Section 3.

The Pit 7-Source (PIT7-SRC) GWTS began operation in May 2010. Three existing monitor wells, NC7-25, NC7-63, and NC7-64, were converted to extraction wells and three wells were drilled to serve as extraction wells (W-PIT7-2305, W-PIT7-2306, and W-PIT7-2307). The GWTS removes uranium, VOCs, nitrate, and perchlorate from ground water in wells within the Quaternary alluvium/Weathered bedrock (Qal/WBR) HSU (NC7-63, NC7-64, and W-PIT7-2306), $Tnbs_1/Tnbs_0$ bedrock HSU (NC7-25), and both HSUs (W-PIT7-2305 and W-PIT7-2307). Well NC7-25, screened in the $Tnbs_1/Tnbs_0$ HSU, will only be pumped when ground water levels in the overlying Qal/WBR HSU are sufficiently low to avoid pulling ground water containing depleted uranium and other contaminants in the Qal/WBR HSU into the $Tnbs_1/Tnbs_0$ HSU. These conditions are most likely to occur in late summer/early fall towards the end of the dry season. The GWTS extracts ground water at an approximate combined flow rate of 0.2 gpm. The current GWTS configuration includes three ion-exchange resin canisters for the removal of uranium followed by three ion-exchange resin canisters containing a nitrate-selective resin that is also effective in removing perchlorate. Ground water that has been treated to remove uranium, nitrate, and perchlorate is then piped through three aqueous-phase GAC canisters to remove VOCs. The treated water, which still contains tritium, is discharged to an infiltration trench.

A map of the Pit 7 Complex area within OU 5 showing the locations of the landfills, Drainage Diversion System, extraction and monitor wells, and the treatment system is presented on Figure 2.5-1.

The Building 850 area of OU 5 is discussed in Sections 2.5.1 and 2.5.2. The Pit 7 Complex area of OU 5 is discussed in Sections 2.5.3 through 2.5.5.

### 2.5.1. Building 850 Area of OU 5 Ground Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.5-1. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; fifty-five required analyses were not performed because there was insufficient water in the wells to collect the samples and twelve required analyses were not performed due to inoperable pumps.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

Ground water elevation contour maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs within the OU are presented on Figures 2.5-2 and 2.5-3, respectively.

### 2.5.2. Building 850 Area of OU 5 Remediation Progress Analysis

This section is organized into three subsections: analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

#### *2.5.2.1. Building 850 Area of OU 5 Contaminant Concentrations and Distribution*

In the Building 850 area of OU 5, tritium and perchlorate are the primary COCs detected in ground water; depleted uranium and nitrate are secondary COCs. These constituents have been identified within the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs.

The distribution of tritium in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs, based on data collected during the second semester 2011 is contoured on Figures 2.5-4 and 2.5-5, respectively. Concentrations of the uranium, nitrate, and perchlorate in Qal/WBR and $Tnbs_1/Tnbs_0$ ground water, based on data collected during the first semester 2011, are presented on Figures 2.5-6 through 2.5-11.

##### *2.5.2.1.1. Tritium Activities and Distribution*

The maximum tritium activities in ground water downgradient of Building 850 have decreased from a historic maximum of 566,000 pCi/L in 1985 (well NC7-28) to a maximum of 53,300 pCi/L during 2011 (well NC7-70, May). The highest tritium activities in ground water continue to occur directly downgradient of the Building 850 Firing Table. The extent of the 20,000 pCi/L MCL cleanup standard ground water tritium activity contour in both the Qal/WBR and $Tnbs_1/Tnbs_0$ bedrock HSUs has decreased slightly compared to 2009 and 2010. While tritium activities continue to decline in most portions of the Building 850 plume, ground water tritium activities in wells in the farthest downgradient portion of the plume near Pit 1 exhibit a slowly increasing trend. However, the overall extent of the 100 pCi/L tritium activity contours in both the Qal/WBR and $Tnbs_1/Tnbs_0$ bedrock HSUs are similar to those of 2010.

Wells W-PIT2-2301 and W-PIT2-2302, both screened in the Qal/WBR HSU and located in Elk Ravine downgradient of the Pit 2 Landfill, yielded tritium activities within background range (<100 pCi/L) in all samples collected in 2010. This was again the case during 2011 (May) when a sample was collected and analyzed from each well. During the second semester 2011, insufficient or no water was present in these wells, therefore no samples were collected for tritium analysis (Figure 2.5-4). Given the low activities of the Qal/WBR samples, tritium from Building 850 is apparently not present in this HSU in Elk Ravine. Overall, the extent of tritium in ground water with activities above the 20,000 pCi/L MCL cleanup standard continues to decrease, and the extent of ground water with tritium in excess of background is stable (similar to that of previous years.)

Two apparently erroneous tritium measurements occurred in 2011. The October sample from well NC2-12S, screened in the $Tnbs_1/Tnbs_0$ HSU in Elk Ravine, about 1,000 ft west of Pit 8, was reported to contain tritium below the 100 pCi/L reporting limit. The May sample contained 3,550 pCi/L which is equivalent to tritium activities observed at this well during the last few years. The October sample was re-analyzed, yielding a tritium activity of 2,410 pCi/L. Based on historic data and the re-analysis, the initial October activity below the reporting limit appears to be a laboratory error. The November sample from guard well W-PIT1-2225, screened in the $Tnbs_1/Tnbs_0$ HSU and located about 500 ft northwest of Pit 8, was reported to contain 2,750 pCi/L of tritium. The January, June, and July samples contained tritium below the 100 pCi/L reporting limit which is equivalent to tritium activities observed at this well during the last few years. The November sample was re-analyzed, yielding a tritium activity below the reporting limit. Based on historic data and the re-analysis, the initial November activity of 2,750 pCi/L appears to be a laboratory error.

#### *2.5.2.1.2. Uranium Concentrations and Distribution*

Total uranium activities in ground water were below the 20 pCi/L MCL cleanup standard in samples from wells at or downgradient of Building 850 during 2011. The 2011 maximum uranium activity in Building 850 ground water was 9.8 pCi/L in a sample from well NC7-28 (July). The uranium 235/uranium-238 atom ratio for this sample, as measured by mass spectrometry, indicates depleted uranium. This well is screened across the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs and is located directly downgradient of the Building 850 Firing Table. In 2011, a sample from $Tnbs_1/Tnbs_0$ HSU well W-850-2315, which is located south and crossgradient of Building 850, contained uranium at a concentration of 20 pCi/L. Historic isotope ratio data indicate the uranium in ground water samples from well W-850-2315 is natural and the uranium activities are within the range of natural background levels at Site 300. Therefore, the uranium detected in well W-850-2315 is considered to be natural in origin.

Uranium analyses for 2011 were performed primarily by alpha spectroscopy with selected samples analyzed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS). High precision uranium isotope data (uranium-235/uranium-238 [$^{235}U/^{238}U$] atom ratio) for determining the presence of depleted uranium are only available by ICP-MS analysis. The presence of depleted uranium is indicated by a $^{235}U/^{238}U$ atom ratio of less than 0.007. Historic uranium isotope data indicate that distributions of ground water within the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs containing some added depleted uranium extend downgradient about 1,200 ft and 700 ft, respectively, from the Building 850 Firing Table and have remained relatively stable. Depleted uranium has also been detected in Qal/WBR and $Tnbs_1/Tnbs_0$ HSU ground water from wells downgradient of the Pit 2 Landfill and from wells in the $Tnbs_1/Tnbs_0$ HSU south of the Pit 2 Landfill. The uranium isotope data for 2011 suggest this has not changed. However, the maximum uranium activities detected in 2011, in Qal/WBR and $Tnbs_1/Tnbs_0$ HSU ground water from wells downgradient of the Pit 2 Landfill were 1.3 pCi/L (well W-PIT2-2301, May) and 4.5 pCi/L (well W-PIT2-1934, May), respectively; significantly below the 20 pCi/L total uranium MCL cleanup standard.

#### *2.5.2.1.3. Nitrate Concentrations and Distribution*

Nitrate was detected at concentrations at or above the 45 mg/L MCL cleanup standard in samples from nine Building 850 area wells during 2011. The 2011 maximum nitrate concentration detected was 130 mg/L in the May 2011 sample from well NC7-29. The historic local maximum of 180 mg/L was also detected in ground water samples from this same well in June 2007 and April 2009. Well NC7-29, screened in the $Tnbs_1/Tnbs_0$ HSU, is located south and crossgradient of Building 850. The 2011 maximum nitrate concentration in wells located directly downgradient of the Building 850 source area was 57 mg/L in the April ground water sample from well NC7-28. Concentrations of nitrate in ground water at this well, and the other treatment zone well W-850-2417, were below the 0.44 mg/L reporting limit in samples collected in October 2011 from the two wells as a result of ethyl lactate injection (see Section 2.5.2.2 for details on the treatability study).

Historic data indicate that ground water nitrate concentrations in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs are limited in extent and relatively stable. Overall, except for the *in situ* bioremediation treatment zone, the distribution and concentrations of nitrate in ground water are generally consistent, or have declined slightly from those observed in previous years.

#### *2.5.2.1.4. Perchlorate Concentrations and Distribution*

During 2011, perchlorate concentrations exceeding the 6 µg/L MCL cleanup standard were detected in ground water samples from 28 wells east and south of Building 850 and east of Pit 1. The 2011 maximum perchlorate concentration of 74 µg/L was detected in the April sample from well W-850-2417, located directly downgradient of the Building 850 Firing Table and screened in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs. Several slugs of ethyl lactate followed by slugs of previously extracted perchlorate-bearing ground water were injected in this well in September and October as the first phase of an *in situ* perchlorate bioremediation treatability study. As a consequence of the ensuing *in situ* bioremediation, subsequent samples of ground water from this well (October and November 2011) did not contain perchlorate in excess of the 4 µg/L reporting limit. Additional details of this treatability test are discussed in Section 2.5.2.2. During 2011, wells downgradient of the Building 850 Firing Table continued to exhibit the highest perchlorate concentrations in the Building 850 area. Perchlorate concentrations in excess of the MCL cleanup standard in Qal/WBR and $Tnbs_1/Tnbs_0$ HSU ground water extend continuously 2,000 and 1,200 ft, respectively, from Building 850. This year, perchlorate concentrations are similar to or have decreased slightly from last year's in samples from Qal/WBR HSU wells immediately downgradient of Building 850. Except for the *in situ* bioremediation treatment zone area, comprised of wells NC7-28 and W-850-2417, compared to last year, concentrations of perchlorate are similar or have increased slightly in the $Tnbs_1/Tnbs_0$ HSU immediately downgradient of Building 850.

Last year, 10 µg/L of perchlorate were measured in the October 2010 sample from Tmss HSU well NC7-69, located 500 ft downgradient (northeast) of Building 850. This was its first occurrence since sampling of the well for perchlorate began in 2001. During 2011, both the primary and duplicate samples collected from this well in May and October contained <4 µg/L of perchlorate, suggesting that the October 2010 result was most likely spurious. Future sample results will indicate if the presence of perchlorate in ground water from this well is ever substantiated.

The overall extent of perchlorate in ground water in and downgradient of the Building 850 area did not change significantly from last year and will continue to be closely monitored.

***2.5.2.1.5. HE Compound Concentrations and Distribution***

During 2011 ground water samples from 23 wells located in or downgradient of the Building 850 Firing Table were collected and analyzed for the HE compounds, HMX and RDX, at a reporting limit of 1 µg/L. Contract laboratory reporting limits were higher in the past, varying from 5 to 20 µg/L. The lower reporting limits have enabled definition of the extent of HMX and RDX in Qal/WBR HSU ground water. The source appears to be the Building 850 Firing Table.

During 2011, the 1 µg/L RDX cleanup standard was exceeded in samples from two of the 23 wells. Last year, the cleanup standard was exceeded in four of 20 wells sampled for RDX. The maximum RDX concentration of 6.5 µg/L was detected in an April 2011 sample from well W-850-2417 located directly east (downgradient) of the Building 850 Firing Table. The other well yielding detectable RDX this year was well NC7-28, located adjacent to well W-850-2417 and screened in the same HSUs. The October 2011 samples from these two wells did not indicate RDX in excess of the cleanup standard/reporting limit. The data indicate that RDX exceeding the cleanup standard has decreased in extent from last year. Last year, the October 2010 sample from $Tnsc_0$ HSU well W-850-2416, located immediately downgradient of the Building 850 Firing Table, yielded 2.7 µg/L of RDX. This year, RDX was not detected at or above the reporting limit in the two samples from the well (April and October). This was also the case in the April 2010 sample and other previous samples from this well. Thus, the October 2010 result may be spurious. Continued monitoring will determine whether RDX actually occurs in ground water adjacent to this well.

This year, one well yielded samples containing HMX above the reporting limit. Last year, HMX was detected above the reporting limit in samples from six wells and one spring (W8SPRNG). Of note, this year, well NC7-54, which last year yielded HMX above the reporting limit, was not sampled due to insufficient water. Only samples from well NC7-28 contained detectable HMX at concentrations of 15 µg/L (April) and 7.7 µg/L (October). These concentrations are significantly below the Regional Tapwater Screening Level for HMX (1,800 µg/L). Due to the insufficient water for sampling, the extent of HMX in ground water has decreased from its 2010 limit (700 ft east and southeast of the

Building 850 Firing Table) to the vicinity of a single well (NC7-28). Sampling and analysis of water from well NC7-54 in 2012 will determine whether the extent has truly diminished. HE compounds were not detected above the reporting limit in ground water samples from wells screened in the $Tnbs_1$/$Tnbs_0$ HSU downgradient of Building 850 or from wells screened in the underlying $Tnsc_0$ HSU. The distribution of HE compounds in ground water at Building 850 is similar to or less extensive compared to observations made since 2008, when regular sampling and analysis for these chemicals commenced.

This year, the extent of HMX and RDX has decreased compared to last year and these compounds are now confined to a small area immediately downgradient of the firing table.

#### *2.5.2.2. Building 850 Area of OU 5 Remediation Optimization Evaluation*

MNA is the selected remedy for remediation of tritium in ground water emanating from the Building 850 area. Recent data indicate MNA continues to be effective in reducing tritium activities in ground water. The highest tritium activities in ground water continue to be located directly downgradient of the tritium sources at the Building 850 Firing Table and continue to decline. The extent of the 20,000 pCi/L MCL cleanup standard tritium activity contours in both HSUs continues to diminish. The significant decreases in activities and extent of the Building 850 tritium plume with activities exceeding the cleanup standard indicate that natural attenuation (dispersion, radioactive decay and a decreasing source term) continues to be effective in reducing tritium activities in ground water. In general, ground water tritium activities continue to decline and are significantly below historic highs throughout the Building 850 plume. Although tritium activities are increasing slightly in the Pit 1 area, the leading edge of the tritium plume is stable, is well within the Site 300 interior, and is expected to attenuate within the boundaries of Site 300.

Total uranium activities in ground water were below the 20 pCi/L MCL cleanup standard in samples from wells at or downgradient of the Building 850 area in 2011. The overall extent of total uranium activities at Building 850 has not changed significantly. The monitoring-only strategy for uranium at Building 850 continues to be protective given that: (1) total uranium activities in Building 850 ground water are below the 20 pCi/L MCL cleanup standard; and (2) the areal extent of depleted uranium has not changed during the period of monitoring. Temporal trends in $^{235}U/^{238}U$ isotope ratios from past samples have remained stable.

The overall extent and maximum concentrations of nitrate and perchlorate in ground water are also similar to those observed in previous years.

An *in situ* perchlorate bioremediation treatability study commenced at Building 850 during the second semester 2011. Studies conducted with lower Neroly Formation ground water and aquifer materials, which are analogous to those present at Building 850, indicated that ethyl lactate promotes microbial reduction of perchlorate without adverse chemical by-products. The objective of this study is to evaluate the efficacy of *in situ* enhanced remediation methods to reduce perchlorate ground water concentrations directly downgradient of the Building 850 Firing Table. From mid-September to mid-October, four five gallon slugs of ethyl lactate, followed by a 50 gallon slug of extracted perchlorate-bearing ground water, were injected into reagent injection well W-850-2417. The injection of the 50 gallons of ground water, originally extracted from well W-850-2417, mixes with and dilutes the ethyl lactate, hastening its transport into the treatment zone. Well W-850-2417 is directly downgradient of the Building 850 firing table and is the source of the injected ground water. Nearby downgradient well NC7-28 and deeper well W-850-2416 serve as performance monitor wells for this test. Microbial reduction has reduced perchlorate and nitrate concentrations at wells W-850-2417 and NC7-28 from pre-test 2011 maximum concentrations of 74 and 71.3 µg/L and 52 and 57 mg/L, respectively, to post-injection 2011 maxima of 13.6 mg/L and < 4 µg/L and < 0.44 mg/L (reporting limits), respectively. Total uranium activities in these wells, as determined by mass spectrometry, decreased from preinjection 2011 maxima of 9.1 and 9.8 pCi/L, respectively, to 2011 post-injection maxima of 3.5 and 2 pCi/L, respectively. The decrease in uranium activities is a result of concurrent reduction of $U^{+6}$ species, along with nitrate and perchlorate reduction, in ground water to $U^{+4}$ species, which form insoluble solids. Reducing conditions, as indicated by low dissolved oxygen concentrations (<1 mg/L) and negative ORP (oxidation-reduction potential), were measured in the treatment zone with *in situ* sensors within days in well W-850-2417, and in less than 3 weeks at performance monitor well NC7-28. These reducing conditions continued through the end of 2011. The test is currently in a monitoring and rebound mode. Additional slugs of ethyl lactate and ground water will be injected after nitrate and perchlorate concentrations increase in the treatment zone. The regulatory agencies will be kept apprised of the results of the treatability study and when additional slugs may be injected.

#### *2.5.2.3. Building 850 Area of OU 5 Remedy Performance Issues*

There were no new issues that affect the performance of the MNA cleanup remedy for tritium in the Building 850 area during this reporting period. The remedy for tritium continues to be effective and protective of human health and the environment, and to make progress toward cleanup. Perchlorate, uranium, and RDX in ground water downgradient of the Building 850 Firing Table will continue to be closely monitored and reported. The *in situ* bioremediation treatability study analytical results (perchlorate, nitrate, uranium, HE compounds, metals, general mineral constituents, dissolved oxygen, Eh, ORP, pH, specific conductance, and volatile fatty acids) will continue to be evaluated to determine when to re-initiate ethyl lactate injection. The results of this evaluation will be presented in future CMRs. The performance of this technology with respect to uranium and RDX remediation or stabilization will also be evaluated.

### 2.5.3. Pit 7 Complex Area of OU 5 Ground Water Treatment System Operations and Monitoring

This section is organized into five subsections: facility performance assessment; operations and maintenance issues; compliance summary; facility sampling plan evaluation and modifications; and treatment facility and extraction wellfield modifications.

#### *2.5.3.1. Pit 7 Complex Area of OU 5 Facility Performance Assessment*

The monthly ground water discharge volumes and rates and operational hours for the second semester of 2011 are summarized in Table 2.5-2. The total volume of ground water extracted and treated, and masses removed in 2011 are presented in Table Summ-1. The cumulative volume of ground water treated and discharged and masses removed are summarized in Table Summ-2. Analytical results for influent and effluent samples during the second semester of 2011 are shown in Tables 2.5-3 through 2.5-6. The pH measurement results are presented in Appendix A.

#### *2.5.3.2. Pit 7 Complex Area of OU 5 Operations and Maintenance Issues*

The following maintenance activities and operational issues occurred during the second semester of 2011 at the PIT7-SRC GWTS during the reporting period:

- Extraction well W-PIT7-2307 remained offline during the second semester of 2011 to prevent drawing contaminants from the Qal/WBR HSU into the underlying $Tnbs_1/Tnbs_0$ bedrock HSU.
- The pipeline to extraction wells W-PIT7-2306, NC7-63, and NC7-64 was disconnected around April 16, 2011 to allow access to the drilling locations for new wells W-PIT7-2303, -2304, and -2305. The extraction wells were reconnected on August 23, 2012.
- Extraction wells NC7-63 and NC7-64 were secured on November 28 for the remainder of the reporting period to protect against damage caused by freezing temperatures.

- The GWTS ceased operation due to an interlock shutdown after a site-wide power outage that occurred on December 18. The system was unable to be restarted due to issues with the tank level float switch therefore the facility was secured for the remainder of the reporting period.

#### *2.5.3.3. Pit 7 Complex Area of OU 5 Compliance Summary*

The PIT7-SRC GWTS operated in compliance with the RWQCB Substantive Requirements for Wastewater Discharge.

#### *2.5.3.4. Pit 7 Complex Area of OU 5 Facility Sampling Plan Evaluation and Modifications*

The PIT7-SRC treatment facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The treatment facility sampling and analysis plan is presented in Table 2.5-7. No modifications were made to the plan during this reporting period.

#### *2.5.3.5. Pit 7 Complex Area of OU 5 Treatment Facility and Extraction Wellfield Modifications*

Although no modifications to the treatment facility occurred during this reporting period, ground water extraction from NC7-63 and NC7-64 was temporarily halted in July and most of August due to drilling operations that required disconnecting the pipelines from these wells. In addition, extraction wells NC7-63 and NC7-64 were secured on November 28 for the remainder of the reporting period to protect against damage caused by freezing temperatures.

### 2.5.4. Pit 7 Complex Area of OU 5 Ground Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.5-8. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; forty-six required analyses were not performed because there was insufficient water in the wells to collect the samples and six required analysis were not performed due to an inoperable pump.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

Ground water elevation contour maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs within the OU are presented on Figures 2.5-2 and 2.5-3, respectively.

### 2.5.5. Pit 7 Complex Area of OU 5 Remediation Progress Analysis

This section is organized into three subsections: analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

#### *2.5.5.1. Pit 7 Complex Area of OU 5 Mass Removal*

The monthly ground water mass removal estimates for the second semester of 2011 are summarized in Table 2.5-9. The total mass removed during 2011 and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

#### *2.5.5.2. Pit 7 Complex Area of OU 5 Contaminant Concentrations and Distribution*

In the Pit 7 Complex area of OU 5, tritium is the primary COC in ground water and uranium, perchlorate, nitrate, and VOCs are secondary COCs. These constituents have been identified within the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs.

The distribution of tritium in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs, based on data collected during the second semester 2011 is contoured on Figures 2.5-4 and 2.5-5, respectively. Concentrations of the uranium, nitrate, and perchlorate in Qal/WBR and $Tnbs_1/Tnbs_0$ ground water, based on data collected during the first semester 2011, are presented on Figures 2.5-6 through 2.5-11.

### *2.5.5.2.1. Tritium Activities and Distribution*

Overlapping plumes of tritium in ground water extend from Pit 3 and Pit 5 Landfill sources. The Pit 7 Landfill is not an apparent source of tritium to ground water as most of the tritium-bearing experiments at Site 300 were conducted prior to its opening in 1979 (Taffet et al., 2008) and well NC7-48, located directly downgradient of Pit 7 and upgradient of Pit 3, has generally yielded ground water samples that contain tritium activities within background ranges. The current ground water sample collected from well NC7-48 contained less than 100 pCi/L of tritium (April 2011).

Tritium activities in the Qal/WBR HSU ground water in the Pit 7 Complex area have decreased from a historic maximum of 2,660,000 pCi/L in 1998 to a 2011 maximum tritium activity of 575,000 pCi/L (April) in samples from well NC7-63. Subsequently, the October 2011 sample from this well contained 221,000 pCi/L. The 575,000 pCi/L April activity represents an increase from last year, as the maximum tritium activity in 2010 was 255,000 pCi/L (January). The 2010 maximum tritium activity in Qal/WBR HSU was also detected in a sample from this well, which is located directly downgradient of Pit 3. Tritium activities in Qal/WBR ground water have generally declined, though some wells showed increases. The observed trends in tritium activity may be related to ground water extraction, which began in April 2010 and/or changes in recharge brought about by the drainage diversion system, potentially due to less dilution. Ground water elevations in the Qal/WBR HSU in the Pit 7 Complex generally increased 2 to 3 ft following the above-average 2009-2010 rainfall. This was expected, as the drainage diversion system is not designed to completely prevent any water level rises but to minimize the influence of extreme storm events by diverting excess runoff and shallow subsurface flow during very heavy rainfall years (i.e., El Niño events) to prevent water tables rises into the landfills. Following the 2010-2011 rainfall season, water elevations generally rose 1 to 2 ft. Water elevations in the Qal/WBR HSU have typically fluctuated within a narrow 4 ft range during the last few years. Ground water levels generally remain well below the bottoms of the Pit 7 Complex Landfills. Continued monitoring of water elevations and tritium activities may clarify the specific processes responsible for the observed tritium activities. In the Qal/WBR HSU, the region of ground water containing tritium in excess of the cleanup standard extends about 1,300 ft southeast from the northern edge of Pit 3. The extent of the 20,000 pCi/L MCL cleanup standard ground water tritium activities in the Qal/WBR HSU in the Pit 7 Complex area is similar to 2010.

Tritium activities in the $Tnbs_1/Tnbs_0$ HSU ground water in the Pit 7 Complex area have decreased from a historic maximum of 770,000 pCi/L in 1999 to a 2011 maximum tritium activity of 214,000 pCi/L (May). Both the historic and 2011 maximum tritium activities were detected in samples from well NC7-25, located about 250 ft downgradient (northeast) of the Pit 3 Landfill. In general, tritium activities in the $Tnbs_1/Tnbs_0$ HSU are similar or have declined slightly compared to 2010 measurements. The highest tritium activities in $Tnbs_1/Tnbs_0$ HSU in Pit 7 Complex area ground water, in excess of the 20,000 pCi/L MCL cleanup standard, continue to extend about 800 ft northeast of Pit 3 and Pit 5. The extent of tritium in excess of the 20,000 pCi/L MCL cleanup standard in the $Tnbs_1/Tnbs_0$ HSU in the Pit 7 Complex area is also similar to 2010 observations.

Overall, the extent of tritium in ground water with activities in excess of the 100 pCi/L background levels remains stable, and is similar to 2010.

### *2.5.5.2.2. Uranium Concentrations and Distribution*

Depleted uranium was previously released to ground water from sources in the Pits 3, 5, and 7 Landfills (Taffet et al., 2008). Uranium activities in Qal/WBR HSU ground water in the Pit 7 Complex area have decreased from a historic maximum of 781 pCi/L (well NC7-40, April 1998) to a 2011 maximum of 172 pCi/L (well NC7-63, April). The 2010 maximum activity of 120 pCi/L was also detected in a sample from this well. Uranium activities exceeded the 20 pCi/L MCL cleanup standard in samples from 12 wells in the Qal/WBR HSU during 2011 (these same wells exceeded cleanup standards in 2010). All 12 wells are proximal to the landfills and have historically shown $^{235}U/^{238}U$ isotopic ratios indicating some depleted uranium. The extent of uranium in excess of the cleanup standard in the Qal/WBR HSU is confined to an area directly adjacent to Pit 3 and another area that extends from Pit 5 southeast about 500 ft. The extents of both these regions are stable and similar to what has been observed over the last few years. The extent of depleted uranium in Qal/WBR HSU ground water has changed little since the mid-1990s. However, the recent sample result (2.5 pCi/L of uranium) from the new extraction well W-PIT7-2704, completed at the northeast corner of Pit 5 indicates that the extent of uranium in Qal/WBR HSU ground water is less extensive than previously depicted. Areas of depleted uranium in ground water are bounded by wells that have in the past, exhibited ground water isotope mass ratios indicative of natural uranium. This indicates that the depleted uranium plume is not migrating significantly in the short term within the Qal/WBR HSU ground water. Sorption may be responsible for slowing the migration of depleted uranium in ground water compared to conservative contaminants such as tritium.

The maximum uranium activity in a 2011 sample from well W-PIT7-2305 screened in both the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs was 17.5 pCi/L. The January 2010 sample from this well contained 22.4 pCi/L, exceeding the 20 pCi/L MCL cleanup standard. A sample was collected in October 2011 from this well and analyzed by mass spectrometry; the isotope ratio indicated natural uranium (15 pCi/L of total uranium).

Uranium activities in the $Tnbs_1/Tnbs_0$ HSU have decreased from a historic maximum of 51.45 pCi/L in 1998 to a 2011 maximum of 35.5 pCi/L (June). The 2010 maximum activity was 36.5 pCi/L (June 2010). All these maximum uranium activities were detected in samples from well NC7-25, located about 250 ft downgradient (northeast) of the Pit 3 Landfill. Well NC7-25 is the only $Tnbs_1/Tnbs_0$ HSU well that historically and currently yields ground water containing uranium in excess of the cleanup standard. The October 2011 sample from this well, analyzed by mass spectrometry, contained 15 pCi/L of uranium, below the 20 pCi/L cleanup standard. All historic and current isotope ratio data indicate that the uranium in NC7-25 ground water is natural. Ground water samples from wells screened in the $Tnbs_1/Tnbs_0$ HSU have not shown depleted uranium mass ratios indicating that depleted uranium has not migrated downward into the $Tnbs_1/Tnbs_0$ HSU.

As is the case for the Building 850 portion of OU 5, uranium activity analyses for 2011 were performed primarily by alpha spectroscopy with selected samples analyzed by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). Mass spectrometric results for samples collected in October 2011 indicated three of the six extraction wells contain ground water with natural $^{235}U/^{238}U$ mass ratios: NC7-25 (0.0073), W-PIT7-2305 (0.0071), and W-PIT7-2306 (0.0068). Uranium atom ratios from a fourth well, W-PIT7-2307 have generally trended toward natural but have recently declined to 0.0055, presumably due to current cessation of pumping.

### *2.5.5.2.3. Nitrate Concentrations and Distribution*

Nitrate was detected at concentrations at or above the 45 mg/L MCL cleanup standard in samples from six Pit 7 Complex area wells during 2011. These wells are located downgradient and northeast of the Pit 7 Complex area. In February 2010, several wells screened in the Qal/WBR HSU, NC7-16, NC7-21, and NC7-34, yielded samples with reported nitrate concentrations of 290, 210, and 150 mg/L, respectively. These results are suspect as the subsequent May 2010 samples collected for verification yielded nitrate concentrations of 39, 40, and 27 mg/L, respectively. During 2011 (April), these wells again yielded similar concentrations of 22, 36, and 23 mg/L, respectively. These last two sets of results are equivalent to historic nitrate concentrations observed at these wells.

The 2011 maximum nitrate concentration detected in the Pit 7 Complex area was 90 mg/L in the April sample from Qal/WBR HSU extraction well NC7-63, located immediately downgradient of Pit 3. The 2011 maximum nitrate concentration in the $Tnbs_1/Tnbs_0$ HSU was 65 mg/L (NC7-47, May). This well is located immediately northeast and downgradient of Pit 3.

Historic data indicate that ground water nitrate concentrations in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs are limited in extent and relatively stable. Overall, maximum nitrate concentrations in Pit 7 Complex ground water have decreased from the historic maximum of 363 mg/L (2003). Other than the anomalous 2010 data described above, the distribution and concentrations of nitrate in ground water this year are generally similar to what was observed in 2010.

#### *2.5.5.2.4. Perchlorate Concentrations and Distribution*

During 2011, perchlorate was detected at concentrations exceeding the 6 µg/L cleanup standard in ground water samples from 19 wells directly northeast and southeast of the landfills.

Perchlorate concentrations in the Qal/WBR HSU ground water in the Pit 7 Complex area have decreased from a historic maximum of 40 µg/L (W-PIT7-2306), June 2009) to a 2011 maximum concentration of 19 µg/L, in the October sample from the same well W-PIT-2306, located immediately downgradient of Pit 3. The Qal/WBR HSU wells that yielded samples containing perchlorate in excess of the 6 µg/L MCL cleanup standard define an area that extends southeast about 1,200 ft from the middle of Pit 3.

Samples from two $Tnbs_1/Tnbs_0$ HSU wells, NC7-25, and NC7-68, contained perchlorate at in excess of the 6 µg/L MCL cleanup standard at maximum 2011 concentrations of 10 and 11.6 µg/L (October and April, respectively) and define an area that extends about 1,000 ft southeast along the edges of Pits 3 and 5.

The overall extent of perchlorate in ground water in the Pit 7 Complex area did not change significantly from 2010 to 2011.

#### *2.5.5.2.5. VOC Concentrations and Distribution*

The VOC COCs in Pit 7 Complex Area ground water include TCE and 1,1-DCE. Total VOC concentrations in Qal/WBR HSU ground water in the Pit 7 Complex area have decreased from a historic maximum of 21.2 µg/L in March 1995 (well NC7-51) to a 2011 maximum of 6.4 µg/L in October (Well W-PIT7-2306) which was comprised entirely of TCE. 1,1-DCE was not detected above the 0.5 µg/L reporting limit in the sample from W-PIT7-2306 or any other wells screened exclusively in the Qal/WBR HSU.

During 2011, VOCs were detected in ground water samples from five Pit 7 Complex area wells: one well completed in the $Tnbs_1/Tnbs_0$ HSU (K7-03), one completed in the Qal/WBR HSU (W-PIT7-2306), and three completed in both HSUs (K7-01, W-PIT-2305, and W-PIT7-2307).

The 2011 maximum VOC concentration in a sample from a Pit 7 Complex well was 9.3 µg/L (W-PIT7-2307, April). This sample contained 6.5 µg/L of TCE; exceeding the TCE MCL cleanup standard of 5 µg/L, and 2.8 µg/L of 1,1-DCE which was below the 1,1-DCE MCL cleanup standard of 6 µg/L. Of note, the October sample from this well contained 1.6 µg/L of TCE; 1,1-DCE was not detected in excess of the 0.5 µg/L reporting limit. Last year, this well also yielded the maximum total VOC concentration in the area (11.8 µg/L, January 2010). TCE was also detected in a sample from

Qal/WBR- $Tnbs_1/Tnbs_0$ HSU well K7-01 at a concentration of 1.2 µg/L; 1,1-DCE was not detected in the sample from K7-01 above the 0.5 µg/L reporting limit. Although the April 2011 sample from well W-PIT7-2305, also completed in both HSUs, contained TCE at a concentration of 0.52 µg/L, the duplicate sample and the October sample from this well did not contain VOCs above the reporting limits. The 2011 maximum total VOC concentration in a sample from a well screened only in the $Tnbs_1/Tnbs_0$ HSU was 0.91 µg/L (K7-03, April), which was comprised entirely of TCE. 1,1-DCE was not detected above the 0.5 µg/L reporting limit in the sample from K7-03 or any other wells screened exclusively in the $Tnbs_1/Tnbs_0$ HSU.

The data indicate that the extent of VOCs in ground water is limited to the area directly downgradient of Pit 5. Individual VOC concentrations were below cleanup standards in all wells sampled during 2011, except for wells W-PIT7-2306 and W-PIT7-2307 that yielded samples with TCE concentrations slightly above the 5 µg/L MCL cleanup standard.

#### *2.5.5.3. Pit 7 Complex Area of OU 5 Remediation Optimization Evaluation*

Ground water extraction and treatment at the PIT7-SRC facility began in March 2010. Therefore, the operation timeframe (1 year and 10 months) and associated hydraulic and chemical data from the area are still insufficient to fully assess the effects of ground water extraction and treatment on COC concentration trends and the performance of the extraction wellfield. The total volume of water extracted and treated during 2011 at PIT7-SRC was 46,543 gallons. Wells W-PIT7-2305 and W-PIT7-2307 contributed the vast majority of the flow (61% and 23%, respectively) to the PIT7-SRC facility at average long-term extraction rates of <0.1 and 0.1 gpm, respectively. Concentrations of COCs in well W-PIT7-2305 ground water have fluctuated since pumping started in 2010, but have shown a general decrease from pre-pumping conditions to the end of 2011. For example:

- Tritium activities decreased from 73,900 pCi/L (January 2010) to 42,600 pCi/L (October 2011).
- Uranium activities decreased from 21 pCi/L (January 2010) to 15 pCi/L (October 2011).
- TCE concentrations decreased from 0.88 µg/L (January 2010) to below the 0.5 µg/L reporting limit (October 2011).
- Perchlorate concentrations decreased very slightly from 15 µg/L (June 2009) to 14 µg/L (October 2011).
- Nitrate concentrations decreased from 44 mg/L (August 2008) to 41 mg/L (April 2011).

Similar to extraction well W-PIT7-2305, concentrations of COCs in well W-PIT7-2307 ground water have fluctuated since pumping started in 2010, but have shown slight general decreases from pre-pumping conditions to 2011. For example:

- Tritium activities decreased from 66,600 pCi/L (June 2010) to 44,000 pCi/L (October 2011).
- Uranium activities decreased from 24.7 pCi/L (January 2010) to 16 pCi/L (October 2011).
- TCE concentrations decreased from 8.3 µg/L (January 2010) to 1.6 µg/L (October 2011).
- Perchlorate concentrations have remained stable at 11 µg/L (January 2010, and April and October 2011).
- Nitrate concentrations decreased from 34 mg/L (June 2010) to 26 mg/L (April 2011).

After assessment of water levels and COC trends in well W-PIT7-2307, it appears that ground water pumped to date, is derived primarily from the $Tnbs_1/Tnbs_0$ bedrock HSU. Because the well may have been largely pumping from the $Tnbs_1/Tnbs_0$ HSU, pumping was suspended in early March 2011 and remained off to avoid pulling contaminants in Qal/WBR HSU ground water into the $Tnbs_1/Tnbs_0$ HSU. Ground water elevations have steadily risen since pumping ceased and in December 2011 were still below the contact between coherent bedrock and the Qal/WBR HSU as defined by the seismic velocity boundary. Well W-PIT7-2305 has been pumping almost continuously during 2011, except for a period at the end of March and the beginning of April. Wells NC7-63 and NC7-64 were pumping, with very low yields, until the water lines to the GWTF were disconnected (mid-April through July 2011) to allow for drilling the three new extraction wells in the Pit 7 area. These wells were again turned off at the end of November for freeze protection. The increase in tritium activity in ground water from well NC7-63 from 2010 to April 2011 (255,000 pCi/L to 575,000 pCi/L) is discussed in Section 2.5.5.2.1. Well W-PIT7-2306 ceased pumping in mid-April 2011 due to drilling operations in the area. It began pumping again in August 2011.

To increase plume capture and the volume of water containing concentrations of COCs in excess of cleanup standards, three additional extraction wells (W-PIT7-2703, W-PIT7-2704, and W-PIT7-2705) with locations shown on Figure 2.5-1 were installed during the period of May to July 2011 near the highest concentrations of uranium and perchlorate in the Qal/WBR HSU. The wells were drilled to the base of the Qal/WBR and completed with 12-inch diameter casing with screens extending to the base of this HSU. Following final well development, baseline chemical samples were collected from the wells. The baseline samples from wells W-PIT7-2703, W-PIT7-2704, and W-PIT7-2705 contained, respectively, 70,500, 751, and 38,400 pCi/L of tritium, 66, 2.5, and 45 pCi/L of uranium, 12, <4, and 11 µg/L of perchlorate, and 29, 24, and 28 mg/L of nitrate. VOCs (TCE) were only detected in the sample from well W-PIT7-2704 (1.6 µg/L). These and other data are being evaluated to determine which of these wells will be connected to the treatment system to increase mass removal. Contaminant mass removal can also be increased in 2012 by targeting Qal/WBR HSU ground water in well W-PIT7-2307 by raising the pump intake to the base of the Qal/WBR HSU once water levels in the well rise above the base of the HSU. Uranium mass removal can be increased in 2012 by commencing pumping in $Tnbs_1$/$Tnbs_0$ HSU well NC7-25. In the long term, continued pumping of existing extraction wells, pumping from one or more of these new wells (once connected in 2012), the effects of the drainage diversion system, and rainfall hydrographs will be evaluated as to their overall influence on the extent of saturation in the Qal/WBR HSU, and in turn, the distribution of ground water available for treatment at PIT7-SRC.

#### *2.5.5.4. Pit 7 Complex Area of OU 5 Remedy Performance Issues*

There were no new issues that affect the performance of the MNA cleanup remedy for tritium in the Pit 7 Complex area during this reporting period. The remedy for tritium continues to be effective and protective of human health and the environment, and to make progress toward cleanup. Uranium, perchlorate, VOCs, and nitrate in Pit 7 Complex ground water continue to be closely monitored. As stated in the previous section, wells W-PIT7-2305 and W-PIT7-2307 pumped the vast majority of ground water to PIT7-SRC, and concentrations of tritium and uranium in samples collected from these wells remained similar to 2010. Uranium activities in these samples remained below cleanup standards. Continued operation of PIT7-SRC and the installation of three new extraction wells in 2011 provide an opportunity for extraction of increased volumes of ground water and mass removal.

During 2011, tritium activities in treated effluent from PIT7-SRC were in the range of 52,000 to 63,000 pCi/L, which is equivalent to recent tritium activities in samples from wells completed adjacent to the infiltration trench (wells K7-01, NC7-16, and NC7-21). Since treatment and re-injection began, ground water tritium activity trends at these wells are stable or decreasing. The tritium activities in these wells will continue to be closely monitored to assess any negative impacts to the distribution of tritium in ground water.

The performance summary of PIT7-SRC indicates that:

- Progress has been made in reducing COC concentrations towards cleanup standards: Uranium activities to-date have remained relatively stable, and are limited in extent. TCE is present above the cleanup standard in only one well. Perchlorate concentrations are stable to decreasing. Nitrate concentrations and distribution have decreased from its historic maximum.

- Uranium mass ratios in four of the six extraction wells are trending toward a natural uranium signature and currently indicate mostly natural uranium. The recent sample from one of these wells (W-PIT7-2307) has recently shown a more depleted signature, presumably due to the current cessation of pumping and subsequent rise of the water table into the Qal/WBR HSU.
- Generally, tritium activities in wells downgradient of the infiltration trench are stable or decreasing, indicating that the discharge of tritium-bearing water is not adversely impacting downgradient ground water.

As discussed in the Remedial Design (RD) for the Pit 7 Complex (Taffet et al., 2008), the drainage diversion system design was not intended to capture 100% of the precipitation that fall in the Pit 7 Complex area. Rather, it was designed to divert excess surface water runoff and shallow subsurface water from the hill slopes to the west and east of the Pit 7 Complex landfills during high intensity storms and periods of extreme rainfall (i.e., the 1997-1998 El Niño) to prevent ground water from coming in contact with the pit waste and underlying contaminated bedrock. Thus, the drainage diversion system performance can best be evaluated during a future El Niño season or other period of very high rainfall.

Criteria indicating that the drainage diversion system is operating as intended and corresponding recent performance include:

1. Ground water elevation responses to rainfall events observed in key monitoring wells are similar to those observed before the installation of the drainage diversion system:
   - Drainage diversion system performance is evaluated by 22 monitor wells outfitted in April 2010 with dedicated pressure transducers that measure ground water elevations. Ground water elevations in the Qal/WBR HSU in the Pit 7 Complex generally increased 2 to 3 ft following the above-average 2009-2010 rainfall and 1 to 2 ft following the 2010-2011 rainfall season. This was expected, as the drainage diversion system is not designed to completely prevent any water level rises but to minimize the influence of extreme storm events by diverting excess runoff and shallow subsurface flow during very heavy rainfall years (i.e., El Niño events) to prevent water tables rises into the landfills.
   - Review of these data indicates that ground water elevation responses to rainfall are less than those observed prior to drainage diversion system installation in several wells. For example, in 2003, prior to installation of the drainage diversion system in a year of below average precipitation, ground water elevation at well NC7-48, immediately downgradient of Pit 7, increased by 8.6 inches per inch of rain received. In 2011, after installation of the drainage diversion system in a year of above average precipitation, ground water elevation increased by 4.2 inches per inch of rain received. At this location, the decrease in ground water response indicates the drainage diversion system appears to be reducing infiltration to ground water. It should be noted that most of the precipitation occurred in a different portion of the rainfall year in 2003 than in 2011 and that the soil moisture profiles may have been very different during those two years, among other factors may render a direct comparison difficult.
2. Maximum ground water rises do not enter the pit waste and underlying contaminated bedrock as indicated by ground water elevation data:
   - During and following the 2009-2010 and 2010-2011 rainfall seasons, ground water levels remained well below the bottoms of the Pit 7 Complex Landfills.

3. Increasing trends in tritium, uranium, VOCs, or perchlorate activities/concentrations are observed over a period of at least four quarters in ground water samples from key wells downgradient of the landfills:
   - Increasing COC trends have not been observed.

Based on the evaluation of data collected in 2010 and 2012 against the performance criteria, the drainage diversion system appears to be operating as intended. However, it is important to note that the drainage diversion system is designed to divert recharge during peak events and has not yet been tested under the conditions for which it was designed.

## 2.6. Building 854 OU 6

The Building 854 Complex has been used to test the stability of weapons and weapon components under various environmental conditions and mechanical and thermal stresses. A map of the Building 854 OU showing the locations of monitor and extraction wells and treatment facilities is presented on Figure 2.6-1.

Three GWTSs are currently operated in the Building 854 OU; Building 854-Source (854-SRC), Building 854-Proximal (854-PRX), and Building 854-Distal (854-DIS). One SVTS is also operated at the 854-SRC facility.

The 854-SRC GWTS began operation in December 1999 removing VOCs and perchlorate from ground water. Ground water extraction was expanded in September 2006 from one well, W-854-02, extracting at a flow rate of approximately 1 gpm, to include wells W-854-18A, W-854-17, and W-854-2218 currently extracting at an approximate combined flow rate of 1.7 gpm. The GWTS configuration includes a particulate filtration system, two ion-exchange resin columns connected in series for perchlorate removal, and three aqueous-phase GAC units connected in series for VOC removal. Nitrate-bearing treated effluent is then discharged via a misting tower onto the landscape for uptake and utilization of the nitrate by indigenous grasses.

A SVTS began operation at the 854-SRC in November 2005. Soil vapor is currently extracted from well W-854-1834 at an approximate flow rate of 45 to 50 scfm. This system consists of vapor-phase GAC to remove VOCs from extracted soil vapor. Treated vapors are discharged to the atmosphere under a permit issued by the San Joaquin Valley Unified Air Pollution Control District.

The 854-PRX GWTS began operation in November 2000 removing VOCs, nitrate, and perchlorate from ground water. Ground water is currently extracted at an approximate flow rate of 1.5 gpm from well W-854-03, located southeast of the Building 854 complex. The GWTS configuration includes two ion-exchange resin columns connected in-series for perchlorate removal, three aqueous-phase GAC units connected in series for VOC removal, and an aboveground containerized wetland biotreatment for nitrate removal prior to being discharged into an infiltration trench. In 2007, the treatment system was modified to replace the solar power with site power to increase the volume of extracted ground water by operating the GWTS 24-hours a day.

The 854-DIS GWTS is solar-powered and began operation in July 2006 removing VOCs and perchlorate from ground water. Ground water is extracted from well W-854-2139. The current operational flow rate averaged over time is approximately 700 to 800 gallons per month. The GWTS configuration includes two ion-exchange resin columns connected in series for perchlorate treatment followed by three aqueous-phase GAC units connected in series for VOC removal prior to discharge to an infiltration trench.

### 2.6.1. Building 854 OU Ground Water Treatment System Operations and Monitoring

This section is organized into five subsections: facility performance assessment; operations and maintenance issues; receiving water monitoring; compliance summary; and sampling plan evaluation and modifications.

#### *2.6.1.1. Building 854 OU Facility Performance Assessment*

The monthly ground water discharge volumes and rates and operational hours for the second semester of 2011 are summarized in Tables 2.6-1 through 2.6-3. The total volume of ground water treated and masses removed during 2011 are presented in Table Summ-1. The cumulative volume of ground water treated and discharged and the masses removed are summarized in Table Summ-2.

Analytical results for influent and effluent samples for the second semester of 2011 are shown in Tables 2.6-4 and 2.6-5. The pH measurement results are presented in Appendix A.

#### *2.6.1.2. Building 854 OU Operations and Maintenance Issues*

The following maintenance activities and operational issues occurred at the 854-SRC GWTS and SVTS, and 854-PRX and 854-DIS GWTSs during the second semester of 2011:

<u>854-SRC GWTS and SVTS</u>

- The SVTS was shut down until July 11 while the rebound test analytical results were received and evaluated.
- The GWTS and SVTS were shut down temporarily on August 30 due to a power outage.
- All three granular activated carbon canisters were replaced on November 10.
- The GWTS and SVTS were secured on November 28 for the remainder of the reporting period to protect against damage caused by freezing temperatures.

<u>854-PRX GWTS</u>

- The GWTS was found shut down on September 6 due to a failing pump in extraction well W-854-03. The pump was replaced and the GWTS was restarted on September 26.
- The GWTS was non-operational on December 5 due to a power outage at Building 855. The power was restored and the GWTS was restarted on December 6.

<u>854-DIS GWTS</u>

- The GWTS was shut off on July 11 due to a leaking GAC canister. The canister was repaired and the GWTS was restarted on July 13.
- The GWTS was found offline on August 17 due to failed batteries. The batteries were replaced and the facility was restarted on August 18.
- The GWTS was secured on November 28 for the remainder of the reporting period to protect against damage caused by freezing temperatures.

#### *2.6.1.3. Building 854 OU Compliance Summary*

The 854-SRC, 854-PRX, and 854-DIS GWTSs all operated in compliance with the RWQCB Substantive Requirements for Wastewater Discharge. Nitrate concentrations in the 854-PRX GWTS extraction well and facility influent have continued to remain below the 45 mg/L nitrate cleanup standard since February 2010. The 854-SRC SVTS operated in compliance with San Joaquin Valley Unified Air Pollution Control District permit limitations.

### *2.6.1.4. Building 854 OU Facility Sampling Plan Evaluation and Modifications*

The Building 854 OU facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.6-6. The only modifications to the plan included extra nitrate monitoring at the 854-PRX in December. The primary reason for shutting down this GWTS for freeze protection in previous years has been to prevent freeze damage to the acetate injection system and because the bacterial denitrification is greatly reduced due the colder temperatures. Since the influent nitrate concentrations have remained below the discharge limit, the GWTS was not shut down, and only the acetate injection system was freeze protected. In addition, no compliance monitoring was conducted at 854-DIS GWTS in December because it was shut down for freeze protection.

### *2.6.1.5. Building 854 OU Treatment Facility and Extraction Wellfield Modifications*

There were no treatment facility or extraction wellfield modifications made to the 854-PRX, 854-DIS, or 854-SRC GWTSs, or the 854-SRC SVTS, during the reporting period.

## 2.6.2. Building 854 OU Ground Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.6-7. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions: twenty-six required analyses were not performed because there was insufficient water in the wells to collect the samples and three required analyses were not performed due to an inoperable pump.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

A ground water elevation contour map for the $Tnbs_1/Tnsc_0$ HSU is presented on Figure 2.6-2. Ground water elevations are posted for the Qls and $Tnbs_1$ HSUs on Figure 2.6-6.

## 2.6.3. Building 854 OU Remediation Progress Analysis

This section is organized into four subsections: mass removal; analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

### *2.6.3.1. Building 854 OU Mass Removal*

The monthly ground water mass removal estimates for the second semester of 2011 are summarized in Tables 2.6-8 through 2.6-10. The total mass removed during 2011 and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

### *2.6.3.2. Building 854 OU Contaminant Concentrations and Distribution*

At the Building 854 OU, VOCs (TCE) and perchlorate are the primary COCs detected in ground water; nitrate is a secondary COC. These COCs have been identified primarily in the $Tnbs_1/Tnsc_0$ HSU.

Total VOC concentration data for the $Tnbs_1/Tnsc_0$ HSU are contoured on Figure 2.6-3. Isoconcentration data for perchlorate and nitrate for the $Tnbs_1/Tnsc_0$ HSU are presented on Figures-2.6-4 and 2.6-5, respectively. A map showing ground water elevations, total VOCs, perchlorate and nitrate for the combined Qls and $Tnbs_1$ HSUs is presented on Figure 2.6-6. Hydraulic capture zones are presented on the $Tnbs_1/Tnsc_0$ HSU ground water elevation and total VOC and perchlorate maps (Figures 2.6-2, 2.6-3, and 2.6-4).

### *2.6.3.2.1. VOC Concentrations and Distribution*

During 2011, the maximum concentration of VOCs in $Tnbs_1/Tnsc_0$ HSU ground water was 120 µg/L (well W-854-02, July and October). TCE comprises all of the VOCs observed in ground water at Building 854, except for low cis-1,2-DCE concentrations detected in samples from wells W-854-17 and W-854-2139. During 2011, the maximum cis-1,2-DCE ground water concentration detected in wells W-854-17 and W-854-2139 was 10 µg/L and 0.73 µg/L, respectively. Overall, VOC concentrations in the $Tnbs_1/Tnsc_0$ HSU have decreased nearly two orders of magnitude from a historic pre-remediation maximum of 2,900 µg/L (well W-854-02, 1997). Two VOC plumes exist in the $Tnbs_1/Tnsc_0$ HSU: a northern plume and a less extensive southern plume. The northern plume encompasses the 854-SRC and 854-PRX areas and is separated from the southern plume by a region where VOC concentrations are below the 0.5 µg/L reporting limit (at wells W-854-1902 and W-854-1822). The southern plume is in the vicinity of former water supply Well 13. While the extent of VOCs impacting Building 854 ground water with concentrations above the 0.5 µg/L reporting limit has remained relatively stable over time, since remediation began: (1) the portion of the northern VOC plume with concentrations greater than 50 µg/L has decreased and is currently limited to the immediate vicinity of the source area; (2) the extent of the northern VOC plume with concentrations greater than 10 µg/L has decreased; and (3) the extent of the southern VOC plume with concentrations greater than 5 µg/L has decreased significantly. VOCs were also detected in shallow perched ground water in well W-854-10 (screened in the $Tnbs_1$ unit but above the $Tnbs_1/Tnsc_0$ HSU) located in the Building 854 source area during 2008, 2009, 2010, and 2011 at maximum concentrations of 34, 17, 41, and 8.9 µg/L (May 2011), respectively. The long-term total VOC concentrations in ground water at this well exhibit a slightly increasing trend with intermittent decreases. The recent intermittent increases and declines in VOC concentrations roughly correlate with declines and increases in water elevations in excess of 1 ft over a 3 month period suggesting that VOC concentrations in this thin perched water-bearing zone are diluted by intermittent recent recharge events. During the 2011, as in 2010, VOCs were not detected in the sample from well W-854-14, located near Building 858 and screened in a perched zone in the $Tnbs_{1,}$ also above the $Tnbs_1/Tnsc_0$ HSU. During 2011, as in 2010, VOCs were not detected in the sample from the one Qls well, W-850-15, that contained water. The maximum historic VOC (all TCE) vapor concentration within the Building 854 OU was measured in 854-SRC SVTS extraction well W-854-1834 (4.4 $ppm_{v/v,}$ November 2005). The maximum 2011 TCE vapor concentration of 0.42 $ppm_{v/v}$ was measured in a June 2011 sample from this well.

### *2.6.3.2.2. Perchlorate Concentrations and Distribution*

The maximum perchlorate concentrations in $Tnbs_1/Tnsc_0$ HSU ground water are generally decreasing from the historic maximum of 27 µg/L in 2003 to a 2011 maximum of 16.4 µg/L (October). Both the historic and recent maximum perchlorate concentrations were detected in well W-854-1823, located downgradient of the 854-PRX facility.

The distribution of perchlorate in ground water is similar to its extent in 2009-2010. However, this year's perchlorate map (Figure 2.6-4) shows the minimum perchlorate concentration contour interval on Figure 2.6-4 as the 4 µg/L reporting limit, rather than the 6 µg/L MCL cleanup standard as in previous CMRs. During 2011, perchlorate was not detected in ground water samples from any well screened in the Qls HSU or perched $Tnbs_1$ water-bearing zones. In October 2010, 6.1 µg/L of perchlorate was reported in the sample from Qls HSU well W-854-15, but was not detected above the 4 µg/L reporting limit in the first semester 2010 sample or the two 2011 samples. Note that the 2010 Annual Compliance Monitoring Report (Dibley et al., 2011a) erroneously contained the following statement: “During 2010, perchlorate was not detected in ground water samples from any well screened in the Qls or $Tnbs_1$ HSU.”

#### *2.6.3.2.3. Nitrate Concentrations and Distribution*

During 2011, the maximum nitrate concentration in $Tnbs_1/Tnsc_0$ HSU ground water was 50 mg/L (extraction well W-854-02, April). Additionally, during 2011, nitrate was detected above the cleanup standard in the sample from well W-854-14, screened in the perched $Tnbs_1$ water-bearing zone (180 mg/L, June) located near Building 858. The continued presence of elevated nitrate in samples from well W-854-14 could be due to impact from the Building 858 septic system. Geochemical data (nitrogen and oxygen isotopes) collected in the Building 854 OU, including Springs 10 and 11, as part of the Site 300 nitrate MNA study indicated some evidence of *in situ* denitrification in Neroly Formation ground water. The distribution of nitrate in the $Tnbs_1/Tnsc_0$ HSU in the distal area remains low and essentially unchanged since this study was conducted. When last sampled in May 2009, well W-854-05, which is screened in the Qls HSU immediately north of the VOC source area, yielded a nitrate concentration above the 45 mg/L MCL cleanup standard (60 mg/L). Due to an inoperable pump, the annual 2010 and 2011 samples for nitrate were not collected from this well. In 2012, and henceforth, grab sampling will be used to collect all samples from this well. Nitrate was not detected above the cleanup standard in the sample from well W-854-10, which is screened in the perched $Tnbs_1$ water-bearing zone near the VOC source area.

#### *2.6.3.3. Building 854 OU Remediation Optimization Evaluation*

Since the 2006 expansion of the 854-SRC GWTS wellfield, the total volume of extracted ground water and contaminant mass removed has increased significantly. Ground water extraction continues to adequately capture the highest VOC concentrations. Well W-854-2218 can be pumped at a higher sustainable yield and future optimization efforts at 854-SRC will include increased pumping of this extraction well. Increased pumping would add to the total volume of 854-SRC effluent discharged.

Prior to initiating rebound testing last year, VOC concentrations (all TCE) in the October 2010 vapor sample from 854-SRC SVTS well W-854-1834 had declined to 0.035 $ppm_{v/v}$. The maximum historic TCE vapor concentration measured in well W-854-1834 was 4.4 $ppm_{v/v}$ (November 2005). By May 31, 2011, TCE concentrations had rebounded to 0.12 $ppm_{v/v}$, at which time, vapor extraction re-commenced. The maximum 2011 TCE vapor concentration of 0.42 $ppm_{v/v}$ was measured from well W-854-1834 on June 7. At this time, the system was again shut down for further vapor rebound test evaluation. A vapor sample was collected on July 11, 2011 and contained 0.46 $ppm_{v/v}$ of TCE. At that time, vapor extraction again recommenced. The vapor sample collected on October 11, 2012 contained 0.38 $ppm_{v/v}$ of TCE. Vapor extraction will be re-evaluated after analysis of additional quarterly samples. During 2011, the 854-SRC SVTS removed 0.57 kg of VOC vapor mass, compared to 0.80 kg, removed during 2010. The lower mass removed during 2011 is predominantly attributed to the long period of non-operation of the facility earlier in the year. When operating, VOC mass continues to be removed from the source area due to relatively high vapor flow rates. This VOC mass is likely volatilizing from vadose zone sources beneath the Building 854 source area and VOC vapors from the underlying dissolved VOC plume in $Tnbs_1/Tnsc_0$ ground water.

During 2011, the 854-PRX GWTS removed 0.022 kg of VOC mass. In 2010, the GWTS removed 0.019 kg of VOC mass.

During 2011, the 854-DIS GWTS removed 0.0014 kg of VOC mass. In 2010, the GWTS removed 0.0012 kg of VOC mass. The one extraction well at the 854-DIS GWTS (W-854-2139) pumps at a low average rate of approximately 750 gallons per month because the well becomes rapidly dewatered and cannot sustain prolonged pumping.

#### *2.6.3.4. Building 854 OU Remedy Performance Issues*

There were no new issues that affect the performance of the cleanup remedy for the Building 854 OU during this reporting period. The overall remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

## 2.7. Building 832 Canyon OU 7

Building 832 Canyon facilities were used to test the stability of weapons and associated components under various environmental conditions. Contaminants were released from Buildings 830 and 832 through piping leaks and surface spills during testing activities at these buildings.

Three GWTSs and two SVTS are operated in the Building 832 Canyon OU: Building 832-Source (832-SRC), Building 830-Source (830-SRC), and Building 830-Distal South (830-DISS). The 832-SRC and 830-SRC facilities extract and treat both ground water and soil vapor, while the 830-DISS facility extracts and treats ground water only.

A map of Building 832 OU showing the locations of monitor and extraction wells and treatment facilities is presented on Figure 2.7-1.

The 832-SRC GWTS removes VOCs and perchlorate from ground water and the SVTS removes VOCs from soil vapor. The GWTS and SVTS began operation in September and October 1999, respectively. Initially, ground water was extracted from nine wells at a combined total flow rate that initially ranged from 30 to 300 gpd. The total flow eventually dropped to 5 to 50 gpd due to lowering of the water table by pumping. In early 2005, the source area extraction wellfield was reduced to two wells (W-832-12 and W-832-15) operating with vacuum enhancement and a combined flow rate ranging from 60 to 220 gpd. In late 2005, the extraction wellfield was expanded to include three additional downgradient wells (W-832-01, W-832-10, and W-832-11). As a result, the combined flow rate increased to about 1,300 gpd, and VOC concentrations in 832-SRC facility influent increased four-fold. Well W-832-25 was connected to 832-SRC in July 2006. Currently, ground water is extracted from wells W-832-01, W-832-10, W-832-11, W-832-12, W-832-15 and W-832-25 at an approximate combined flow rate of 0.16 gpm. Soil vapor is extracted from wells W-832-12 and W-832-15 at an approximate combined flow rate of approximately 3.0 to 4.4 scfm. The current GWTS configuration includes a Cuno filter for particulate filtration, two ion-exchange resin columns connected in series to remove perchlorate, and three aqueous-phase GAC units (also connected in series) to remove VOCs. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. A positive displacement rotary lobe blower is used to create a vacuum at selected wellheads through a system of piping manifolds. The contaminated vapors are treated using three vapor-phase GAC units connected in series. Treated soil vapors are then discharged to the atmosphere under a permit issued by the San Joaquin Valley Unified Air Pollution Control District.

The 830-SRC GWTS removes VOCs and perchlorate from ground water and the SVTS removes VOCs from soil vapor. The GWTS and SVTS began operation in February and May 2003, respectively. Ground water was extracted from four wells at a total flow rate ranging from 5 to 100 gpd. The 830-SRC extraction wellfield was expanded in 2006; seven GWTS extraction wells (W-830-49, W-830-1829, W-830-2213, W-830-2214, W-830-57, W-830-60, and W-830-2215) were added to the original three (W-830-1807, W-830-19, and W-830-59). The expansion well testing began in 2006. The tests were completed and the expanded wellfield was in full operation during the first semester 2007. During the second semester 2009, both wells W-830-1829 and W-830-2213 were converted back to monitor wells due to lack of water for extraction. In early 2010, the 830-SRC GWTS was modified so that ground water extracted from higher flow extraction wells (W-830-2215, W-830-60, and W-830-57) was routed around the 830-SRC ion-exchange canisters. Perchlorate has not been detected above the reporting limit (4 µg/L) since 2005 in these wells. This bypass is expected to improve the operation of the treatment facility by decreasing backpressure, allowing for increased ground water flow and mass removal rates. Ground water extracted from low-flow $Tnsc_{1a}$ well W-830-2214 still contains perchlorate above the discharge limit; this well does not bypass the perchlorate treatment system. The 830-SRC GWTS is currently extracting ground water at a combined flow rate of approximately 5 to 7 gpm. The GWTS configuration includes a Cuno filter for particulate filtration, two ion-exchange resin columns connected in-series to remove perchlorate, and three in-series aqueous-phase GAC units to remove VOCs. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. The 830-SRC soil vapor extraction wellfield was also expanded to include well W-830-49 in 2006. Soil vapor is extracted from wells W-830-1807 and W-830-49 using a liquid ring vacuum pump at a current combined flow rate of approximately 30 to 33 scfm. The contaminated vapors are treated using three vapor-phase GAC units connected in series. Treated soil vapors are then discharged to the atmosphere under a permit issued by the San Joaquin Valley Unified Air Pollution Control District.

The 830-DISS GWTS began operation in July 2000 removing VOCs, perchlorate, and nitrate from ground water. Approximately 1 gpm of ground water was extracted from three wells (W-830-51, W-830-52, and W-830-53) using natural artesian pressure. The GWTS configuration consisted of a Cuno filter for particulate filtration, two aqueous-phase GAC units in series to remove VOCs, two in-series ion-exchange resin columns to remove perchlorate, and three bioreactor units for nitrate reduction. These units were open-container wetland bioreactors containing microorganisms that use nitrate during cellular respiration. Acetic acid was added to the process stream as a carbon source. Treatment system effluent was discharged via a storm drain that discharges to the Corral Hollow alluvium. At the request of the RWQCB, the facility was modified during the first semester 2007 to cease discharge of treated water to a surface water drainage way. The modification included the addition of a fourth well, W-830-2216, to the extraction wellfield. The GWTS is now extracting ground water at a combined flow rate of approximately 2 to 3 gpm. Currently, extracted ground water flows through ion-exchange canisters to remove perchlorate at the 830-DISS location. The water is piped to the Central GSA GWTS for VOC removal. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses.

### 2.7.1. Building 832 Canyon OU Ground Water and Soil Vapor Extraction and Treatment System Operations and Monitoring

This section is organized into four subsections: facility performance assessment; operations and maintenance issues; compliance summary; and sampling plan evaluation and modifications.

#### *2.7.1.1. Building 832 Canyon OU Facility Performance Assessment*

The monthly ground water and soil vapor discharge volumes, rates, and operational hours for the second semester of 2011 are summarized in Tables 2.7-1 through 2.7-3. The total volume of ground water and vapor extracted and treated and mass removed during 2011 are presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and mass removed are summarized in Table Summ-2. Analytical results for influent and effluent samples collected in the second semester of 2011 are shown in Tables 2.7-4 and 2.7-5. The pH measurement results are presented in Appendix A.

#### *2.7.1.2. Building 832 Canyon OU Operations and Maintenance Issues*

The following maintenance activities and operational issues occurred at the 832-SRC GWTS and SVTS, 830-SRC GWTS and SVTS, and 830-DISS GWTS during the second semester of 2011:

830-SRC GWTS and SVTS

- The power supply was replaced, and the GWTS was restarted on July 7 without wells W-830-49 and W-830-1807. New wire and conduit for the control box for well W-830-49 were installed and the well was restarted on July 18. The SVTS was restarted on July 20, extracting from well W-830-49 only.
- The GWTS and SVTS were shut down from August 29 to September 1 to replace spent granular activated carbon treatment media.
- A small clean water leak detected in the misting tower line was repaired.
- The pump in extraction well W-830-2214 was changed and restarted on October 18. The pump in extraction well W-830-49 failed on October 18 and was repaired and restarted on November 9. The pump in extraction well W-830-19 failed on October 31 and was replaced on November 22. The pump in extraction well W-830-57 was replaced on December 8 but remained off to protect against damage from freezing temperatures.
- Extraction wells W-830-19, W-830-57, W-830-59, and W-830-2214 were secured on November 29 for the remainder of the reporting period to protect against damage caused by freezing temperatures.
- The GWTS and SVTS shut down December 18 due to a site-wide power outage and were restarted on December 19.

832-SRC GWTS and SVTS

- The GWTS and SVTS were shut down on July 7 due to a leaking GAC canister. All aqueous-phase GAC canisters were changed and the systems were restarted on July 18.
- Extraction wells W-832-01, W-832-10, W-832-11, and W-832-25 were secured on November 29 for the remainder of the reporting period to protect against damage caused by freezing temperatures.
- The GWTS and SVTS shutdown December 18 due to a site-wide power outage and were restarted on December 19.

830-DISS GWTS

- The GWTS was offline from July 8 to July 18 due to a problem with the Central GSA GWTS compressor.
- The nitrate ion-exchange resin was changed on September 29.
- The GWTS was shut down on November 28 for the remainder of the reporting period due to discharge issues at the Central GSA GWTS.

#### *2.7.1.3. Building 832 Canyon OU Compliance Summary*

The 830-SRC, 832-SRC, and 830-DISS GWTSs operated in compliance with RWQCB Substantive Requirements during the reporting period. The 830-SRC SVTS operated in compliance with the San Joaquin Valley Unified Air Pollution Control District permit limitations.

#### *2.7.1.4. Building 832 Canyon OU Facility Sampling Plan Evaluation and Modifications*

The Building 832 Canyon OU treatment facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.7-6.

The only modifications made to the plan during this reporting period included no compliance monitoring samples were collected in December from the 830-DISS facility due to the shutdown of this system when the CGSA GWTS became inoperable on November 28, 2011.

#### *2.7.1.5. Building 832 Canyon OU Treatment Facility and Extraction Wellfield Modifications*

No treatment facility or wellfield modifications were made to any of the OU 7 GWTSs or SVTSs during this reporting period.

### 2.7.2. Building 832 Canyon OU Ground Water Monitoring

The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.7-7. This table explains deviations from the sampling plan and indicates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; forty-four required analyses were not performed because there was insufficient water in the wells to collect the samples, three required analyses were not performed because the artesian well was not flowing at the time of sampling, and seventeen required analyses were not performed due to inoperable pumps.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

Ground water elevations and flow directions for the Qal/WBR and $Tnsc_{1a}$ HSUs are presented on Figures 2.7-2 and 2.7-4, respectively. Ground water elevation contour maps for the $Tnsc_{1b}$ and Upper $Tnbs_1$ HSUs are presented on Figures 2.7-3 and 2.7-5, respectively.

### 2.7.3. Building 832 Canyon OU Remediation Progress Analysis

This section is organized into four subsections: mass removal; contaminant concentrations and distribution; remediation optimization evaluation; and performance issues.

#### *2.7.3.1. Building 832 Canyon OU Mass Removal*

The monthly ground water and soil vapor mass removal estimates for the second semester of 2011 are summarized in Tables 2.7-8 through 2.7-10. The total masses removed during 2011 and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

#### *2.7.3.2. Building 832 Canyon OU Contaminant Concentrations and Distribution*

At the Building 832 Canyon OU, VOCs (mainly TCE) are the primary COCs detected in ground water, although cis-1,2-DCE is a COC at Buildings 830 and 832 and chloroform and PCE are COCs at Building 830. Perchlorate and nitrate are the secondary COCs. These constituents have been identified primarily in the Qal/WBR, $Tnsc_{1b}$ and $Tnsc_{1a}$ HSUs. VOCs have also been detected at low concentrations in Building 832 Canyon in the $Tnbs_2$ and Upper $Tnbs_1$ HSUs.

Total VOC isoconcentration data are posted for the Qal/WBR and $Tnsc_{1a}$ HSUs and contoured for the $Tnsc_{1b}$ and Upper $Tnbs_1$ HSUs, on Figures 2.7-6, 2.7-8, 2.7-7, and 2.7-9, respectively. Hydraulic capture zones are depicted on the $Tnsc_{1b}$ and Upper $Tnbs_1$ HSU ground water potentiometric surface and total VOC maps. Concentration maps for the secondary COCs are presented on Figures 2.7-10 through 2.7-15. Concentration data are posted for perchlorate in the Qal/WBR, and $Tnsc_{1a}$ HSUs; and for nitrate in the Qal/WBR, $Tnsc_{1b}$, and $Tnsc_{1a}$ HSUs. Perchlorate concentration data is contoured for the $Tnsc_{1b}$ HSU.

### *2.7.3.2.1. VOC Concentrations and Distribution*

Historically, ground water samples from wells located in the Building 830 source area have contained the highest VOC concentrations in the Qal/WBR HSU. VOC concentrations in Qal/WBR HSU ground water near 830-SRC have decreased by an order-of-magnitude from a historic maximum of 10,000 µg/L (well SVI-830-035) in 2003 to a 2011 maximum concentration of 1,100 µg/L (well SVI-830-035, August). VOCs detected in Building 830 area ground water consist primarily of TCE. Other VOCs including PCE, cis-1,2-DCE, trans-1,2-DCE (1 well), 1,2-DCA, chloroform, and 1,1,2-TCA (1 well) were also detected at concentrations above the reporting limit, but only trans-1,2-DCE was detected at concentrations above its MCL.

VOC concentrations detected in soil vapor continue to decline in the 830-SRC area. VOC concentrations collected from dual extraction well W-830-1807 have decreased from a historic maximum concentration of 35 parts per million on a volume per volume basis ($ppm_{v/v}$) in January 2004 to a 2011 maximum concentration of 0.43 $ppm_{v/v}$ (October). This well is screened across both the Qal/WBR and $Tnsc_{1b}$ HSUs. VOC concentrations detected in soil vapor collected from dual extraction well W-830-49 have decreased from a historic maximum concentration of 259 $ppm_{v/v}$ in April 2007 to a 2011 maximum concentration of 14.03 $ppm_{v/v}$. This well is screened in the $Tnsc_{1b}$ HSU.

Since remediation began in 1999, in the Building 832 source area VOC concentrations in wells screened in the Qal/WBR HSU have decreased from a historic maximum of 1,800 µg/L (well W-832-18) in 1998 to a 2011 maximum concentration of 130 µg/L (well W-832-18, March). Ground water samples for VOC analyses were not collected during 2011 from a few wells completed in the Qal/WBR and $Tnsc_{1b}$ HSUs because the water table dropped below the screened intervals. VOCs detected in Building 832 area ground water consist primarily of TCE. Cis-1,2-DCE, chloroform, and Freon 11 were also detected at concentrations above the reporting limit, but these VOCs concentrations were all below their MCLs. During 2011, chloroethane (1 well) and methylene chloride (1 well) were also detected above the reporting limits in the Building 832 source area.

VOC concentrations detected in soil vapor are also declining in the 832-SRC area. VOC concentrations collected from extraction well W-832-12 have decreased from a historic maximum concentration of 1.1 $ppm_{v/v}$ in November 2008 to a 2011 maximum concentration of 0.22 $ppm_{v/v}$ (October). VOC concentrations detected in soil vapor samples collected from extraction well W-832-15 have decreased from a historic maximum concentration of 1.8 $ppm_{v/v}$ in September 2001 to a 2011 maximum concentration of 0.28 $ppm_{v/v}$ (October). Both dual extraction wells are screened in the $Tnsc_{1b}$ HSU.

VOC concentrations in ground water samples taken from Qal/WBR HSU guard wells W-35B-01 and W-880-02 located south of Building 832 Canyon near the Site 300 southern boundary were both below reporting limits (<0.5 µg/L). VOC concentrations in these wells have decreased from a historic maximum of 1.9 µg/L (well W-35B-01) in 2001.

Since remediation began in 2000 in the Building 830 source area, VOC concentrations in ground water in the $Tnsc_{1b}$ HSU have decreased from a historic maximum of 13,000 µg/L (well W-830-49) in 2003 to a 2011 maximum of 3,800 µg/L (well W-830-19, October). Although remediation efforts in the $Tnsc_{1b}$ HSU have been effective in decreasing the areas of highest concentrations, the overall extent of VOCs in this HSU has not changed significantly over the past several years due to limited recharge and low ground water yields.

At the 830-DISS treatment facility, VOC concentrations in $Tnsc_{1b}$ HSU artesian wells W-830-51, W-830-52 and W-830-53, have decreased from a historic maximum of 170 µg/L in 2002 to a 2011 maximum concentration of 31 µg/L (well W-830-53, January). Farther south along Building 832 Canyon, the leading edge of the $Tnsc_{1b}$ VOC plume continues to be contained within Site 300 boundary based on total VOC concentrations below the 0.5 µg/L reporting limit in guard wells W-830-1730 and W-4C.

Since remediation of the $Tnsc_{1a}$ HSU began in early 2007, VOC concentrations in ground water have decreased from a historic maximum of 1,700 µg/L (well W-830-27, 1998) to a first semester 2011 maximum concentration of 950 µg/L (well W-830-2214, April). Monitor well W-830-2311was installed in 2007 to evaluate the downgradient extent of VOCs in the $Tnsc_{1a}$ HSU. This well is located near Spring 3 and had a total VOC concentration of 27 µg/L when sampled in September 2011. A new $Tnsc_{1a}$ guard well, W-830-2610, was completed in June 2010. This well will be added to the sampling plan after final well development and baseline sampling are completed.

Since remediation began in the Upper $Tnbs_1$ HSU, VOC concentrations in ground water have decreased from a historic maximum of 100 µg/L (well W-830-28, June 1998) to a 2011 maximum concentration of 25 µg/L (well W-830-2215, April). During 2011, VOCs were not detected above the 0.5 µg/L reporting limit, in guard wells W-830-15 and W-832-2112. Both wells are screened in the Upper $Tnbs_1$ HSU.

#### *2.7.3.2.2. HE Compound Concentrations and Distribution*

During 2011, HE compounds were not detected in ground water in any Building 832 Canyon OU wells.

#### *2.7.3.2.3. Perchlorate Concentrations and Distribution*

Perchlorate concentrations detected in Qal/WBR HSU ground water have decreased from a historic maximum of 51 µg/L (well W-830-34, December 1998) to a 2011 maximum concentration of 14 µg/L (well W-832-18, March). The maximum perchlorate concentration detected in ground water from monitor well W-832-23 during 2011 was 9.6 µg/L (March). Monitor well W-832-23, located slightly downgradient of the Building 832 source area, is used to monitor contaminant concentrations in both the Qal/WBR and $Tnsc_{1b}$ HSUs because the well is screened across both units. During 2011, perchlorate was not detected above the 4 µg/L reporting limit in Qal/WBR HSU guard wells W-35B-01 and W-880-02.

The maximum perchlorate concentration sampled in the $Tnsc_{1b}$ HSU ground water during 2011 was 14 µg/L (W-832-18, March). Historically, well W-830-58 has contained the highest perchlorate ground water concentration in this HSU (26 µg/L, May 2001). In February 2011, the perchlorate concentration in ground water at monitor well W-830-58 was 8.6 µg/L. During 2011, perchlorate was not detected above the reporting limit in $Tnsc_{1b}$ HSU guard wells W-830-1730, W-4C or W-880-03.

During 2011, the maximum perchlorate ground water concentration sampled in the $Tnsc_{1a}$ HSU was 8.1 µg/L in extraction well W-832-25 (February). The highest historic perchlorate concentration sampled in the $Tnsc_{1a}$ HSU was 13 µg/L (W-832-25, February 1999).

During 2011, perchlorate was not detected above the reporting limit of 4 µg/L in any ground water samples collected from the Upper $Tnbs_1$ HSU.

#### *2.7.3.2.4. Nitrate Concentrations and Distribution*

Nitrate ground water concentrations continue to remain high in the vicinity of the Building 832 and 830 source areas and low or below the reporting limit (<0.5 mg/L) in the downgradient, deeper parts of all Building 832 Canyon HSUs.

During 2011, nitrate ground water concentrations detected in samples from the Qal/WBR HSU ranged from the <0.5 mg/L reporting limit (guard wells) near the site boundary to 120 mg/L (well W-832-13, March) in the Building 832 source area.

The maximum nitrate concentrations detected in samples of $Tnsc_{1b}$ HSU ground water during 2011 was 160 mg/L in dual extraction well W-830-49 (February). Historically, well W-830-49 has contained the highest nitrate concentrations in the $Tnsc_{1b}$ HSU (501 mg/L, June 1998). Nitrate concentrations in the $Tnsc_{1b}$ guard wells during 2011 ranged from <0.5 mg/L to 1.9 mg/L (well W-830-1730, March), significantly below the 45 mg/L MCL cleanup standard.

During 2011, the maximum nitrate ground water concentration detected in samples from the $Tnsc_{1a}$ HSU was 92 mg/L (well W-832-25, March). Nitrate ground water concentrations detected in samples from the Upper $Tnbs_1$ ranged from <0.5 mg/L to 28 mg/L (W-26R-01, January). Nitrate ground water concentrations were not detected above the 45 mg/L MCL cleanup standard in any Upper $Tnbs_1$ HSU guard wells during 2011. The very low nitrate concentrations in the downgradient areas and the absence of detectable nitrate in the southern site boundary guard wells are consistent with the interpretation that nitrate is naturally attenuating *in situ*.

#### *2.7.3.3. Building 832 Canyon OU Remediation Optimization Evaluation*

Ground water and soil vapor extraction wellfield operation continued during 2011 to prevent offsite plume migration, reduce source area concentrations, and remove contaminant mass. The expanded 832-SRC and 830-SRC extraction wellfields have increased hydraulic capture, while preventing the downward migration of contaminants into deeper HSUs and/or laterally toward the site boundary and Site 300 water-supply wells, Well 18 and Well 20. Ground water yield from many 830-SRC and 832-SRC extraction wells continues to be low and hydraulic capture is difficult to assess because these wells cannot maintain continuous operation. The low yield is due to a combination of low hydraulic conductivity geologic materials, dewatering, and limited recharge.

As documented in Section 2.7.1.2, the 832-SRC GWTS and SVTS were offline during early 2011 to replace a knockout drum and because of damage caused by freezing temperatures. Long-term mass removal rates will not be impacted by this shutdown and both facilities were back online by April 2011. At the 830-SRC, a modification was made in early 2010 to allow Upper $Tnbs_1$ HSU extraction wells that do not contain perchlorate concentrations above the 4 µg/L reporting limit (W-830-60, W-830-2215 and W-830-57 wells) to bypass the ion-exchange treatment system. This modification decreased backpressure, allowing the extraction well pumps to operate more effectively.

In the Qal/WBR and $Tnsc_{1b}$ HSUs, the extraction wellfield targets the highest VOC plume concentrations emanating from the Building 832 and Building 830 source areas, but steep terrain and unstable canyon bottom soil conditions limit the availability of sites for new wells. Ground water extraction is further constrained by limited recharge and declining water levels in both source areas. At the 830-SRC, some $Tnsc_{1b}$ HSU extraction wells were offline for part of the reporting period due to treatment facility improvements, pump repairs, and freeze protection. No long-term impact is expected as a result of these shutdowns. At both the 832-SRC and 830-SRC areas, dual extraction wells are an important source of mass removal. At 832-SRC during 2011, 38 g of total VOCs were removed by the GWTS and 26 g were removed by the SVTS. At 830-SRC during 2011, 1,100 g of total VOCs were removed by the GWTS and 680 g were removed by the SVTS. At 830-DISS during 2011, 110 g of VOCs were removed by the GWTS. Nitrate and perchlorate were also removed by the 832-SRC and 830-SRC treatment facilities.

The $Tnsc_{1a}$ extraction wellfield currently consists of two wells: W-830-2214, located near the 830-SRC and W-832-25, located downgradient of 832-SRC in the distal area of this plume. Active remediation of the $Tnsc_{1a}$ HSU began in 2007 and during the time this HSU has been under remediation, total VOC ground water concentrations have remained relatively stable. Water levels continue to decline in both the 830-SRC and 832-SRC areas, limiting continuous extraction from the $Tnsc_{1b}$ and $Tnsc_{1a}$ HSUs. During 2010, one new guard well, W-830-2610, was installed in the $Tnsc_{1a}$ HSU. This well is located near the site boundary and will be added to the sampling and analysis plan after final well development and baseline sampling are completed.

During 2011, a new $Tnsc_{1a}$ monitor well (W-830-2701) was installed near Upper $Tnbs_1$ HSU extraction well W-830-60. This well will be evaluated to determine if it would be an effective extraction well to increase hydraulic capture in the $Tnsc_{1a}$ HSU downgradient of extraction well W-830-2214. VOC concentrations detected in this well ranged from 4.3 to 11 µg/L. Perchlorate concentrations were below the reporting limit of 4 µg/L and nitrate concentrations were significantly below the 45 mg/L MCL cleanup standard. Per the recommendations of the Five-Year Review (Helmig et. al., 2011), this well may be connected the 830-SRC treatment facility depending on concentration trends.

Extraction wells in the Upper $Tnbs_1$ target areas with the highest total VOC concentrations. Since remediation began in this HSU, the overall extent of total VOCs has also decreased significantly and ground water samples collected from monitor well W-830-1832, which is located on the leading edge of the VOC plume, have been below the reporting limit for two years. Ground water in Upper $Tnbs_1$ guard wells, located downgradient of well W-830-1832 and upgradient of water-supply Well 20, continues to show analytical results below the 45 mg/L cleanup standard for nitrate and below the reporting limits for all other COCs.

As described in Section 2.4 (High Explosives Process Area), well W-830-2216 extracts ground water from the $Tnbs_2$ HSU. The contamination near this well is due to a combination of sources located both in the HEPA and the Building 832 Canyon OUs. Since extraction began in 2007, total VOC concentrations in extraction well W-830-2216 and nearby monitor well W-830-13 have decreased significantly. The extracted water is treated at the 830-DISS treatment facility.

As extraction proceeds from the 832-SRC, 830-SRC and 830-DISS extraction wells, it is expected that concentrations in all Building 832 Canyon HSUs will continue to decline. Over the past year, the extent of the VOC plume in the Upper $Tnbs_1$ HSU has decreased slightly and this trend is expected to persist with continued pumping. VOC concentration trends in the Upper $Tnbs_1$ HSU continue to be monitored closely because pumping at water-supply Well 20 and backup water supply Well 18 has the potential to influence the distribution of contaminants. After Site 300 begins using the Hetch-Hetchy reservoir as its main water supply, Well 20 will become a backup water-supply well and Well 18 will no longer be used.

#### *2.7.3.4. Building 832 Canyon OU Remedy Performance Issues*

No new issues were identified during this reporting period that could impact the long-term performance of the cleanup remedy for the Building 832 Canyon OU. The remedy continues to make progress toward cleanup and to be protective of human health and of the environment.

## 2.8. Site 300 Site-Wide OU 8

The Site 300 Site-Wide OU is comprised of release sites at which no significant impacts to ground water and no unacceptable risk to human health or the environment are present. For this reason, a monitoring-only interim remedy was selected for the release sites in the Site-Wide Record of Decision (U.S. DOE, 2008). The monitoring conducted during the reporting period for these release sites is discussed below.

### 2.8.1. Building 801 and Pit 8 Landfill

The Building 801 Firing Table was used for explosives testing until it was discontinued in 1998, and the firing table gravel and some underlying soil were removed. Waste fluid discharges to the Building 801 Dry Well from the late 1950s to 1984, resulted in contamination of the soil and ground water. Debris from the firing table was buried in the nearby Pit 8 Landfill until 1974. A map of the

Building 801 and Pit 8 Landfill area showing the locations of the building, landfill, and monitor wells is presented on Figure 2.8-1.

#### *2.8.1.1. Building 801 and Pit 8 Landfill Ground Water Monitoring*

Wells K8-01, -02B, -03B, -04, and -05 monitor Building 801 ground water contaminants that were released from the Building 801 dry well. Wells K8-02B, K8-04, and K8-05 are also used as monitor wells to detect any releases from the Pit 8 Landfill. Detection monitoring of this landfill, which is discussed in Section 3.2, is conducted to determine if releases have occurred.

The sampling and analysis plan for ground water monitoring is presented in Table 2.8-1. This table delineates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; nine required analyses were not performed because there was insufficient water in well K8-05 to collect the samples and four required analyses were not performed due to an inoperable pump in K8-02.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

Ground water elevations and the approximate hydraulic gradient direction are posted for the $Tnbs_1/Tnbs_0$ HSU on Figure 2.8-1.

#### *2.8.1.2. Building 801 and Pit 8 Landfill Contaminant Concentrations and Distribution*

At Building 801, the VOCs chloroform, 1,2-DCA, and TCE are the primary COCs detected in ground water; perchlorate and nitrate are the secondary COCs. There are no COCs in ground water at the Pit 8 Landfill. The results of the detection monitoring of the Pit 8 Landfill are discussed in Section 3.2. For 2011, perchlorate, nitrate, and total VOC data for the $Tnbs_1/Tnbs_0$ HSU are posted on Figure 2.8-1.

In the Building 801/Pit 8 Landfill area, VOC concentrations have decreased from a historical maximum of 10 µg/L (well K8-01, 1990) to a 2011 maximum of 4.9 µg/L in the same well. The VOCs detected in well K8-01 in 2011 were comprised of 3.3 µg/L of TCE and 1.6 µg/L of 1,2-DCA. The concentrations of TCE detected in Building 801/Pit 8 Landfill monitor wells in 2011 (K8-01 [3.3 µg/L], K8-02B [1.4 µg/L], and K8-04 [1.3 µg/L]) were all below the 5 µg/L TCE MCL cleanup standard. The concentrations of 1,2-DCA detected in Building 801/Pit 8 Landfill monitor wells in 2011 (K8-01 [1.6 µg/L] and K8-04 [0.7 µg/L]) were slightly above its 0.5 µg/L MCL cleanup standard. No other VOCs were detected in Building 801/Pit 8 Landfill area above analytical reporting limits. In 2011, TCE concentrations in all wells were below the 5 µg/L MCL cleanup standard.

The 2011 maximum concentration of 1,2-DCA (1.6 µg/L) measured in well K8-01 ground water represents a decrease from the historic maximum 1,2-DCA concentration of 5 µg/L detected in this well in 1990.During 2011, perchlorate was not detected above the 4 µg/L reporting limit in ground water samples from any Building 801/Pit 8 monitor wells.

Nitrate concentrations in ground water in the vicinity of Building 801/Pit 8 Landfill have been relatively stable over time. In 2011, the maximum nitrate concentration detected in a ground water sample from a well in the Building 801/Pit 8 Landfill area was 57 mg/L (well K8-04, May). The sample from well K8-04 and the duplicate sample from well K8-01 (47 mg/L, May) were the only samples that exceeded the 45 mg/L MCL cleanup standard for nitrate. The historic maximum nitrate concentration of 64 mg/L was detected in samples collected from well K8-01 in 2002. Overall, nitrate concentrations in ground water at the Building 801/Pit 8 Landfill are generally similar to previous years.

Nitrate and 1,2-DCA are the only COCs remaining above their MCL cleanup standards at Building 801.

### 2.8.2. Building 833

TCE was used as a heat-exchange fluid at Building 833 from 1959 to 1982 and was released through spills and rinse water disposal, resulting in TCE-contamination of soil and shallow perched ground water. A map showing the locations of the building and monitor wells is presented on Figure 2.8-2.

#### *2.8.2.1. Building 833 Ground Water Monitoring*

The sampling and analysis plan for ground water monitoring is presented in Table 2.8-2. This table delineates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; ten required analyses were not performed because there was insufficient water in the wells to collect the samples.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

Ground water elevations are posted for the Tpsg HSU on Figure 2.8-2.

#### *2.8.2.2. Building 833 Contaminant Concentrations and Distribution*

At Building 833, the VOCs TCE and cis-1,2-DCE are the primary COCs in ground water; there are no secondary COCs. Total VOC concentrations are posted in the Tpsg HSU are presented on Figure 2.8-2.

The Tpsg HSU is a shallow, highly ephemeral perched water-bearing zone. During heavy rainfall events, this HSU may become saturated, but quarterly monitoring of the wells from 1993 to present has shown little evidence of saturation. When saturated, monitoring conducted from 1993 to present has shown a decline in VOC concentrations in Tpsg HSU ground water from a historic maximum concentration of 2,100 µg/L in 1992 (well W-833-03). During 2011, well W-833-33, screened in the Tpsg HSU, yielded a sample containing a VOC concentration of 150 µg/L (February) that was comprised entirely of TCE. Last year, this well yielded a sample containing a VOC concentration of 110 µg/L (February 2010) that also consisted entirely of TCE. During 2011, VOCs were not detected in ground water samples collected from deep $Tnbs_1$ HSU monitor well W-833-30 (February and March), indicating that VOC contamination continues to be confined to the shallow Tpsg perched water-bearing zone.

TCE is the only COC remaining above MCL cleanup standards at Building 833.

### 2.8.3. Building 845 Firing Table and Pit 9 Landfill

The Building 845 Firing Table was used from 1958 until 1963 to conduct explosives experiments. Leaching from Building 845 Firing Table debris resulted in minor contamination of subsurface soil with depleted uranium and HMX detected in samples collected from boreholes drilled in 1989. A map showing the locations of the building, landfill, and monitor wells, are presented on Figure 2.8-3.

#### *2.8.3.1. Building 845 and Pit 9 Landfill Ground Water Monitoring*

No ground water COCs were identified for the Building 845/Pit 9 Landfill area. Wells K9-01 through K9-04 monitor ground water in the Building 845 and Pit 9 Landfill area to:

- Detect any future releases from the Pit 9 Landfill, and

- Detect any impacts to ground water from HMX and uranium in subsurface soil and rock.

These monitor wells are screened in the lower Neroly Formation $Tnsc_0$ HSU. Detection monitoring of the Pit 9 Landfill is discussed in Section 3.3.

The sampling and analysis plan for ground water monitoring is presented in Table 2.8-3. This table delineates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; nine required analyses were not performed due to an inoperable pump in well K9-04.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

Ground water elevations and the approximate hydraulic gradient direction are posted for the $Tnbs_1/Tnbs_0$ HSU on Figure-2.8-3.

#### *2.8.3.2. Building 845 and Pit 9 Landfill Contaminant Concentrations and Distribution*

There are no ground water COCs at the Building 845 and the Pit 9 Landfill. The detection monitoring constituents: VOCs, nitrate, tritium, perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride concentrations/activities in samples collected during 2011 were either below reporting limits or within the range of background concentrations. Because uranium and the HE compound HMX were identified as COCs in subsurface soil at Building 845/Pit 9 Landfill, ground water in this area is monitored for these constituents and the analytical results are posted on Figure 2.8-3. HMX concentrations in ground water samples remain below the 1 µg/L reporting limit. Uranium activities in ground water samples remain very low (<1 pCi/L) and $^{235}U/^{238}U$ atom ratios indicate the presence of only natural uranium. These data indicate that there have been no releases from the Pit 8 Landfill or impacts to ground water from HMX and uranium in subsurface soil.

### 2.8.4. Building 851 Firing Table

The Building 851 Firing Table has been used since 1962 to conduct explosives experiments. A map depicting the locations of the firing table and monitor wells is presented on Figure 2.8-4.

#### *2.8.4.1. Building 851 Ground Water Monitoring*

The sampling and analysis plan for ground water monitoring is presented in Table 2.8-4. This table delineates any additions made to the CMP.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

#### *2.8.4.2. Building 851 Contaminant Concentrations and Distribution*

At the Building 851 Firing Table, uranium is the primary and only COC detected in ground water. Total uranium and $^{235}U/^{238}U$ atom ratio data for the Tmss HSU are posted on Figure 2.8-4.

Uranium activities in ground water in the Building 851 Firing Table area have always been well below the 20 pCi/L MCL cleanup standard for total uranium and within the range of background levels, However, ground water is monitored to detect any impacts to ground water from uranium in subsurface soil and rock. The 2011 maximum total uranium activity detected in ground water samples from wells in the Building 851 area was 0.42 pCi/L (well W-851-08, May). The historic maximum uranium activity was 3.2 pCi/L (well W-851-07, October 1991). The atom ratio of $^{235}U/^{238}U$ in samples from wells W-851-06 and W-851-08 indicated the addition of some depleted uranium. The samples from wells W-851-05 and W-851-07 contained only natural uranium. Due to the low mass of $^{235}U$ in the sample (less than reporting limit) for W-851-05, the reporting limit was used as the numerator in the $^{235}U/^{238}U$ ratio calculation, resulting in an atom ratio (<0.0088) that includes the range of atom ratios including that of enriched uranium. In reality, the uranium is wholly natural in this sample. Overall, uranium activities in ground water are similar to previous years and remain well below the 20 pCi/L cleanup standard and within the range of natural background levels.

# 3. Detection Monitoring, Inspection, and Maintenance Program for the Pits 2, 3, 4, 5, 7, 8, and 9 Landfills and Inspection and Maintenance Program for the Drainage Diversion System and Building 850 CAMU

The Detection Monitoring Program is designed to detect any future releases of contaminants from the Pit 2, 3, 4, 5, 7, 8, and 9 Landfills. This section presents the results for ground water detection monitoring of these landfills, and any landfill inspections or maintenance conducted during the reporting period. This section also includes any inspection and maintenance activities conducted for the Pit 7 Drainage Diversion System and Building 850 CAMU during the reporting period.

## 3.1. Pit 2 Landfill

The Pit 2 Landfill was used from 1956 until 1960 to dispose of firing table debris from Buildings 801 and 802. Ground water data indicate that a past discharge of potable water to support a red-legged frog habitat located upgradient from the landfill may have leached depleted uranium from the buried waste. The frogs were relocated and the water discharge was discontinued, thereby removing the leaching mechanism. No contaminants were identified in surface or subsurface soil at the Pit 2 Landfill. No risk to human or ecological receptors has been identified at the Pit 2 Landfill.

### 3.1.1. Sampling and Analysis Plan Modifications

Detection monitoring is conducted annually for VOCs, nitrate, tritium, perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride.

The sampling and analysis plan for the Pit 2 Landfill ground water Detection Monitoring Program is presented in Table 3.1-1.

During the reporting period ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; eighteen required analyses were not performed because there was insufficient water in the wells to collect the samples and twelve required analyses were not performed due to unsafe conditions at well K2-01C. There were no modifications made to the plan.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

### 3.1.2. Contaminant Detection Monitoring Results

A map showing the locations of monitor wells and the Pit 2 Landfill is presented on Figure 2.5-1. Depth to ground water within the $Tnbs_1/Tnbs_0$ HSU beneath the Pit 2 Landfill currently ranges from over 50 ft to over 70 ft.

The 2011 (May) ground water samples from wells W-PIT2-2301 and W-PIT2-2302, screened in the Qal/WBR HSU and located in Elk Ravine downgradient from Pit 2 Landfill, did not contain tritium above the reporting limit/background activity (100 pCi/L). The maximum 2011 tritium activity within the $Tnbs_1/Tnbs_0$ HSU in the area immediately south of the Pit 2 Landfill was 4,460 ± 885 pCi/L (well NC2-08, October). The historic maximum tritium activity of 49,100 pCi/L was detected in 1986 (January and August) from well K2-01C. These data indicate that tritium activities in $Tnbs_1/Tnbs_0$ HSU ground water immediately downgradient of the landfill are decreasing and are currently a fraction of the historic maximum.

Uranium isotope data from ground water samples collected from Qal/WBR wells W-PIT2-2301 and W-PIT2-2302 in 2011 (May) contained low activities of total uranium (1.3 and 0.16 pCi/L, respectively). The maximum 2011 uranium activity detected in a ground water sample from the Pit 2 area was 4.5 pCi/L (well W-PIT2-1934). This well is completed in the $Tnbs_1/Tnbs_0$ HSU. The release of depleted uranium from Pit 2 may have been the result of the discharge of potable water that was used to maintain a wetland habitat for red-legged frogs (a Federally-listed endangered species) within a drainage channel that extends along the northern and eastern margin of the Pit 2 Landfill. This discharge was discontinued in 2005. Since the discharge was discontinued, total uranium activities in ground water from $Tnbs_1/Tnbs_0$ HSU wells W-PIT2-1934 and W-PIT2-1935, both located along the northern margin of the Pit 2 Landfill, have decreased. The samples collected from wells W-PIT2-1934 (above) and W-PIT2-1935 during 2011 and analyzed by mass spectrometry contained only natural uranium at 4.5 and 1.8 pCi/L, respectively (May). Samples collected from these wells and analyzed by alpha spectrometry contained 4.6 and 1.7 pCi/L of uranium, respectively.

During 2011, perchlorate was not detected above the 4 µg/L reporting limit in any Pit 2 area ground water samples. The other detection monitoring constituents: VOCs, nitrate, HE compounds, Title 26 metals, lithium, and fluoride concentrations/activities in samples collected during 2011 were either below reporting limits or within the range of background concentrations.

#### 3.1.3. Landfill Inspection Results

The Pit 2 Landfill was inspected during the first and second semesters of 2011. No problems were identified.

#### 3.1.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring was conducted during the second semester of 2011. No evidence of subsidence was detected.

#### 3.1.5. Maintenance

No maintenance was necessary or conducted on Pit 2 during 2011.

### 3.2. Pit 8 Landfill

Pit 8 Landfill received debris from the Building 801 Firing Table until 1974, when it was covered with compacted soil. There is no evidence of contaminant releases from the landfill.

#### 3.2.1. Sampling and Analysis Plan Modifications

Detection monitoring is conducted annually for VOCs, nitrate, tritium, perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride.

The sampling and analysis plan for the Pit 8 Landfill ground water Detection Monitoring Program is presented in Table 2.8-1.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; nine required analyses were performed because there was insufficient water in well K8-05 to collect the samples and four required analyses were performed due to an inoperable pumps in K8-02.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

### 3.2.2. Contaminant Detection Monitoring Results

Locations of buildings and monitor wells, ground water elevations, and nitrate, perchlorate, and total VOC concentrations in $Tnbs_1/Tnbs_0$ HSU ground water at Pit 8 are presented on Figure 2.8-1. Historic and current data indicate that VOCs detected in ground water in the Pit 8 Landfill area are the result of releases from the former Building 801 dry well, which have migrated downgradient from Building 801 to the area beneath the landfill. The highest concentration (5.6 µg/L) of VOCs, comprised of 3.8 µg/L of TCE and 1.8 µg/L of 1,2-DCA, in 2011 (May) continues to be observed at well K8-01, located immediately upgradient of Pit 8. The presence of VOCs (1.3 µg/L of TCE and 0.7 µg/L of 1,2-DCA) in ground water samples from well K8-04, immediately downgradient of the Pit 8 Landfill (2 µg/L, May) appears to be indicative of a continuation of the VOC plume originating at the Building 801 dry well and not due to a release from the Pit 8 Landfill.

The maximum 2011 nitrate concentration detected in a ground water sample from a well in the Pit 8 Landfill area was 57 mg/L (well K8-04, May). A duplicate sample from well K8-01 (47 mg/L, May) was the only other sample from the Pit 8 area that exceeded the 45 mg/L cleanup standard for nitrate.

Tritium activities in all samples collected from wells in the Pit 8 Landfill area during 2011 were below the reporting limit (<100 pCi/L), except for the regular and duplicate June and single October samples from well K8-01 (144 ± 60.0, 104 ± 75.3, and 155 ± 94.1 pCi/L, respectively). These activities are all within the range of background.

The other detection monitoring constituents: perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride concentrations/activities in samples collected during 2011 from wells upgradient and downgradient of the Pit 8 Landfill were either below reporting limits or within the range of background concentrations.

Of the constituents monitored during the first semester 2011 as part of the Detection Monitoring Program in $Tnbs_1/Tnbs_0$ HSU ground water from Pit 8 Landfill area wells, only 1,2-DCA and nitrate exceeded applicable cleanup standards.

### 3.2.3. Landfill Inspection Results

The Pit 8 Landfill was inspected during the first and second semesters of 2011. No problems were reported.

### 3.2.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring was conducted during the second semester of 2011. No evidence of subsidence was detected.

### 3.2.5. Maintenance

No maintenance was conducted at Pit 8 during 2011.

## 3.3. Pit 9 Landfill

Debris generated at the Building 845 Firing Table was buried in the Pit 9 Landfill from 1958 until 1963. There has been no evidence of contaminant releases from the Pit 9 Landfill.

### 3.3.1. Sampling and Analysis Plan Modifications

Detection monitoring is conducted annually for VOCs, nitrate, tritium, perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride.

The sampling and analysis plan for the Pit 9 Landfill ground water Detection Monitoring Program is presented in Table 2.8-3.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; nine required analyses were not performed due to an inoperable pump.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

### 3.3.2. Contaminant Detection Monitoring Results

A map showing the locations of the building, landfill, and monitoring wells are presented on Figure 2.8-3. The detection monitoring constituents: VOCs, nitrate, tritium, perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride concentrations/activities in samples collected during 2011 were either below reporting limits or within the range of background concentrations.

### 3.3.3. Landfill Inspection Results

The Pit 9 Landfill was inspected during the first and second semesters of 2011. Several cracks and about 8 holes greater than 6 inches in diameter were observed in the cover.

### 3.3.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring will be conducted during the second semester 2011.

### 3.3.5. Maintenance

During the second semester, the cracks and holes in the cover were filled with clean fill.

## 3.4. Pit 7 Complex Landfills

The Pit 3, 4, 5, and 7 Landfills are collectively designated the Pit 7 Landfill Complex. Firing table debris containing tritium, depleted uranium, and metals was placed in the pits in the 1950s through the 1980s. The Pit 4 and 7 landfills, and about 25-30% of Pit 3, were capped in 1992. During years of above-normal rainfall (i.e., 1997-1998 El Niño), ground water rose into the bottom of the landfills and the underlying contaminated bedrock. This resulted in the release of tritium, uranium, VOCs, perchlorate, and nitrate to ground water. In addition to these COCs, ground water samples from Pit 7 Complex detection monitor wells are also analyzed for metals, HE compounds, and PCBs as these constituents may have been contained in the firing table gravels placed in the landfills.

### 3.4.1. Sampling and Analysis Plan Modifications

Detection monitoring is conducted annually for VOCs, nitrate, tritium, perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, fluoride, and PCBs.

The sampling and analysis plan for the Pit 7 Complex Landfill ground water Detection Monitoring Program is presented in Table 2.5-8.

During the reporting period ground water monitoring was conducted in accordance with the CMP monitoring requirements.

Analytical results and ground water elevation measurements obtained during 2011 are presented in Appendices B and C, respectively.

### 3.4.2. Contaminant Detection Monitoring Results

A map showing the locations of detection monitor wells and the Pit 7 Complex Landfill is presented on Figure 2.5-1. Wells K7-01, K7-03, K7-06, K7-09, K7-10, NC7-26, NC7-47, and NC7-48 comprise the current detection monitoring well network for the Pit 7 Complex. Wells K7-01, K7-03 and NC7-26 are located downgradient of Pit 5 and Pit 7; well K7-06 is upgradient of Pit 7, wells K7-09 and K7-10 are cross-gradient of Pits 3, 5, and 7; well NC7-48 is immediately downgradient of Pit 7, and well NC7-47 is far downgradient of Pits 3 and 7.

The detection monitor wells are screened in the following HSUs:

- NC7-48: Qal/WBR HSU.
- K7-01 and K7-06: Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs.
- K7-03, K7-10, NC7-26, and NC7-47: $Tnbs_1/Tnbs_0$ HSU.
- K7-09: $Tnsc_0$ HSU.

Ground water extraction and treatment at the PIT7-Source facility began in March 2010. Pumping on the extraction wells (all completed in the Qal/WBR HSU) proximal to Pits 3 and 5 will have an impact on the distribution and magnitudes of COC concentrations observed.

Depth to ground water is currently a minimum of 10-15 ft below the buried waste in Landfill Pits 3, 4, 5, and 7.

#### *3.4.2.1. Tritium*

The Pit 3 and 5 Landfills have been identified as the sources of previous releases of tritium to ground water. The Pit 7 Landfill is not an apparent source of tritium in ground water as most of the tritium-bearing experiments conducted at Site 300 occurred prior to its opening in 1979 (Taffet et al., 2008).

The highest tritium activity detected in a first semester 2011 ground water sample from a Pit 7 Complex detection monitor well was 71,000 pCi/L (April) in $Tnbs_0$ well K7-03. Tritium activities in samples from this well have generally been declining from the historic maximum activity detected in a water sample from this well of 216,000 pCi/L in March 1993. Last year, the maximum tritium activity in a sample from this well was 82,000 pCi/L.

Tritium activities in samples from detection monitor well K7-01 have decreased from the historic maximum activity of 72,900 pCi/L in October 1999 to a first semester 2011 activity of 38,600 pCi/L detected in the May sample from this well. Last year, a maximum tritium activity of 47,200 pCi/L was detected in the April 2010 sample from this well.

Tritium activities in samples from detection monitor well NC7-26 have decreased from the historic maximum activity of 30,000 pCi/L to a current activity of 1,800 pCi/L in the April sample. Last year, the maximum tritium activity in a sample from this well was 2,600 pCi/L.

Tritium activities in all samples collected this semester from upgradient well K7-06, cross-gradient wells K7-09, and K7-10, downgradient well NC7-48, and far downgradient well NC7-47 were all below the 100 pCi/L reporting limit/background activity.

In general, tritium activities and the extent of tritium in the $Tnbs_1/Tnbs_0$ and Qal/WBR HSUs in the Pit 7 Complex area are consistent with those observed in 2010 and no new release of tritium from the landfills is indicated by the first semester 2011 ground water tritium data.

A discussion of tritium that was previously released to ground water from the Pit 7 Complex Landfills is presented in Section 2.5.5.2.1.

### *3.4.2.2. Uranium*

Depleted uranium was previously released to ground water from sources in Pits 3, 5, and 7 (Taffet et al., 2008). Uranium activities were below the 20 pCi/L cleanup standard in all detection monitor well samples collected during 2011. The maximum uranium activity in a 2011 sample from a detection monitor well was 18 pCi/L (May) from well K7-01. Uranium activities in ground water samples from this well have generally fluctuated within a few pCi/L of the 20 pCi/L cleanup standard since the 1997-1998 El Niño and $^{235}U/^{238}U$ isotopic ratios have indicated added depleted uranium. The historic maximum uranium activity detected in a sample from this well was 27 pCi/L (September 1984).

The next highest uranium activity in a 2011 detection monitor well sample was 9.40 pCi/L in the April 2011 sample from well NC7-48. Uranium activities in samples from this well have declined from the historic maximum of 104.9 pCi/L detected in this well after the 1997-98 El Niño (March 1998). Ground water samples from this well have historically contained depleted uranium.

Uranium activities in samples from all detection monitor wells have generally decreased from their historic maximum uranium activities. Uranium activities in samples from wells K7-06, K7-09, K7-10, NC7-26, and NC7-47 have generally decreased to near or below the detection limit during 2011.

The extent of uranium in Qal/WBR and $Tnbs_1/Tnbs_0$ ground water is similar to recent years. Ground water uranium data from 2011 do not indicate any new releases of uranium from the Pit 7 Complex Landfills. A discussion of uranium that was previously released to ground water from the Pit 7 Complex Landfills is presented in Section 2.5.5.2.2.

### *3.4.2.3. Nitrate*

The maximum nitrate concentration detected in a 2011 sample from a Pit 7 Complex detection monitor well was 65 mg/L (May 2011) from $Tnbs_1/Tnbs_0$ HSU well NC7-47. Ground water samples from well NC7-47 have never contained any other COCs in excess of background concentrations. None of the other detection monitoring wells yielded 2011 samples containing nitrate concentrations in excess of the 45 mg/L MCL cleanup standard. Nitrate concentrations in samples from the other detection monitor wells ranged from <0.5 mg/L at wells K7-09 and NC7-26 to 40 mg/L at well K7-01. Nitrate concentrations trends in the detection monitoring wells are all stable, and generally decreasing from their historic maximum nitrate concentrations. The distribution of nitrate in Pit 7 Complex ground water has declined from previous years. Current data do not indicate any new releases of nitrate from any of the landfills. A discussion of nitrate that was previously released to ground water from the Pit 7 Complex Landfills is presented in Section 2.5.5.2.3.

### *3.4.2.4. Perchlorate*

Wells K7-01 (screened in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs) and K7-03 (screened in the $Tnbs_1/Tnbs_0$ HSU) are the only detection monitor wells from which ground water samples have historically contained perchlorate at concentrations in excess of the 4 µg/L reporting limit. Perchlorate concentrations in samples from these wells have decreased from the historic maximum of 25 µg/L at well K7-01 (July 2006) and 29 µg/L at well K7-03 (April 2005) to 11 µg/L and 5.6 µg/L of perchlorate, respectively, during 2011. The overall extent of perchlorate in ground water in the Pit 7 Complex area did not change significantly from 2010 to present. The current semester data do not indicate any new releases of perchlorate from any of the landfills. A discussion of perchlorate that was previously released to ground water from the Pit 7 Complex landfills is presented in Section 2.5.5.2.4.

#### *3.4.2.5. Volatile Organic Compounds*

During 2011, VOCs were detected in samples from only two detection monitor wells at concentrations above the 0.5 µg/L detection limits. These samples from wells K7-01 (May) and K7-03 (April) contained 1.2 and 0.91 µg/L of total VOCs (all as TCE), respectively. The historic maximum VOC concentrations in samples from these wells were 20 µg/L (well K7-01, May 1985) and 15.2 µg/L (well K7-03, July 1985). VOC concentrations have generally been declining in samples from these wells since the times of those maxima. The overall extent of VOCs in ground water in the Pit 7 Complex area did not change significantly from 2010 to 2011. The current data do not indicate any new releases of VOCs from any of the landfills. A discussion of VOCs that were previously released to ground water from the Pit 7 Complex Landfills is presented in Section 2.5.5.2.5.

#### *3.4.2.6. Title 26 Metals and Lithium*

During 2011, Title 26 metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc) and lithium were not detected in ground water samples from the Pit 7 Complex area detection monitoring wells at concentrations in excess of background concentrations. These data did not indicate a release of metals during the year from any of the landfills.

#### *3.4.2.7. High Explosives (HE) Compounds*

During 2011, HE compounds were not detected in ground water samples from the Pit 7 Complex area detection monitoring wells at concentrations in excess of individual compound detection limits of 1-2 µg/L. These data did not indicate a release of HE compounds during the year from any of the landfills.

#### *3.4.2.8. Polychlorinated Biphenyls (PCBs)*

During 2011, PCBs were not detected in ground water samples from the Pit 7 Complex area detection monitoring wells at concentrations in excess of individual compound detection limits of approximately 0.5 µg/L. These data do not indicate a release of PCBs during the year from any of the landfills.

### 3.4.3. Landfill Inspection Results

The Pit 7 landfill cap engineering inspection was conducted on April 26, 2011. Some very small burrows (maximum diameter of 2-in to 4-in) were observed but were deemed to not require repair at this time. No other issues were observed. A post-closure inspection of Pit 7 was completed during the second semester of 2011 and no problems were observed. The Pit 3 and 5 Landfill covers were not inspected during the first semester 2011.

### 3.4.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring of the Pit 7 landfill was conducted during the second semester of 2011. No evidence of subsidence was observed.

### 3.4.5. Maintenance

Maintenance was not performed on any of the pit covers during the first or second semesters of 2011.

## 3.5. Pit 7 Complex Drainage Diversion System

A Drainage Diversion System was constructed in the Pit 7 Complex area of OU 5 in 2007-2008 (Section 2.6). The Pit 7 Drainage Diversion System is inspected and maintained per the requirements of the Inspection and Maintenance Plan (Taffet et al., 2008).

### 3.5.1. Drainage Diversion System Inspection Results

Monthly rainy season inspections occurred during the first semester 2011. The drainage diversion system was inspected on January 13, February 14, March 14, March 30 (following large storm), April 13 (post-season), October 11 (pre-season), November 10, and December 13. Sediment and vegetative debris accumulation were noted. In addition, squirrel damage to the channel banks was also observed during the October inspection.

### 3.5.2. Drainage Diversion System Maintenance

Vegetative debris and sediment buildup were removed during the first and second semesters of 2011. In addition, during the first semester, squirrel damage to the channel banks was repaired.

## 3.6. Building 850 CAMU

A CAMU was constructed in the Building 850 area of OU 5 in 2009 as part of the Building 850 Removal Action (Section 2.5). The Building 850 CAMU is inspected and maintained per the requirements of the Inspection and Maintenance Plan (SCS Engineers, 2010).

### 3.6.1. Building 850 CAMU Inspection Results

CAMU inspections were conducted on July 18 (post-season) and October 13 (pre-season). Minor vegetation was observed on the edges, but not the top, of the CAMU during the first inspection. During both inspections, a small trailer and a 550 gallon tank were staged on the lower level of the CAMU as part of the *in situ* bioremediation test for perchlorate in ground water emanating from Building 850.

### 3.6.2. Building 850 CAMU Maintenance

No maintenance was required.

# 4. Risk and Hazard Management Program

The goal of the Site 300 Risk and Hazard Management Program is to protect human health and the environment by controlling exposure to contaminants during remediation. Risk and hazard management is conducted in areas of Site 300 where the exposure point risk exceeded $1 \times 10^{-6}$ or the hazard index exceeded 1 in the baseline risk assessment. Institutional controls have been implemented to manage risks. The CMP/CP requires that the institution controls in place at Site 300 be evaluated annually. The completed Institutional Controls Monitoring Checklist for 2011 is presented in Appendix D.

## 4.1. Human Health Risk and Hazard Management

The CMP/CP requires that the risk and hazard associated with volatile contaminants in the subsurface migrating upward into indoor and outdoor ambient air and being inhaled by workers be re-evaluated annually using current data, where the risk exceeds $10^{-6}$ and the hazard indices exceeds 1.

The on-site worker inhalation risk associated with vapor intrusion from the subsurface into indoor and outdoor air is discussed in Section 4.1.1. The onsite worker inhalation risk associated with springs is discussed in Section 4.1.2.

#### 4.1.1. Annual Inhalation Risk Evaluation

The CMP (Ferry et al., 2002) requires that the risk and hazard associated with volatile contaminants in the subsurface migrating upward into indoor and outdoor ambient air and being inhaled by workers be re-evaluated annually using current data. The following risk evaluations were performed during 2011:

- Indoor Ambient Air in Building 834D
- Indoor Ambient Air in Building 830
- Indoor Ambient Air in Building 833

The risk and hazard management is complete for a building when the estimated risk is below $10^{-6}$ and the hazard index is below 1 for two consecutive years. The risk and hazard management has been completed and was not evaluated for the following:

- Outdoor Ambient Air Near Building 834D (2003 and 2004)
- Outdoor Ambient Air Near Building 815 (2003 and 2004)
- Outdoor Ambient Air in Building 854F (2003 and 2004)
- Outdoor Ambient Air Near Building 830 (2003 and 2004)
- Indoor Ambient Air Near Building 832F (2003 and 2004, building demolished in 2005)
- Indoor Ambient Air in Building 854F (building demolished in 2005)
- Indoor Ambient Air in Building 854A (2005 and 2006)

Institutional controls, such as restricting access to or activities in areas of elevated risk, remained in place during 2011 to prevent unacceptable exposure to contaminants during remediation for those buildings and areas that continue to show an unacceptable risk and/or hazard.

Between 2003 and 2005, inhalation risk and hazard resulting from transport of VOC vapors from ground water to the building foundations and subsequently into indoor ambient air was estimated using the Johnson-Ettinger Model (U.S. EPA, 2002). Between 2005 and 2011, the model results were updated to reflect the chemical-specific toxicity criteria referenced in the "Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" (DTSC, 2005). The U.S. EPA updated toxicity values for TCE in 2011. The current inhalation risk and hazard resulting from transport of VOC vapors from ground water to the building foundations and subsequently into indoor ambient air was estimated using the Johnson-Ettinger Model (U.S. EPA, 2002, version 3.1;02/04 GW-ADV) after the cancer inhalation unit risk and the non-cancer reference concentration for TCE were updated to $4.0 \times 10^{-6}$ per $\mu g/m^3$ and $2.0 \times 10^{-3}$ $\mu g/m^3$, respectively.

The following conservative methodology is used in developing the input values for each model. A representative soil column was developed combining the borehole geology information from wells and boreholes that are within a 100 ft radius of the modeled building or site. The resulting soil column was simplified into three strata as input to the Johnson-Ettinger Model by conservatively selecting the most permeable soil types for each stratum. The highest observed ground water elevation at the site was used as the source depth. The highest observed VOC ground water concentration in a well located in close proximity to the building or site being modeled was selected as the source concentration. If the VOC of interest was not detected in any nearby wells, then the highest detection limit was used as the source concentration. For the Johnson-Ettinger Model, site-specific building dimensions were used.

The individual chemical risk, hazard index, and cumulative risk values estimated for the indoor ambient air are reported in Table 4.1-1 for those buildings that were evaluated in 2011. Generally the concentrations of VOCs in wells show a declining trend at Buildings 834D, 830, and 833.

As shown in Table 4.1-1, the estimated risk in 2011 remained above $10^{-6}$ and/or hazard quotient above 1 for the indoor ambient air exposure pathway evaluated at Building 834D. At Building 830, the estimated risk in 2011 was above $10^{-6}$ and/or the hazard quotient was above 1 for the indoor ambient air exposure pathway evaluated. As a result, the building occupancy restrictions, monitoring, and annual risk evaluations will continue for Buildings 834D and 830 in accordance with the CMP/CP for the Interim Remedies at LLNL Site 300. Because Building 830 is not used and Building 834D is used only for storage, engineering controls are not needed at this time to prevent worker exposure. However, the institutional controls for these buildings include building occupancy restrictions to prevent onsite worker inhalation exposure to VOCs inside Buildings 830 and 834D until the annual risk re-evaluation indicates that the risk is less than $10^{-6}$. During 2011, active remediation using ground water and soil vapor extraction continued at Building 834 and 830 to further reduce VOC concentrations to health-protective levels.

In both 2010 and 2011, the risk evaluation for Building 833 for indoor ambient air showed no human health risk for this exposure pathway. "No Risk" is defined as an individual and cumulative excess cancer risk below $10^{-6}$ and a hazard quotient below 1. According to the procedures outlined in Section 6.1.1 and 6.1.2 of the CMP/CP for the Interim Remedies at LLNL Site 300, (2002), the risk and hazard management for Building 833 is considered complete when the estimated risk has remained below $10^{-6}$ and the hazard quotient has remained below 1 for two consecutive years. Therefore, no human health risk for this pathway remains and risk re-evaluation will be discontinued in 2012.

### 4.1.2. Spring Ambient Air Inhalation Risk Evaluation

#### *4.1.2.1. VOC-Contaminated Springs*

The CMP requires annual sampling of outdoor air above VOC-contaminated surface water, when surface water is present to determine VOC concentrations.

An unacceptable risk or hazard was identified during the baseline risk assessment (Webster-Scholten, 1994) for the inhalation of VOCs at four locations:

1. Spring 3 (Building 832 Canyon OU) – Cumulative risk 7 x $10^{-5}$, hazard index 2.3 due to TCE and PCE.
2. Spring 5 (HEPA OU) – Cumulative risk 1 x $10^{-5}$, due to 1,1-DCE and TCE.
3. Spring 7 (Pit 6 Landfill OU) – Cumulative risk 4 x $10^{-5}$, hazard index 1.5 due to TCE, PCE 1,2-DCA, and chloroform.
4. The Carnegie State Vehicular Recreation Area pond (offsite, east of the Pit 6 Landfill) – Cumulative risk 3 x $10^{-6}$ (hypothetical), due to TCE.

The risk and hazard management evaluation for Spring 3 was completed in 2009. The estimated risk has remained below $10^{-6}$ and the hazard index has remained below 1 for two consecutive years. No unacceptable risk or hazard to onsite workers exists. Therefore, the annual ambient air inhalation risk evaluation was continued for the following springs in 2011:

- Ambient Air Near Spring 5 in the HEPA OU
- Ambient Air Near Spring 7 in the Pit 6 Landfill OU

No surface water or green hydrophilic vegetation was present at Springs 5 and 7 during first semester 2011, therefore no ambient air VOC sampling was performed. Springs 5 and 7 have been devoid of surface water or green hydrophilic vegetation since monitoring began in 2003. These springs will be monitored for the presence of surface water or green hydrophilic vegetation in 2012 and air samples will be collected if water is present.

Water-supply well CARNRW-2 is used to fill the Carnegie State Vehicular Recreation Area pond. The baseline risk assessment indicated that if the VOC source in the Pit 6 Landfill OU was not controlled, contaminated ground water could migrate to well CARNRW-2 and result in an unacceptable risk from inhaling VOC vapors volatilizing from the pond. However, an engineered cap was placed over the Pit 6 Landfill preventing infiltration of precipitation and further releases of contaminants from the landfill. The VOC plume originating from the Pit 6 Landfill has not impacted CARNRW-2. No unacceptable risk or hazard exists.

#### *4.1.2.2. Tritium-Contaminated Springs*

An unacceptable cumulative risk of 1 x $10^{-3}$ was identified in the baseline risk assessment for the inhalation of tritium at Well 8 Spring in the Building 850 area. The risk associated with the inhalation of tritium vapors volatilizing from Well 8 Spring is based on the maximum tritium activity detected (770,000 pCi/L) in 1972. The tritium activities in Well 8 Spring have steadily declined over the decades. The 2002 CMP/CP did not present risk and hazard management processes to re-evaluate the risk associated with tritium in Well 8 Spring. The 2009 CMP/CP revision indicated that the inhalation risk associated with tritium in surface water volatilizing into outdoor ambient air would be re-evaluated annually when surface water is present. The surface water will be sampled and analyzed for tritium semi-annually. The maximum activity will be compared to the current tritium vapor PRG for tap water.

The risk re-evaluation of Well 8 Spring could not be performed in 2011 due to lack of water in the spring. No samples were collected from Well 8 Spring in 2011. Sampling and risk re-evaluation will be conducted in 2012 if surface water is present. Workers do not occupy or plan to occupy the site in the near future, therefore site use restrictions will be maintained and the annual sampling continued until the activity remains below the PRG for two years.

## 4.2. Ecological Risk and Hazard Management

### 4.2.1. Ecological Risk and Hazard Management Measures and Contingency Plan Actions Required by the 2009 Compliance Monitoring Report/Contingency Plan

The ecological risk and hazard management measures described in the 2009 CMP/CP (Dibley et al. 2009a) were developed to meet the Remedial Action Objectives for environmental protection. These objectives are to:

1. Ensure ecological receptors important at the individual level of ecological organization (special-status species, i.e., State of California or federally-listed threatened or endangered species or State of California species of special concern) do not reside in areas where relevant hazard indices exceed 1.
2. Ensure changes in contaminant conditions do not threaten wildlife populations and vegetation communities.

The ecological risk and hazard management measures required by the 2009 CMP/CP include:

- Periodically evaluating available biological survey data from the Buildings 801, 851 and the HEPA to determine potential population-level impacts to ground squirrel and deer exposed to cadmium in surface soil in these areas, as well as re-evaluating the ecological hazard associated with cadmium in surface soil in these areas.
- Ensuring the integrity of the Pit 7 Complex landfill caps to prevent exposure to burrowing animals from uranium.

- Evaluating changes in existing contaminant and ecological conditions in OUs 1 through 8 every five years, including re-evaluating VOCs in burrow air in the event that ground water VOC concentrations increase to levels that previously posed a risk to burrowing animals.

As part of the contingency plan presented in the 2009 CMP/CP, periodic review of available biological survey data (e.g., preconstruction survey data, biological monitoring data, surveys conducted for Environmental Impact Statement/Environmental Impact Report (EIS/EIR) preparation, etc.) for the presence of new special status species is required. Any new special status species identified is to be evaluated for potential impact from the presence of contamination using the process laid out in the 2009 CMP/CP. The results of this evaluation will be reported on in the annual CMRs.

In addition to reporting on the ecological risk and hazard management and contingency plan measures described in the 2009 CMP/CP, this and future compliance monitoring reports will address several new constituents identified in surface soil and surface water during the most recent five year ecological review for which ecological hazard could not be adequately evaluated due to either a limited data set or the lack of background data. The results of the most recent Five-Year Ecological Review were reported in the 2008 Annual CMR (Dibley et al. 2009b).

This report, and subsequent compliance monitoring reports prepared during the reporting period in which the 2009 CMP/CP is active, will report on ecological risk and hazard management measures and ecological contingency plan actions required by the 2009 CMP/CP.

### 4.2.2. Cadmium in Surface Soil

As described above, the 2009 CMP/CP required that available biological survey data to be periodically reviewed to identify changes in the abundance of deer or ground squirrel over time that could indicate impacts to the populations in the Buildings 801 and 851 areas, and the HEPA from cadmium in surface soil. However, as reported on in the 2011 First Semester CMR (and summarized below), an evaluation of the EPA Ecological Soil Screening Levels for cadmium (U.S. EPA 2005) and the cadmium baseline ecological risk assessment conducted in the Site-Wide Remedial Investigation (SWRI) (Webster-Scholten et al., 1994) concluded that deer and ground squirrels are not at risk from cadmium in surface soil in these areas. Therefore, reviewing available biological survey data from the Buildings 801 and 851 areas and the HEPA to identify changes in the abundance of deer or ground squirrel over time will be discontinued. However, available survey data will continue to be reviewed to identify the presence of special status species as long as the potential for ecological impact from cadmium in surface soil persists. Data reviewed included surveys conducted for all ground disturbing activities, and observations made by LLNL wildlife biologists.

As discussed in the 2010 Annual CMR, both Building 801 and 851 are located within grasslands that are a mix of introduced exotic annual grasses from the Mediterranean and native grasslands. The HEPA is composed primarily of exotic annual grasses. All three areas could be used as dispersal habitat for the California red-legged frog (*Rana draytonii*), a federal threatened species. No frogs were directly observed in areas containing elevated cadmium concentrations in 2011. The Building 851 area is also located within the Alameda whipsnake (*Masticophis lateralis euryxanthus*) critical habitat (a federal threatened species). However, this area is outside the scrub habitat in which the snake is typically found. No Alameda whipsnakes were directly observed in areas containing elevated cadmium concentrations. The HEPA is also located within the 1100 meter buffer surrounding California tiger salamander (*Ambystoma californiense*) breeding sites (a federal threatened species). These areas may also be used as upland habitat for the Western spadefoot toad (*Spea hammondii*), a California species of special concern. No California red-legged frogs or California tiger salamanders have been observed in the HEPA since the closure of the Building 827 wastewater lagoons. Western spadefoot toads have also not been directly observed in the area.

In addition to evaluating the available biological survey data from the Buildings 801, 851 and

HEPA, the 2009 CMP/CP also requires a re-evaluation of the ecological hazard associated with cadmium in surface soil in these areas to determine if continuation of risk and hazard management measures are necessary. Part of this re-evaluation includes collecting additional surface soil samples from these areas for cadmium analysis and re-evaluating the associated ecological hazard, as described in the 2009 CMP/CP.

As part of the re-evaluation of the ecological hazard associated with cadmium in surface soil, locations with cadmium exceeding the Site 300 background of 1.9 mg/kg in the Building 801 and 851 areas and HEPA were examined more closely, which included conducting a site visit to each location. The results of this evaluation are described in detail in the 2011 First Semester CMR. Surface soil locations with available coordinates and good documentation were examined. Locations with elevated cadmium concentrations evaluated included:

- Several samples adjacent to the paved area at Building 801 taken as part of an investigation into the Building 801 cooling tower (samples MS-801-02 and MS-801-04),
- A single sample along Route 3 going towards Building 851 (sample 3SS-45-01),
- A single sample near Building 815 in the HEPA (sample 815-09),
- A single sample near Building 818 in the HEPA (sample 818-10), and
- Three samples near Building 827 in the HEPA taken as part of a tank removal project (TK01-827-02, TK02-827-01 and TK05-827-01).

Close inspection of these locations revealed that elevated cadmium is limited to: (1) areas near or adjacent to roads or fire trails, or (2) areas adjacent or within a paved area. Similar to lead, cadmium is often associated with the burning of fossil fuels (U.S. EPA 2005), which may result in elevated cadmium concentrations adjacent to roads. The presence of cadmium adjacent to roads is therefore unlikely to be the result of release due to specific Site 300 activities. The three samples taken near Building 827 were obtained through pavement adjacent to the building and therefore this area was eliminated from further consideration.

The ecological relevance of the EPA Ecological Soil Screening Levels (U.S. EPA 2005) to biota expected to occur at Site 300 was also examined and reported on in the 2011 First Semester CMR. Since the completion of the baseline ecological risk assessment, the EPA has developed Ecological Soil Screening Levels (EcoSSLs) for cadmium (U.S. EPA 2005). The EcoSSLs went through an extensive peer review process, and are the highest quality screening levels available. In developing these screening levels, available literature was rigorously screened to develop a reasonable, but conservative, toxicity reference value (TRV). In the Site 300 baseline ecological risk assessment, a single paper (Wills et al. 1981) was used to derive the highly conservative TRV of 0.0055 milligram per kilogram per day (mg/kg/d) for mammals. This paper was only one of 145 studies used by the EPA to derive the TRV for the mammals of 0.777 mg/kg/d.

The EcoSSLs were developed by the EPA for several groups of ecological receptors. Table 4.2-1 shows the EcoSSLs for terrestrial plants, soil invertebrates, and three guilds of birds and mammals representing herbivores, ground insectivores and carnivores. With the exception of the EcoSSLs for avian and mammalian ground insectivores, all EcoSSLs for cadmium are significantly above Site 300 background. Thus, the ecological hazard identified in the baseline ecological risk assessment to ground squirrels and deer can be assumed not to be present. Site 300 does not have any strict ground insectivorous mammals (such as the shrew), and few strict ground insectivorous birds. This is because the arid nature of the site limits the types of ground-dwelling insects, although aerial insects are abundant. For example, earthworms, which are the assumed food source for the avian and mammalian ground insectivores listed in Table 4.2-1, do not occur at Site 300 except within a small irrigated lawn within the Site 300 administrative area located in the southern portion of the site. The rock wren (*Salpinctes obsoletus*), a ground insectivorous bird, does occur in canyons south of Building 801, but is unlikely to be present in this area due to lack of appropriate habitat (rock outcrops and canyons). This species may occur in the rock outcrops to the east and south of Building 851. However, the limited areal extent of cadmium exceeding background in these areas will limit exposure to the rock wren.

Although there are no strict mammalian ground insectivores and few avian ones, the California tiger salamander (*Ambystoma californiense*) and California red-legged frog (*Rana draytonii*) are both ground insectivores. Although the EPA did not develop ecological soil screening levels for amphibians due to the lack of data, it considers the mammalian and avian ESLs to be protective of amphibians. As discussed in the 2010 Annual CMR, the Building 801, 851 and HEPA are all dispersal habitat for the California red-legged frog (a federally-listed threatened species), although it is unlikely these species will spend any significant time in these areas due to the lack of nearby water.

Because of the small potential for cadmium to pose an ecological hazard to ground insectivores, only limited soil sampling was conducted to confirm that elevated cadmium levels are not wide-spread in areas of actual ecological habitat, and that the areal extent of elevated cadmium in the Building 801 and 851 areas and HEPA is limited.

Sampling was conducted on November 22, 2011. The following samples were collected:

- Six samples were collected around Building 801 (samples 3SS-801-001 through -006),
- Three samples were collected in the Building 851 area around sample 3SS-45-01 (samples 3SS-851-004 through -006),
- Five samples were collected in the Building 815 area around sample 815-09 (samples 3SS-815-001 through 3SS-815-005), and
- Five samples were collected in the Building 818 area around sample 818-10 (samples 3SS-818-001 through -005).

Sampling was conducted in accordance with LLNL SOP 1.12 (Goodrich and Lorega, 2009). Samples were analyzed for total cadmium concentration by EPA Method 6010B by BC Laboratories, Inc. All samples contained less than 0.5 mg/kg of cadmium.

To further evaluate the potential impact of cadmium in surface soil on the California tiger salamander and the California red-legged frog, all available cadmium surface soil data were evaluated within an extended area around Buildings 801, 851, 815 and 818. This included data without location coordinates but for which concentration data were available. Data were selected within these areas to calculate a 95% upper confidence limit (UCL) of the mean cadmium concentrations. These areas are shown in Figures 4.2-1 through 4.2-3 and represent reasonable dispersal areas for the two species. For Building 801 (Figure 4.2-1), the area represents the area that could be used by a California red-legged frog dispersing from the breeding pools near Building 812, up the Elk Ravine drainage (i.e. northwest along Route 4), and going upland both northeast of the drainage (around Building 801) and southwest of the drainage (near Building 845). For the Building 851 area (Figure 4.2-2), the area represents the area that could be used by a California red-legged frog dispersing upstream (northwest) along the drainage adjacent to Route 3, and then dispersing upland to the northeast or to the southwest. For the Building 815 and 818 areas (Figure 4.2-3), this area represents the upland area between two drainages, that of the drainage along Route 3 to the east, and the drainage to the west of the Building 817 complex. These dispersal areas could be used during years of heavy and consistent rainfall.

Tables 4.3-2 through 4.2-4 show the data used in the 95% UCL calculations. These locations are also shown on Figures 4.2-1 through 4.2-3. All data used had well documented location information and were obtained from soil available to ecological receptors. In locations where multiple surface soil samples were taken within a small area, samples representing a median for all the samples collected from the area were used in the 95% UCL calculations so as not to overly bias the calculation.

Data not used in the 95% UCL calculations are shown Table 4.3-5 through 4.3-7. These samples are: (1) from locations in which the soil containing the cadmium was removed or paved over, (2) from locations that could not be adequately verified, (3) one of multiple samples obtained within a small geographic area that were not selected as representative, or (4) from an area adjacent but outside the area used for the 95% UCL calculation (i.e. locations within the HEPA). With a few exceptions, all data not used in the 95% UCL calculation were at or below the Site 300 cadmium background of 1.9 mg/kg. One exception includes data collected from transects within ~100 ft of the berms at the 801 and 851 firing tables in 1989. These data were used in the baseline risk assessment presented in the SWRI, and drove the ecological risk in these areas. In the case of Building 801, this area is now paved and is occupied by the Contained Firing Facility and is therefore no longer accessible to ecological receptors. Additional construction activities have also occurred at Building 851 since 1989, including the expansion of the Building 851 facility. However, available documentation is not clear on whether the berm has been replaced.

The distribution of the data used in the 95% UCL calculation was evaluated through the construction of histograms and use of the Shapiro-Wilk test for normality (Gilbert, 1987). All distributions were found to be non-normal, with the histograms showing a lognormal distribution. Therefore, all data were lognormally transformed, and the 95% UCL was calculated by the Land method using the H-statistic (USEPA, 2002). The data distribution was sufficiently lognormal, and the data set was large enough to avoid the known problems associated with the use the Land method (U.S. EPA, 2002).

Tables 4.2-2 through 4.2-4 show the 95% UCL for each respective area. All 95% UCLs are below the Site 300 background for cadmium (1.9 mg/kg). There is clearly little ecological risk from cadmium in the Building 801 area or the HEPA, as areas with existing elevated cadmium concentrations are very small and isolated. Therefore, cadmium in surface soil will no longer be considered a contaminant of ecological concern in these areas. It would also appear that cadmium does not pose an ecological risk in the Building 851 area, however additional sampling behind Building 851 is needed to definitively remove this risk. The additional sampling will be scheduled.

### 4.2.3. Uranium in Subsurface Soil within the Pit 7 Complex Landfills

As part of the Five-Year Ecological Review reported on in the 2008 Annual CMR, results of samples of pit waste that were collected from borings through the Pit 3 and 5 landfills at depths 4 ft or greater were determined to contain uranium at concentrations that posed a hazard if ingested by ground squirrels, burrowing owls, and kit fox. While this area represents potential habitat for burrowing owls and kit fox, neither species has been observed in this area.

The 2009 CMP/CP requires the Pit 7 Complex landfills to be inspected and any burrows or holes in the cover are filled to prevent unacceptable exposure of animals to the pit waste. This is done as part of the inspection and maintenance program for the Pit 7 Complex. Section 3.4.3 describes the quarterly landfill inspection results, Section 3.4.4 describes the annual subsidence monitoring results, and Section 3.4.5 describes any maintenance performed. A few small burrowing animal holes approximately 2 to 4 inches in diameter were observed during the annual inspection conducted in on April 26, 2011 by Abri Environmental Engineering, Inc. No recommendations to fill the holes were made. No animal burrows were visible during the inspections made by LLNL personnel on January 2, April 18, July 12 or October 12, 2011.

### 4.2.4. Constituents Identified in the 2008 Five Year Ecological Review Requiring Additional Evaluation

As reported in the 2010 First Semester CMR, the ecological hazard of several new constituents detected in surface soil and surface water could not be adequately evaluated in the Five-Year Ecological Review due to either a limited data set or the lack of background data. In surface soil, the ecological hazard from potassium-40 (K-40) was not evaluated due to a limited data set and the lack of background data. To determine if a sampling effort to develop background levels of K-40 in surface soil is warranted, the literature will be reviewed to evaluate the potential for ecological hazard from K-40 in surface soil. Results of this review will be reported in future compliance monitoring reports.

The Five-Year Ecological Review concluded that chloride, ortho-phosphate, total phosphorus, nitrate plus nitrite, ammonia nitrogen and uranium in several springs required additional evaluation to determine their potential to cause ecological hazard. As reported in the 2010 First Semester CMR, additional evaluation showed that many of these constituents were within Site 300 background or the data were misinterpreted in the Five-Year Ecological Review, and thus were dropped from further consideration. Constituents that require additional evaluation include chloride in Spring 14, total phosphorus as P and ammonia in Spring 4, and total uranium in Springs 10 and 11.

Although the maximum chloride concentration detected in Spring 14 exceeds the maximum concentration observed in background springs, the chloride concentration in the most recent sample collected from Spring 14 was below the maximum concentration detected in the background springs. Chloride concentrations will be monitored in future samples collected from Spring 14.

The single sample from Spring 4 analyzed for total phosphorus as P exceeds the maximum concentration observed in the background springs. The maximum concentration of ammonia nitrogen in Spring 4 was detected in the most recent sample available that was analyzed for this constituent. Data for ammonia nitrogen are not available for the background springs. Therefore, future samples collected from Spring 4 will be analyzed for total phosphorus as P and ammonia nitrogen to determine representative concentrations of these constituents in this spring. In addition, future samples collected from the background springs will be analyzed for ammonia nitrogen to determine the background concentration of this constituent.

The maximum total uranium concentration as mg/L (estimated from uranium-238 results) in Spring 10 and Spring 11 slightly exceeded the Site 300 background concentration. These maximum concentrations were detected in the most recent sample available for both springs. Both samples were analyzed for uranium isotopes using mass spectrometry, and results from both springs showed a uranium-235/uranium-238 ratio of 0.0072. This is the natural ratio for these uranium isotopes, and indicates no added depleted uranium is present. Few of the background springs have had samples analyzed for uranium isotopes using the more precise mass spectrometry analytical analysis. The vast majority of available background uranium data are from alpha spectrometry analyses. Therefore, future samples collected from the current background springs will be analyzed for uranium isotopes using mass spectrometry.

Data from the additional spring sampling will be reported on in future compliance monitoring reports as they become available.

#### 4.2.5. Identification and Evaluation of New Special Status Species

Contingency actions that are described in the 2009 CMP/CP include periodically evaluating available biological survey data (e.g., pre-construction survey data, biological monitoring data, surveys conducted for EIR/EIS preparation) for the presence of new special-status species and reporting the results of the evaluation in the annual compliance monitoring reports. New biological information collected since the completion of the Five-Year Ecological Review (years 2009 and 2010) was evaluated and reported on in the 2010 Annual CMR. For the year 2011, data reviewed included surveys conducted for all ground disturbing activities, and observations made by LLNL wildlife biologists. No new special-status species were identified in areas of potentially elevated ecological risk. A protected bird-of-prey species, the white-tailed kite (*Elanus leucurus*), established a nest in the western GSA in 2011. Nest protection measures were put into place between May and June of 2011

(Woollett, 2011). Three fledgling kites were observed learning to fly in June. The nest is located outside of the areas of known surface soil contamination. In addition, birds of prey tend not to be impacted by localized surface soil contamination due to their large home range. Therefore, no impact to this species from Site 300 ecological contaminants of concern is expected.

# 5. Data Management Program

The management of data collected during second semester 2011 was subject to the Environmental Restoration Department (ERD) data management process and standard operating procedures (Goodrich, 2009). This data management process tracks sample and analytical information from the initial sampling plan through data storage in a relational database. As part of the standard operating procedures for data quality, this process includes sample planning, chain of custody tracking, sample collection history, electronic and hard copy analytical results receipt, strict data validation and verification, data quality control procedures, and data retrieval and presentation. The use of this system promotes and provides a consistent data set of known quality. Quality assurance and quality control are performed consistently on all data.

## 5.1. Modifications to Existing Procedures

The relational database used to maintain the data for the CMR continued to be Oracle on Linux servers. General maintenance and refinements were implemented to improve chains of custody, data entry verification, and querying abilities. Improvements and additions to the ERD data management process continued to be implemented in an ongoing effort to automate and improve the applications, including updates to verifications. The ERD specifications for the electronic data deliverable format used by the analytical laboratories was modified to include run number, in order to collect it for reporting to the California State Water Resources Control Board. A field was added to the sample collection tables that directs where purged water from sampling efforts is to be disposed. The Treatment Facility Real Time (TFRT) application, a high frequency data acquisition system for treatment facilities and their associated extraction wells, continued to be improved and its scope of coverage extended. Improvements continued to be added to Well Track, a cradle-to-grave tracking system for wells. Standard operating procedures are up to date. Improvements were added to the software error reporting tool to allow identification of specific applications.

## 5.2. New Procedures

The process of re-architecting existing computer programs that generate web pages continues, with the dual goals of improving maintainability and user efficiency. An invoicing tracking tool was added to Sample Planning and Chain of Custody Tracking (SPACT) that allows record keeping of payment for analytical services. A tool was created that automated the creation of the Sampling and Analysis Plan Tables used in this document. Bid Package Price Management tool was added to SPACT facilitating appending annual price lists for each analytical laboratory.

# 6. Quality Assurance/Quality Control Program

LLNL conducted all compliance monitoring in accordance with the approved Quality Assurance Project Plan (QAPP) (Dibley, 1999) requirements for planning, performing, documenting, and verifying the quality of activities and data. The QAPP was prepared for CERCLA compliance and ensures that the precision, accuracy, completeness, and representativeness of project data are known and are of acceptable quality. The QAPP is used in conjunction with the LLNL ERD Standard

Operating Procedures (SOPs), Operations and Maintenance Manuals (O&Ms), Work Plans, Sampling Plans, Integration Work Sheets (IWSs), and Site Safety Plans. Modifications to existing LLNL quality assurance/quality control (QA/QC) procedures, new QA/QC procedures that were implemented during this reporting period, self-assessments, quality issues and corrective actions, and analytical and field quality control are discussed in this section.

## 6.1. Modifications to Existing Procedures

Twenty-nine ERD SOPs remain in the final review and approval process. After the final review has been completed and procedures have been signed-off, the approved procedures will be released as Revision 14. Revision 14 consists of the following procedures that will be distributed as controlled documents:

- SOP 1.1: Field Borehole Logging,
- SOP 1.2: Borehole Sampling of Unconsolidated Sediments and Rock,
- SOP 1.3: Drilling,
- SOP 1.4: Well Installation,
- SOP 1.5: Initial Well Development,
- SOP 1.6: Borehole Geophysical Logging,
- SOP 1.7: Well Closure,
- SOP 1.10: Soil Vapor Surveys,
- SOP 1.11: Soil Surface Flux Monitoring of Gaseous Emission,
- SOP 1.13: Operation of the AMS TR7000 Well Management System,
- SOP 1.15: Well Site Core Handling,
- SOP 1.16: Four Wheel All Terrain Vehicle (ATV) Operation,
- SOP 1.17: Soil Vapor Monitoring and Sampling,
- SOP 4.1: General instructions for Field Personnel,
- SOP 4.2: Sample Control and Documentation,
- SOP 4.4: Guide to Packaging and Shipping of Samples,
- SOP 4.5: General Equipment Decontamination,
- SOP 4.6: Validation and Verification of Radiological and Nonradiological Data Generated by Analytical Laboratories,
- SOP 4.8: Calibration/Verification and Maintenance of Field Instruments Used in Measuring Parameters of Surface Water, Ground Water, and Soils,
- SOP 4.9: Collection of Field QC Samples,
- SOP 4.12: Quality Improvement Forms,
- SOP 4.13: Standard Operating Procedure Process,
- SOP 4.15: ERD Self-assessments and Walkabouts,
- SOP 4.16: ERD Lockout/Tagout Program,
- SOP 4.17: Change of Aqueous and Vapor Phase Granular Activated Carbon,
- SOP 4.18: ERD Document Control,
- SOP 5.5: Data Management Receipt and Processing,

- SOP 5.20: Cost Effective Sampling (CES) Algorithm Preparation, and
- SOP 6.1: Decontamination and Decommissioning (D&D) Team – SOP 001.

A number of procedures, as listed below, will continue to be reviewed and updated, and will not be released as part of Revision 14:

- SOP 1.8: Disposal of Investigation-Derived Wastes (Drill Cuttings, Core Samples, and Drilling Mud),
- SOP 1.14: Final Well Development/Specific Capacity Tests at LLNL Livermore Site and Site 300,
- SOP 2.8: Installation of Dedicated Sampling Devices,
- SOP 3.1: Water-Level Measurements,
- SOP 3.2: Pressure Transducer Field Calibration,
- SOP 3.3: Hydraulic Testing (Slug/Bail),
- SOP 3.4: Hydraulic Testing (Pumping),
- SOP 4.7A: Livermore Site Treatment and Disposal of Well Development and Well Purge Fluids, and
- SOP 4.14: Mapping with the Trimble Pathfinder Pro XR GPS System.

The following procedures were determined to be obsolete and will be omitted from Revision 14:

- SOP 1.18: Deployment, Retrieval, Sampling and Maintenance of Instrumented Membrane Technology (IMT) Borehole-Liner Systems, and
- SOP 2.12: Ground Water Monitor Well and Equipment Maintenance.

A single procedure, SOP 4.7B: Site 300 Treatment and Disposal of Well Development and Well Purge Fluids was reviewed, updated, approved, and released in advance of releasing Revision 14 in its entirety. It was essential that the procedure be released in a timely manner to provide field personnel with guidance related to restructured processes for the collection, treatment, and disposal of investigation-derived ground water. SOP 4.18: ERD Document Control was updated, approved, and released as an uncontrolled document. The procedure was updated in response to a Corrective and Preventative Action Program (CAP) component developed to curb recurring document control issues observed during an International Organization for Standardization (ISO) 14001: 2004 Environmental Management System (EMS) audit.

## 6.2. New Procedures

A new procedure titled, "Site 300 Treatment Media Inventory and Tracking Process" is being developed. The procedure is part of ERD's path forward to help ensure treatment media meets specific acceptance criteria prior to utilizing the material(s) at treatment facilities. Additionally, the procedure outlines processes to effectively track treatment media by type, quantity, facility where media is installed, and a treatment media sample collection process.

## 6.3. Self-assessments

ERD participates in self-assessments, both formal and informal. Assessments are conducted to evaluate work activities to procedural, QA, management, and Integrated Safety Management System (ISMS) practices. External regulatory agencies and management performs frequent management work observations, verifications, and inspections (MOVIs) of ERD work activities. There were a total of twenty-six MOVIs, and an institutional ISO 14001: 2004 EMS audit conducted during 2011. Issues and deficiencies observed during assessments are tracked from inception to resolution using the institutional Issues Tracking System (ITS).

A CAP was developed to address findings observed during the ISO 14001: 2004 EMS audit, one of which was an ERD document control issue. ERD conducted corrective actions to fulfill the requirements specified in the CAP. Corrective actions performed by ERD included informing personnel of ERD's document control management practices; ensuring each worker has assess to and use of the most current version of a procedure, and informing personnel to destroy superseded procedures or mark older documents as obsolete if retained. The completed corrective actions were entered into the ITS to comply with assigned due date(s) specified in the CAP.

To date, there is a single open occurrence report (OR), Assessment ID: 33453 in the ITS. The OR stemmed from the event where contaminated treatment media was inadvertently utilized at the 829-SRC Treatment Facility (see Section 2.4.1.3). The first sign of introduced contamination was indicated by a positive detection of methylene chloride in a treatment facility effluent sample collected on July 12, 2011, and again in a subsequent effluent sample collected on August 18, 2011. Methylene chloride was not detected in the influent sample and has not been a contaminant of concern (COC) for this particular treatment area. After subsequent investigation, it was recognized that the treatment media was the source of contamination. Based on this evaluation, the Site 300 Facility Manager declared the event to be a significant concern to other facilities or activities in the DOE complex. The occurrence was written-up as a "management concern" and recorded in the ITS. In the ITS, there were two initial issues linked to this OR; one issue has been corrected and completed in the ITS and a resolution(s) is in progress to address the second issue but may not be completed by the estimated completion date of February 1, 2012.

## 6.4. Quality Issues and Corrective Actions

Quality improvement, nonconformance, and corrective action reporting is documented using the Quality Improvement Form (QIF). There were two QIFs processed during this reporting period. The first QIF (QIF-11-003) was developed to describe the event where methylene chloride was detected in the 829-SRC Treatment Facility effluent due to the usage of contaminated resin (see Section 2.4.1.3). The corrective action for this issue is still in progress. The second QIF (QIF-11-004) describes the unintentional modification of the 830-SRC Treatment Facility configuration. The unintentional modification was brought to light when analytic results for a sample collected at the influent sample port (830-SRC-I) and at the intermediate sample port (830-SRC-I2), both mirrored VOCs concentrations typically seen in the influent samples. The normal treatment configuration for the facility was restored.

## 6.5. Analytical Quality Control

Data review, validation, and verification are conducted on 100% of the incoming analytical data. Contract analytical laboratories are contractually required to provide internal quality control (QC) checks in the form of method blanks, laboratory control samples, matrix spikes, and matrix spike or sample duplicate results with every analysis. During the data validation process, the analytical QC data and associated QC acceptance criteria (control limits) are reviewed. Data qualifier flags are assigned to analytical data that fall outside the QC acceptance criteria. Data qualifier flags and their definitions are listed in the Acronyms and Abbreviations in the Tables section of this report. The qualifier flags, when they exist, appear next to the analytical data presented in the treatment facility compliance tables of this report. Because rejected data are not used for decision-making, the rejected analytical data are not displayed in the tables, only the "R" flag is presented. Data is qualified as rejected only when there is a serious deficiency in the ability to analyze the sample and meet QC criteria.

As described in Section 2.4.1.3, methylene chloride was detected in effluent samples collected from treatment facility 829-SRC on July 12, 2011 and on August 15, 2011. The two effluent sample results were flagged "suspect" due to methylene chloride not being detected in the influent and not being a contaminant of concern (COC) for this particular treatment area. An in depth investigation followed and is described in Section 2.4.1.3.

## 6.6. Field Quality Control

Quality control is implemented during the sample collection process in the field. Ten percent of samples are collocated (5% intralaboratory and 5% interlaboratory). Field blanks and trip blanks are used to identify contamination that may occur during sample collection, transportation, or handling of samples at the analytical laboratory. Equipment blanks are used to determine the effectiveness of decontamination processes of portable equipment used for purging and/or sample collection. During the fourth quarter of the calendar year, tritium was frequently detected and reported in ERD field blanks at activities above the reporting limit of 100 pCi/L. This issue was brought to the attention of the laboratory that provides the blank water and as a result, the lab will provide dead water for blanks that will be submitted for tritium analysis and DI water for blanks that will be submitted for other radionuclide tests. The analytic test results for the dead water and DI water will accompany the shipment of blank water at the beginning of each sampling quarter. The test results will be stored on ERD's server along with the sampling plan each quarter. There were no other issues regarding trip blank, field blank, or equipment blank analyses encountered during this reporting period.

# 7. References


Blake R., and M. Taffet (2008a) *Compliance Monitoring Program for the CERCLA-Closed Pit 6 Landfill, First Quarter 2008 Report*, Lawrence Livermore National Laboratory, Livermore, CA (UCRL-AR-132057-08-1).

Blake R., and M. Taffet (2008b) *Compliance Monitoring Program for the CERCLA-Closed Pit 6 Landfill, Second Quarter 2008 Report*, Lawrence Livermore National Laboratory, Livermore, CA (UCRL-AR-132057-08-2).

Dibley, V.R. (1999), *Livermore Site and Site 300 Environmental Restoration Projects Quality Assurance Project Plan*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-103160 Rev. 2).

Dibley, V., L. Ferry, M. Taffet (2008), *Action Memorandum for the Removal Action at the Building 850 Firing Table, Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (LLNL-AR-403206).

Dibley V., L. Ferry, S. Gregory, L. Hall, V. Madrid, L. Martello, E.N. Shiroma, M. Taffet, K.S. Wells (2009a), *Compliance Monitoring Plan/Contingency Plan for Environmental Restoration at Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (LLNL-AR-411239).

Dibley, V., L. Ferry, and M. Buscheck Ed. (2009b), *2008 Annual Compliance Monitoring Report, Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-206319-08)

Dibley, V., L. Ferry, and M. Buscheck Ed. (2011a), *2010 Annual Compliance Monitoring Report, Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-206319-10).

Dibley, V., L. Ferry, and M. Buscheck Ed. (2011b), *First Semester 2011 Compliance Monitoring Report, Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-206769-11).

DTSC (2005) Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, California EPA – DTSC.

Environmental Quality Management, Inc. (2001) *Supplemental Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathways*, Prepared for the USEPA Superfund Program Office of Emergency Response and Remediation, Washington, D.C.

Environmental Quality Management, Inc. (2004) *User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings*, Prepared for the USEPA Superfund Program Office of Emergency Response and Remediation, Washington, D.C.

Ferry, L., M. Dresen, Z. Demir, V. Dibley, V. Madrid, M. Taffet, S. Gregory, J. Valett, M. Denton (2006), *Final Site-Wide Remediation Evaluation Summary Report for Lawrence Livermore National Laboratory Site 300,* Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-220391).

Ferry L., V. Madrid, S. Gregory, A. Helmig (2010), *Explanation of Significant Difference for Ground Water Nitrate Treatment at the Building 829-Source Treatment Facility Remedies at Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (LLNL-AR-454953).

Goodrich, R., and J. Wimborough (Eds.) (2009), *LLNL Livermore Site and Site 300 Environmental Restoration Project Standard Operating Procedures (SOPs)*, Lawrence Livermore National Laboratory Livermore, Calif. (UCRL-AM-109115 Rev. 13).

Helmig, A., V. Dibley, V. Madrid, and J. Valett (2011), *Five-Year Review Report for the Building 832 Canyon Operable Unit at Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-470073).

Holtzapple, C. (2007), *Shutdown of the Eastern General Services Area Ground Water Extraction and Treatment System at Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (letter).

Jackson, S. (2008), *Statistically Significant Evidence for a Release of Total Uranium from Lawrence Livermore National Laboratory Experimental Test Site (Site 300) Pit 6*, Letter to S. Timm, RWQCB (WGMG08-022).

Johnson, P. C, and R. A. Ettinger (1991), "Heuristic Model for Predicting the Intrusion Rate of Contaminant Vapors in Buildings," *Environ. Sci. Technol.* **25**, 1445–1452.

Johnson, P. C, (2002), "Identification of Critical Parameters for the Johnson and Ettinger (1991) Vapor Intrusion Model," American Petroleum Institute *Bulletin No. 17*, Washington, D.C.

Jury, W. A., W. F. Spencer, and W. J. Farmer (1983), "Behavior Assessment Models for Trace Organics in Soil: I Model description," *J. Environ. Qual.* **12**, 558–564. (Errata see: *J. Environ. Qual.* **16**, 448).

Office of Environmental Health and Hazard Assessment. (2004), Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil. Integrated Risk Assessment Section.

Rueth, L. S., R. Ferry, L. Green-Hormer, and T. Delorenzo (1998), *Remedial Design Document for the General Services Area Treatment Facilities,* Lawrence Livermore National Laboratory Site 300, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-127465).

SCS Engineers (2009), *Excavation and Remediation Plan (100% Submittal) Building 850 Soil Remediation,* Lawrence Livermore National Laboratory Site 300 LLNL Subcontract No. B575171, SCS Engineers, Pleasanton, Calif.

SCS Engineers (2010), *Inspection and Maintenance Plan, Building 850 Containment Embankment*, Lawrence Livermore National Laboratory Site 300 LLNL Subcontract No. B575171, SCS Engineers, Pleasanton, Calif.

Taffet, M.J. and A.L. Lamarre (1989), *Remedial Investigation of Landfill Pit 7 Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCID-21764).

Taffet, M., V. Dibley, L., Ferry, W. Daily, and Z. Demir, (2008), *Interim Remedial Design Document for the Pit 7 Complex at Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-234697).

U.S. DOE (2008), *Final Site-Wide Record of Decision for Lawrence Livermore National Laboratory Site 300,* Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-236665).

U.S. EPA (2002), OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance), EPA530-D-02-004.

U.S. EPA (2005), *Ecological Soil Screening Levels for Cadmium, Interim Final*, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C. 20460, OSWER 9285.7-65, March 2005.

Valett, J., Dibley, V., Madrid, V., and Ferry, L. (2011a), *Draft Final Five-Year Review Report for the General Services Area Operable Unit at Lawrence Livermore National Laboratory Site 300,* Lawrence Livermore National Laboratory, Livermore, Calif. (LLNL-AR-486703-DRAFT FINAL).

Valett, J., Dibley, V., Madrid, V., and Ferry, L. (2011b), *Draft Five-Year Review Report for the Building 834 Operable Unit at Lawrence Livermore National Laboratory Site 300,* Lawrence Livermore National Laboratory, Livermore, Calif. (LLNL-AR-499272-DRAFT).

Wannamaker, E. (2004) Technical memorandum: Superfund JE Model Spreadsheet Error, EnviroGroup Limited.

Webster-Scholten, C. P., Ed. (1994), *Final Site-Wide Remedial Investigation Report, Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-108131).

# Figures

# List of Figures

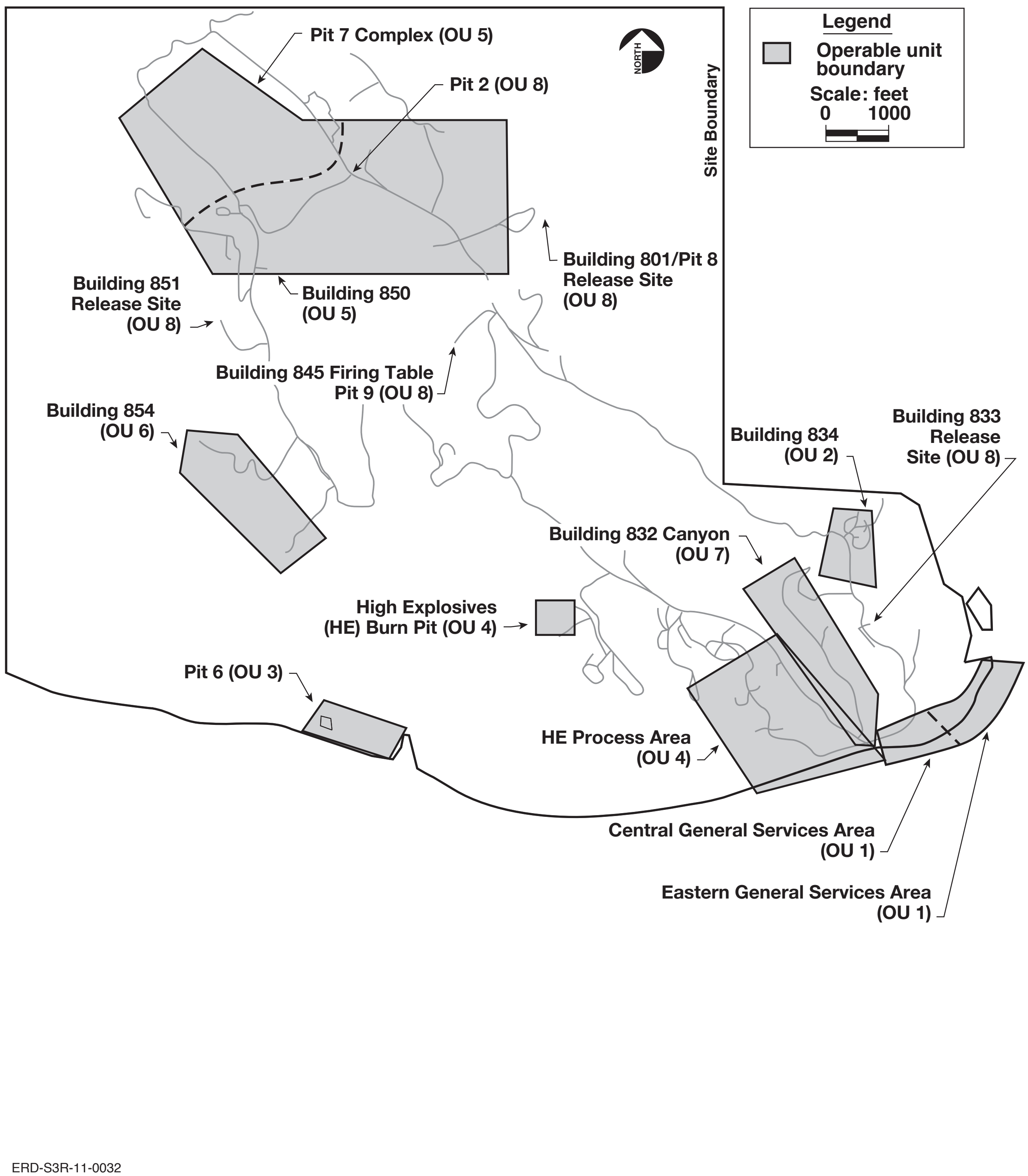


**Figure 2-1. Site 300 map showing Operable Unit locations.**

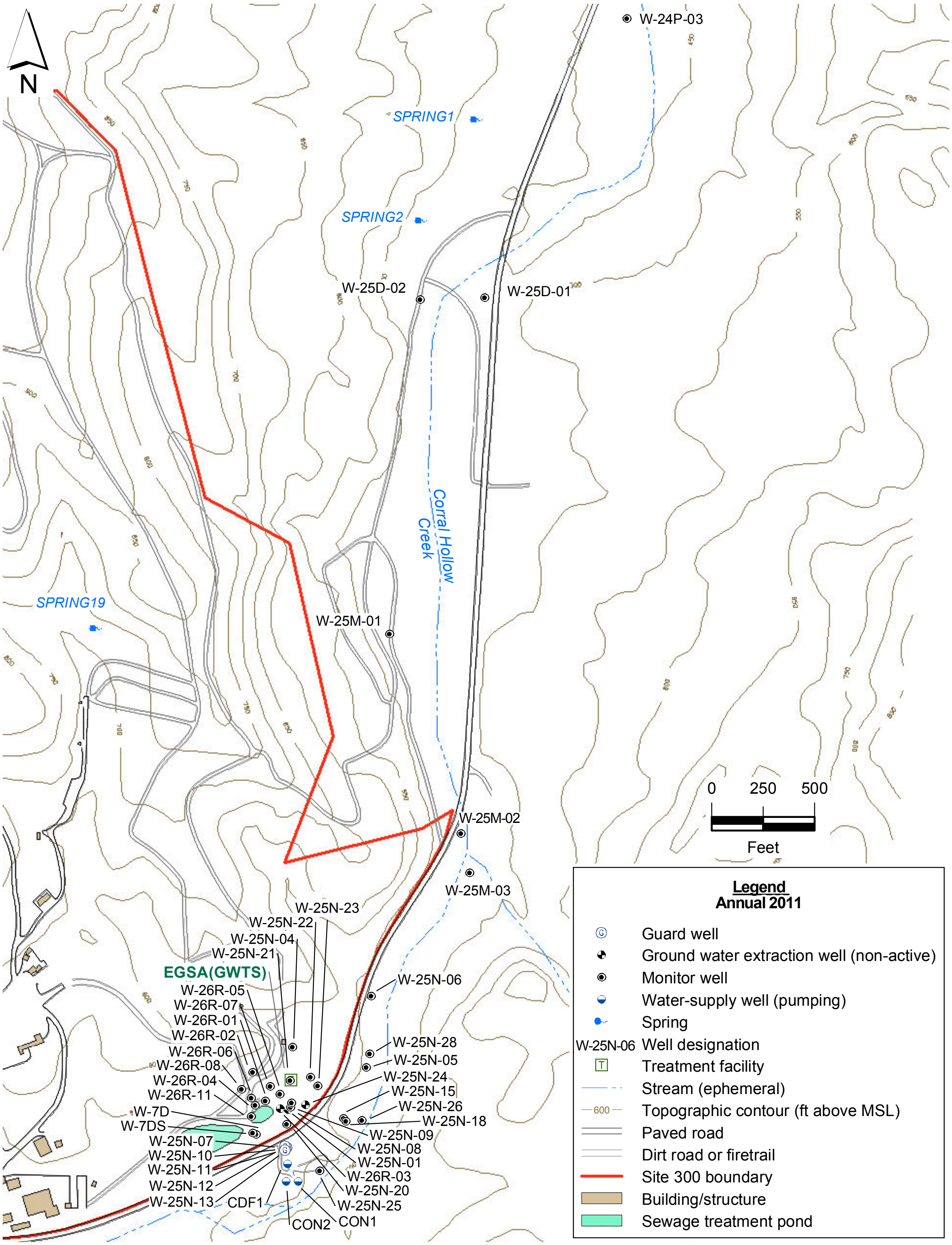


**Figure 2.1-1. Eastern General Services Area Operable Unit site map showing monitor, extraction and water-supply wells, and treatment facilities.**

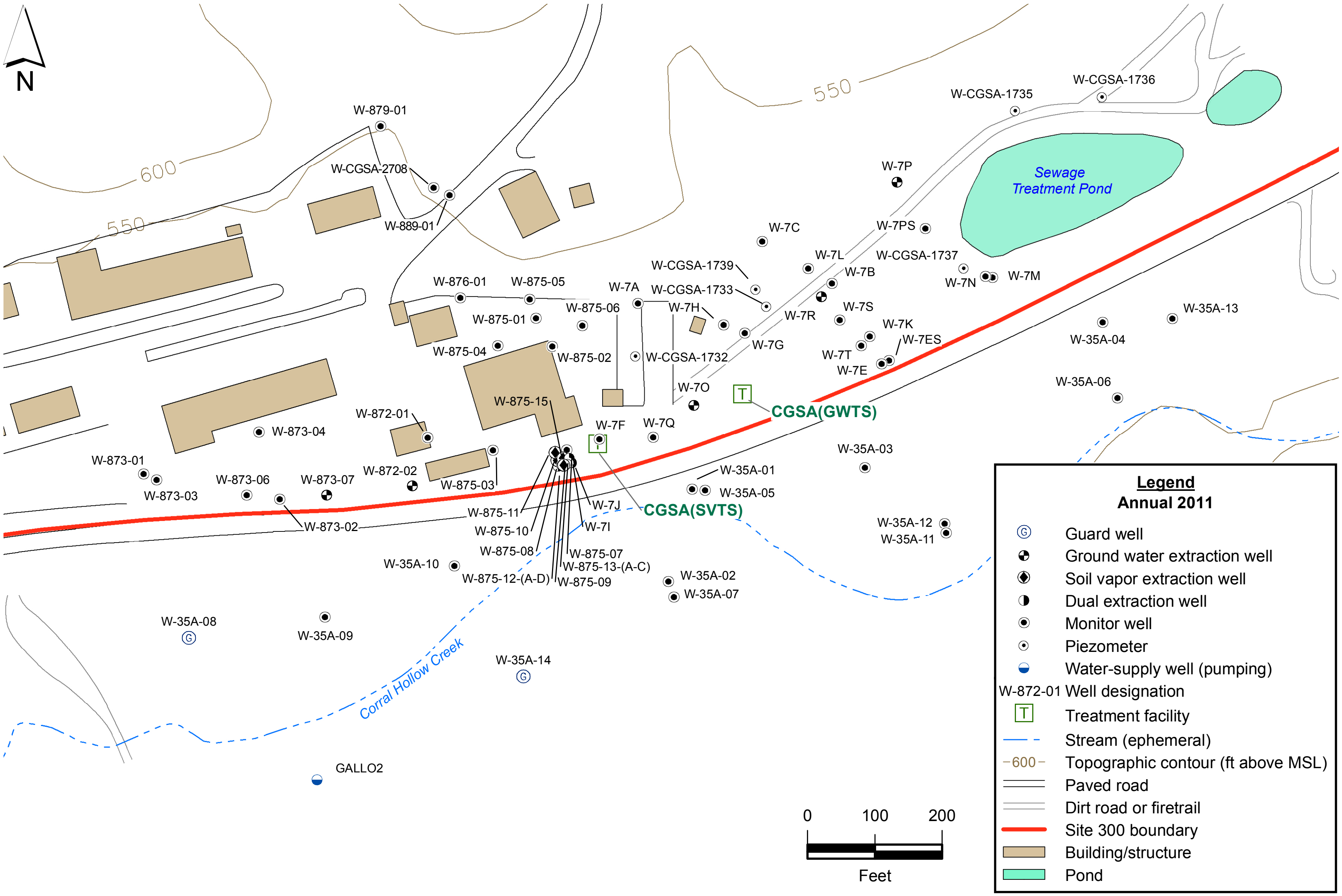


**Figure 2.1-2. Central General Services Area Operable Unit site map showing monitor, extraction and water-supply wells, and treatment facilities.**

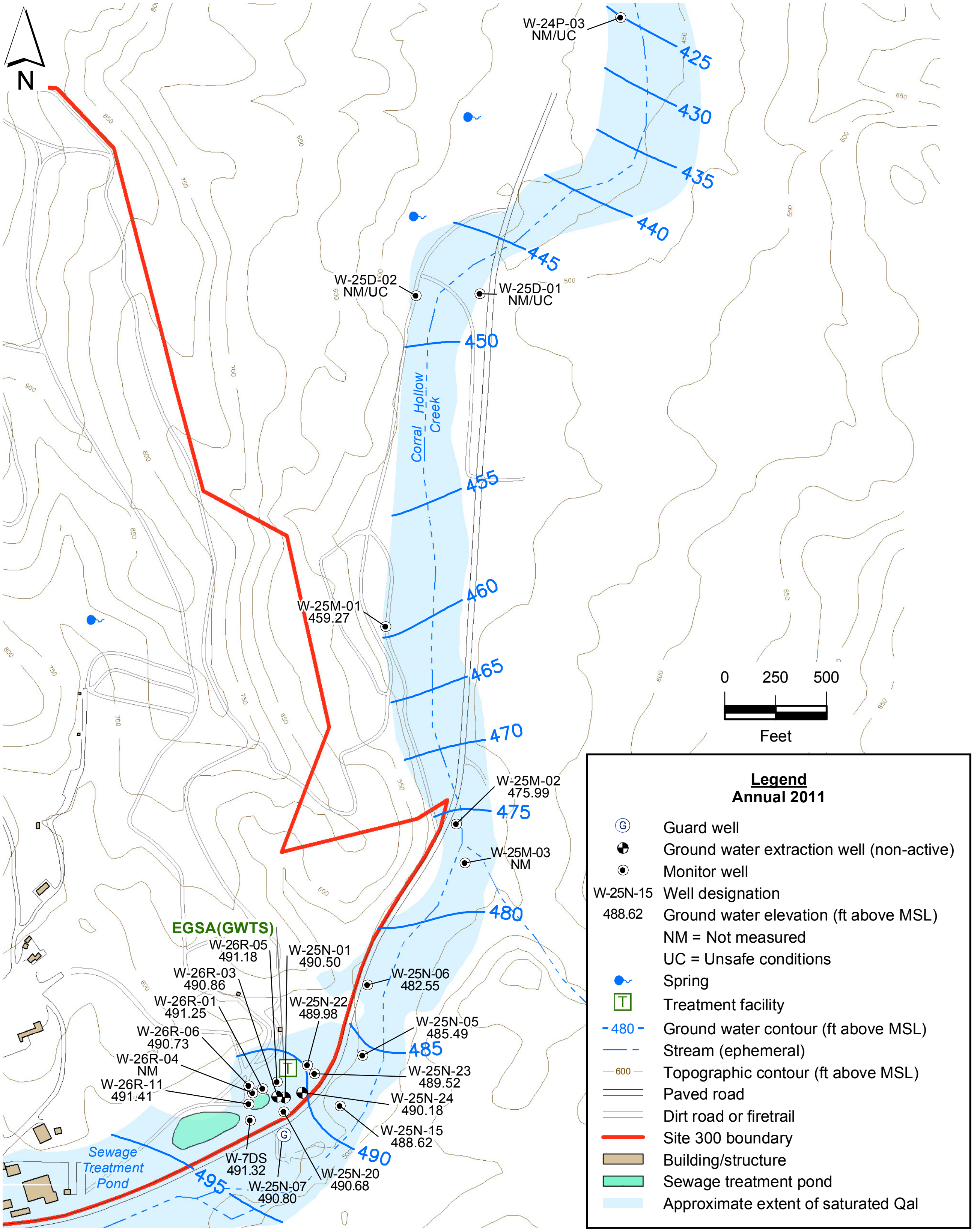


**Figure 2.1-3. Eastern General Services Area Operable Unit ground water potentiometric surface map for the Qal-Tnbs$_1$ hydrostratigraphic unit.**

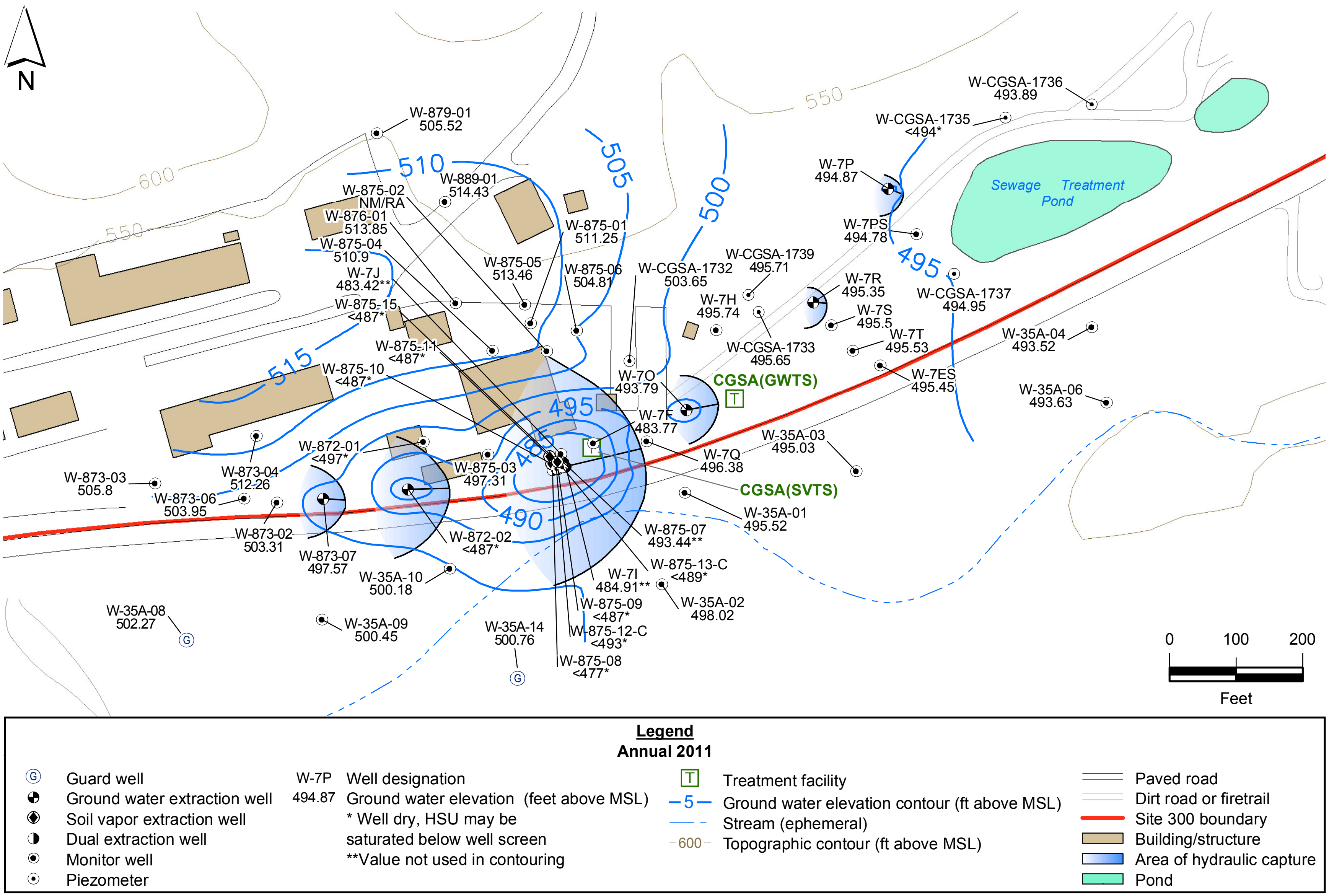


**Figure 2.1-4. Central General Services Area Operable Unit ground water potentiometric surface map for the Qt-Tnsc$_1$ and Qal-Tnbs$_1$ hydrostratigraphic units.**

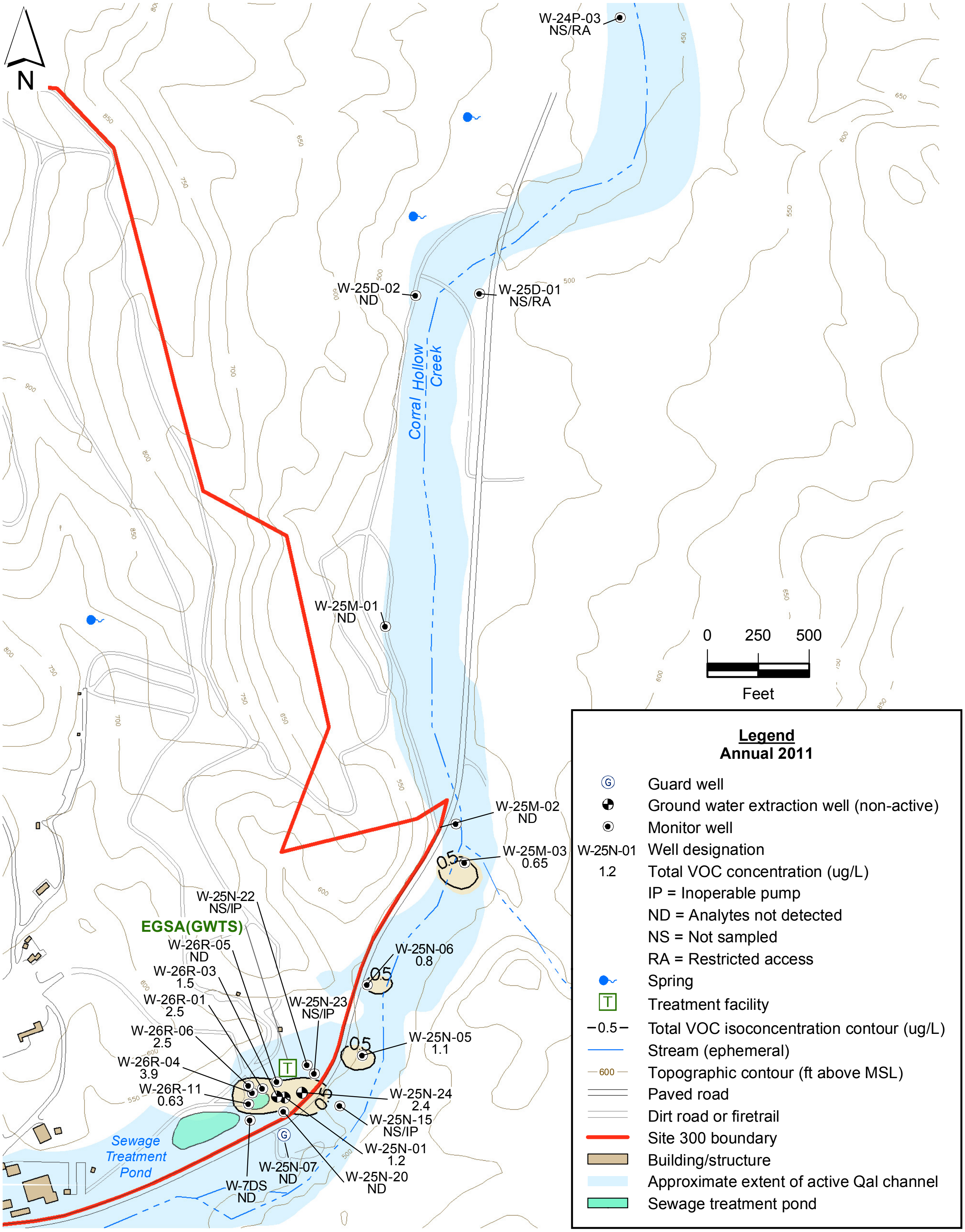


**Figure 2.1-5. Eastern General Services Area Operable Unit total VOC isoconcentration contour map for the Qal-Tnbs$_1$ hydrostratigraphic unit.**

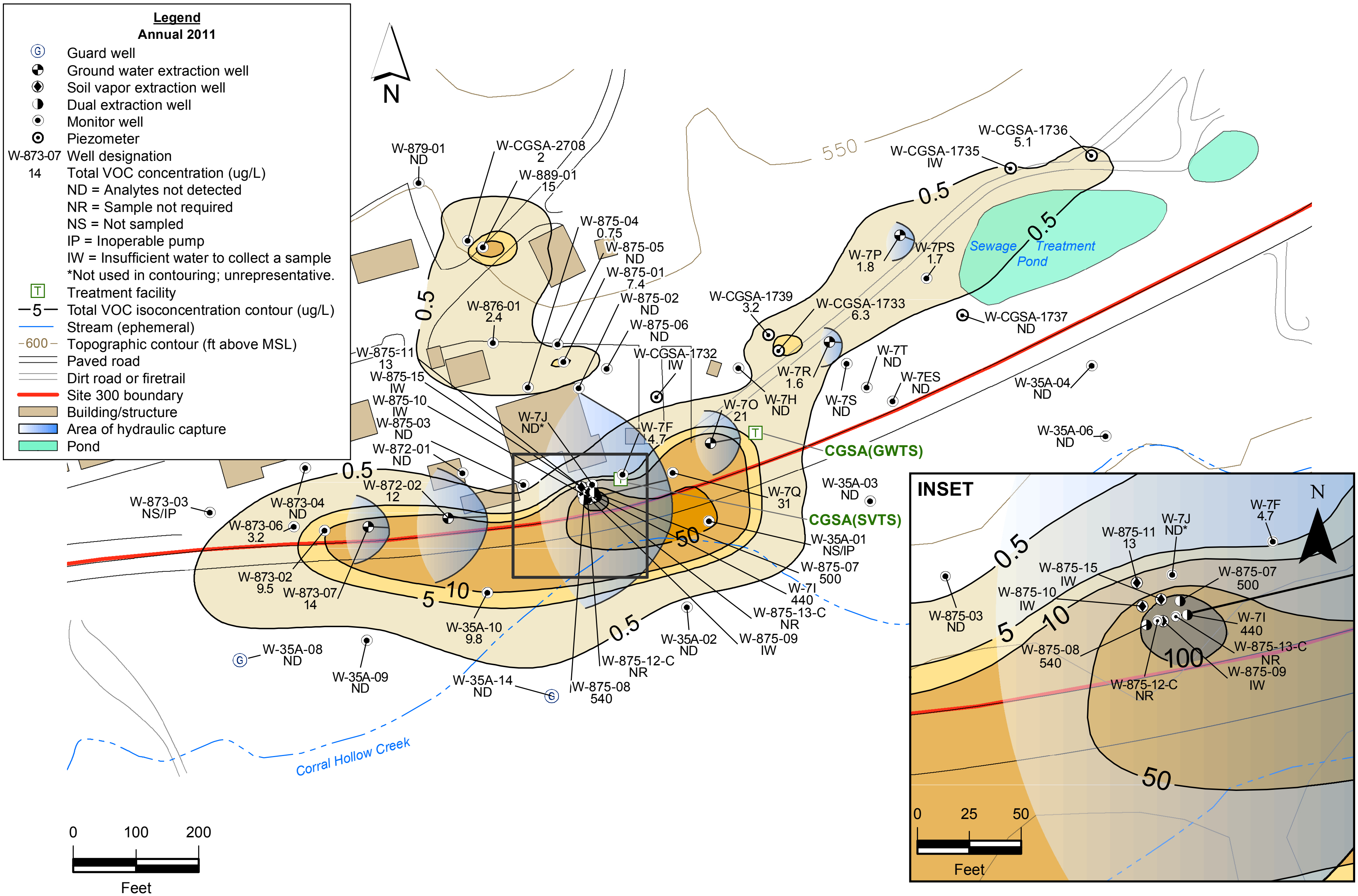


**Figure 2.1-6. Central General Services Area Operable Unit total VOC isoconcentration contour map for the Qt-Tnsc$_1$ and Qal-Tnbs$_1$ hydrostratigraphic units.**

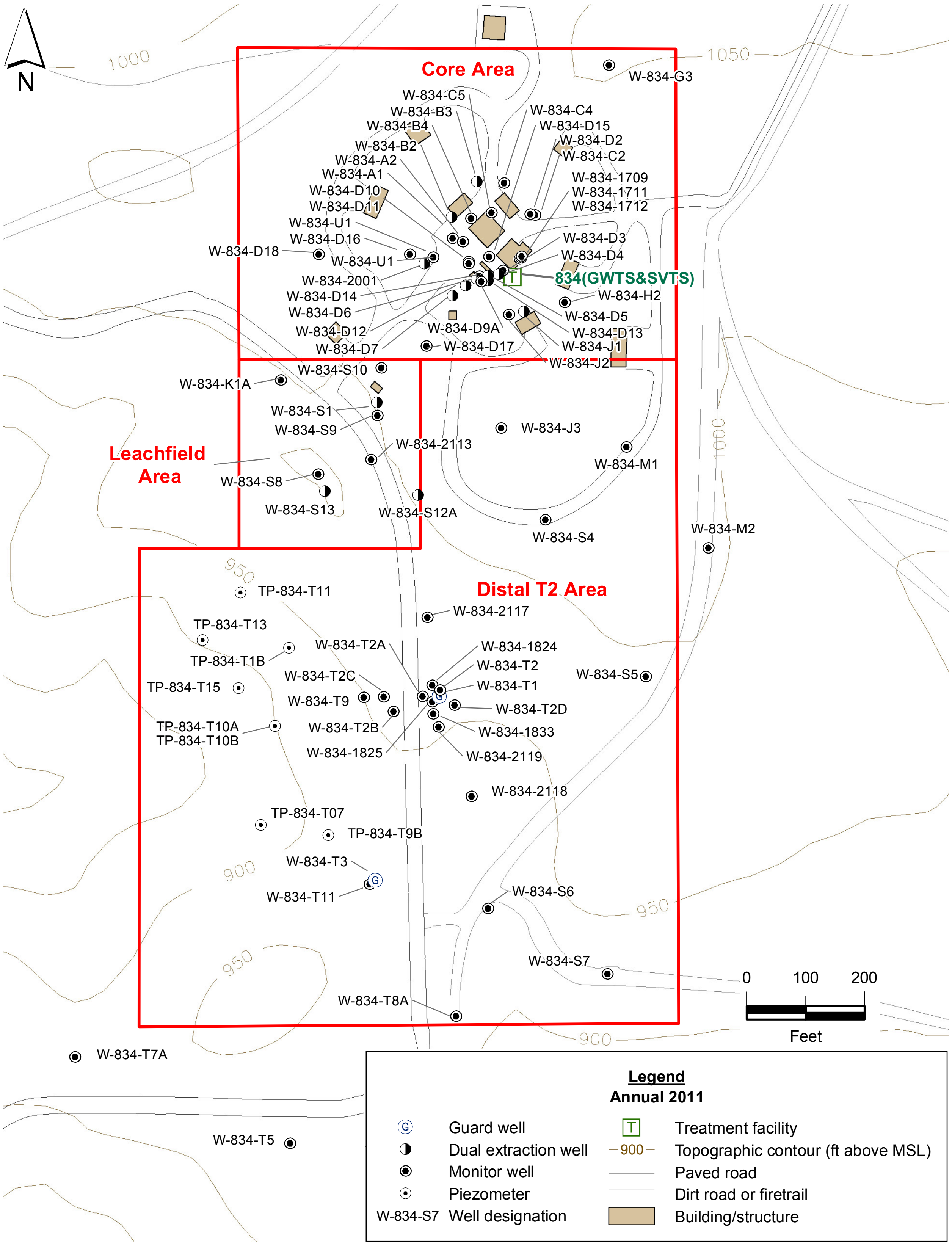


**Figure 2.2-1. Building 834 Operable Unit site map showing monitor and extraction wells, and treatment facilities.**

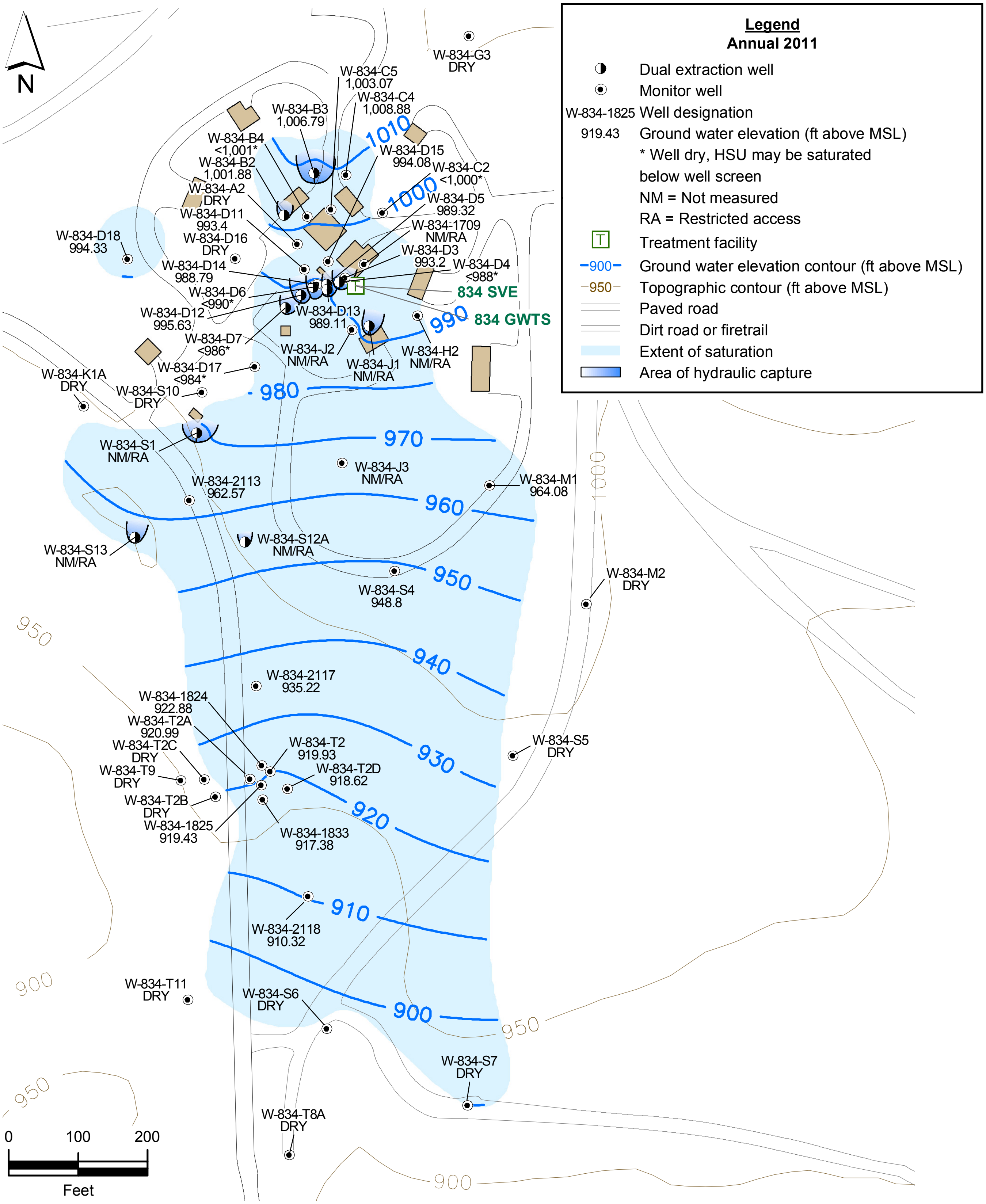


**Figure 2.2-2. Building 834 Operable Unit ground water potentiometric surface map for the Tpsg perched water-bearing zone.**

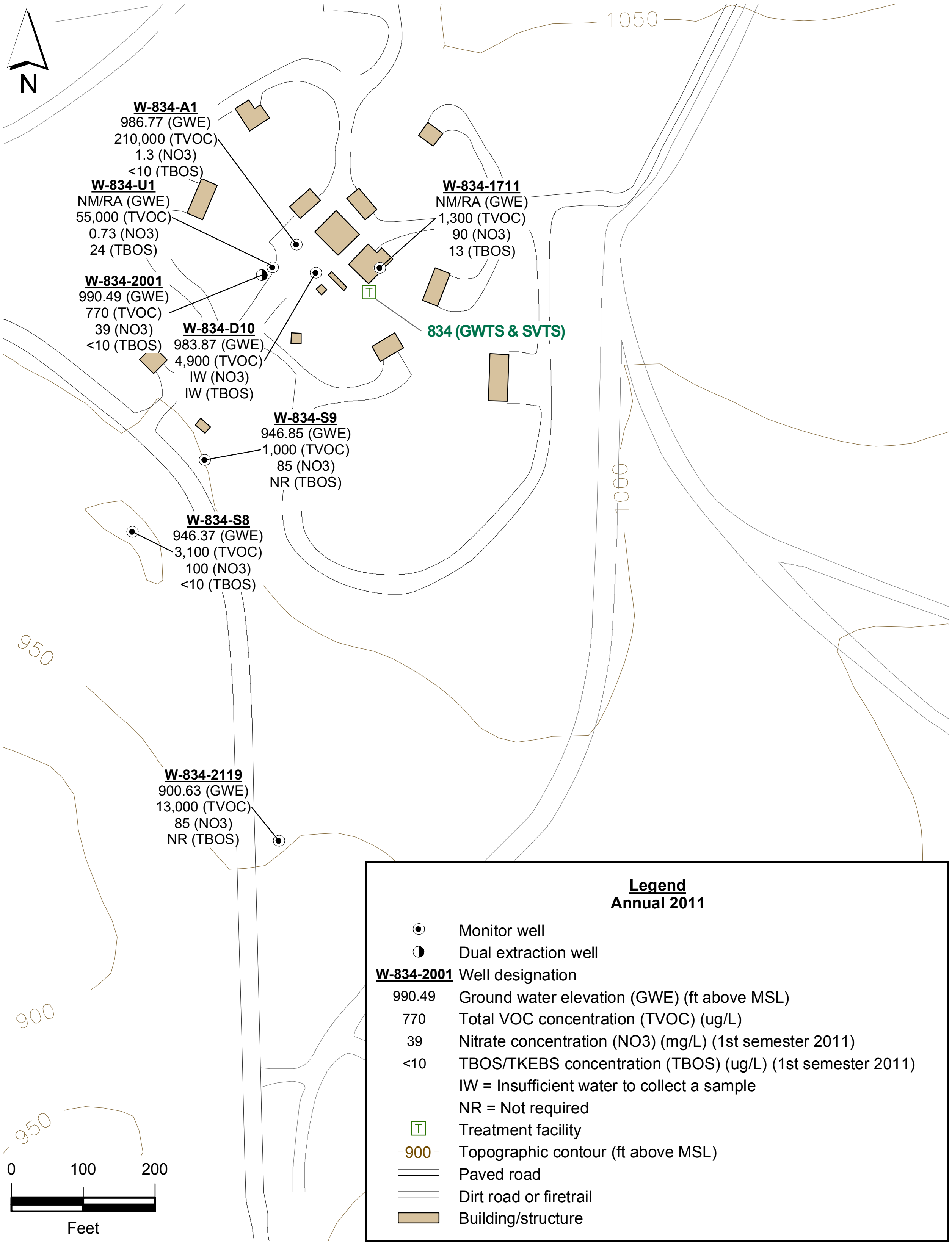


**Figure 2.2-3. Building 834 Operable Unit map showing ground water elevations, and total VOC, TBOS/TKEBS, and nitrate concentrations for the Tps-Tnsc$_2$ hydrostratigraphic unit.**

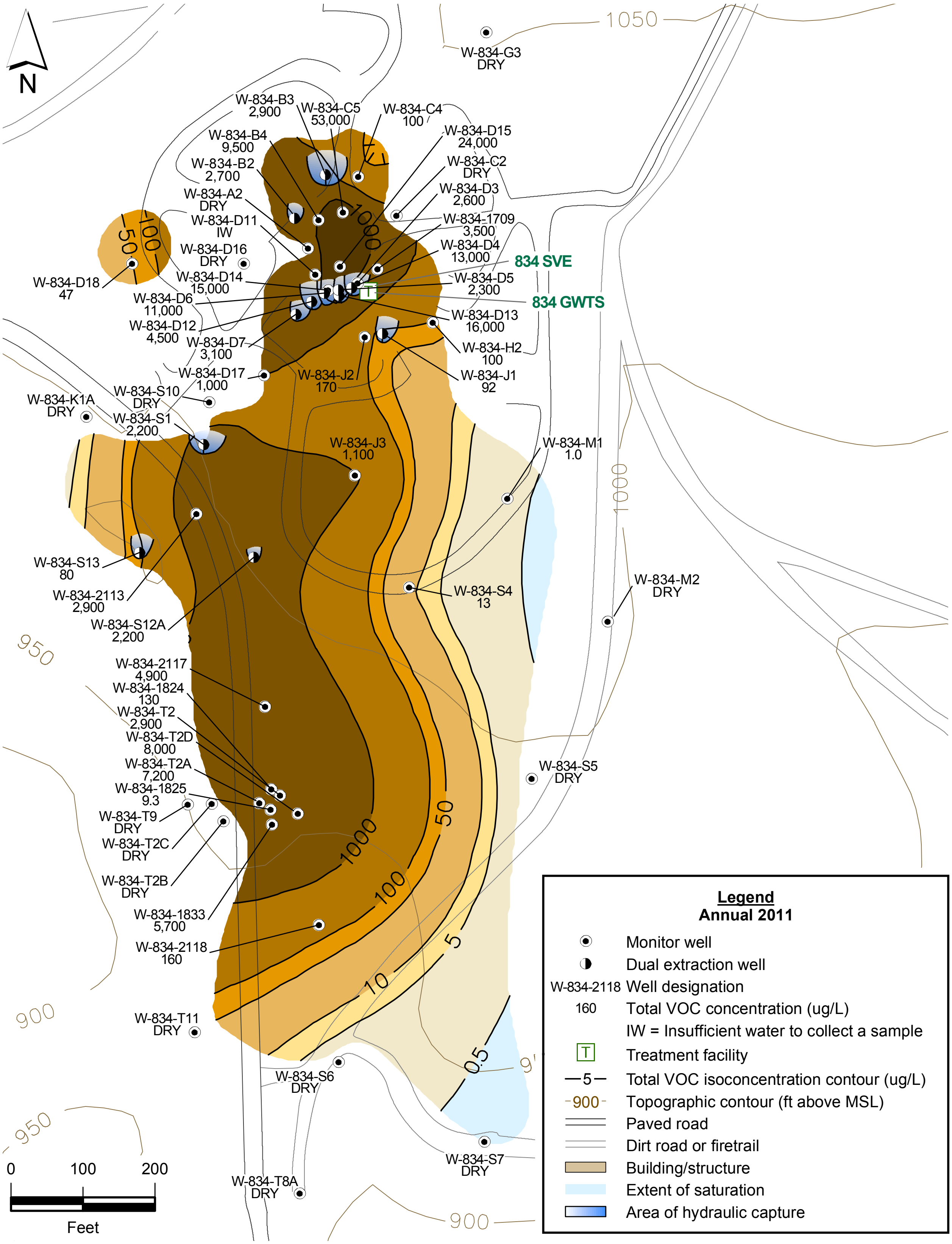


**Figure 2.2-4. Building 834 Operable Unit total VOC isoconcentration contour map for the Tpsg perched water-bearing zone.**

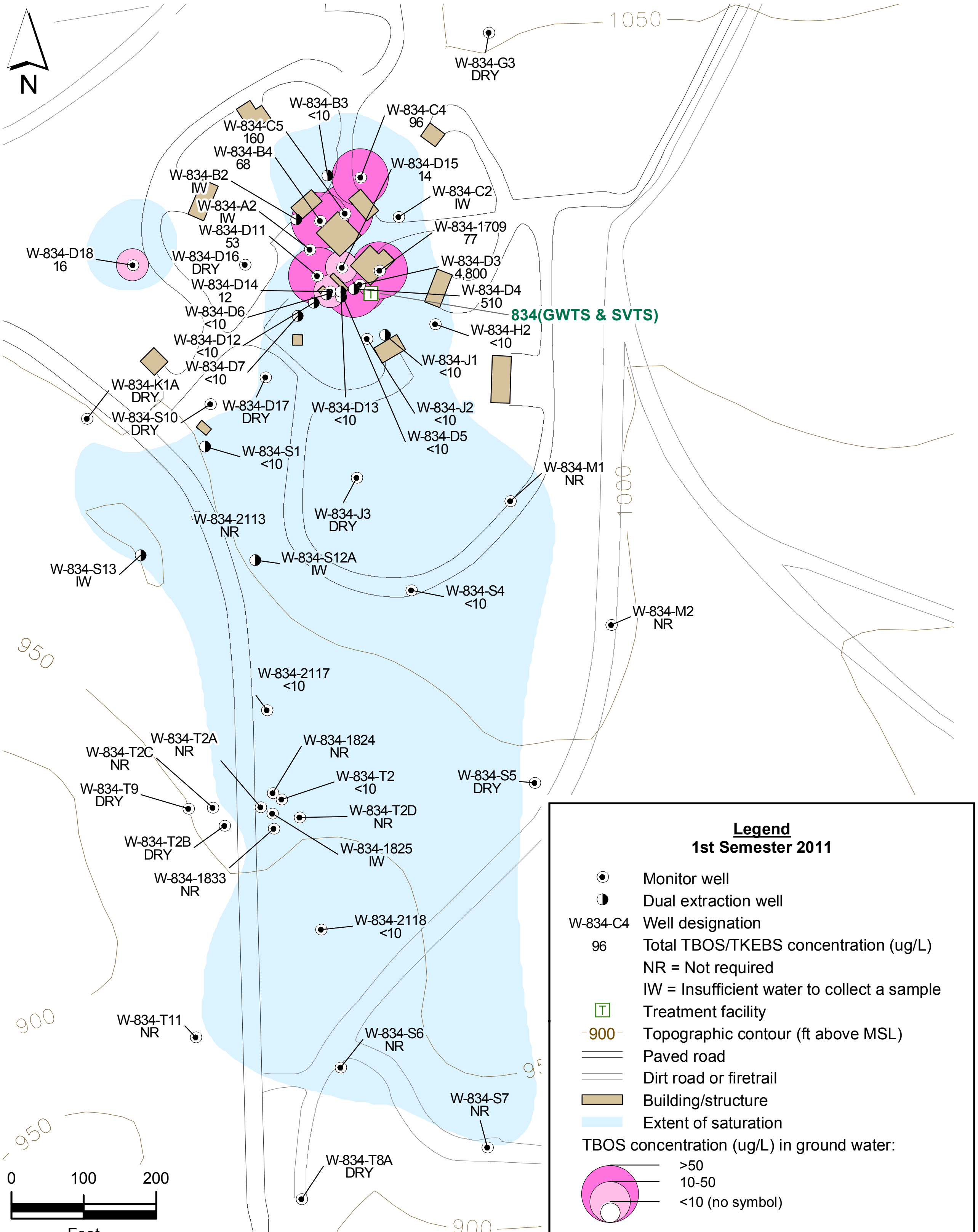


**Figure 2.2-5. Building 834 Operable Unit map showing TBOS/TKEBS concentrations for the Tpsg perched water-bearing zone.**

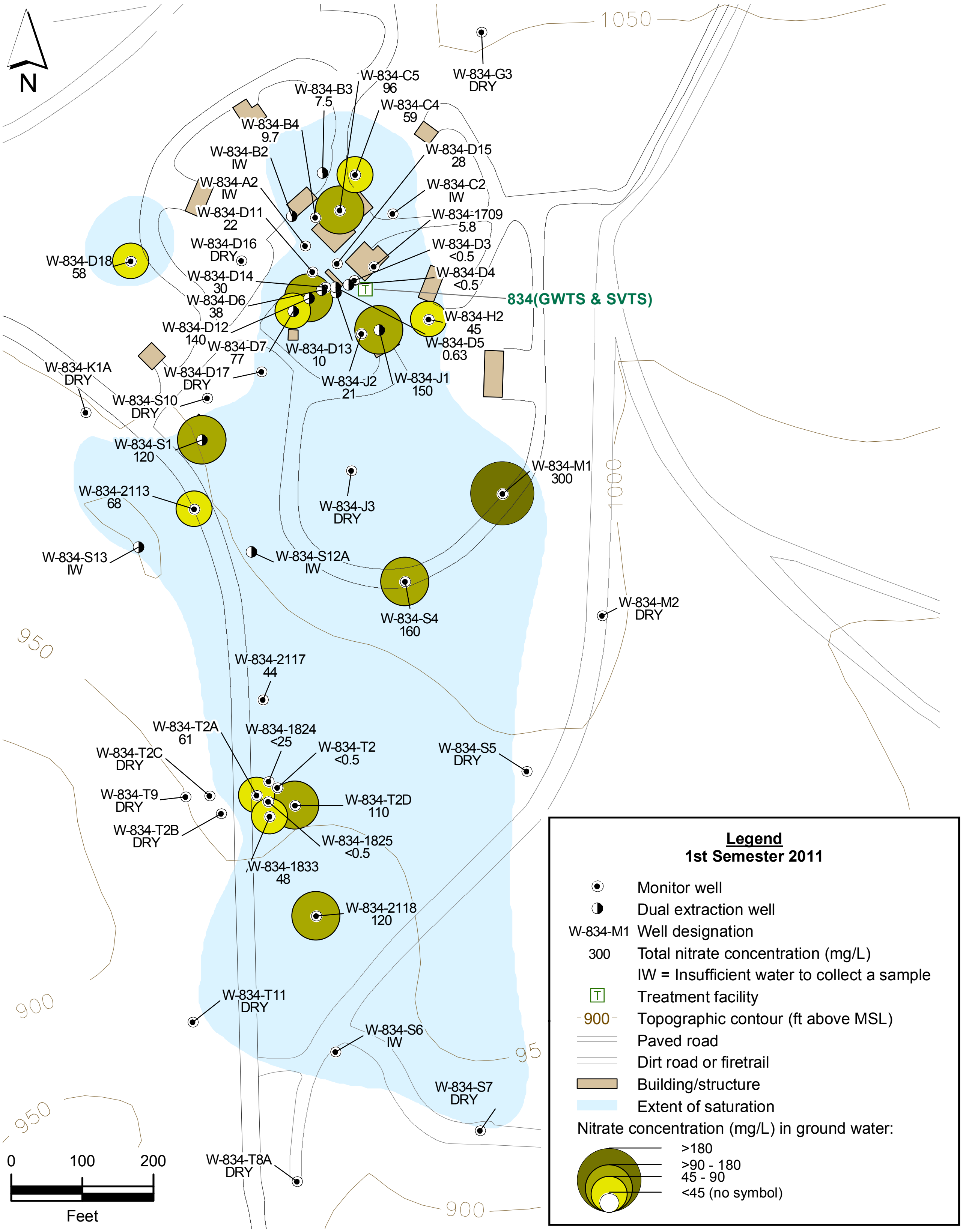


**Figure 2.2-6. Building 834 Operable Unit map showing nitrate concentrations for the Tpsg perched water-bearing zone.**

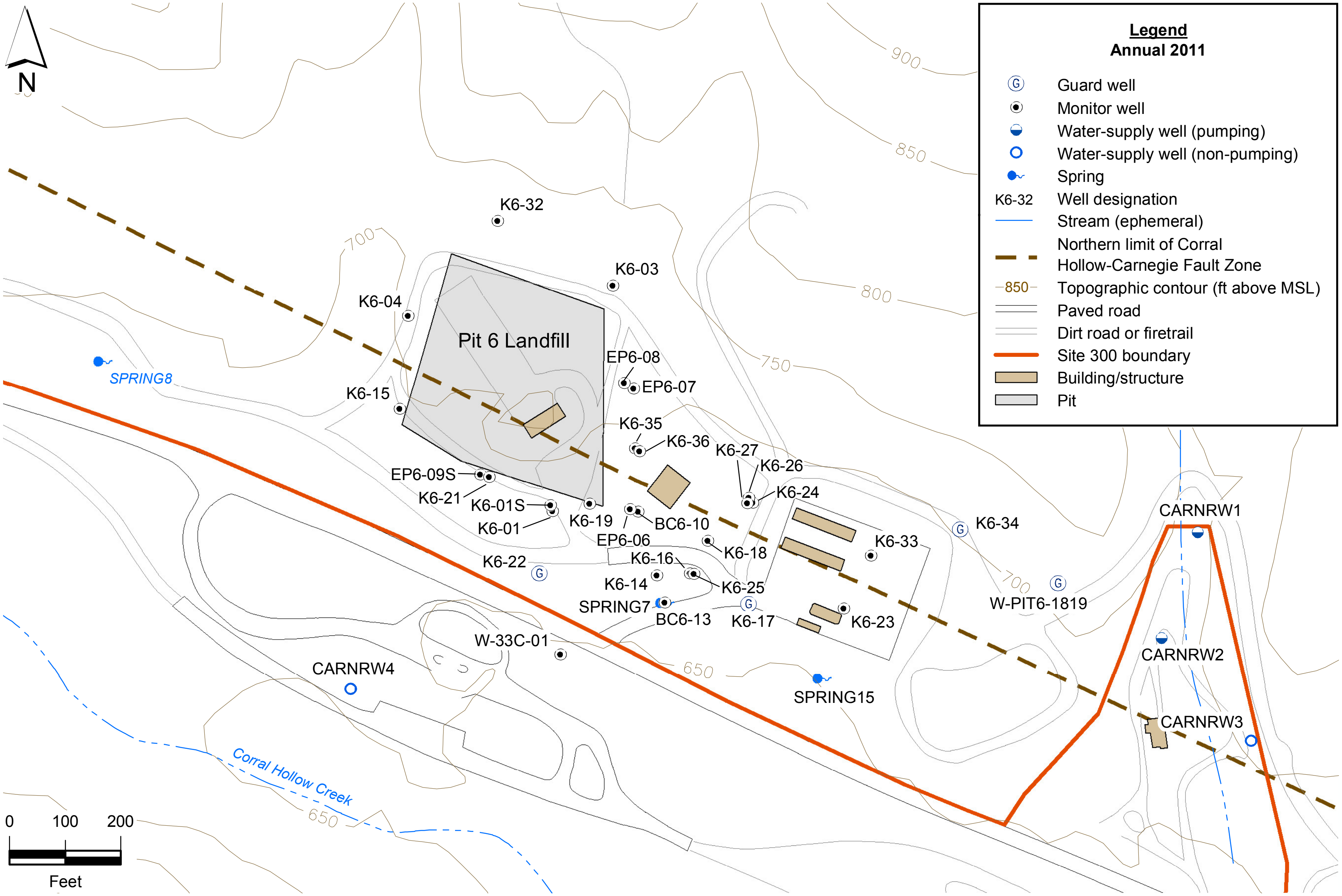


**Figure 2.3-1. Pit 6 Landfill Operable Unit site map showing monitor and water-supply wells.**

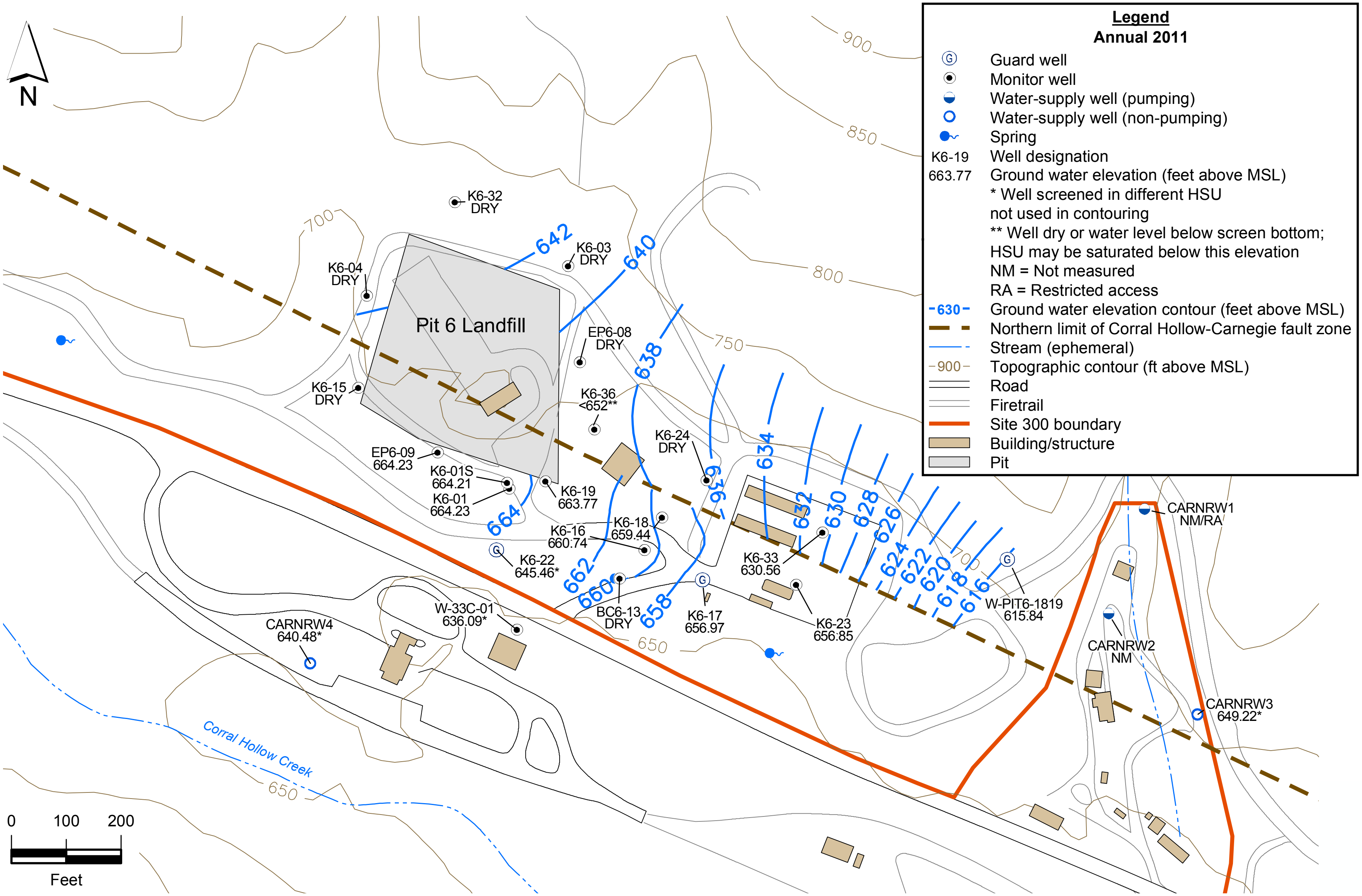


**Figure 2.3-2. Pit 6 Landfill Operable Unit ground water potentiometric surface map for the Qt-Tnbs$_1$ hydrostratigraphic unit.**

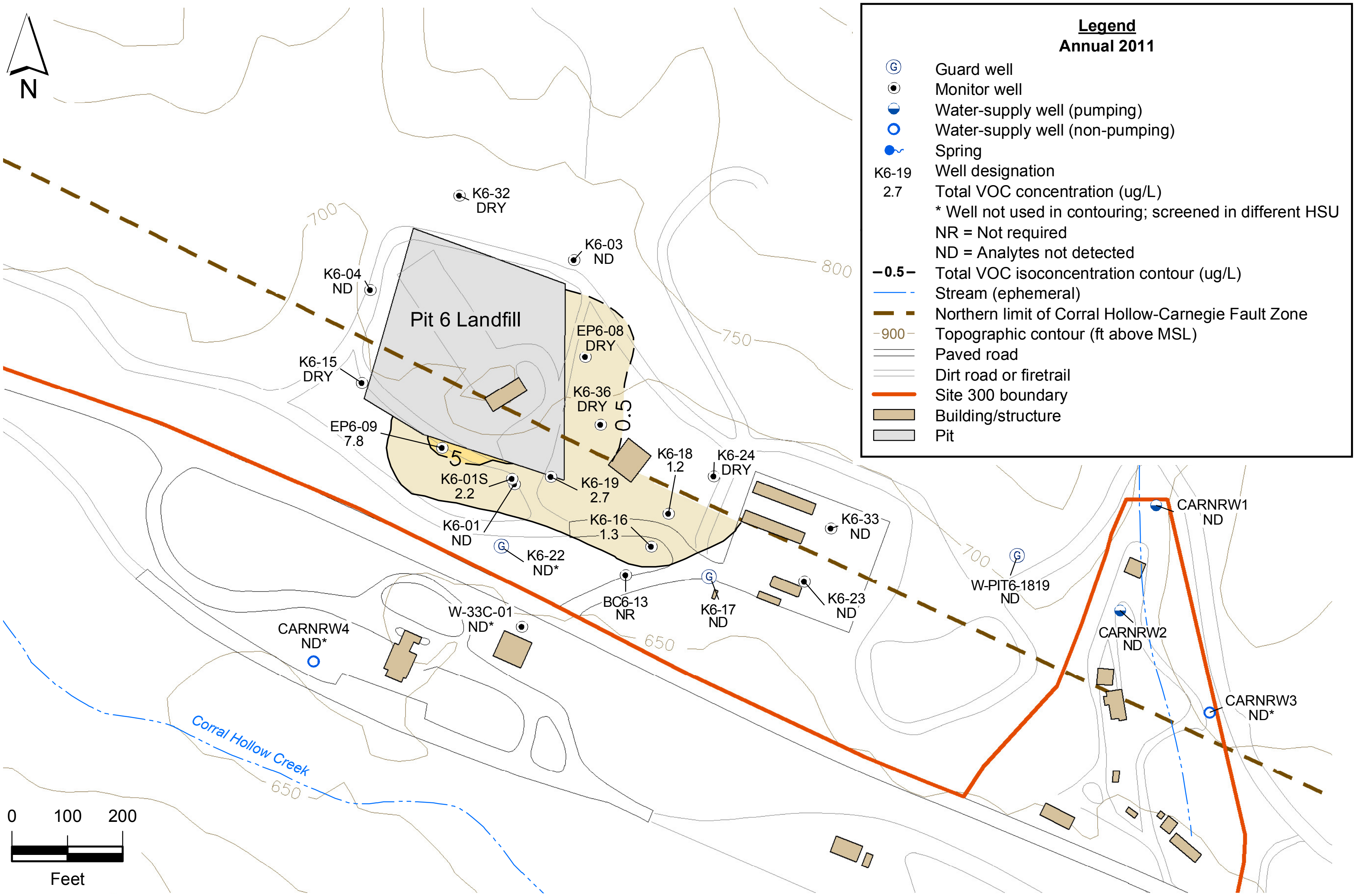


**Figure 2.3-3. Pit 6 Landfill Operable Unit total VOC isoconcentration contour map for the Qt-Tnbs1 hydrostratigraphic unit.**

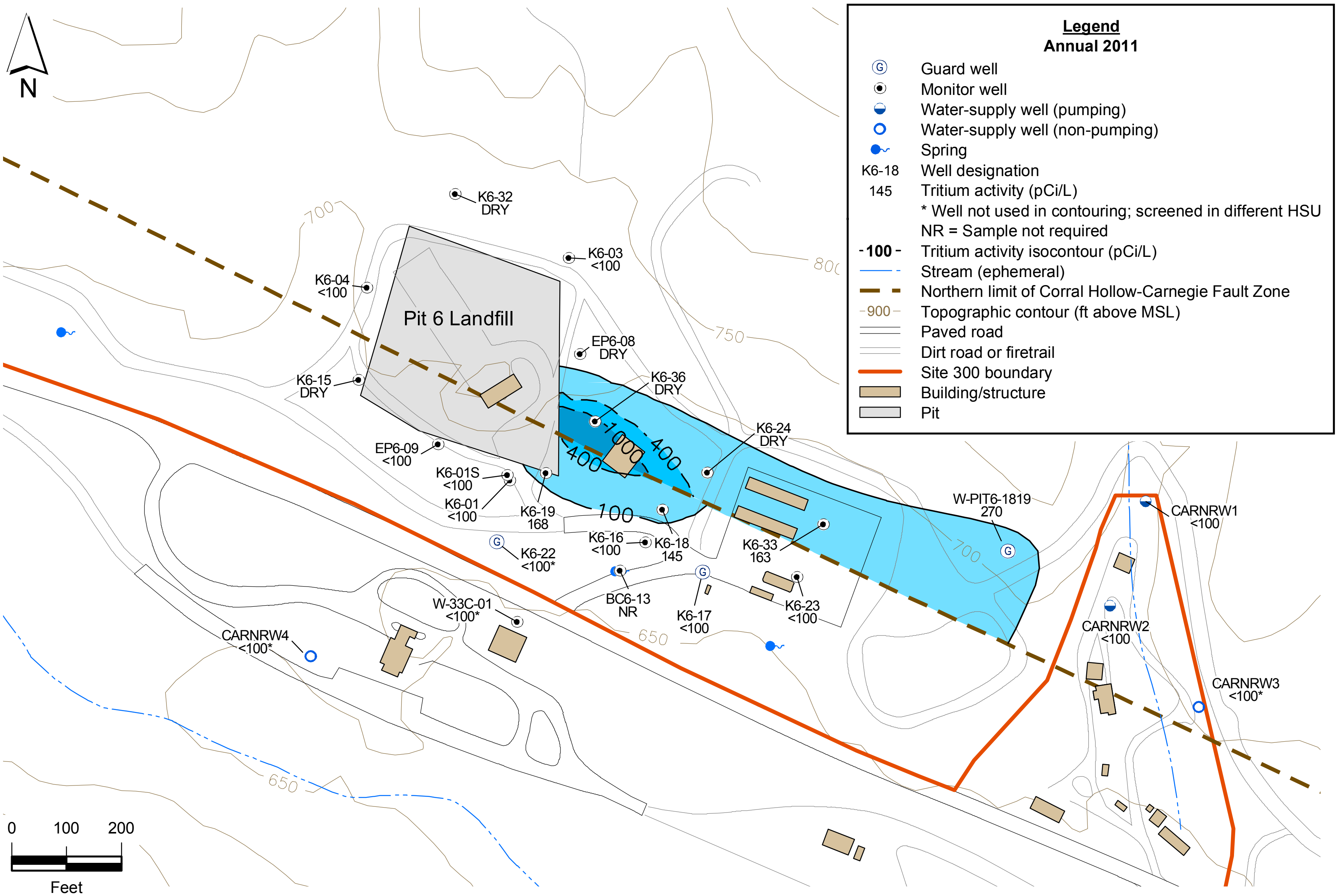


**Figure 2.3-4. Pit 6 Landfill Operable Unit tritium activity isocontour map for the Qt-Tnbs$_1$ hydrostratigraphic unit.**

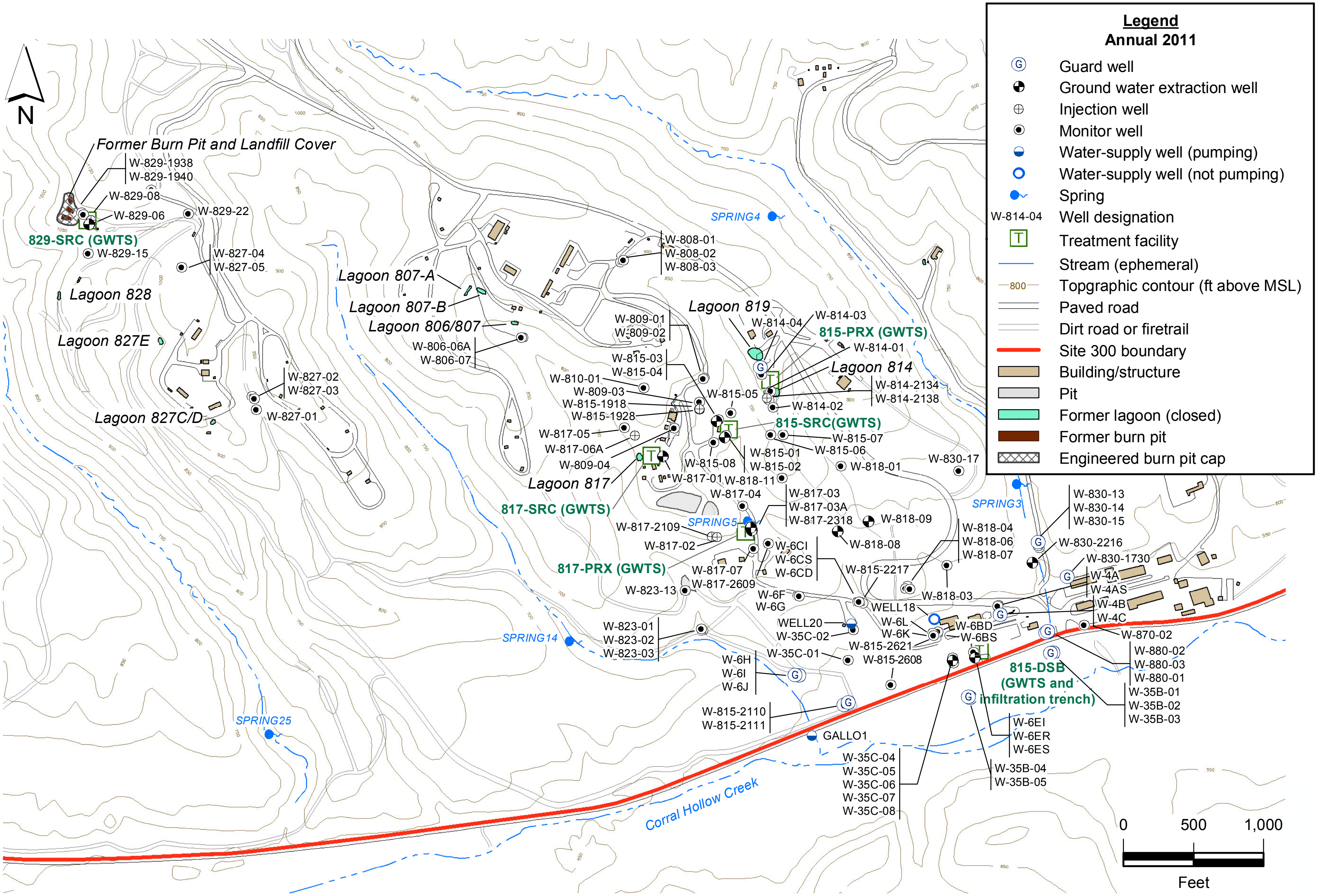


**Figure 2.4-1. High Explosives Process Area Operable Unit site map showing monitor, extraction, injection and water-supply wells, and treatment facilities.**

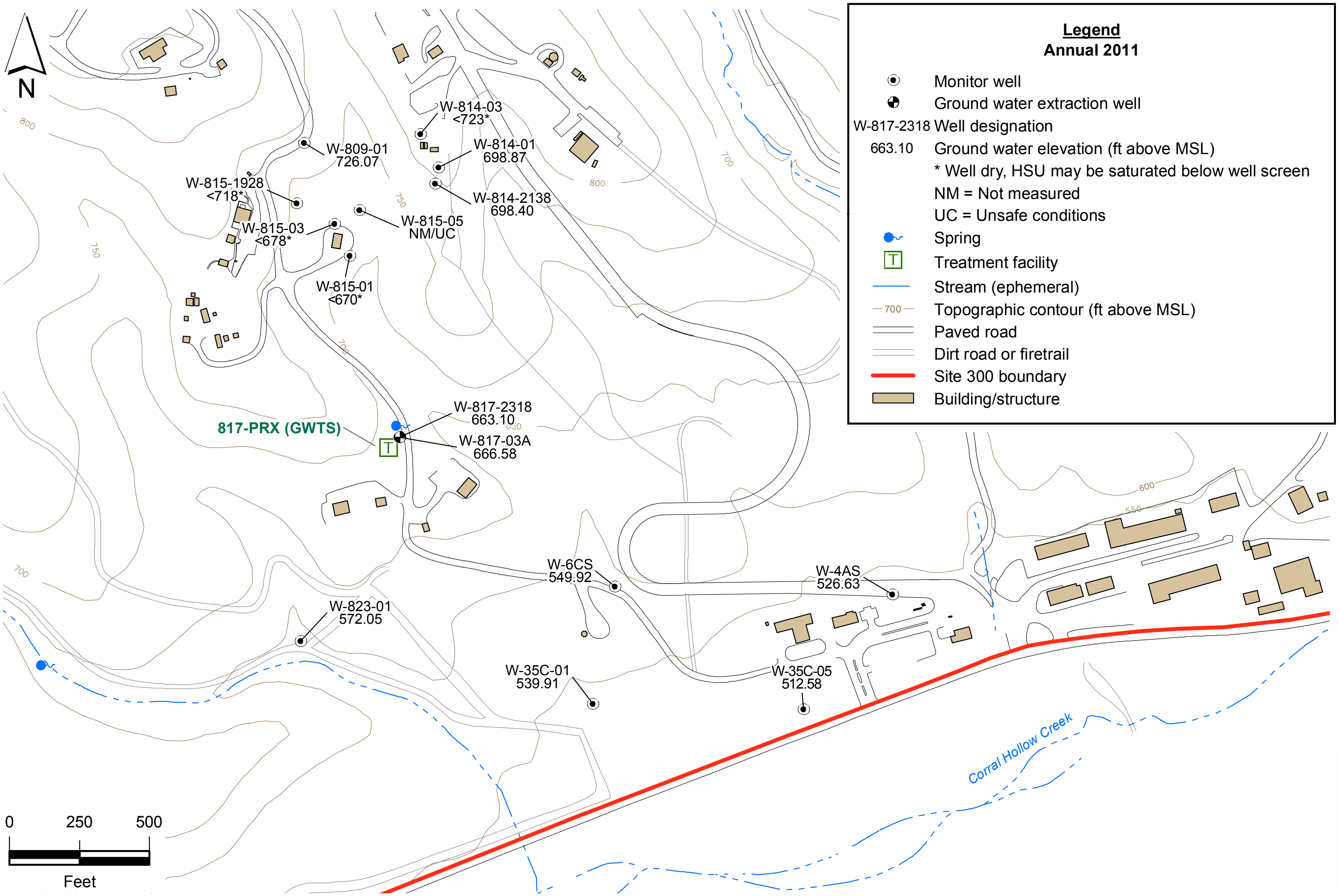


**Figure 2.4-2. High Explosives Process Area Operable Unit map showing ground water elevations for the Tpsg-Tps hydrostratigraphic unit.**

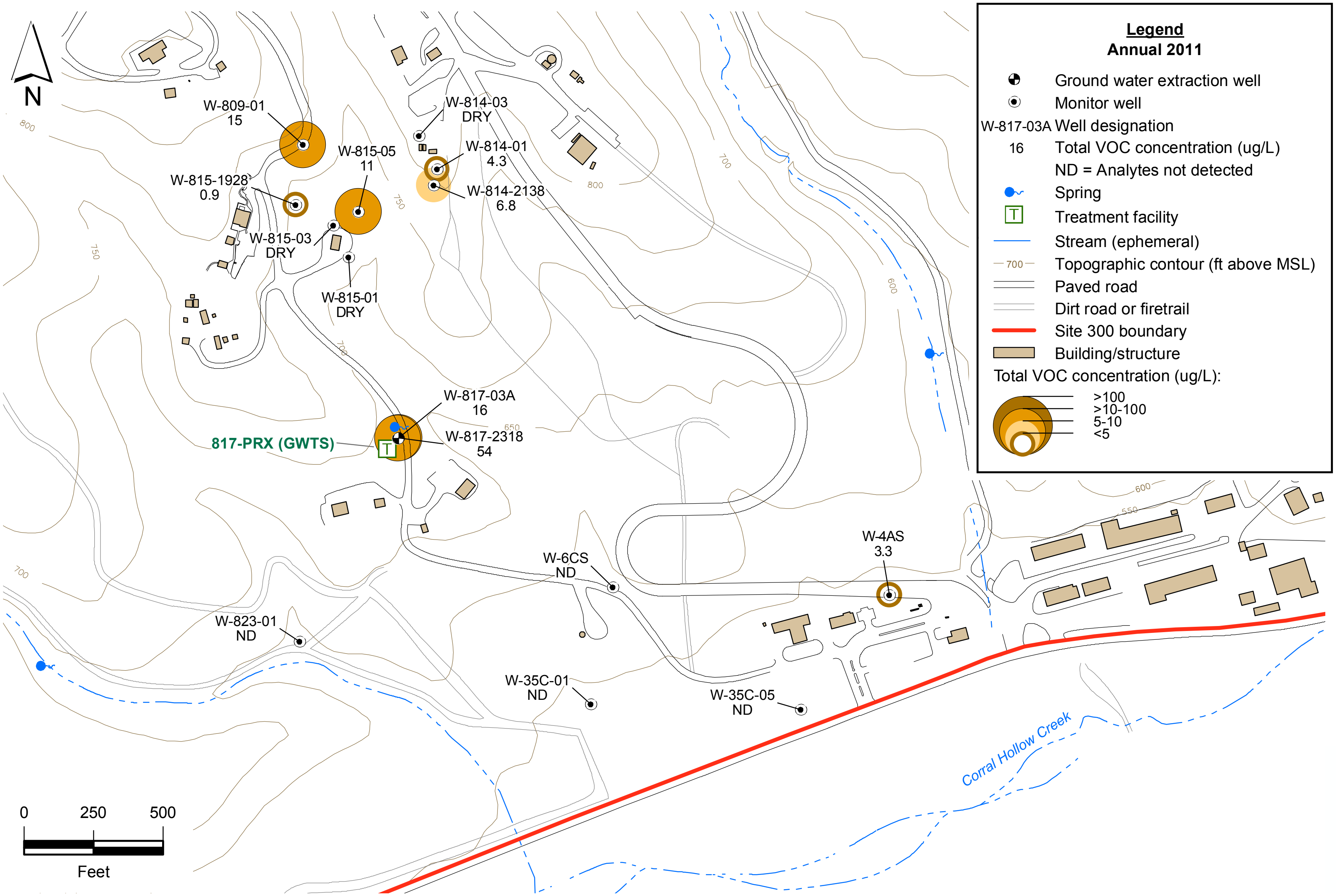


**Figure 2.4-3. High Explosives Process Area Operable Unit map showing total VOC concentrations for the Tpsg-Tps hydrostratigraphic unit.**

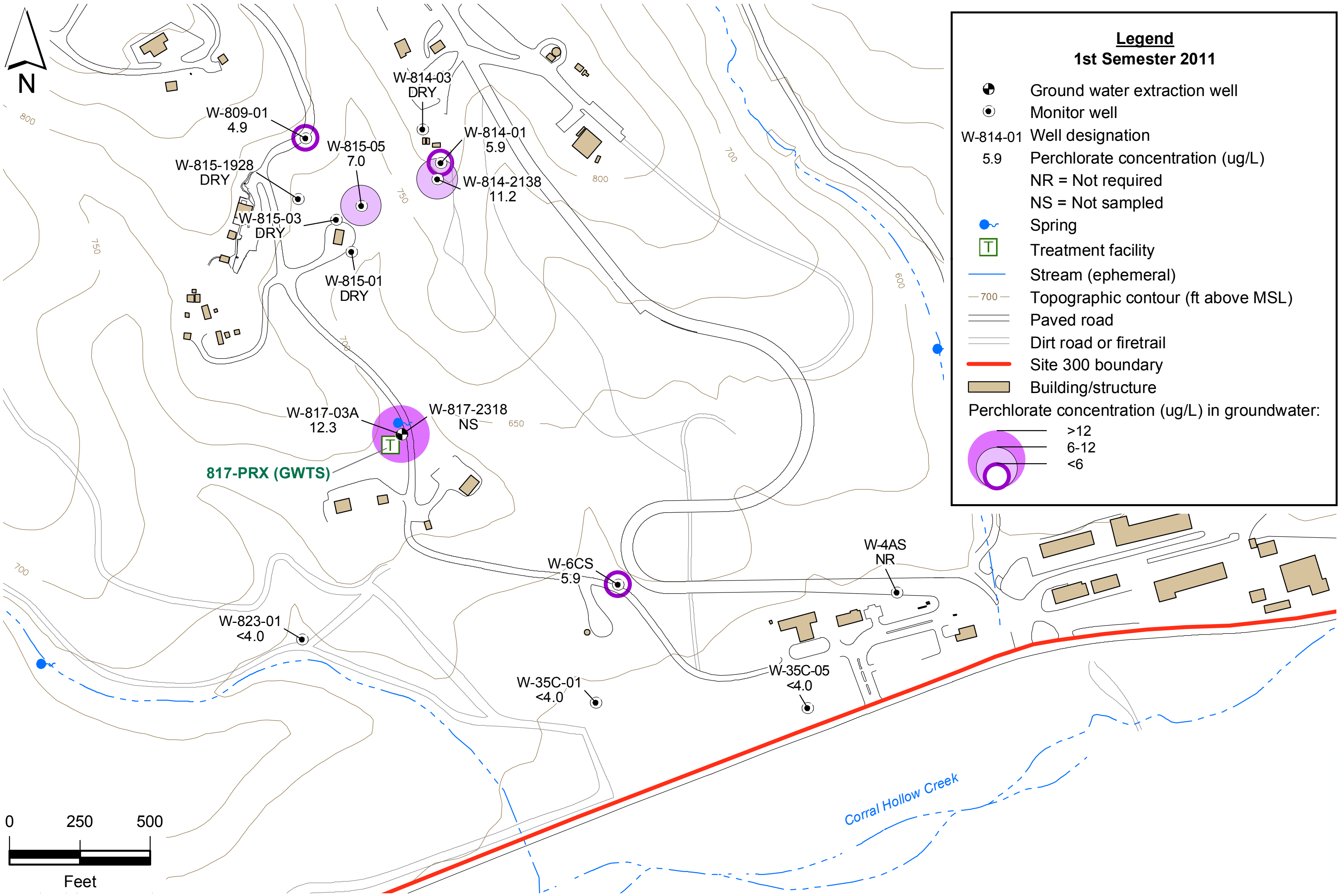


**Figure 2.4-4. High Explosives Process Area Operable Unit map showing perchlorate concentrations for the Tpsg-Tps hydrostratigraphic unit.**

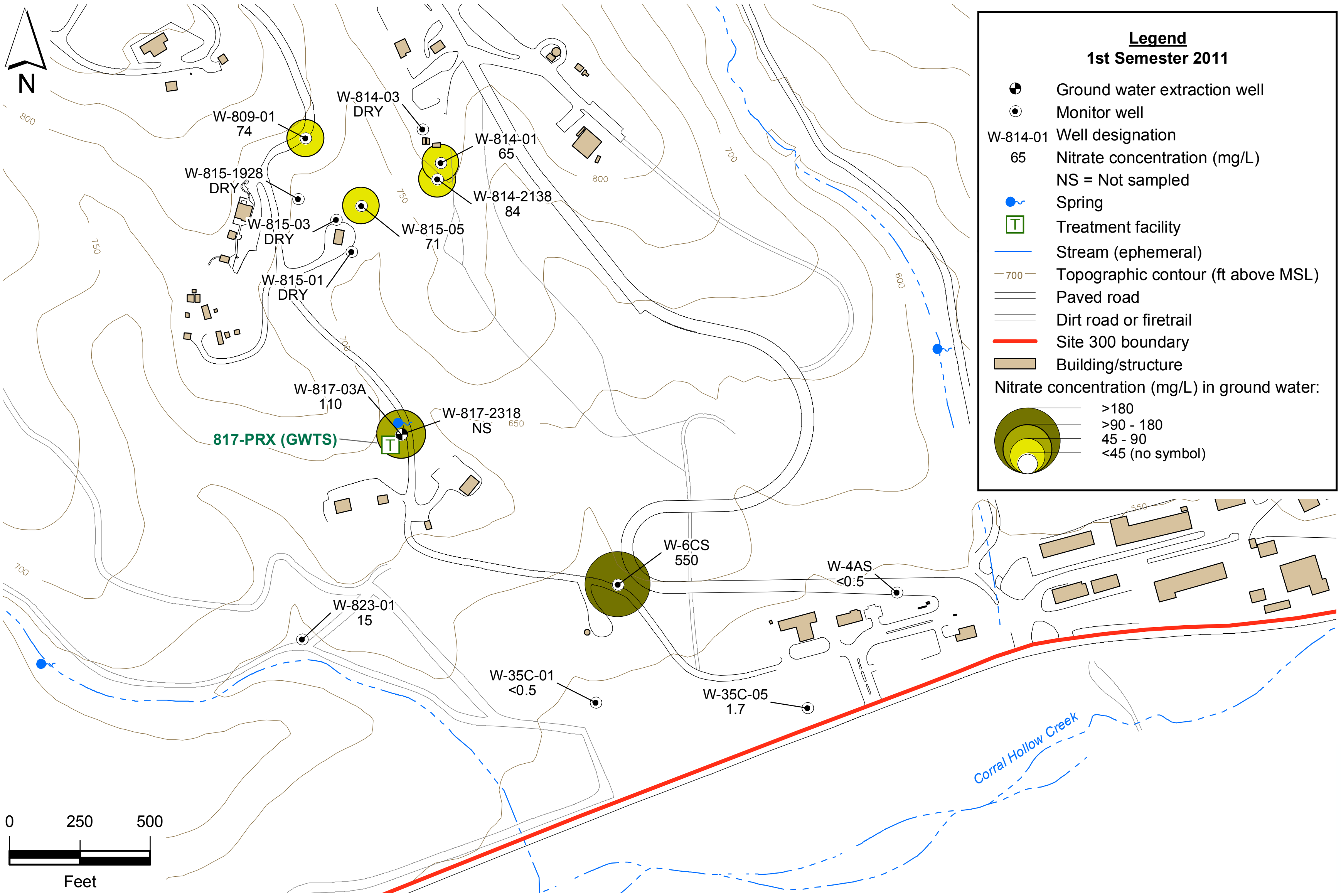


**Figure 2.4-5. High Explosives Process Area Operable Unit map showing nitrate concentrations for the Tpsg-Tps hydrostratigraphic unit.**

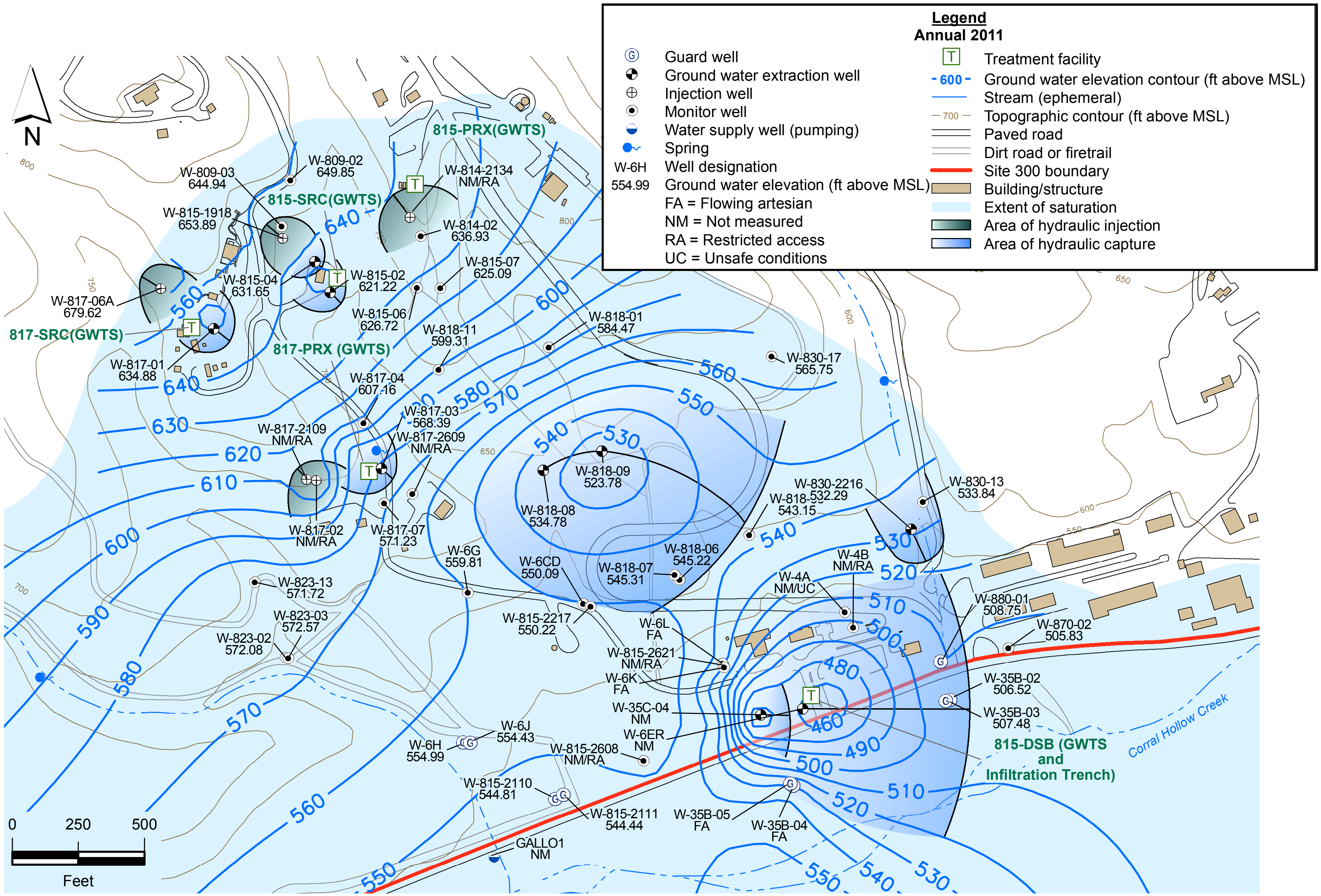


**Figure 2.4-6. High Explosives Process Area Operable Unit ground water potentiometric surface map for the Tnbs$_2$ hydrostratigraphic unit.**

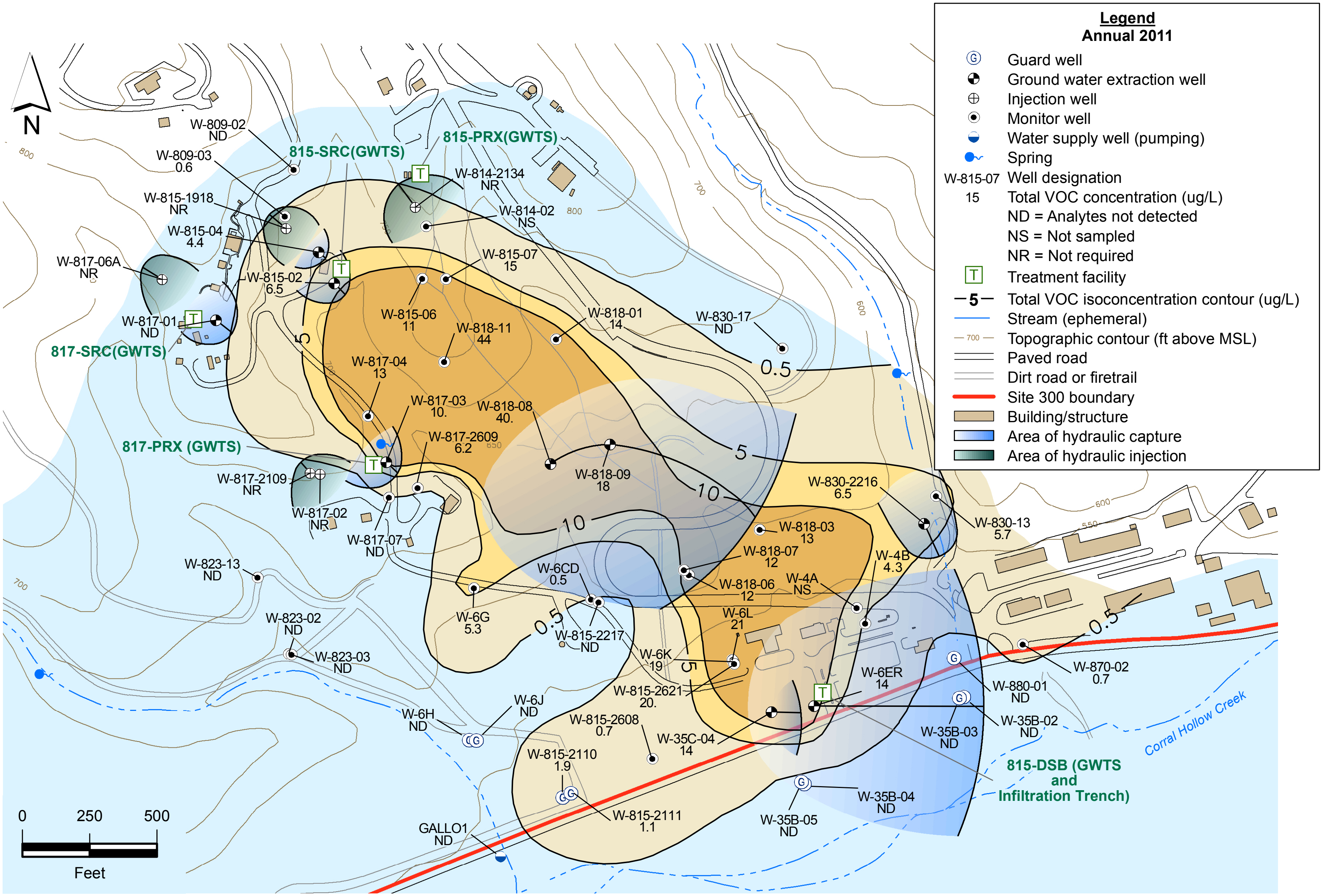


**Figure 2.4-7. High Explosives Process Area Operable Unit total VOC isoconcentration contour map for the Tnbs$_2$ hydrostratigraphic unit.**

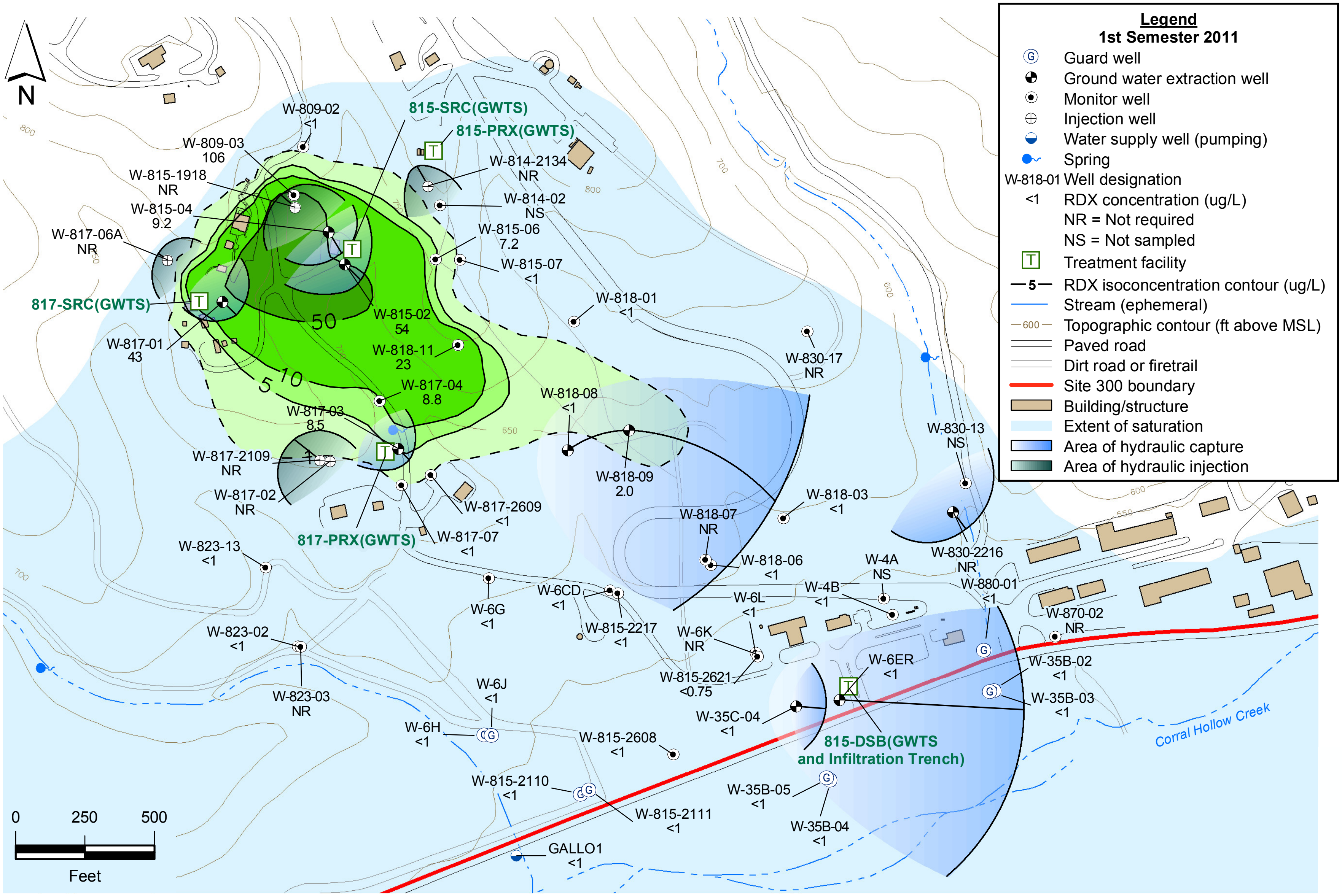


**Figure 2.4-8. High Explosives Process Area Operable Unit RDX isoconcentration contour map for the Tnbs$_2$ hydrostratigraphic unit.**

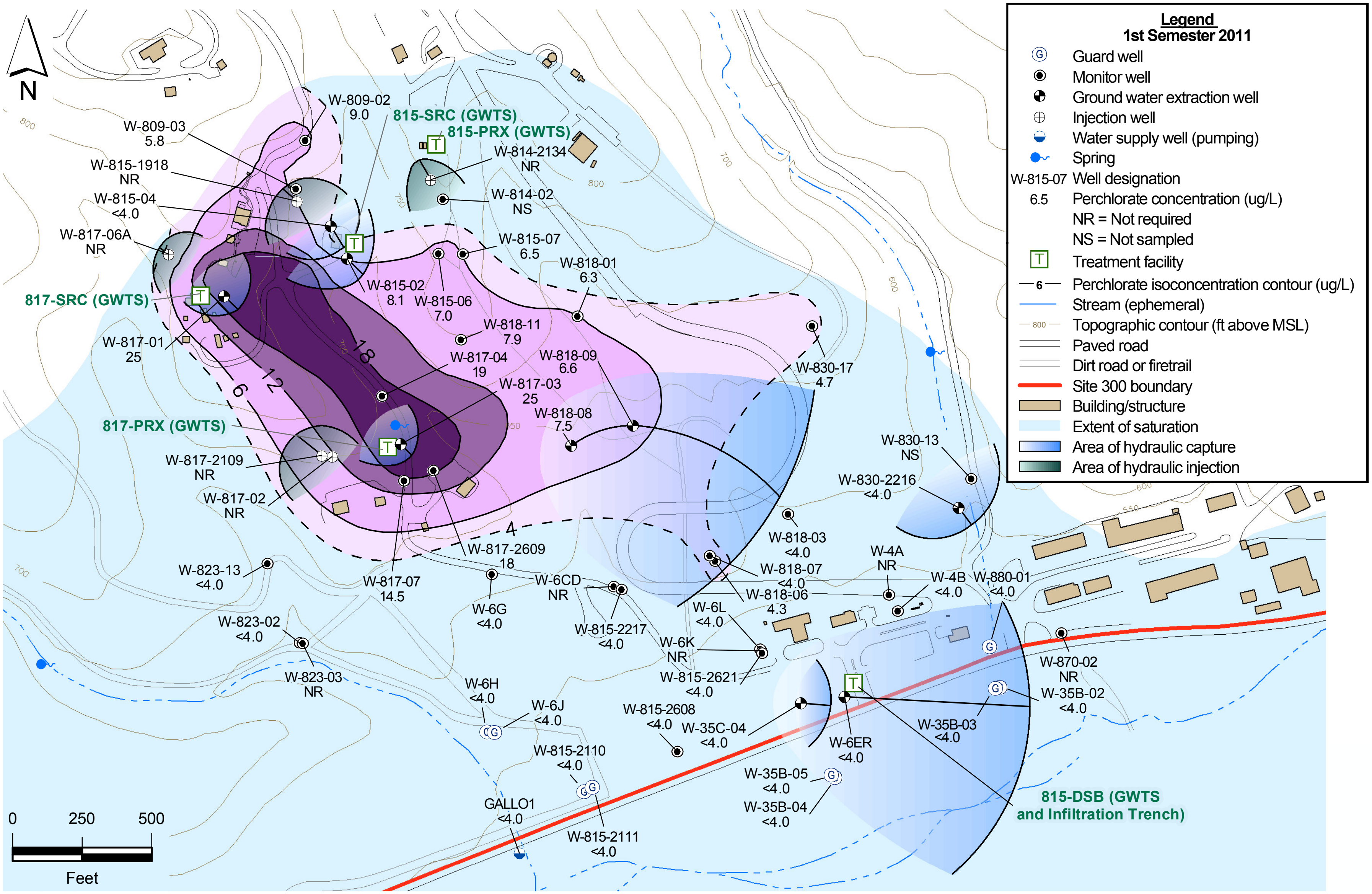


**Figure 2.4-9. High Explosives Process Area Operable Unit perchlorate isoconcentration contour map for the Tnbs$_2$ hydrostratigraphic unit.**

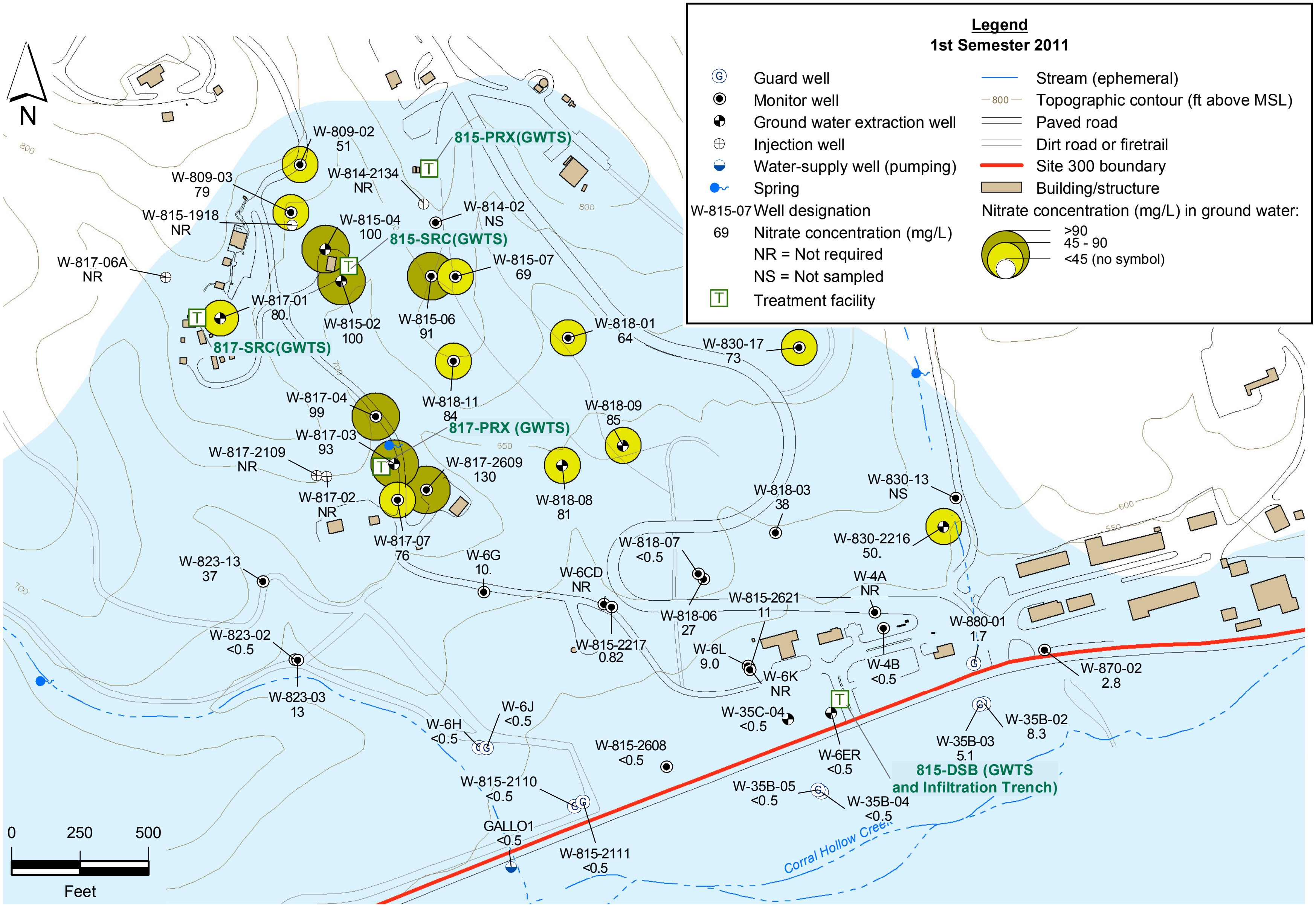


**Figure 2.4-10. High Explosives Process Area Operable Unit map showing nitrate concentrations for the Tnbs$_2$ hydrostratigraphic unit.**

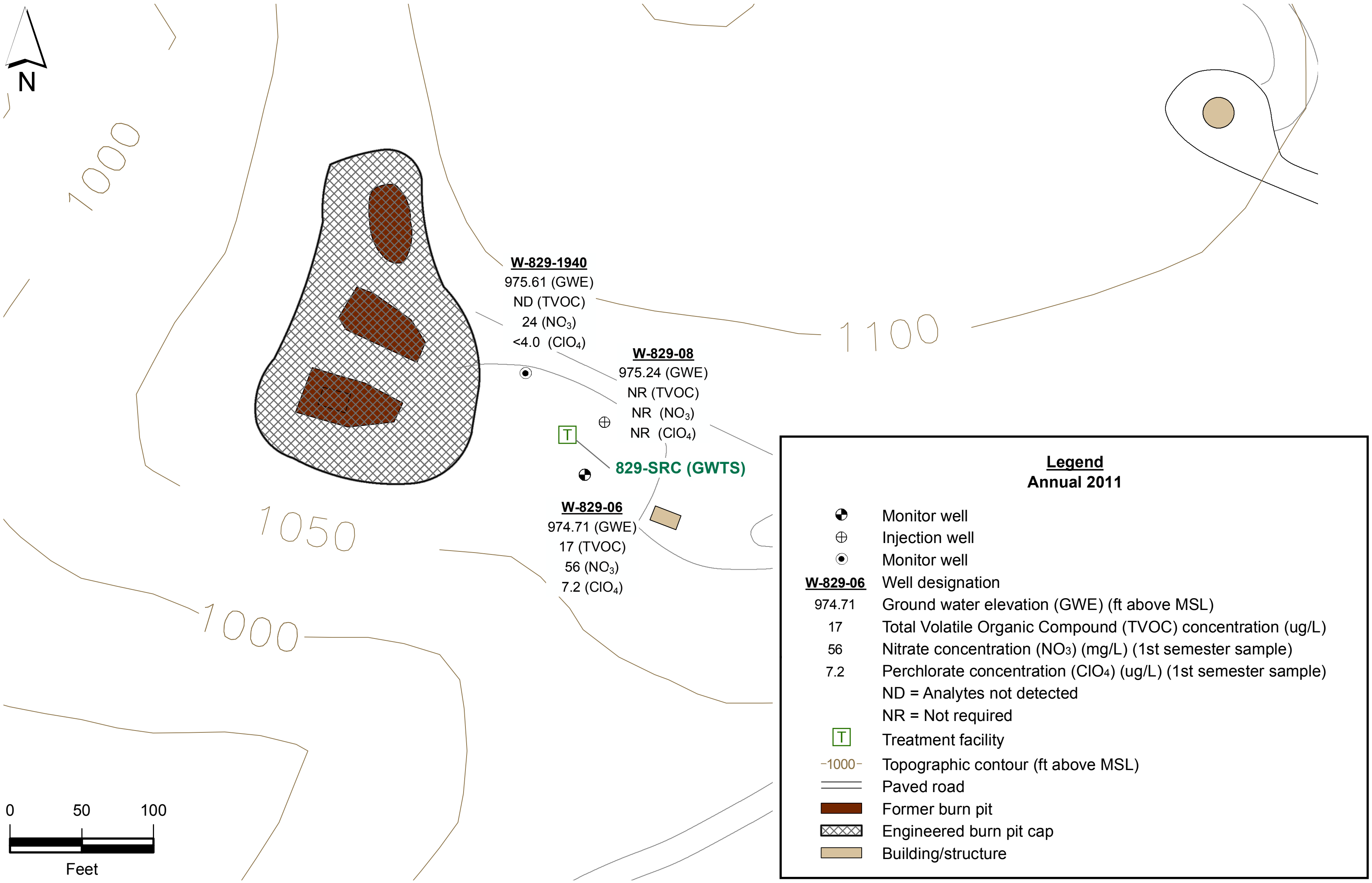


**Figure 2.4-11. Building 829 burn pit site map showing monitor, extraction, and injection wells; ground water elevations; and total VOC, perchlorate, and nitrate concentrations for the Tnsc$_{1b}$ hydrostratigraphic unit.**

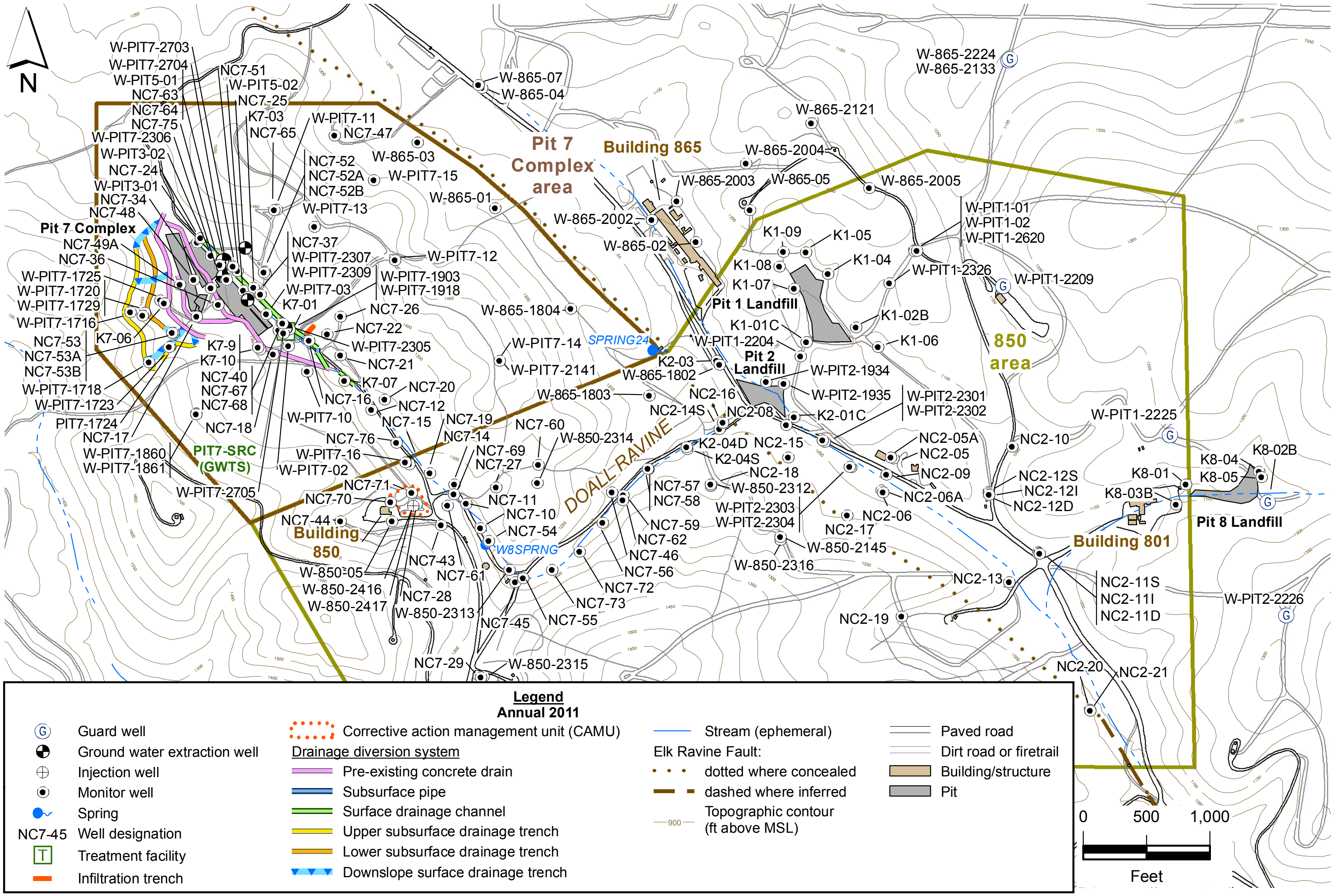


**Figure 2.5-1. Building 850 and Pit 7 Complex area site map showing monitor, extraction, and injection wells, treatment facility and other remediation features.**

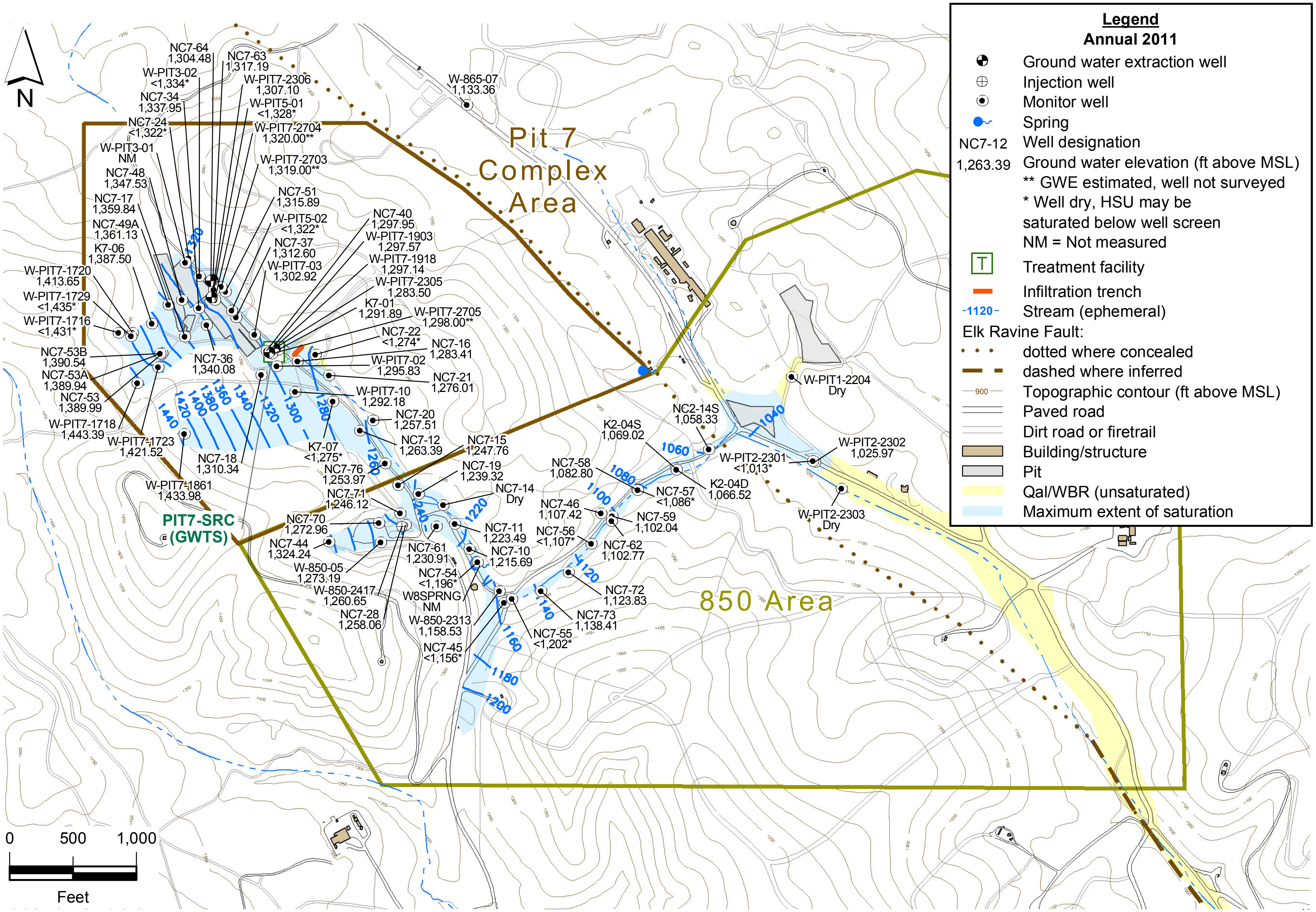


**Figure 2.5-2. Building 850 and Pit 7 Complex area ground water potentiometric surface map for the Qal/WBR hydrostratigraphic unit.**

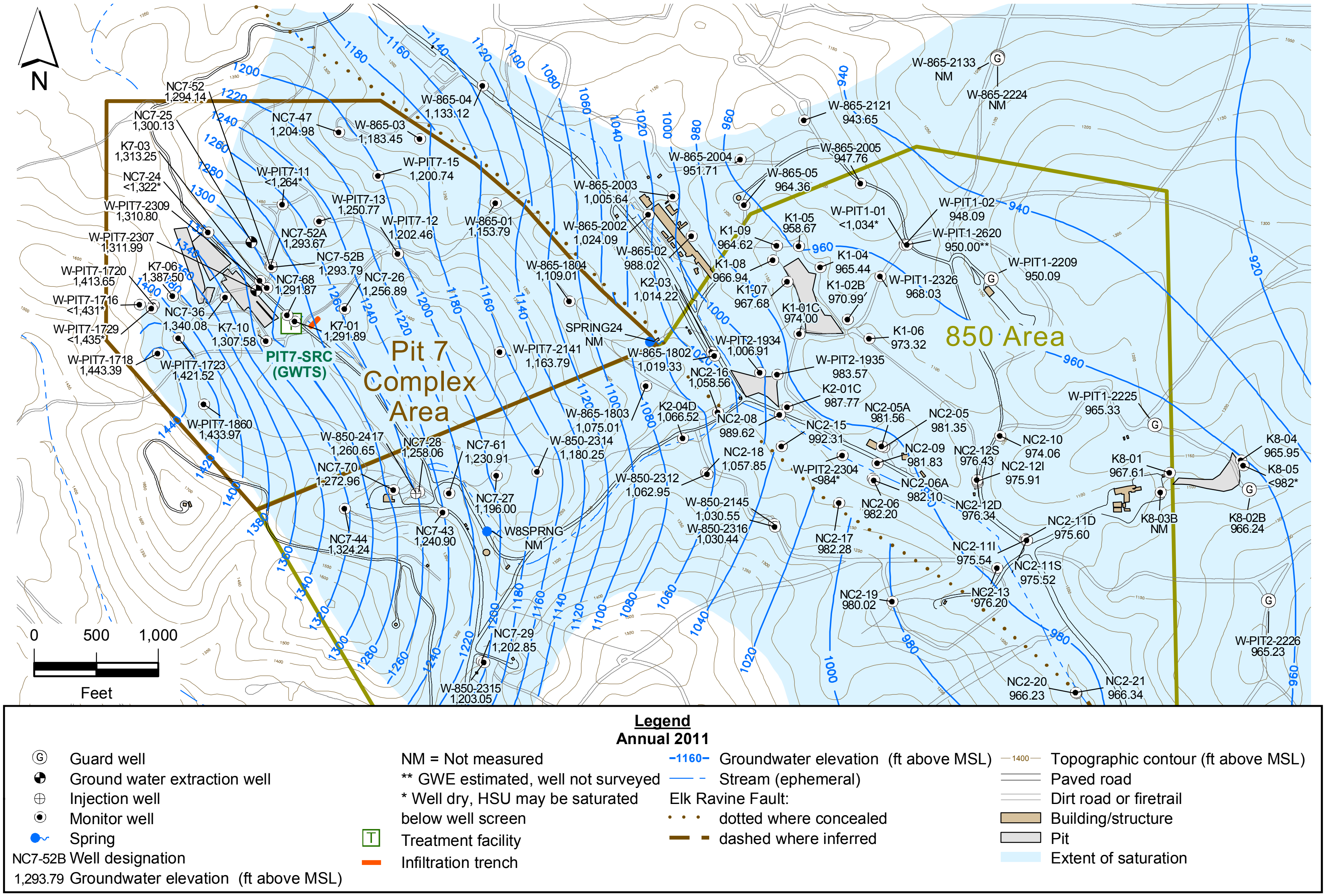


**Figure 2.5-3. Building 850 and Pit 7 Complex area ground water potentiometric surface map for the $Tnbs_1/Tnbs_0$ hydrostratigraphic unit.**

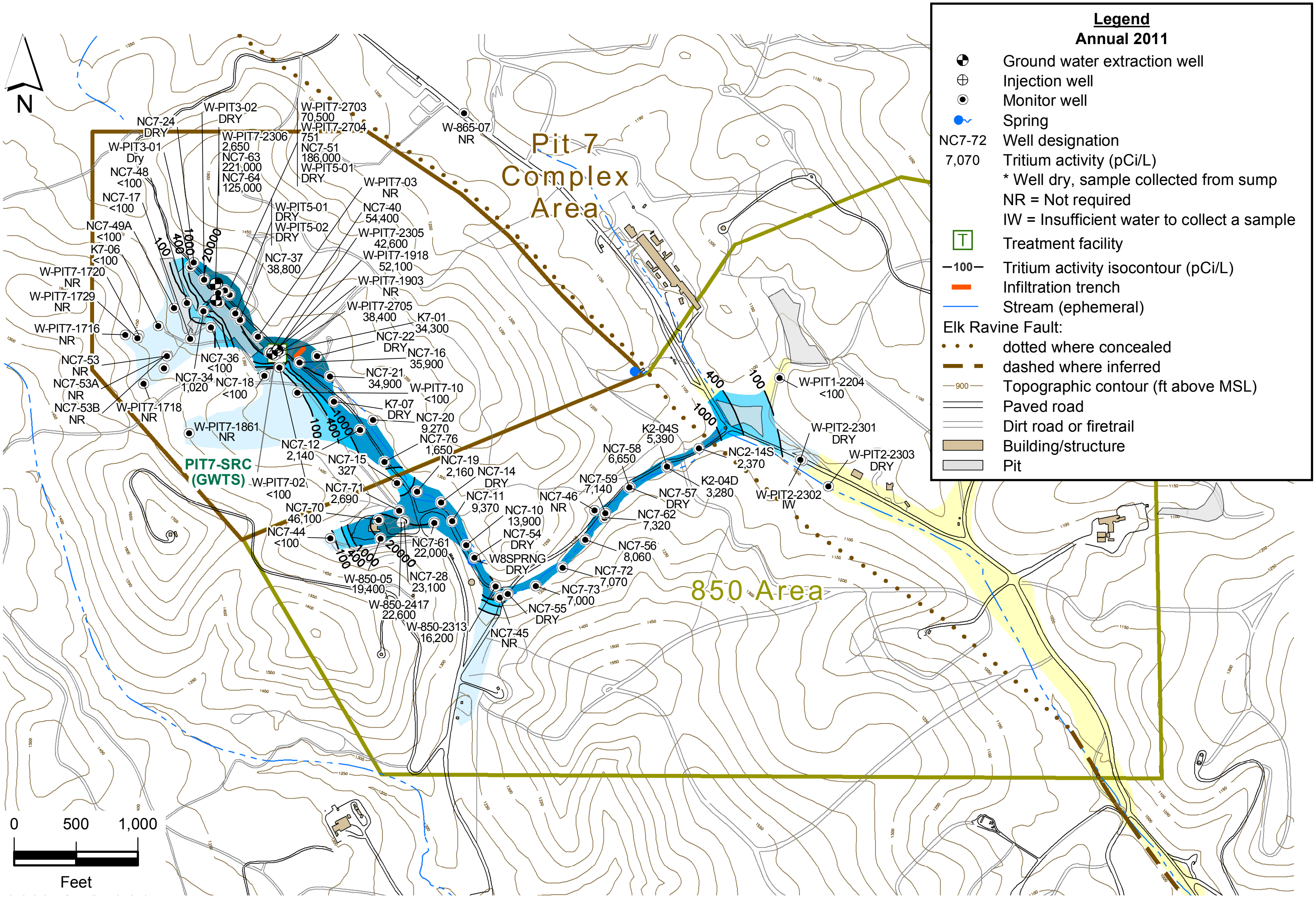


**Figure 2.5-4. Building 850 and Pit 7 Complex area tritium activity isocontour map for the Qal/WBR hydrostratigraphic unit.**

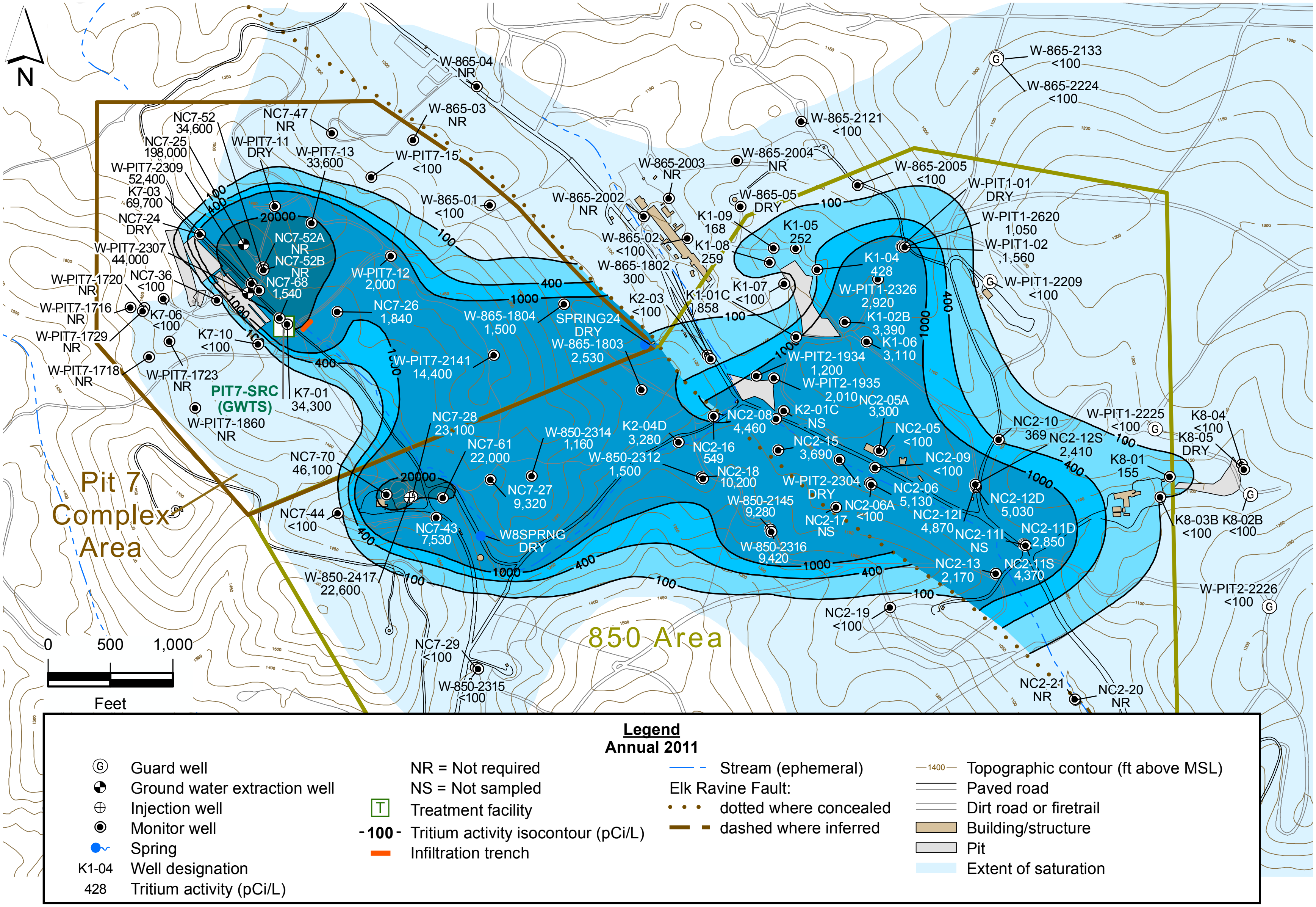


**Figure 2.5-5. Building 850 and Pit 7 Complex area tritium activity isocontour map for the $Tnbs_1/Tnbs_0$ hydrostratigraphic unit.**

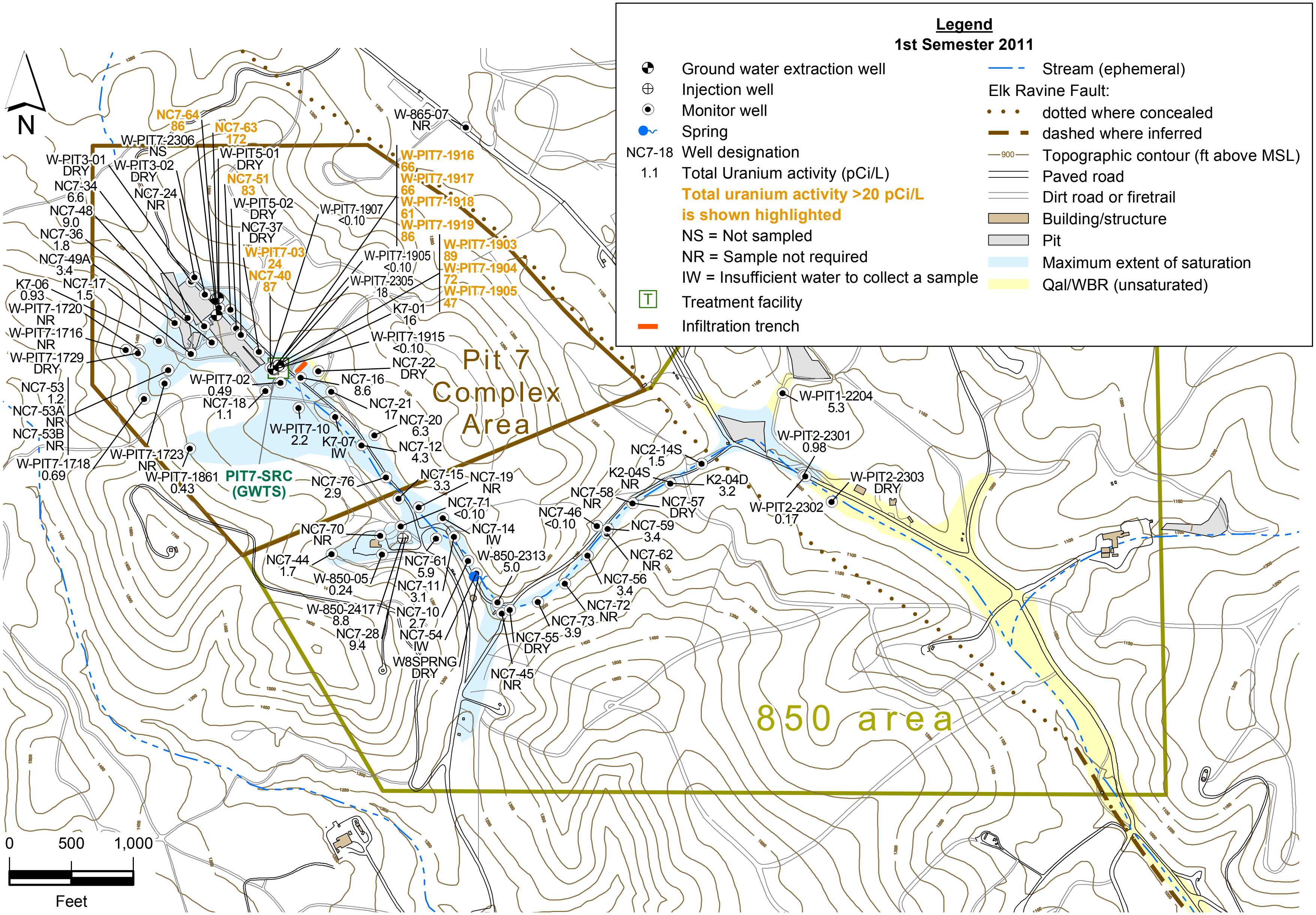


**Figure 2.5-6. Building 850 and Pit 7 Complex area map showing ground water uranium activities for the Qal/WBR hydrostratigraphic unit.**

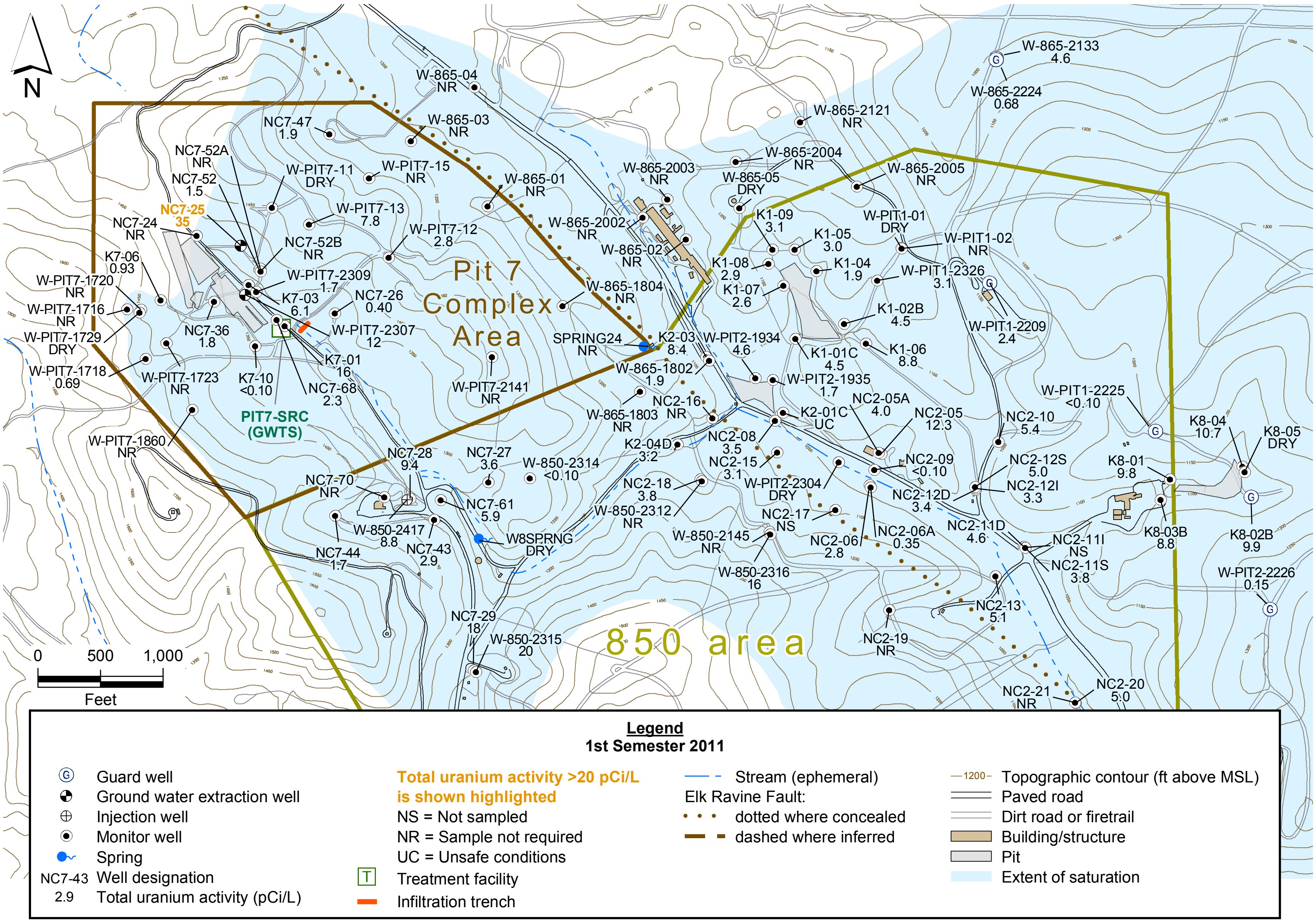


**Figure 2.5-7. Building 850 and Pit 7 Complex area map showing ground water uranium activities for the $Tnbs_1/Tnbs_0$ hydrostratigraphic unit.**

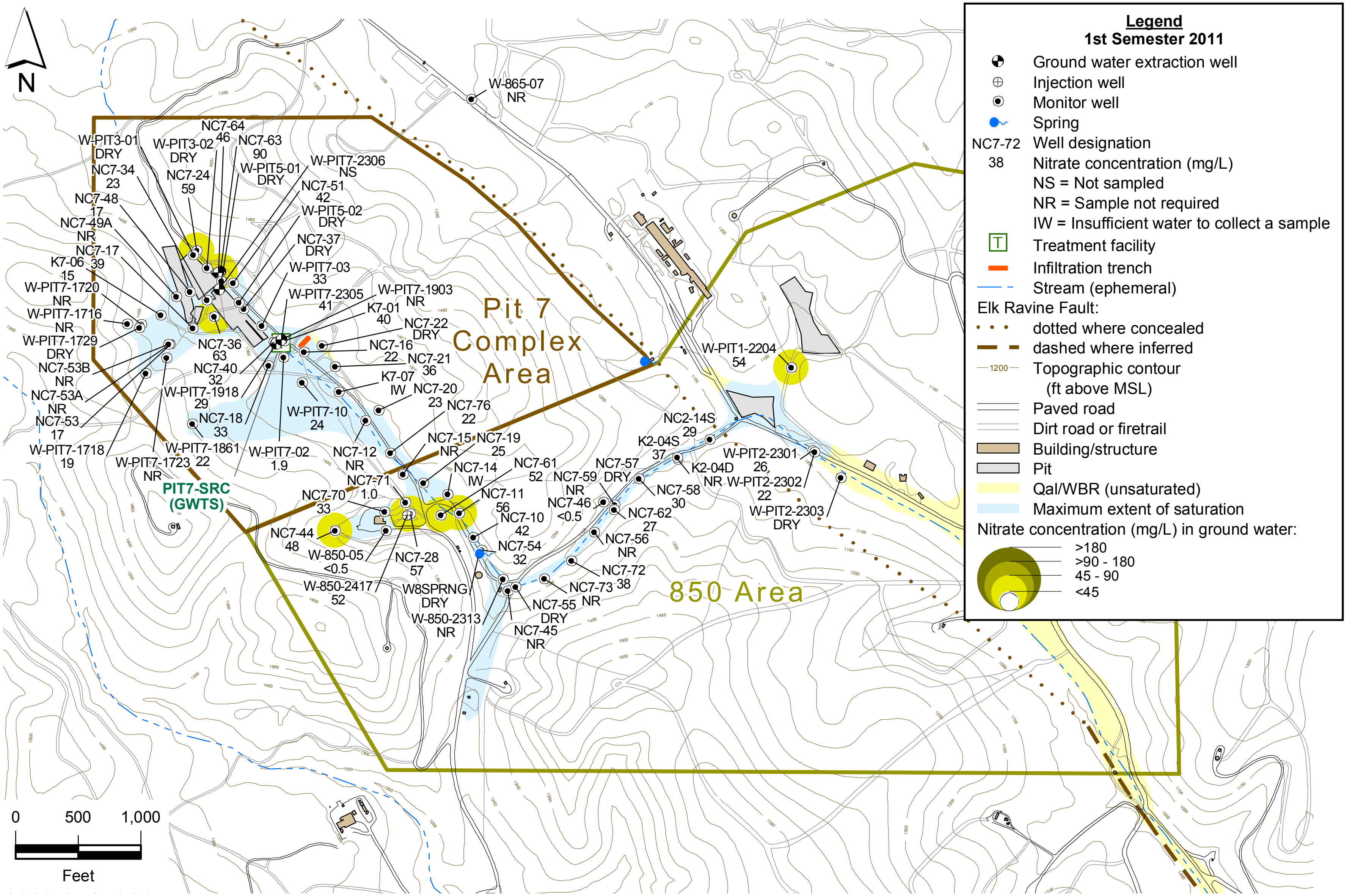


**Figure 2.5-8. Building 850 and Pit 7 Complex area map showing nitrate concentrations for the Qal/WBR hydrostratigraphic unit.**

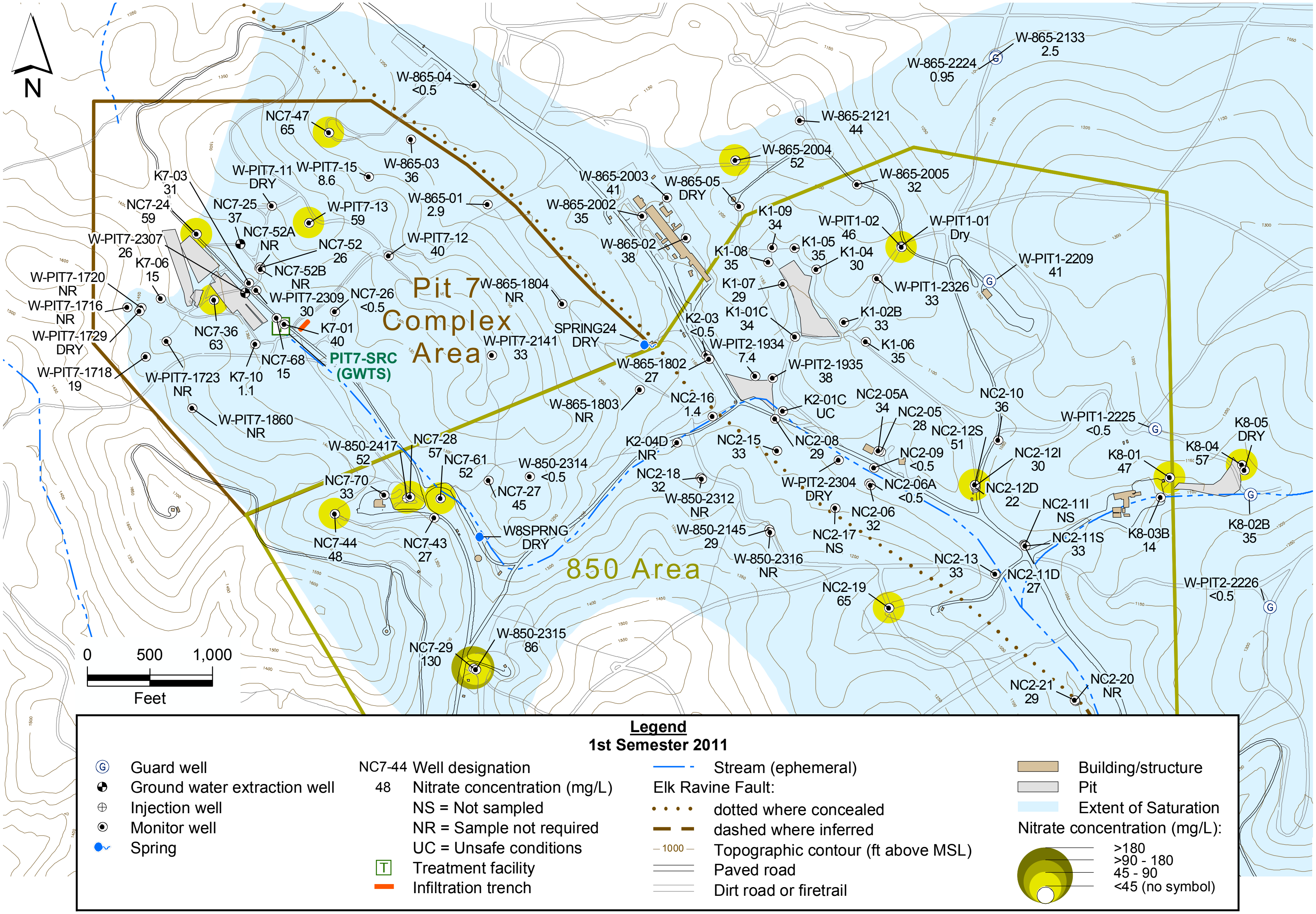


**Figure 2.5-9. Building 850 and Pit 7 Complex area map showing nitrate concentrations for the $Tnbs_1/Tnbs_0$ hydrostratigraphic unit.**

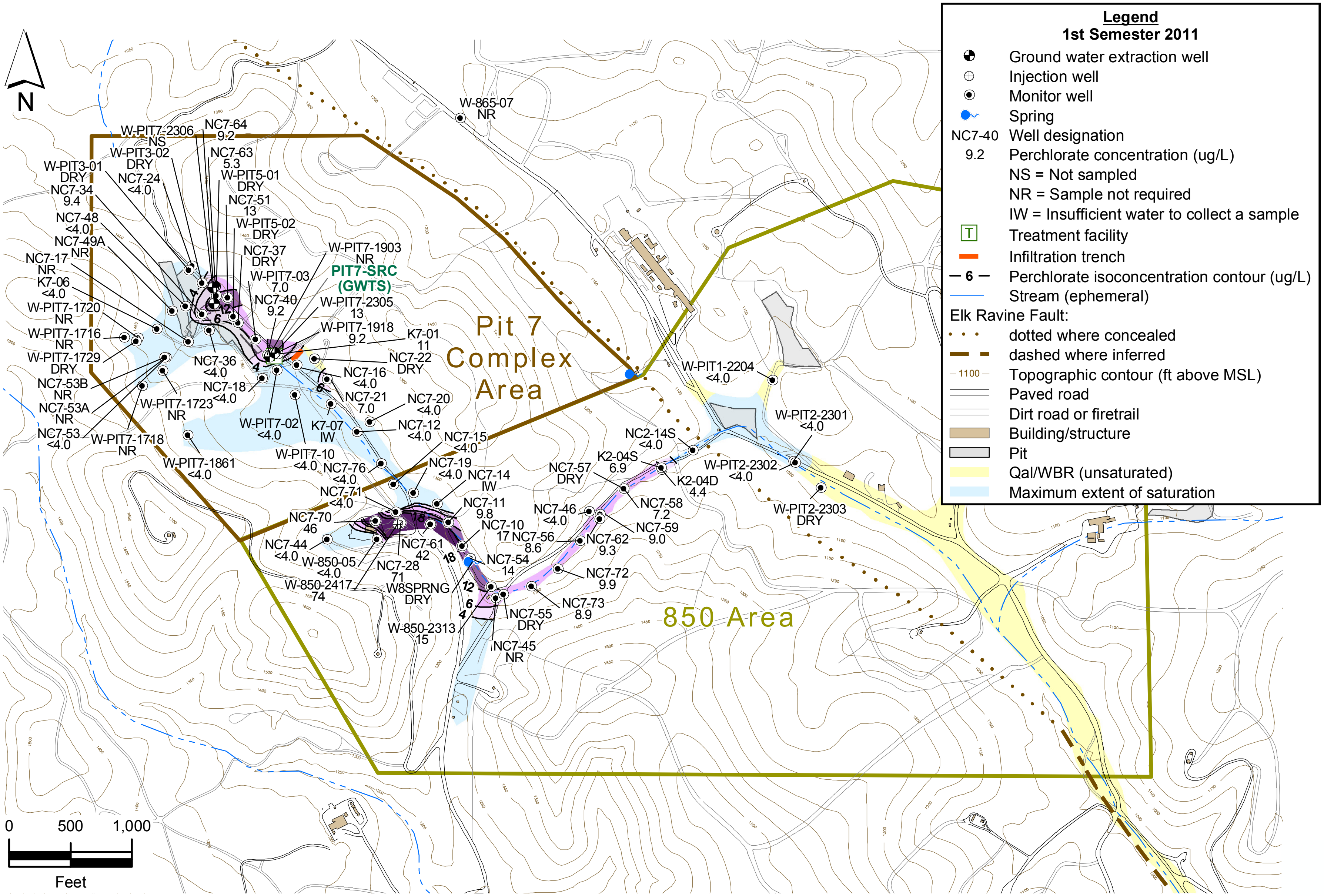


**Figure 2.5-10. Building 850 and Pit 7 Complex area perchlorate isoconcentration contour map for the Qal/WBR hydrostratigraphic unit.**

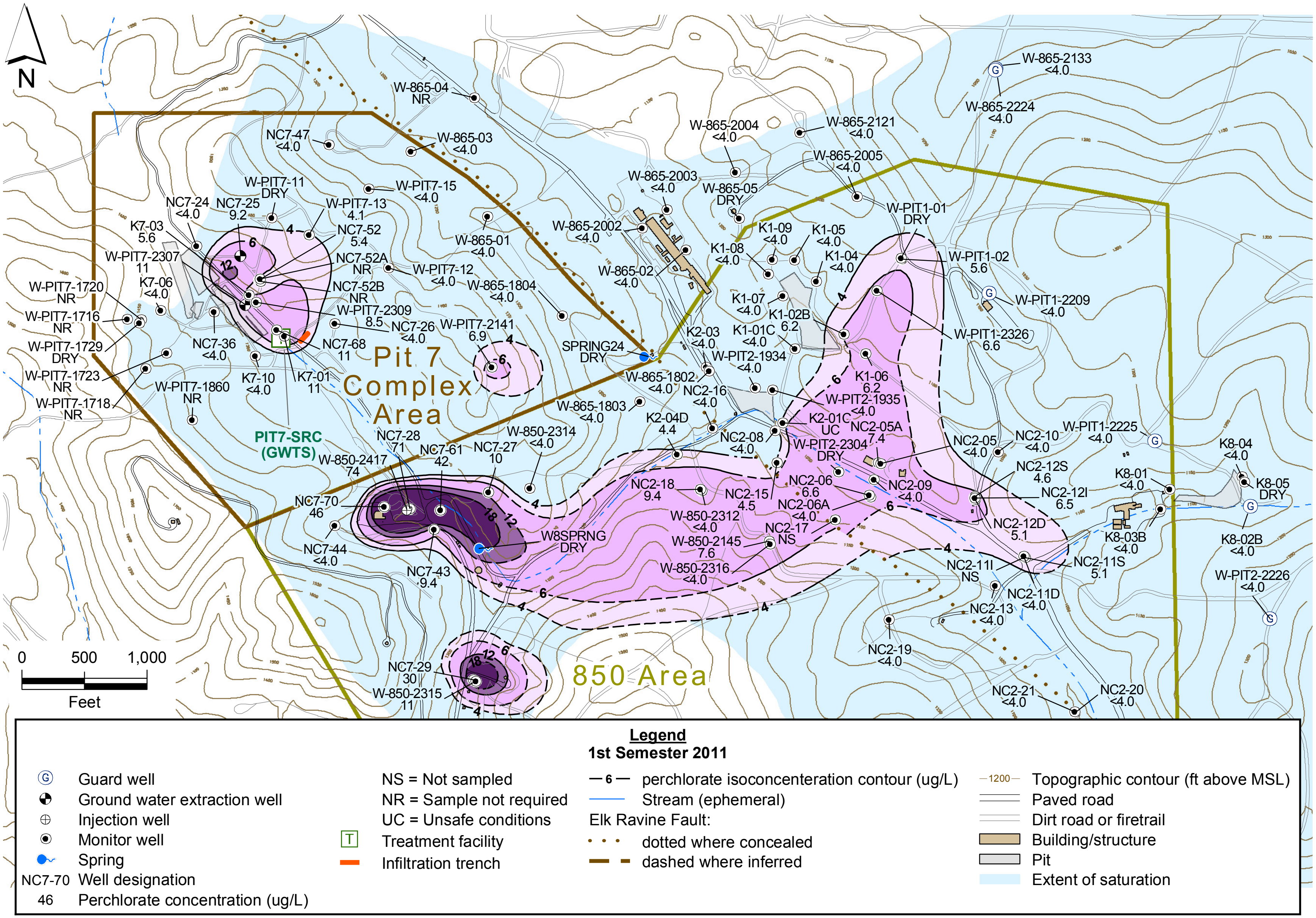


**Figure 2.5-11. Building 850 and Pit 7 Complex area perchlorate isoconcentration contour map for the $Tnbs_1/Tnbs_0$ hydrostratigraphic unit.**

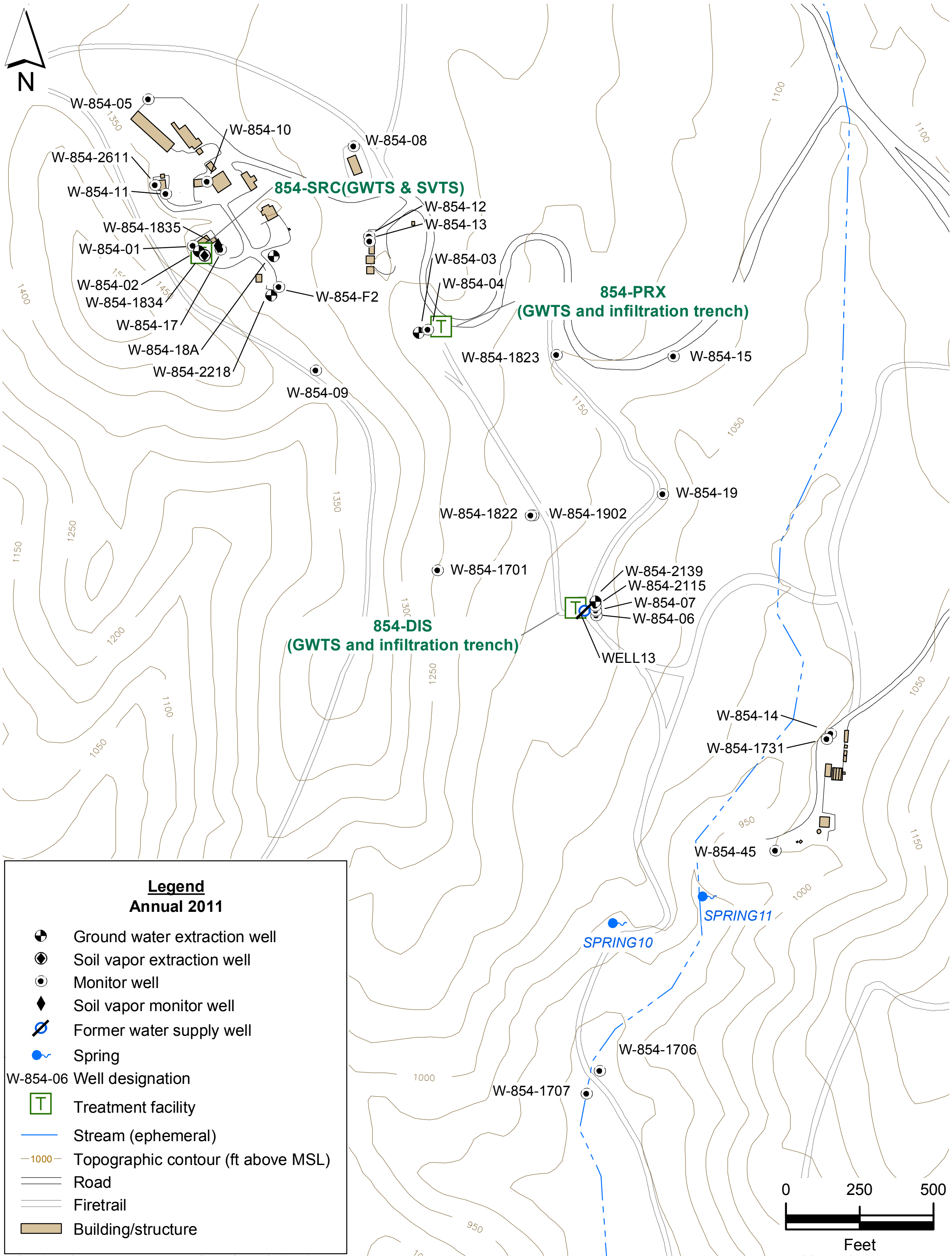


**Figure 2.6-1. Building 854 Operable Unit site map showing monitor and extraction wells, and treatment facilities.**

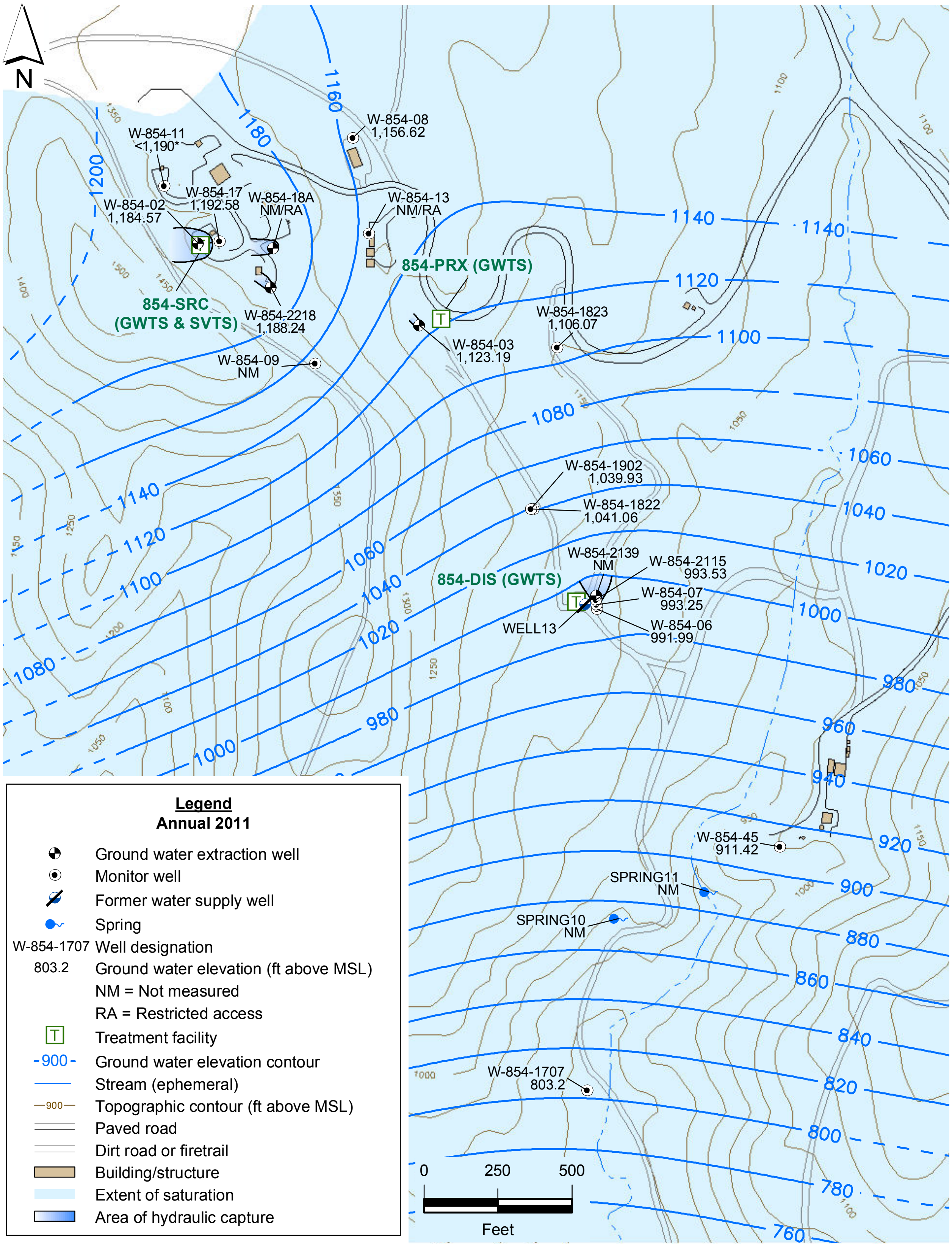


**Figure 2.6-2. Building 854 Operable Unit ground water potentiometric surface map for the $Tnbs_1/Tnsc_0$ hydrostratigraphic unit.**

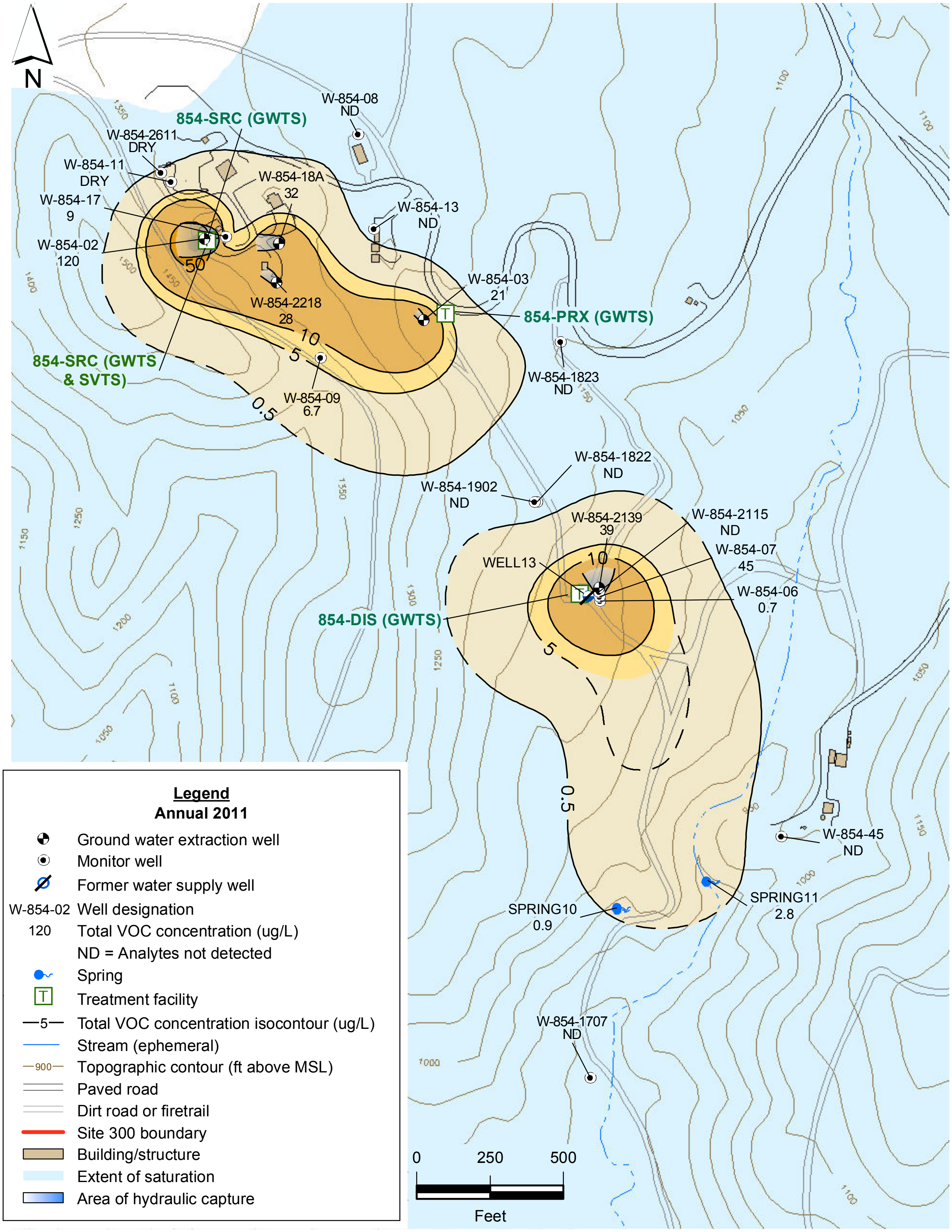


**Figure 2.6-3. Building 854 Operable Unit total VOC isoconcentration contour map for the $Tnbs_1/Tnsc_0$ hydrostratigraphic unit.**

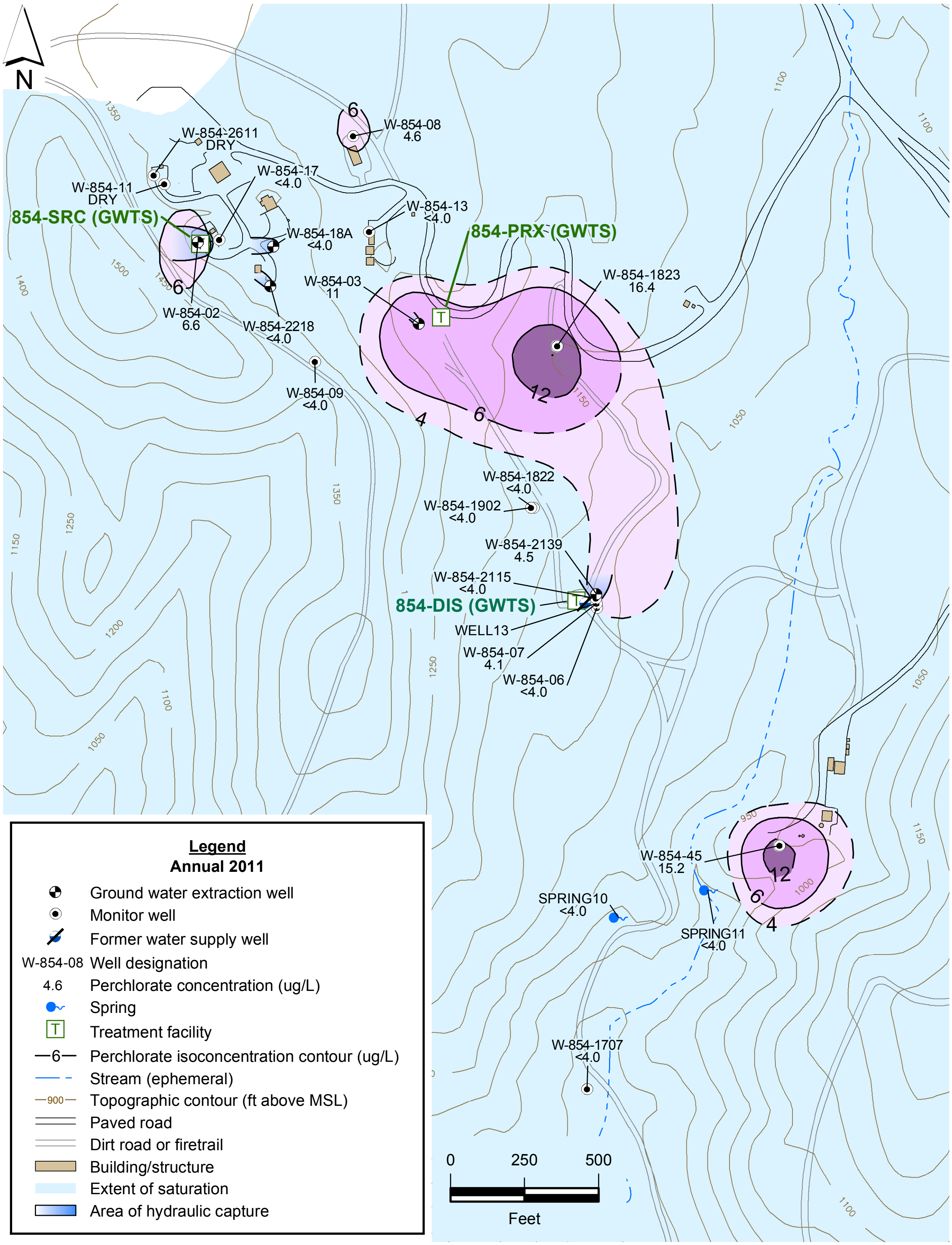


**Figure 2.6-4. Building 854 Operable Unit perchlorate isoconcentration contour map for the $Tnbs_1/Tnsc_0$ hydrostratigraphic unit.**

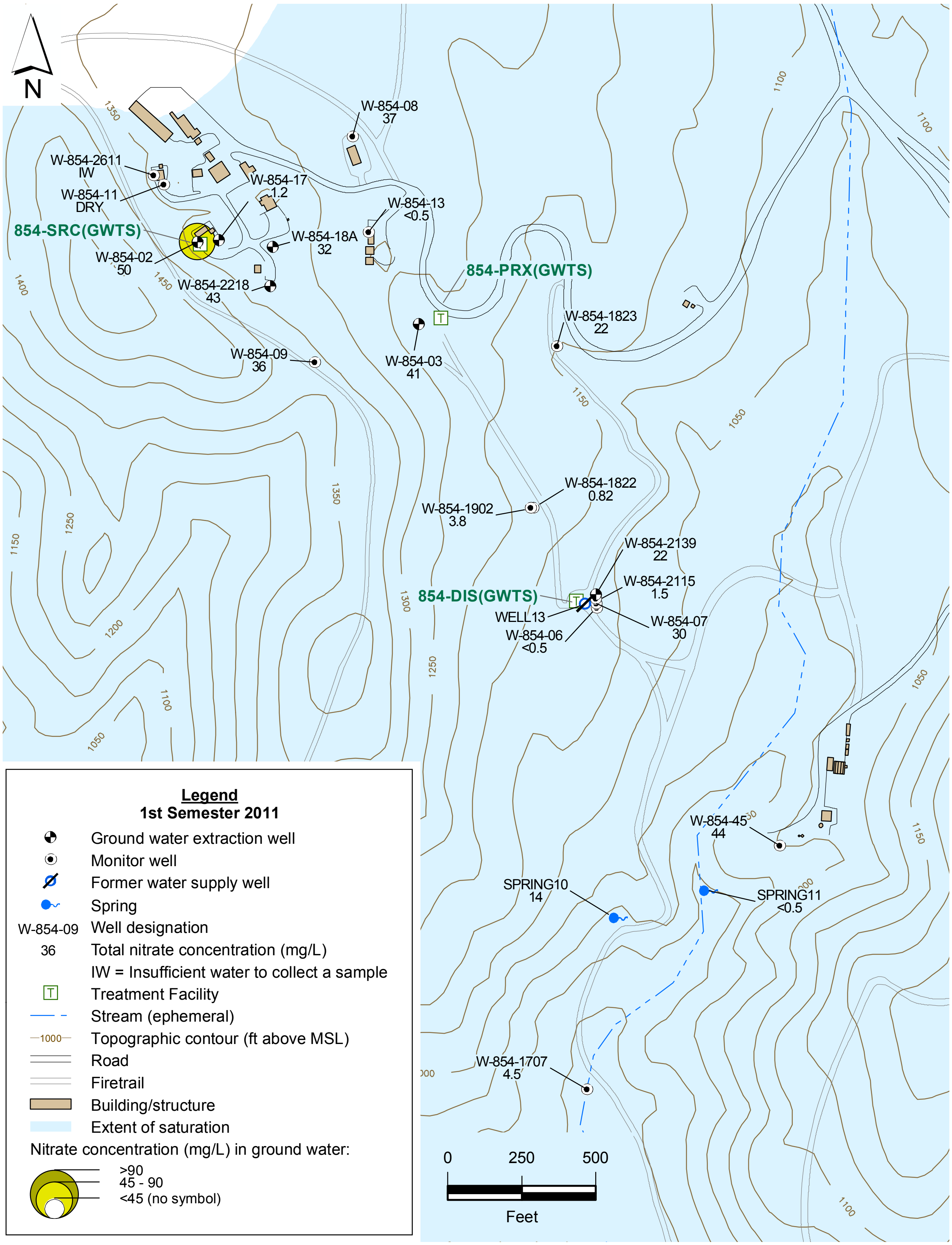


**Figure 2.6-5. Building 854 Operable Unit map showing nitrate concentrations for the $Tnbs_1/Tnsc_0$ hydrostratigraphic unit.**

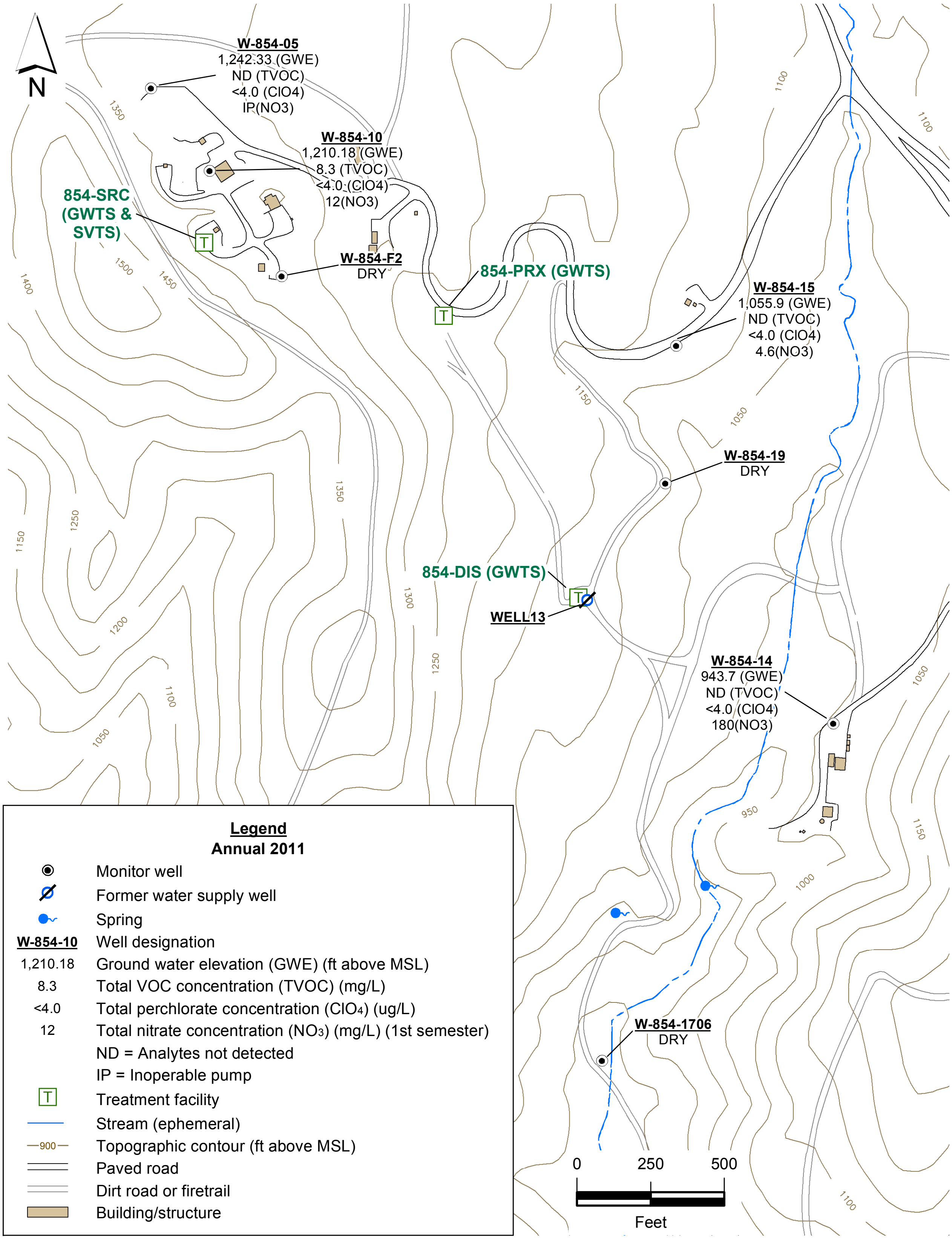


**Figure 2.6-6. Building 854 Operable Unit map showing ground water elevations, total VOCs, perchlorate, and nitrate concentrations for the combined Qls and $Tnbs_1$ hydrostratigraphic units.**

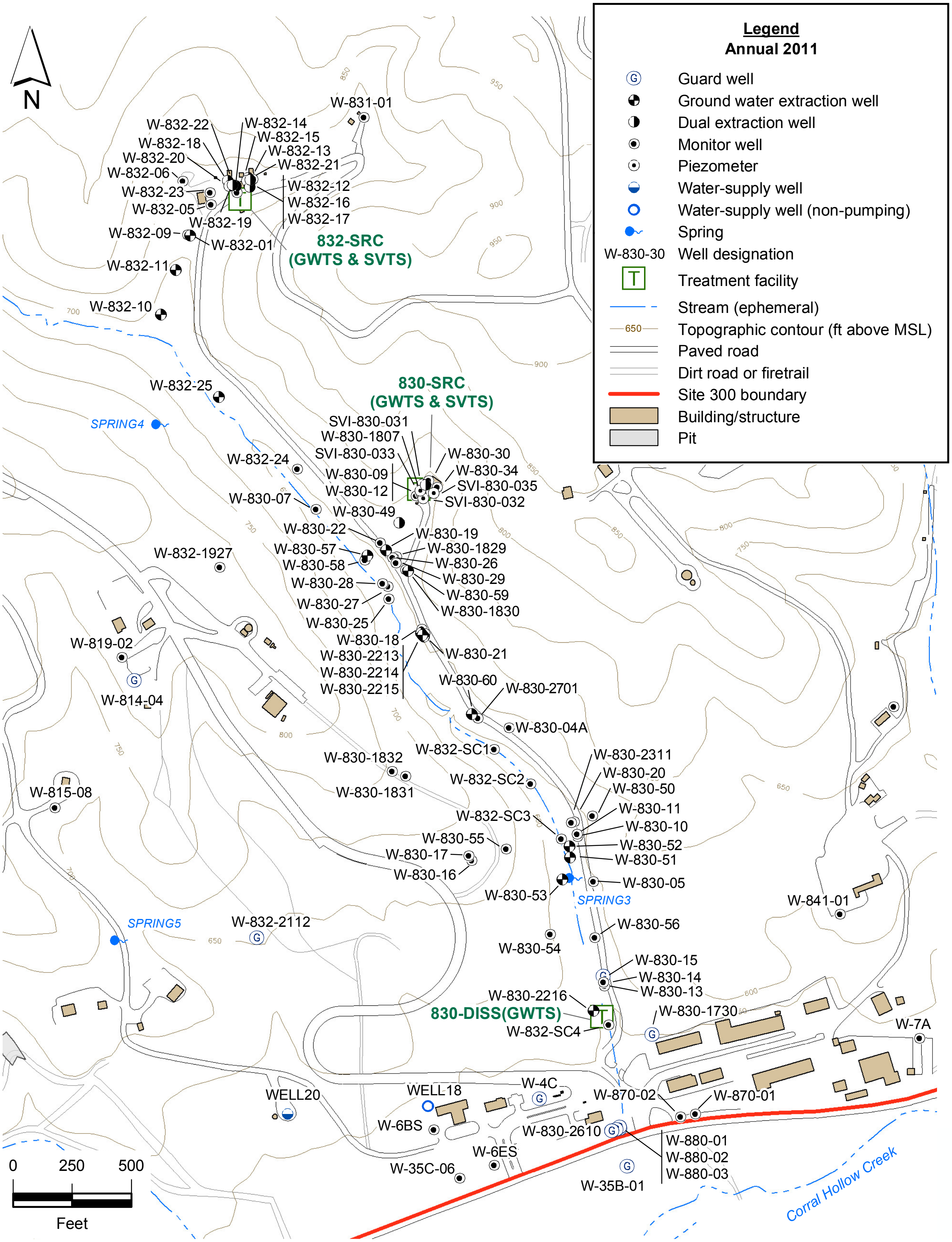


**Figure 2.7-1. Building 832 Canyon Operable Unit site map showing monitor, extraction and water-supply wells, and treatment facilities.**

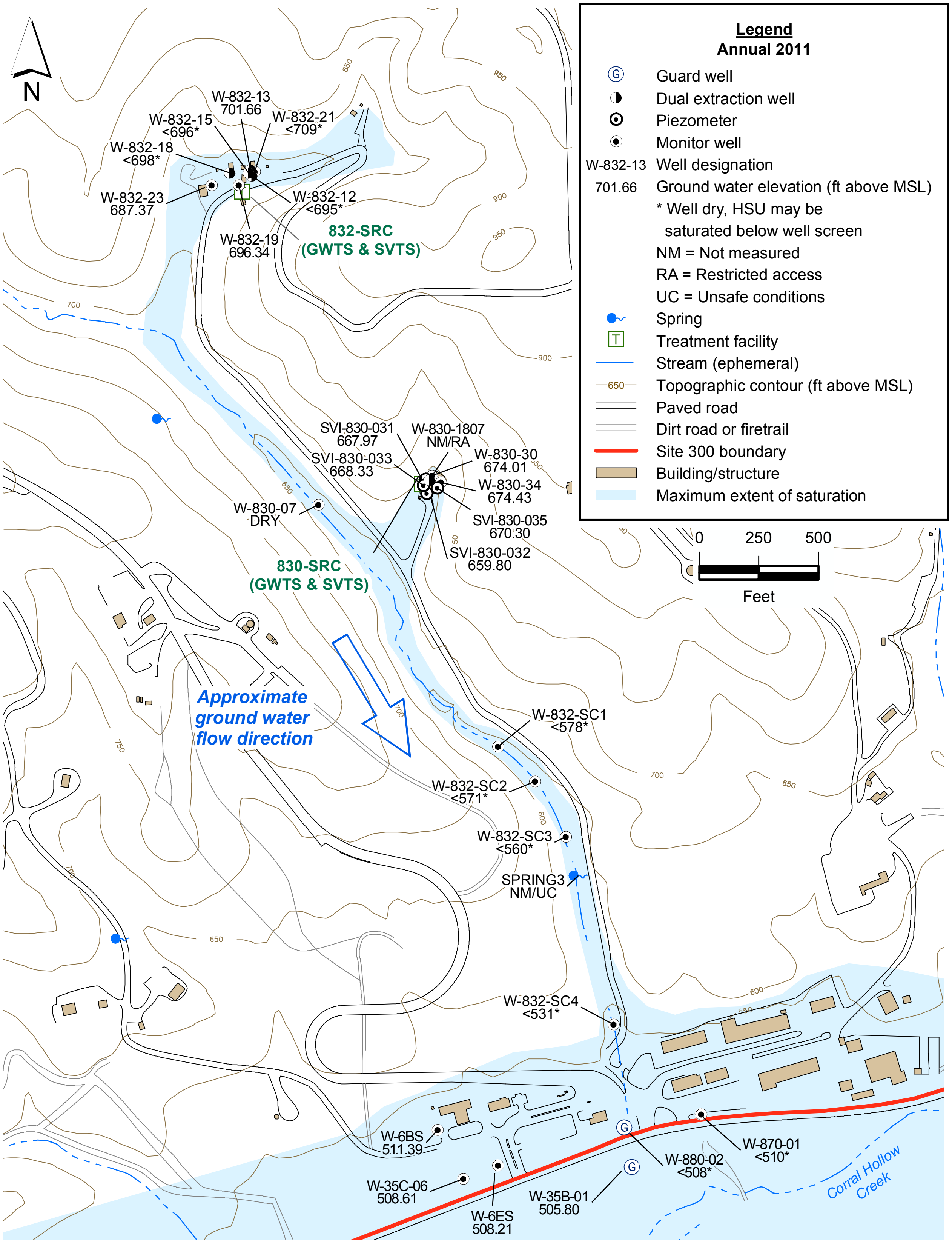


**Figure 2.7-2. Building 832 Canyon Operable Unit map showing ground water elevations and ground water flow direction for the Qal/WBR hydrostratigraphic unit.**

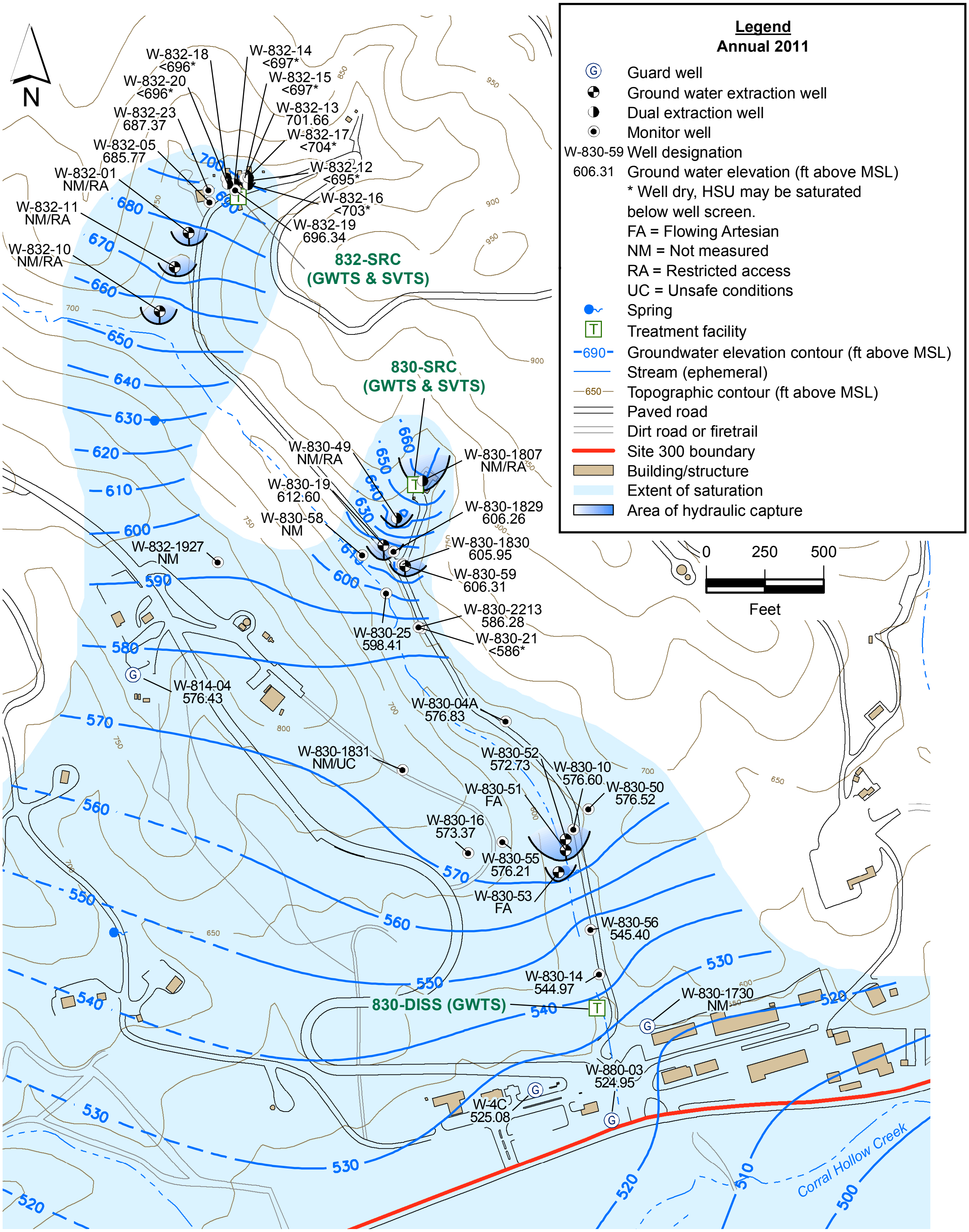


Figure 2.7-3. Building 832 Canyon Operable Unit ground water potentiometric surface map for the $Tnsc_{1b}$ hydrostratigraphic unit.

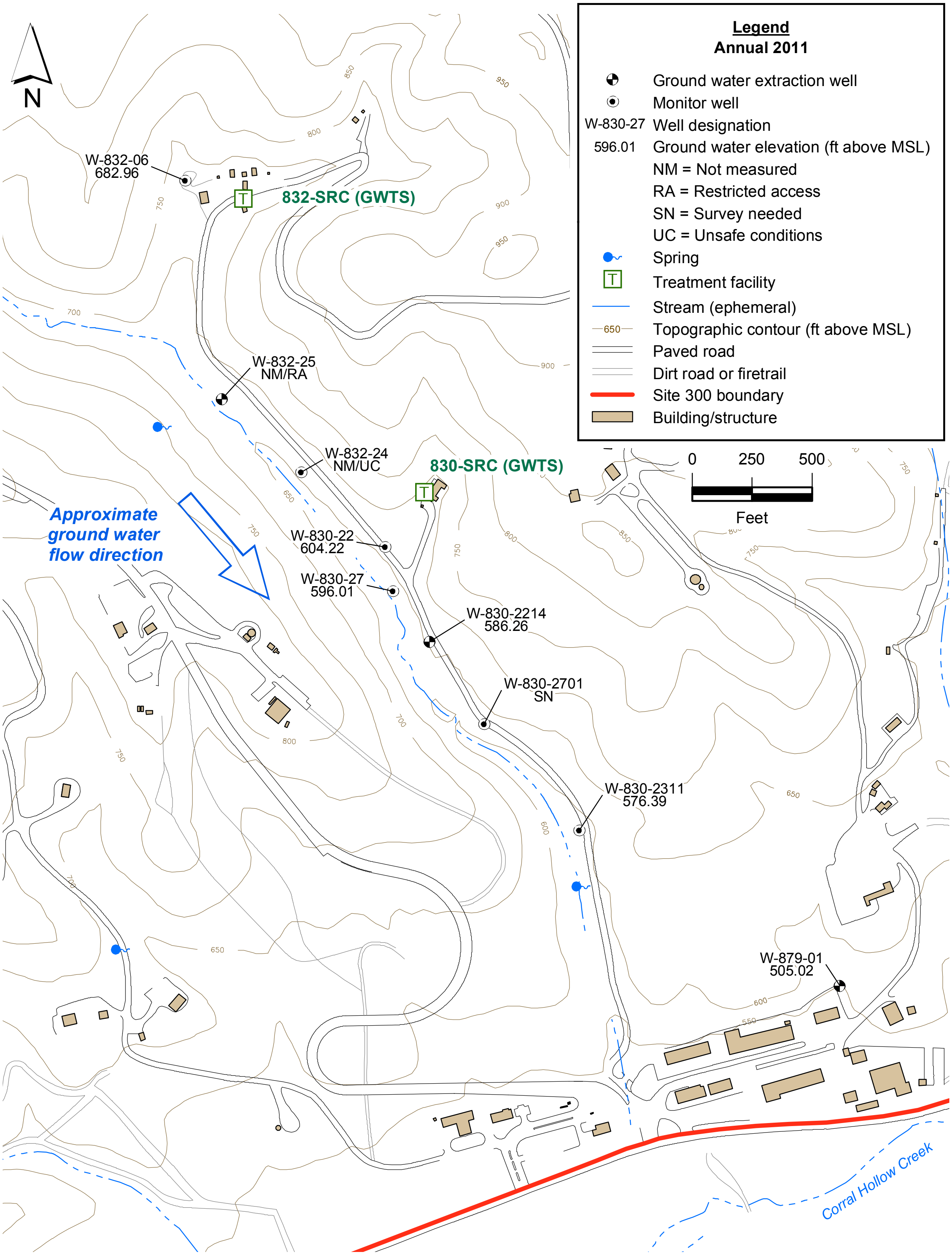


**Figure 2.7-4. Building 832 Canyon Operable Unit map showing ground water elevations and ground water flow direction for the Tnsc$_{1a}$ hydrostratigraphic unit.**

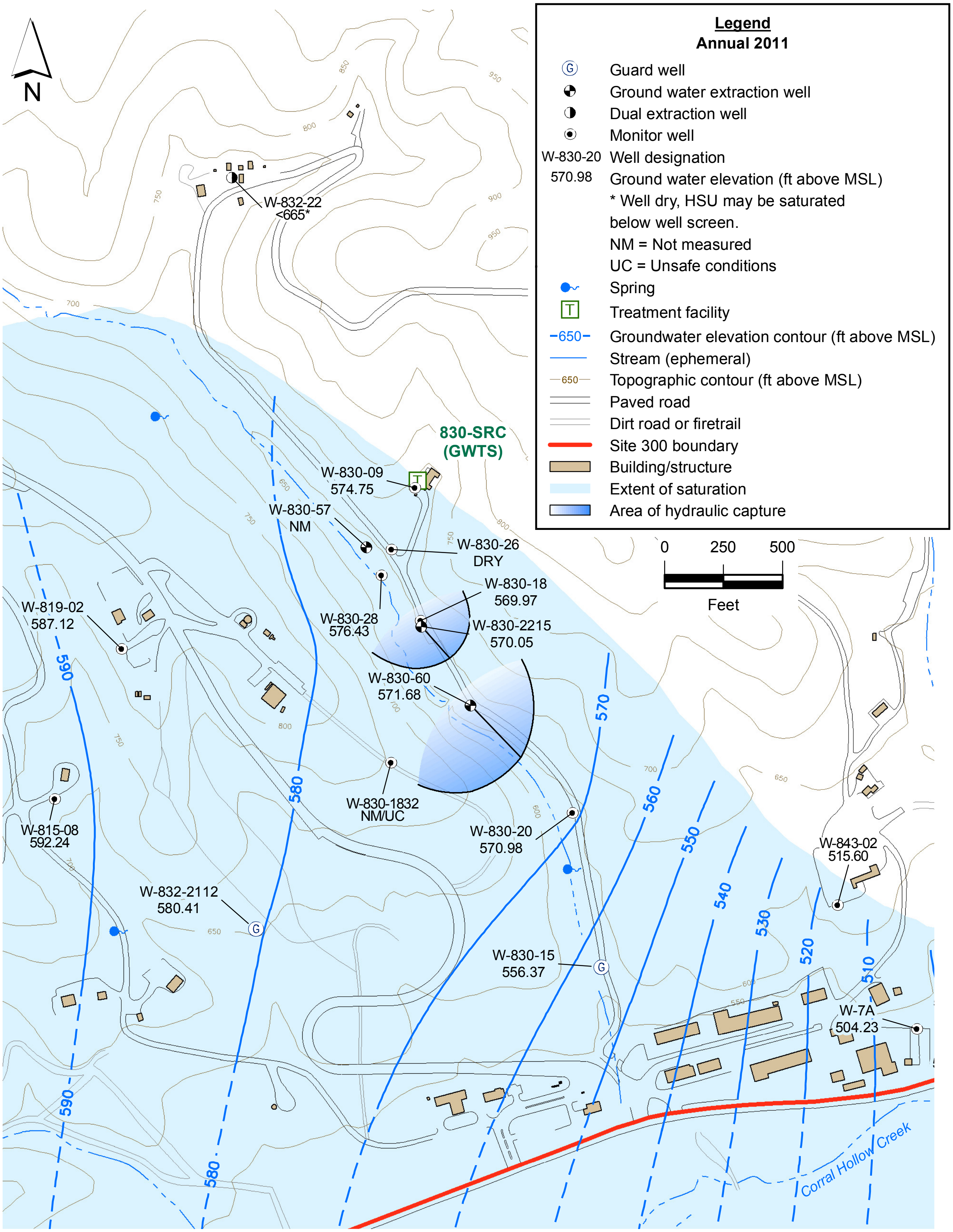


**Figure 2.7-5. Building 832 Canyon Operable Unit ground water potentiometric surface map for the Upper Tnbs$_1$ hydrostratigraphic unit.**

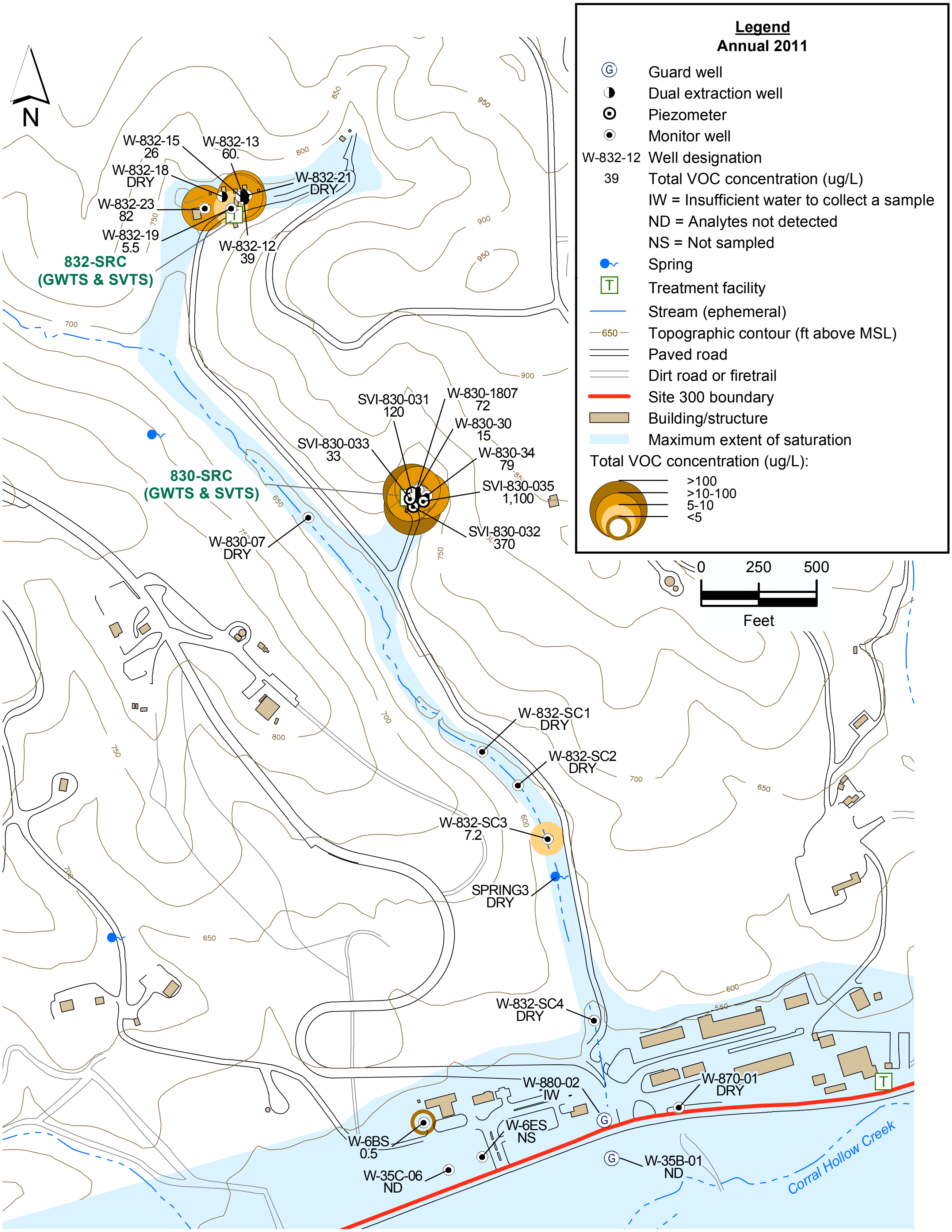


**Figure 2.7-6. Building 832 Canyon Operable Unit map showing total VOC concentrations for the Qal/WBR hydrostratigraphic unit.**

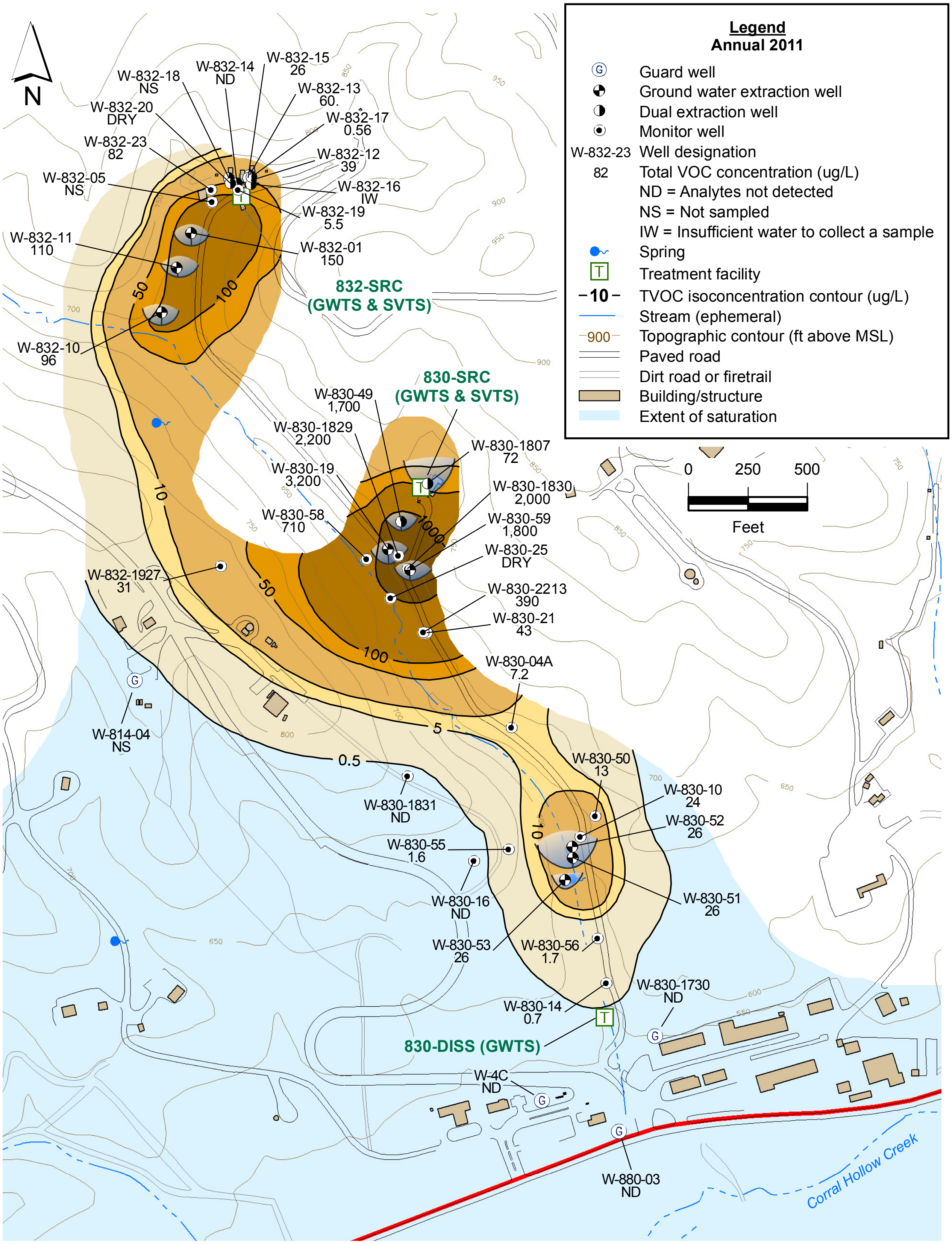


**Figure 2.7-7. Building 832 Canyon Operable Unit total VOC isoconcentration contour map for the Tnsc$_{1b}$ hydrostratigraphic unit.**

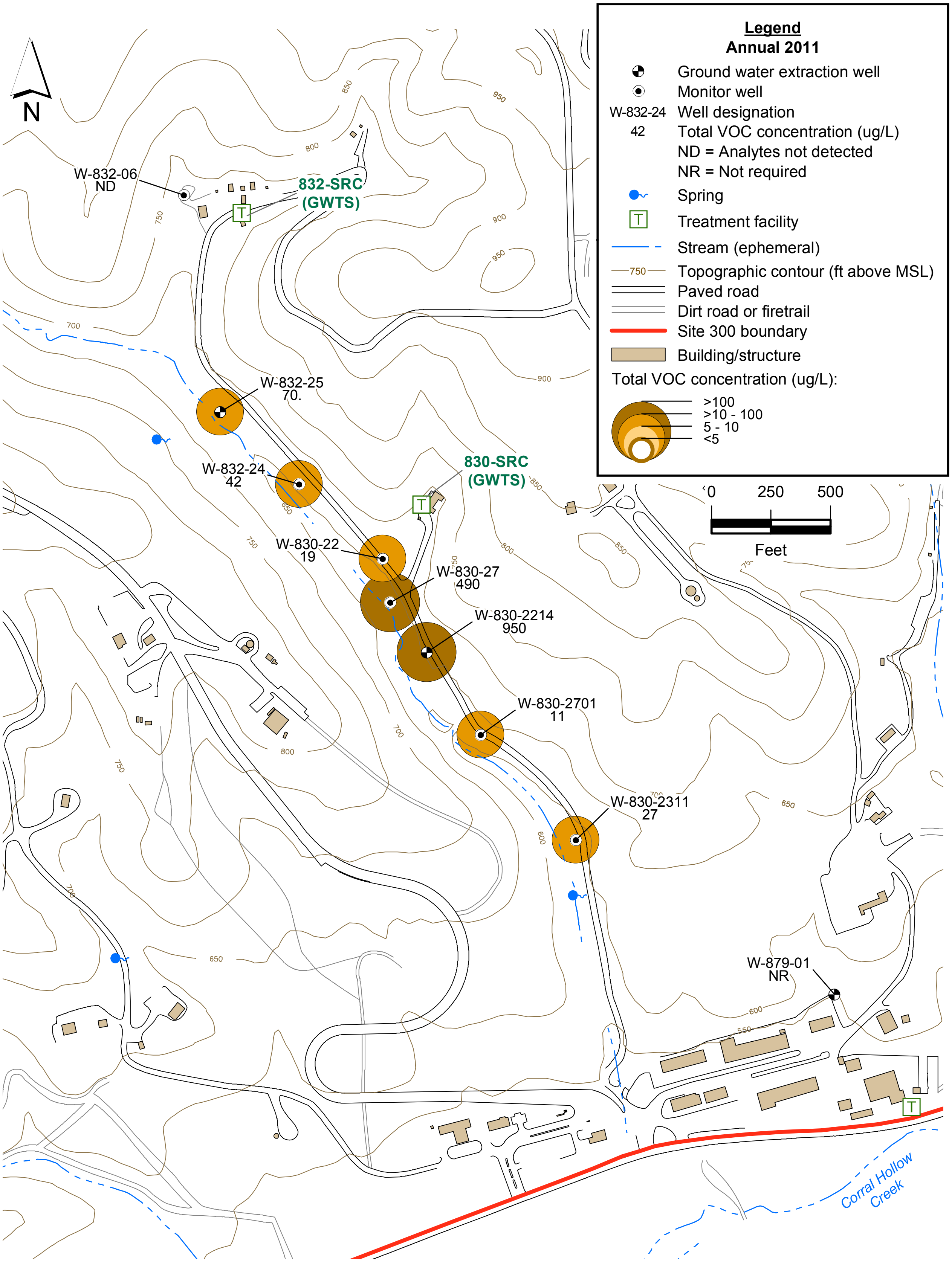


**Figure 2.7-8. Building 832 Canyon Operable Unit map showing total VOC concentrations for the Tnsc$_{1a}$ hydrostratigraphic unit.**

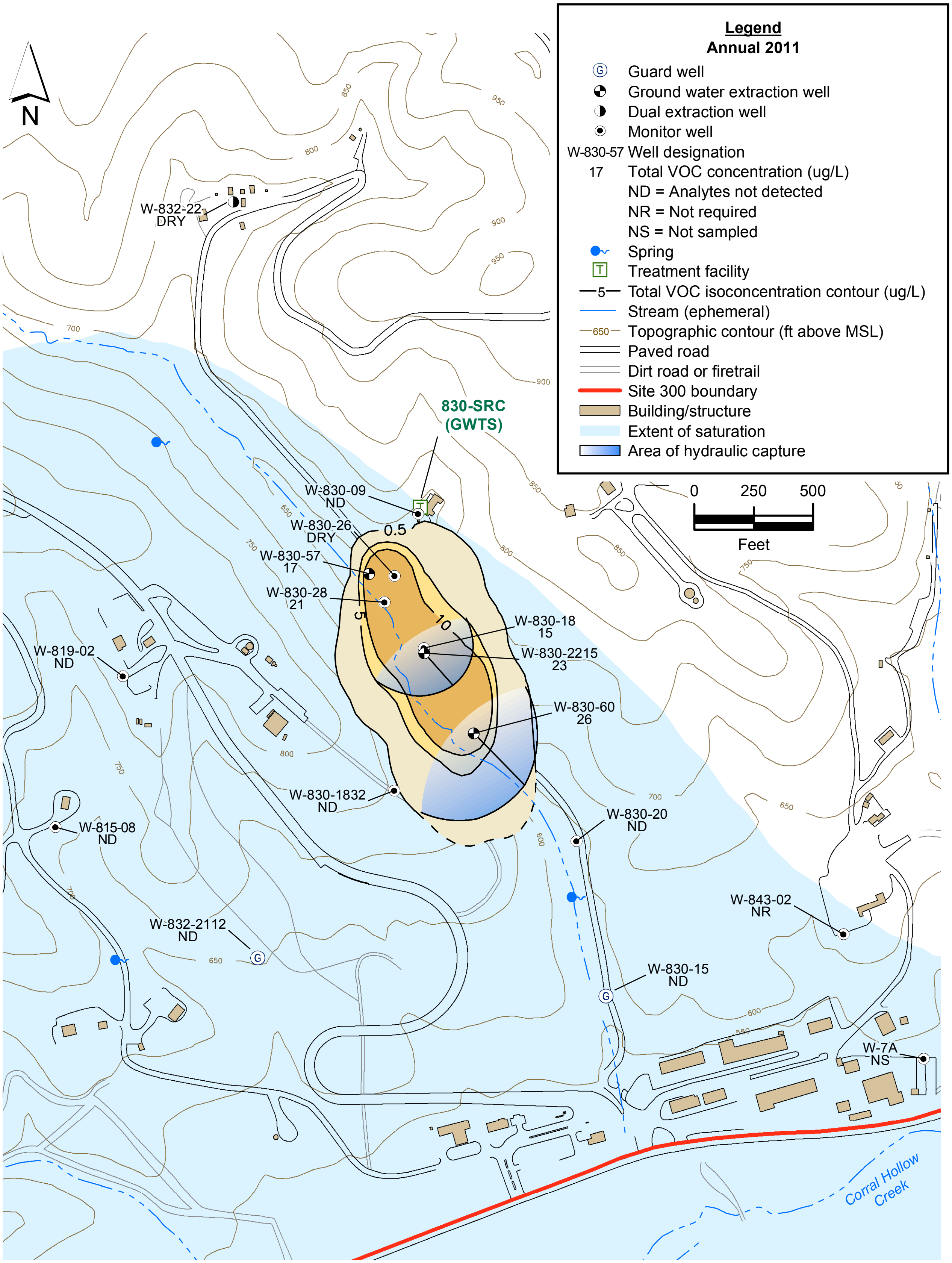


**Figure 2.7-9. Building 832 Canyon Operable Unit total VOC isoconcentration contour map for the Upper Tnbs$_1$ hydrostratigraphic unit.**

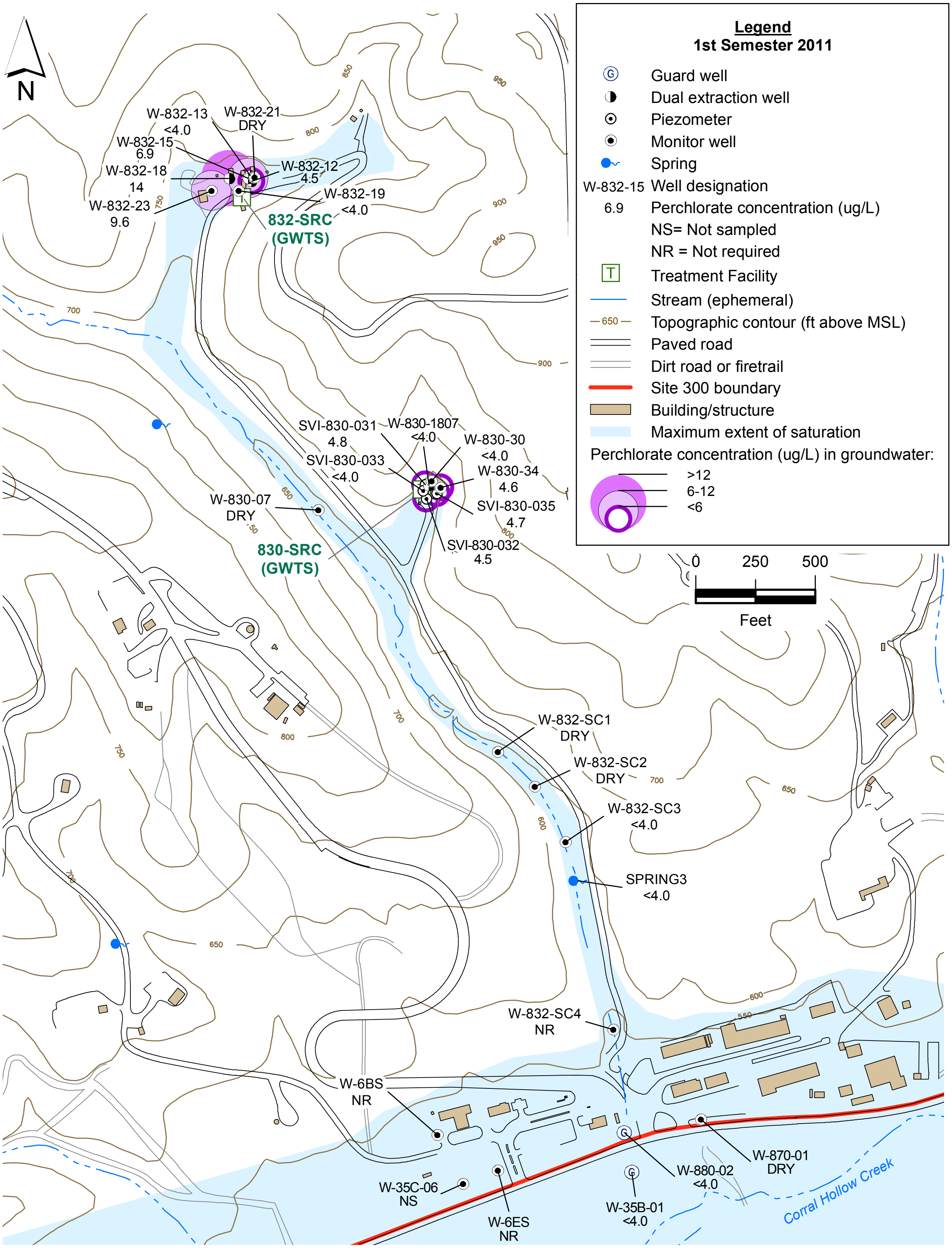


**Figure 2.7-10. Building 832 Canyon Operable Unit map showing perchlorate concentrations for the Qal/WBR hydrostratigraphic unit.**

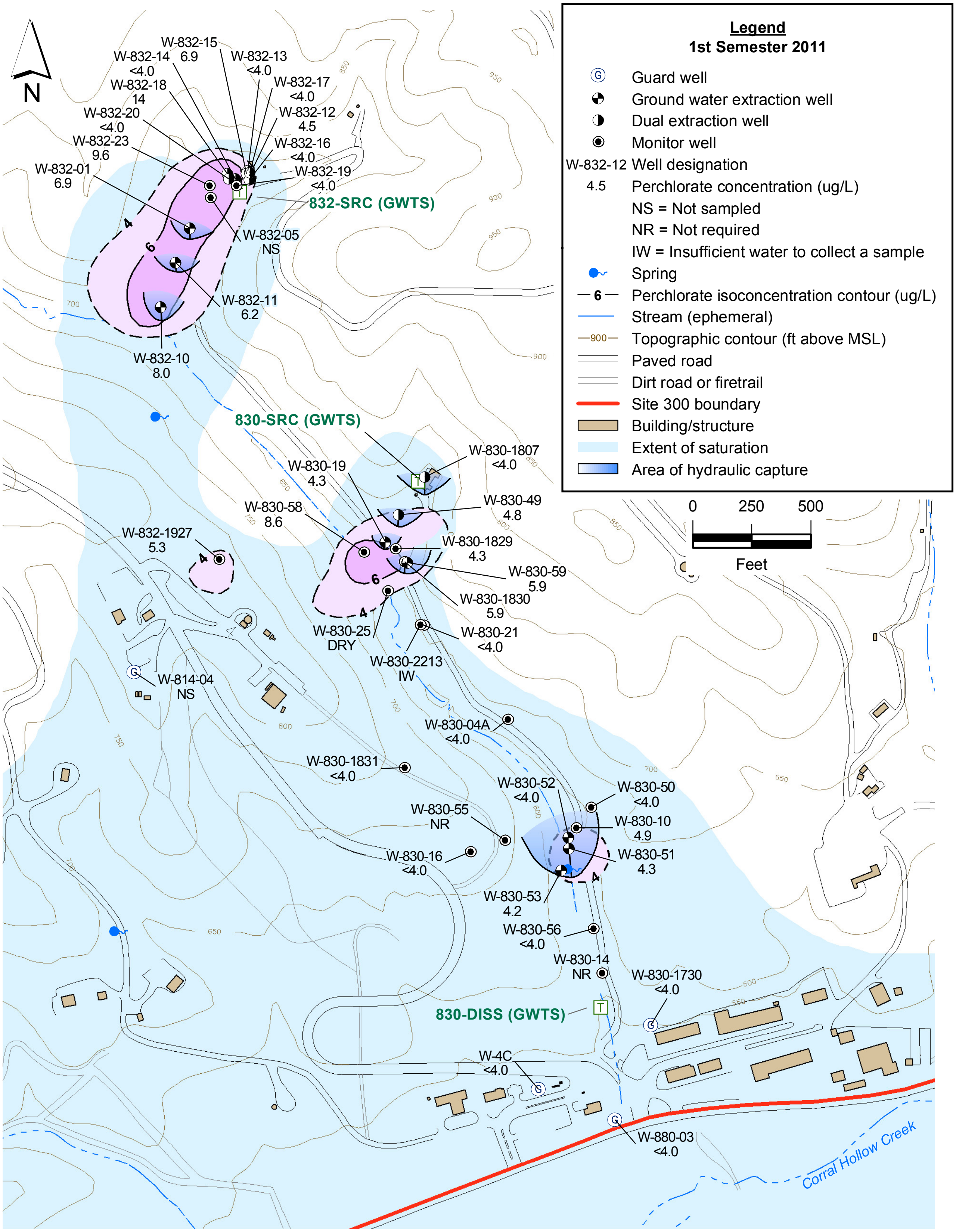


**Figure 2.7-11. Building 832 Canyon Operable Unit perchlorate isoconcentration contour map for the $Tnsc_{1b}$ hydrostratigraphic unit.**

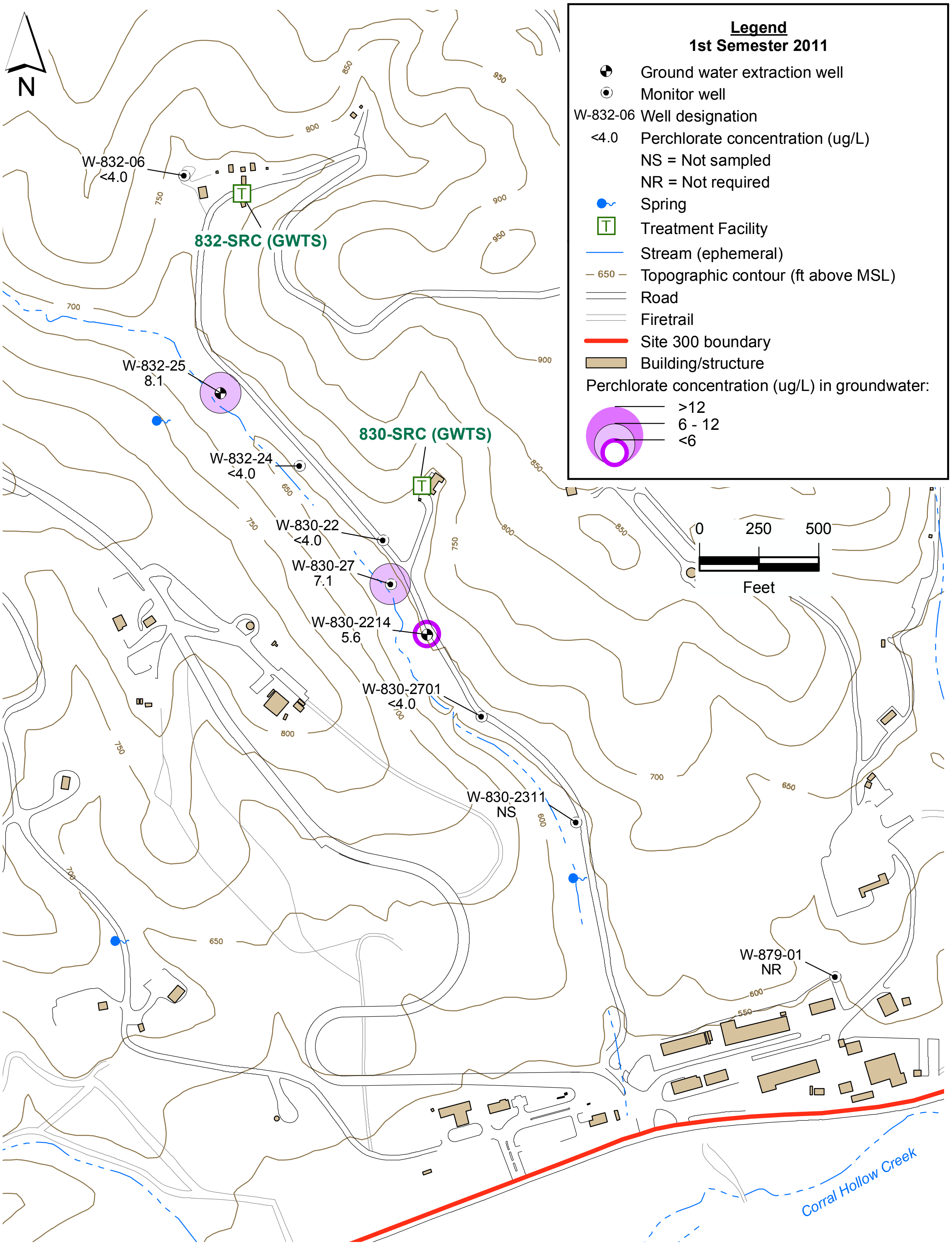


**Figure 2.7-12. Building 832 Canyon Operable Unit map showing perchlorate concentrations for the Tnsc$_{1a}$ hydrostratigraphic unit.**

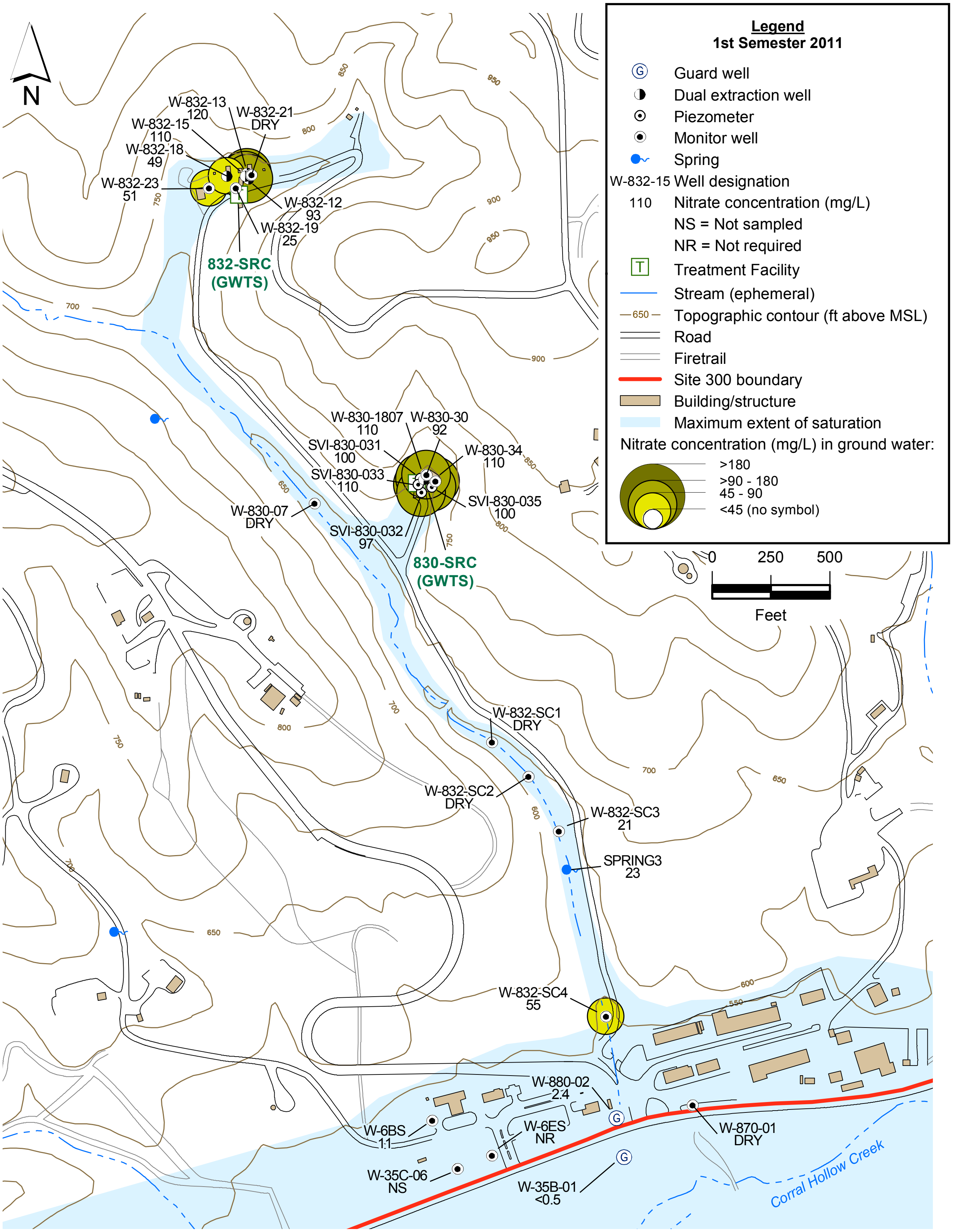


**Figure 2.7-13. Building 832 Canyon Operable Unit map showing nitrate concentrations for the Qal/WBR hydrostratigraphic unit.**

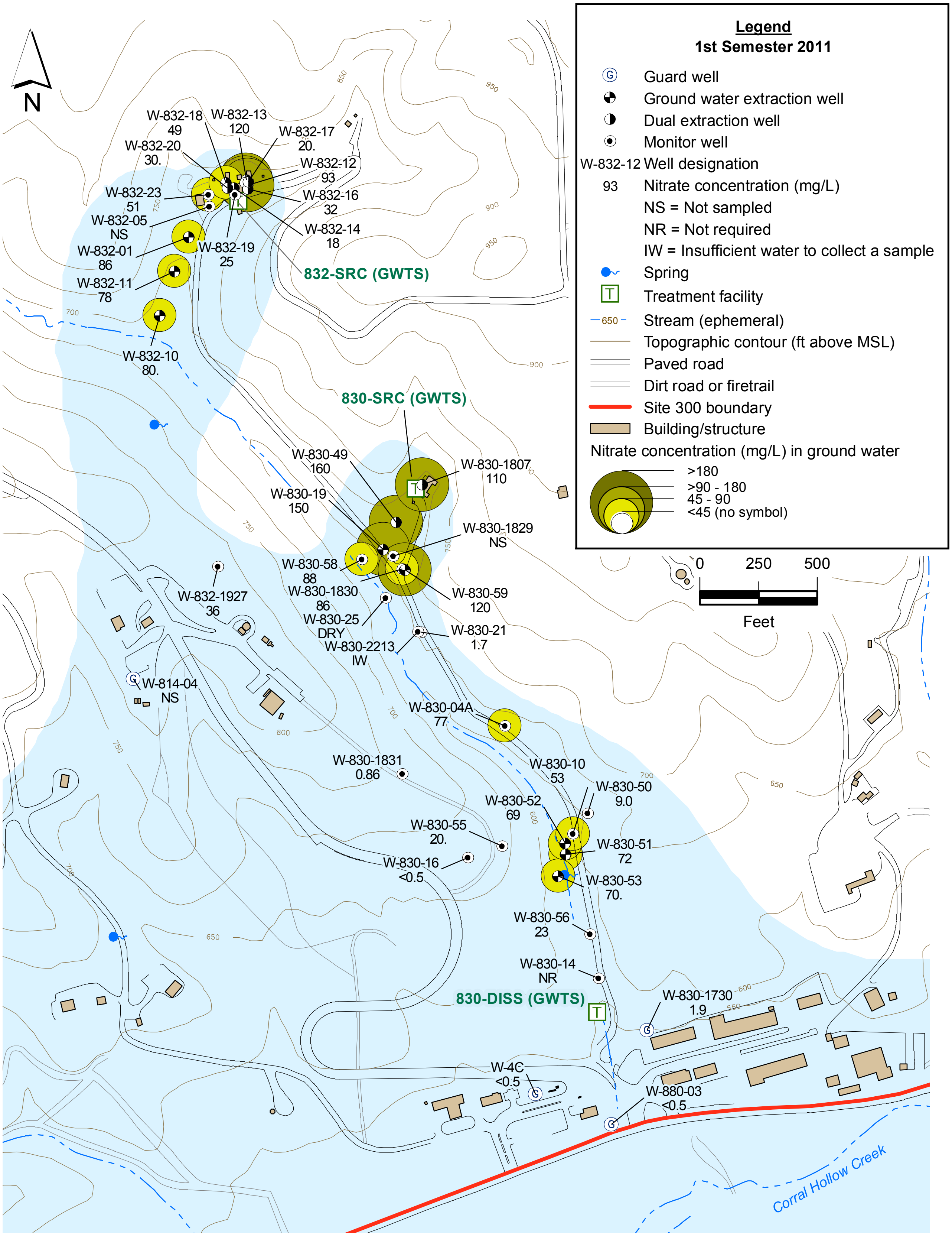


**Figure 2.7-14. Building 832 Canyon Operable Unit map showing nitrate concentrations for the $Tnsc_{1b}$ hydrostratigraphic unit.**

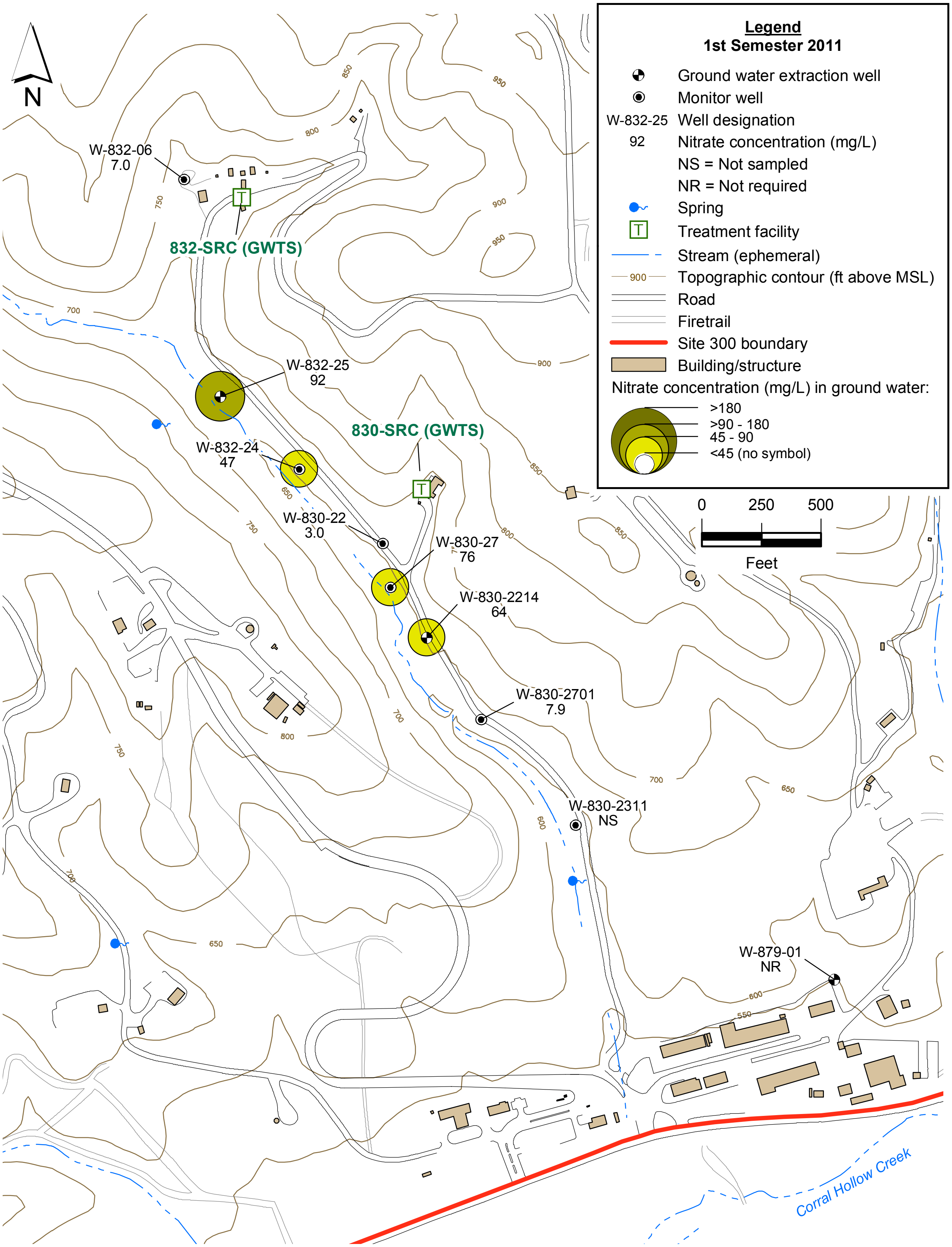


**Figure 2.7-15. Building 832 Canyon Operable Unit map showing nitrate concentrations for the $Tnsc_{1a}$ hydrostratigraphic unit.**

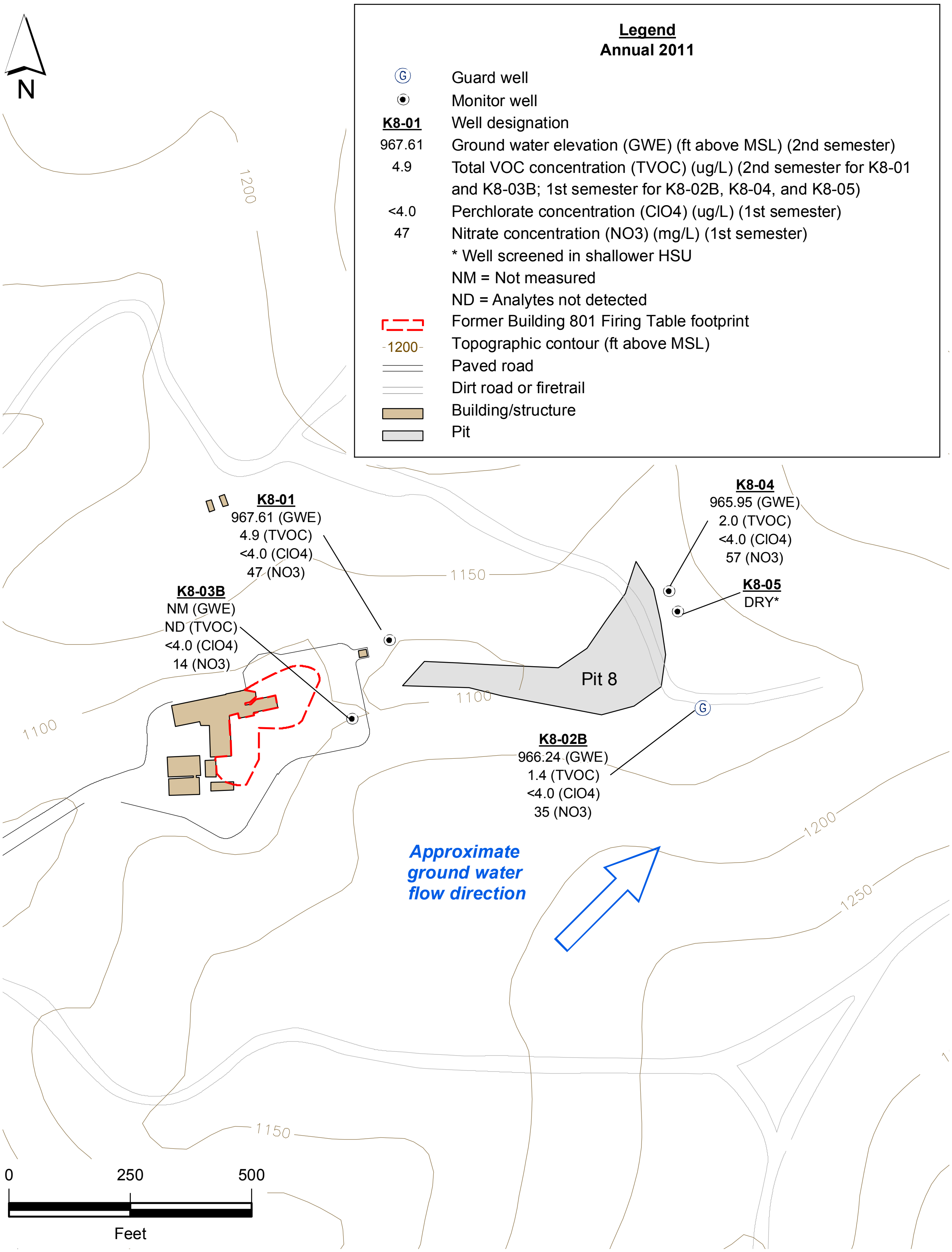


**Figure 2.8-1. Building 801 Firing Table and Pit 8 Landfill site map showing monitor well locations, ground water elevations, and nitrate, perchlorate and total VOC concentrations, and ground water flow direction in the $Tnbs_1/Tnbs_0$ hydrostratigraphic unit.**

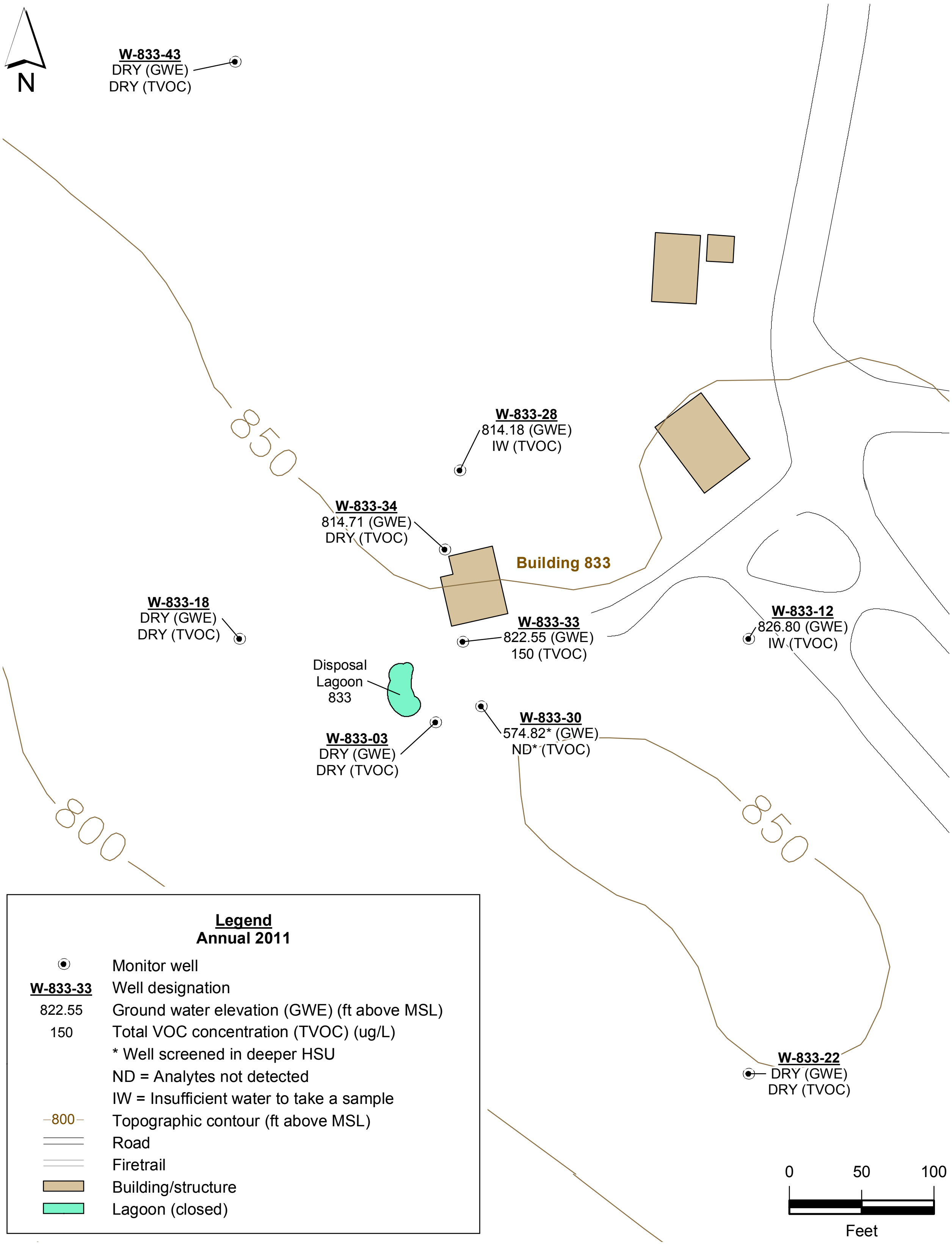


**Figure 2.8-2. Building 833 site map showing monitor well locations, ground water elevations, and total VOC concentrations in the Tpsg hydrostratigraphic unit.**

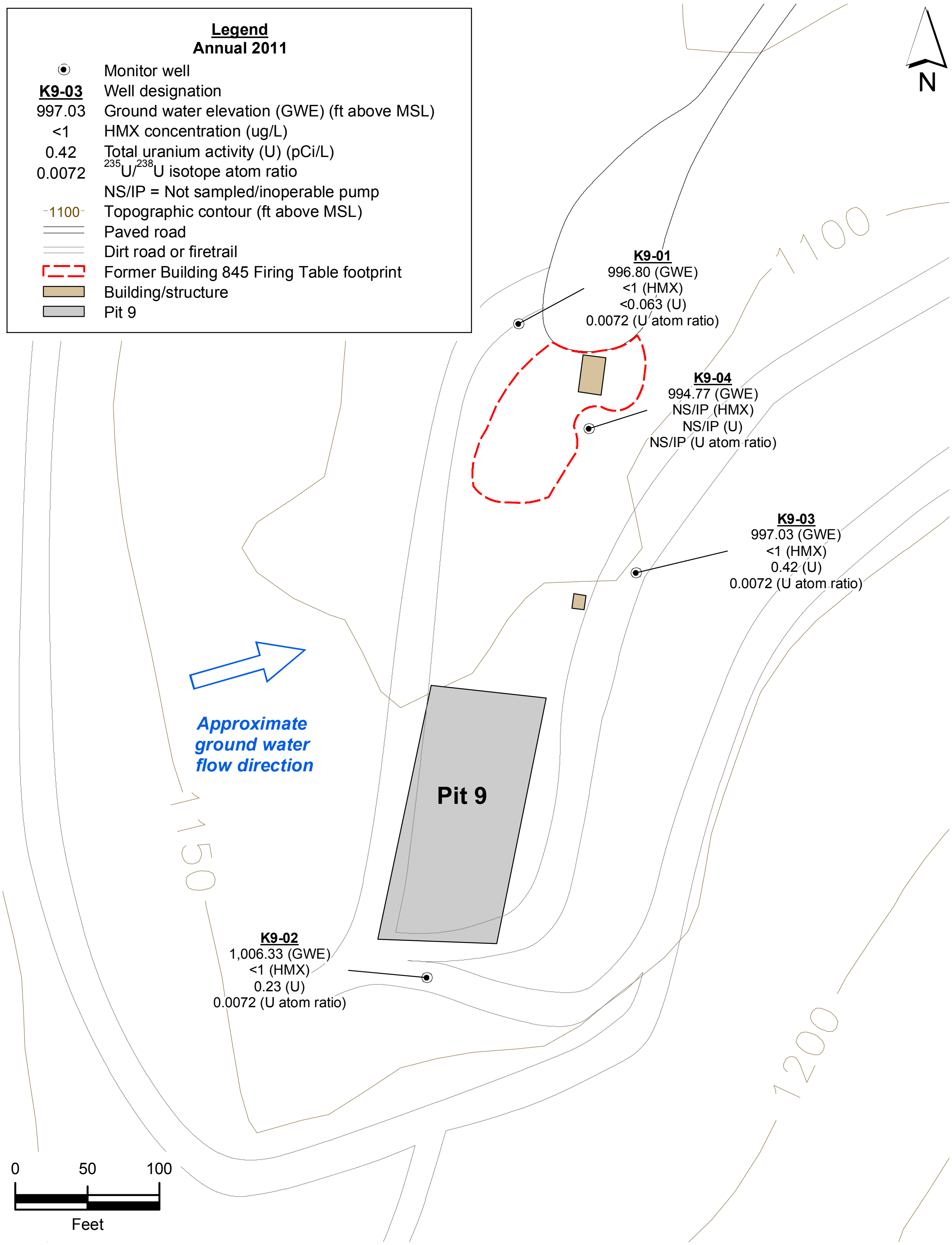


**Figure 2.8-3. Building 845 Firing Table and Pit 9 Landfill site map showing monitor well locations, ground water elevations, ground water flow direction, and HMX concentrations, uranium activities and $^{235}U/^{238}U$ isotope atom ratios in the $Tnsc_0$ hydrostratigraphic unit.**

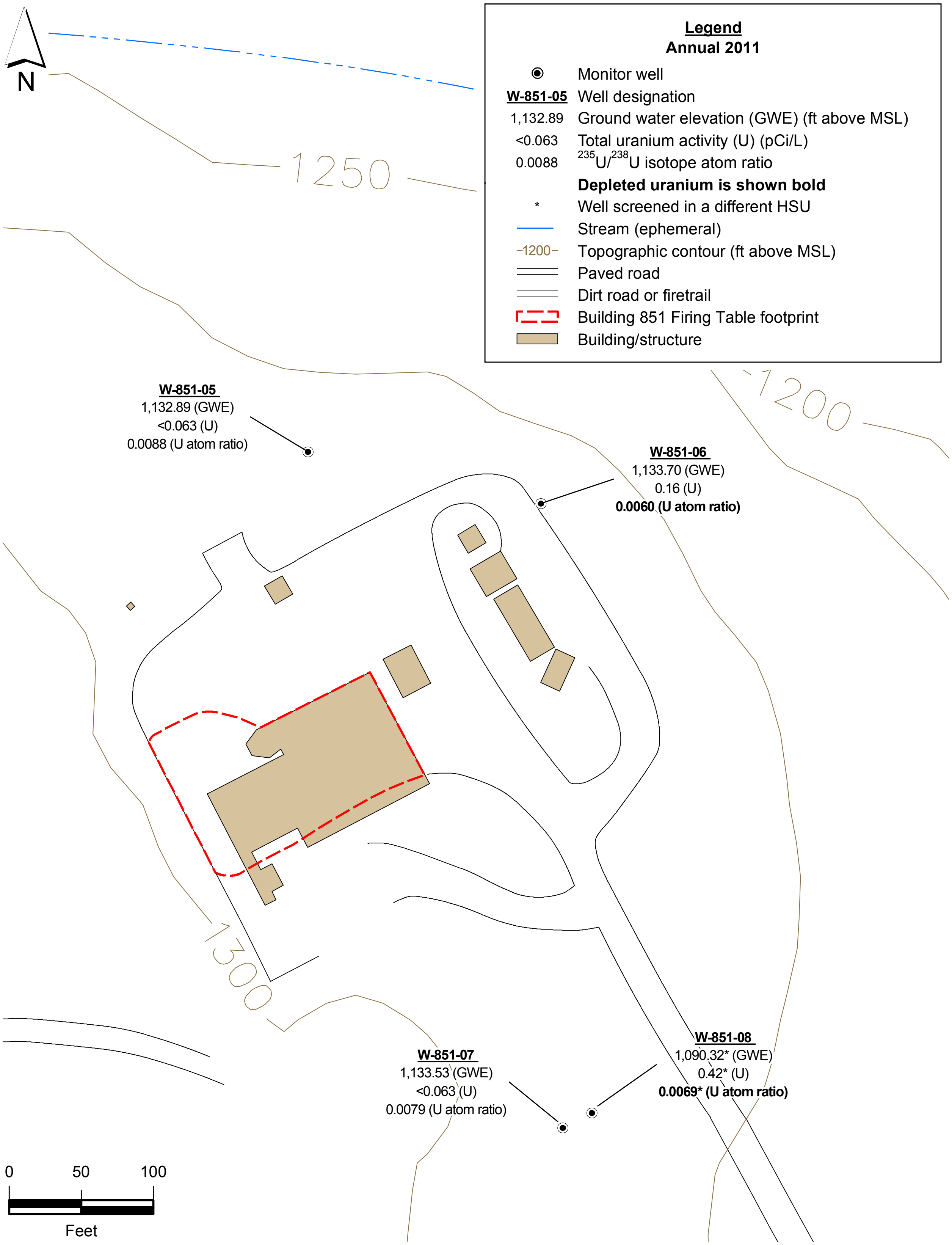


**Figure 2.8-4. Building 851 Firing Table site map showing monitor well locations, ground water elevations, uranium activities, and $^{235}U/^{238}U$ isotope atom ratios in the Tmss hydrostratigraphic unit.**

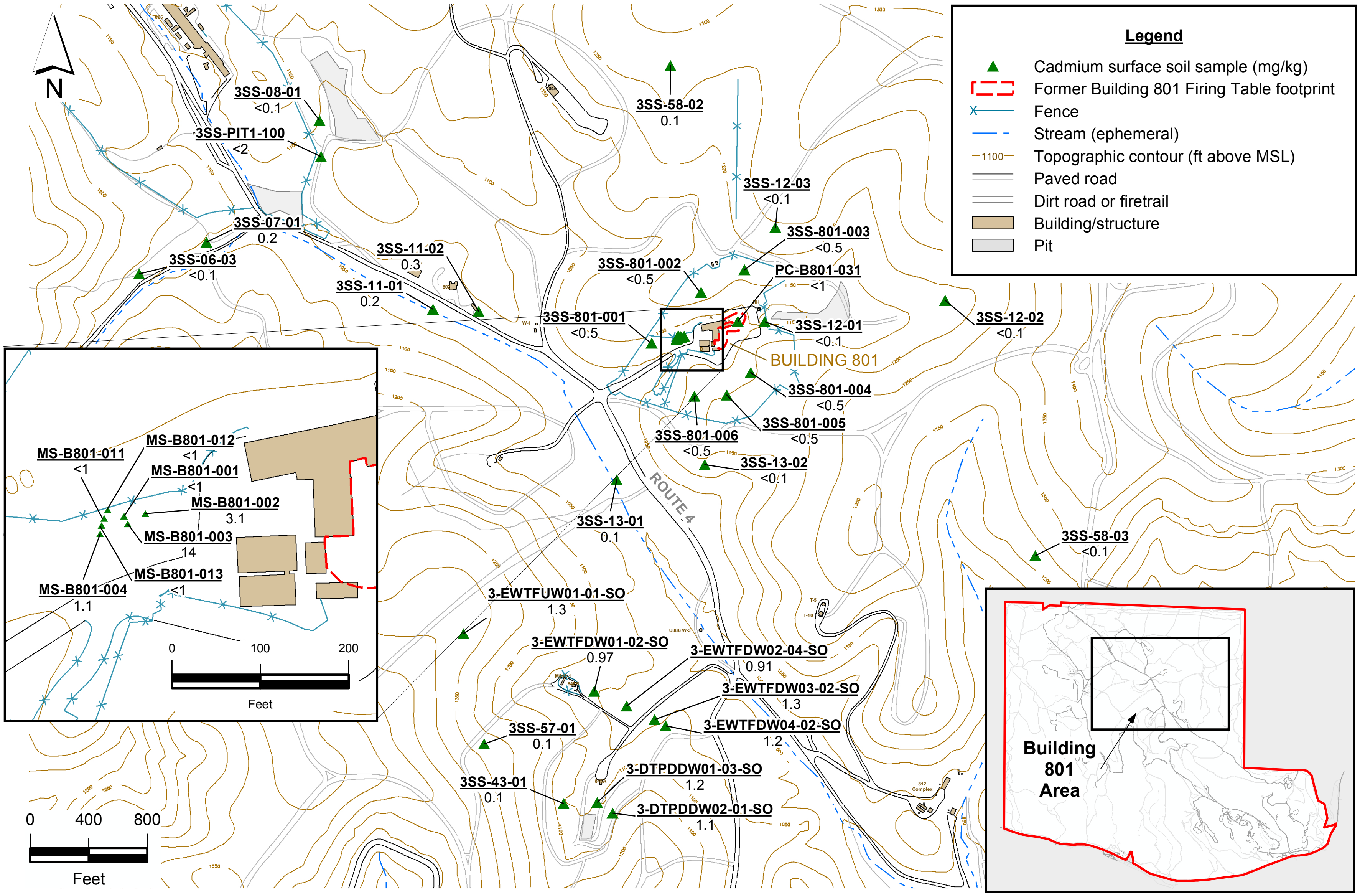


**Figure 4.2-1. Surface soil cadmium concentrations in milligrams per kilogram (mg/kg) in the vicinity of Building 801 used to calculate a 95% upper confidence limit of the mean to evaluate potential ecological hazard.**

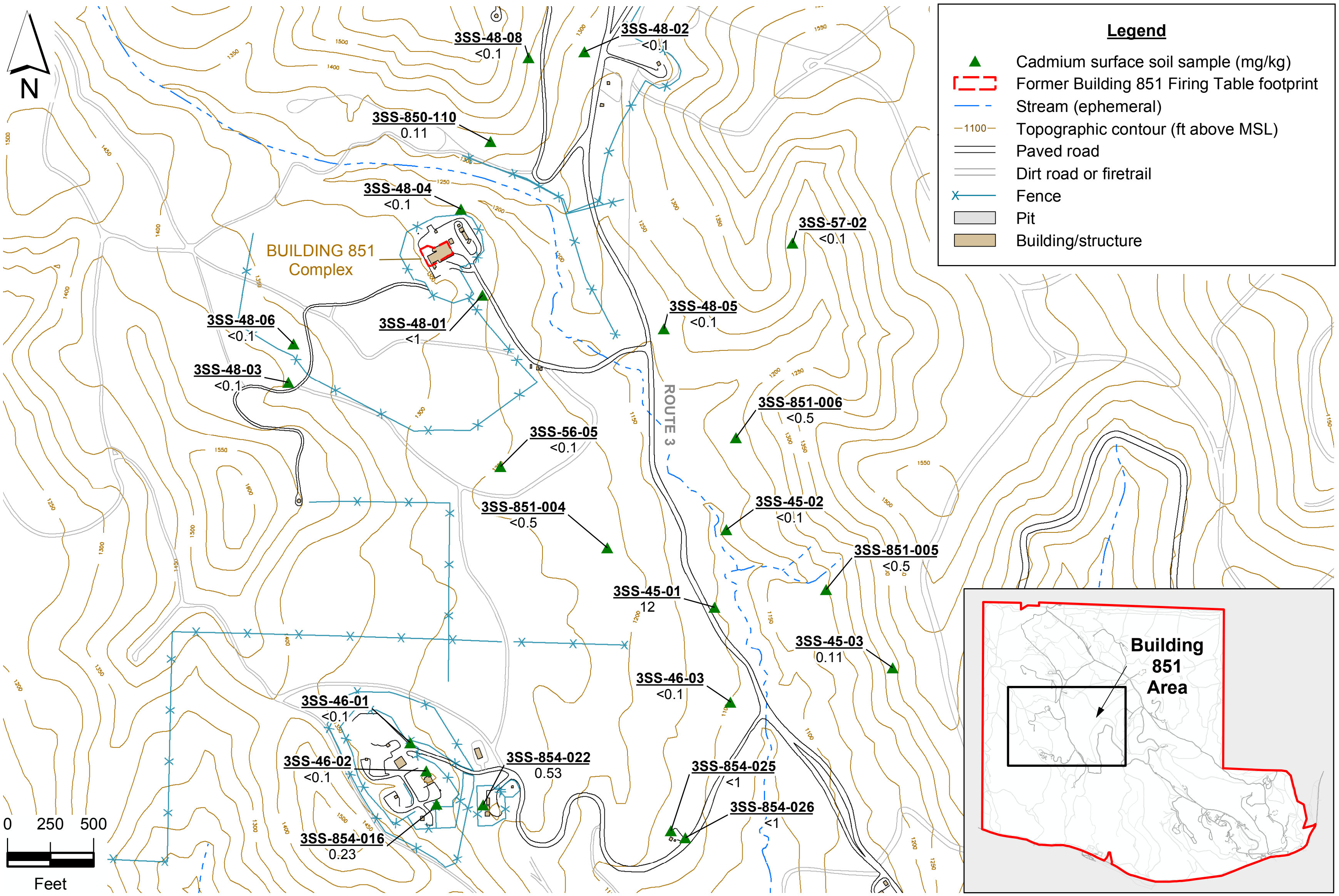


**Figure 4.2-2. Surface soil cadmium concentrations in milligrams per kilogram (mg/kg) in the vicinity of Building 851 used to calculate a 95% upper confidence limit of the mean to evaluate potential ecological hazard.**

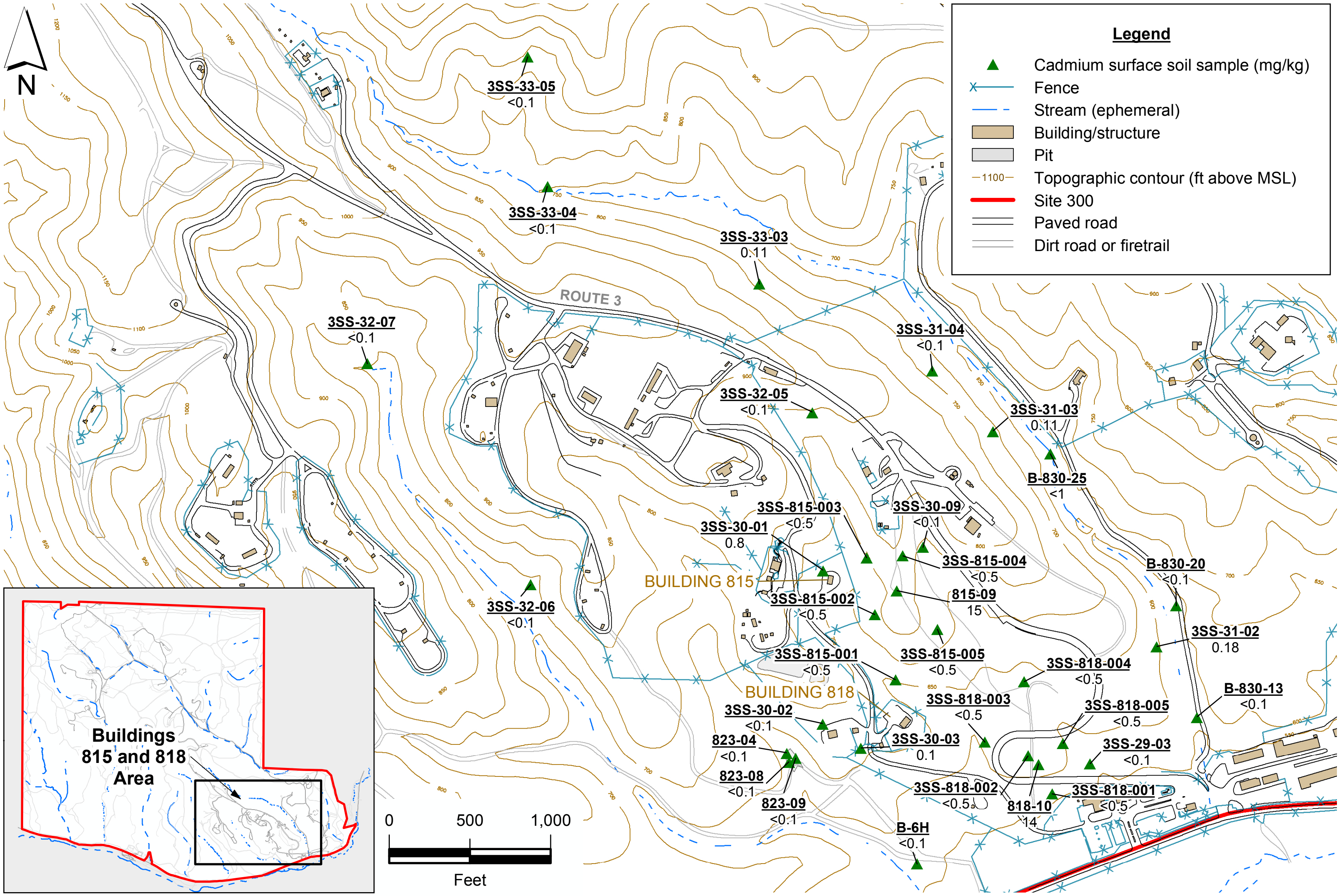


**Figure 4.2-3. Surface soil cadmium concentrations in milligrams per kilogram (mg/kg) in the vicinity of Buildings 815 and 818 used to calculate a 95% upper confidence limit of the mean to evaluate potential ecological hazard.**

# Tables

# Acronyms and Abbreviations

| | |
|---|---|
| 4-ADNT | 4-Amino-2,6-dinitrotoluene |
| 815 | Building 815 |
| 817 | Building 817 |
| 829 | Building 829 |
| 832 | Building 832 |
| 834 | Building 834 |
| 850 | Building 850 |
| 854 | Building 854 |
| A | Annual |
| As N | As nitrogen |
| As $CaCO_3$ | As calcium carbonate |
| BTEX | Benzene, toluene, ethyl benzene, and xylene |
| °C | Degrees Celsius |
| C12-C24 | Diesel range organic compounds in the carbon 12 to carbon 24 range |
| CAL | Contracted analytical laboratories |
| CAMU | Corrective Action Management Unit |
| CAP | Corrective and Preventative Action Program |
| CDFG | California Department of Fish and Game |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| CFE | Carbon filter effluent |
| CFI | Carbon filter influent |
| CF2I | Second aqueous phase granular carbon filter influent |
| CF3I | Third aqueous phase granular carbon filter influent |
| cfm | Cubic feet per minute |
| CFV2 | Second vapor phase granular activated carbon filter effluent |
| CGSA | Central General Services Area |
| CHC | Corral hollow creek |
| CMP/CP | Compliance Monitoring Plan/Contingency Plan |
| CMR | Compliance Monitoring Report |
| $CO_2$ | Carbon dioxide |
| COC | Contaminants of Concern |
| DCA | Dichloroethane |
| DCE | Dichloroethylene or dichloroethene |
| DIS | Discretionary sampling (not required by the CMP) |
| DISS | Distal south |
| DMW | Detection monitor well |
| DOE | Department of Energy |
| DSB | Distal Site Boundary |
| DTSC | Department of Toxic Substances Control |

| | |
|---|---|
| DUP | Duplicate or collocated QC sample |
| E | Effluent (acronym found in Treatment Facility Sampling Plan Tables) |
| E | Sample to be collected during even numbered years (i.e., 2012) (acronym found in Sampling Plan Tables) |
| EcoSSLs | Ecological Soil Screening Levels |
| EGSA | Eastern General Services Area |
| EIS/EIR | Environmental Impact Statement/Environmental Impact Report |
| EMS | Environmental Management System |
| EPA | Environmental Protection Agency |
| ERD | Environmental Restoration Department |
| ES&H | Environmental Safety and Health |
| EV | Effluent vapor |
| EW | Extraction well |
| ft | Feet |
| $ft^3$ | Cubic feet |
| g | Gram(s) |
| GAC | Granular activated carbon |
| gal | Gallon(s) |
| GIS | Geographic Information Systems |
| gpd | Gallons per day |
| gpm | Gallons per minute |
| GSA | General Services Area |
| GTU | Ground Water Treatment Unit. |
| GW | Guard well |
| GWTS | Ground Water Treatment System |
| HE | High Explosives |
| HEPA | High Explosives Process Area |
| H-H | Hetch-Hetchy |
| HMX | High-Melting Explosive |
| HQ | Hazard quotient |
| HSU | Hydrostratigraphic unit |
| I | Influent |
| ICP-MS | Inductively Coupled Plasma - Mass Spectrometry |
| ISMA | *In Situ* Microcosm Array |
| ISMS | Integrated Safety Management System |
| ISO | International Organization for Standardization |
| ITS | Issues Tracking System |
| IV | Influent vapor |
| IW | Injection well |
| IWS | Integrated Work Sheet |
| K-40 | Potassium-40 |
| $kft^3$ | thousands of cubic feet |
| kg | Kilograms |

| | |
|---|---|
| kgal | Thousands of gallons |
| km | Kilometers |
| LCS | Laboratory Control Sample |
| LHC | Light hydrocarbon |
| LLNL | Lawrence Livermore National Laboratory |
| µg/L | Micrograms per liter |
| $\mu g/m^3$ | Micrograms per meters cubed |
| µmhos/cm | Micro ohms per centimeter |
| µS | Microsiemens |
| M | Monthly |
| MCL | Maximum Contaminant Level |
| Mgal | Millions of gallons |
| Mg/kg/d | Milligram per kilogram per day |
| mg/L | Milligrams per liter |
| MNA | Monitored Natural Attenuation |
| MOVI | Management observations, verifications, and inspections |
| MSA | Management self-assessment |
| MSL | Mean Sea Level |
| MTU | Miniature Treatment Unit |
| mv | Millivolts |
| MWB | Monitor well used for background |
| N | No |
| NB | Nitrobenzene |
| $N_2$ | Nitrogen |
| $NO_3$ | Nitrate |
| NA | Not applicable |
| NT | Nitrotoluene |
| NTU | Nephelometric turbidity units |
| O | Sample to be collected during odd numbered years (i.e., 2013) |
| OR | Occurrence Report |
| ORP | Oxidation/reduction potential |
| OU | Operable unit |
| O&M | Operations and Maintenance |
| $P/PO_4$ | Phosphorous |
| PCBs | Polychlorinated biphenyls |
| PCE | Tetrachloroethene |
| pCi/L | PicoCuries per liter |
| pH | A measure of the acidity or alkalinity of an aqueous solution |
| PHG | Public Health Goal |
| PLC | Programmatic logic control |
| $ppb_v$ | Parts per billion by volume |
| $ppm_v$ | Parts per million on a volume-to-volume basis |
| PBA | Programmatic Biological Assessment |

| | |
|---|---|
| PRX | Proximal |
| PRXN | Proximal north |
| PSDMP | Post-Monitoring Shutdown Plan |
| PTMW | Plume Tracking Monitor Well |
| PTU | Portable Treatment Unit |
| Q | Quarterly |
| QAPP | Quality Assurance Project Plan |
| QA/QC | Quality assurance/quality control |
| QIF | Quality Improvement Form |
| RAOs | Remedial Action Objectives |
| R1 | Receiving water sampling point located 100 ft upstream |
| R2 | Receiving water sampling point located 100 ft downstream |
| RDX | Research Department explosive |
| REA | Reanalysis |
| Redox | Reduction-oxidation reaction |
| REX | Resample |
| ROD | Record of Decision |
| RPM | Remedial Project Manager |
| RWQCB | Regional Water Quality Control Board |
| S | Semi-annual |
| Scfm | Standard cubic feet per minute |
| SOP | Standard Operating Procedure |
| SOW | Statement of work |
| SPACT | Sample Planning and Chain of Custody Tracking |
| SPR | Spring |
| SRC | Source |
| STU | Solar-powered Treatment Unit |
| SVE | Soil Vapor Extraction |
| SVTS | Soil Vapor Treatment System |
| SVI | Soil Vapor Influent |
| SWEIS | Site-Wide Environmental Impact Statement |
| SWFS | Site Wide Feasibility Study |
| SWRI | Site-Wide Remedial Investigation |
| TBOS | Tetrabutyl orthosilicate |
| TCA | Trichloroethane |
| TFRT | Treatment Facility Real Time |
| THMs | trihalomethanes |
| TKEBS | Tetrakis (2-ethylbutyl) silane |
| TCE | Trichloroethene |
| TDS | Total dissolved solids |
| TF | Treatment facility |
| TNB | Trinitrobenzene |

| | |
|---|---|
| TNT | Trinitrotoluene |
| TRV | Toxicity Reference Value |
| $^{235}U/^{238}U$ | Atom ratio of the isotopes uranium-235 and uranium-238 |
| U.S. | United States |
| USFWS | U.S. Fish and Wildlife Service |
| VCF4I | Fourth vapor phase granular activated carbon filter influent |
| VE | Vapor effluent |
| VES | Vapor extraction system |
| VI | Vapor influent |
| VOC | Volatile organic compound |
| WAA | waste accumulation area |
| WGMG | Water Guidance and Monitoring Group |
| WS | Water supply well |
| Y | Yes |

## Hydrogeologic Units

Lower $Tnbs_1$ = Lower member of the Neroly lower blue sandstone, below claystone marker bed (regional aquifer).
Qal = Quaternary alluvium.
Qls = Quaternary landslide.
Qt = Quaternary terrace.
Tmss = Miocene Cierbo Formation—lower siltstone/claystone member.
$Tnsc_{1a}$, $Tnsc_{1b}$, $Tnsc_{1c}$ = Sandstone bodies within the $Tnsc_1$ Neroly middle siltstone/claystone (1a = deepest).
$Tnbs_1$ = Lower member of the Neroly lower blue sandstone.
$Tnbs_0$ = Neroly silty sandstone.
$Tnbs_2$ = Miocene Neroly upper blue sandstone.
$Tnsc_0$ = Tertiary Neroly Formation—lower siltstone/claystone member.
$Tnsc_2$ = Miocene Neroly Formation—upper siltstone/claystone member.
Tps = Pliocene non-marine unit.
Tpsg = Miocene non-marine unit (gravel facies).
Tts = Tesla Formation.
$UTnbs_1$ = Upper member of the Neroly lower blue sandstone, above claystone marker bed.
WBR = Weathered bedrock.

## Data Qualifier Flag Definitions

B = Analyte found in method blank, sample results should be evaluated.

D = Analysis performed at a secondary dilution or concentration (i.e., vapor samples).

E = The analyte was detected below the LLNL reporting limit, but above the analytical laboratory minimum detection limit.

F = Analyte found in field blank, trip blank, or equipment blank.

G = Quantitated using fuel calibration, but does not match typical fuel fingerprint.

H = Sample analyzed outside of holding time, sample results should be evaluated.

I = Surrogate recoveries were outside of QC limits.

J = Analyte was positively identified; the associated numerical value is the proximate concentration of the analyte in the sample.

L = Spike accuracy not within control limits.

O = Duplicate spike or sample precision not within control limits.

R = Sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

S = Analytical results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

T = Analyte is tentatively identified compound; result is approximate.

## Requested Analyses

AS:UISO = Uranium isotopes performed by alpha spectrometry.
DWMETALS:ALL = Drinking water metals suite performed by various analytical methods.
E200.7:FE = Iron performed by EPA Method 200.7.
E200.7:Li = Lithium performed by EPA Method 200.7.
E200.7:SI = Silica performed by EPA Method 200.7.
E200.8:AS = Arsenic performed by EPA Method 200.8.
E200.8:CR = Chromium performed by EPA Method 200.8.
E200.8:MN = Manganese performed by EPA Method 200.8.
E200.8:SE = Selenium performed by EPA Method 200.8.
E300.0:NO3 = Nitrate performed by EPA Method 300.0.
E300.0:PERC = Perchlorate performed by EPA Method 300.0.
E300.0:O-PO2 = Orthophosphate performed by EPA Method 300.0.
E340.2:ALL = Fluoride performed by EPA method 340.2.
E502.2:ALL = Volatile organic compounds performed by EPA Method 502.2.
E601:ALL = Halogenated volatile organic compounds performed by EPA Method 601.
E624:ALL = Volatile organic compounds performed by EPA Method 624.
E8082A = Polychlorinated biphenyls performed by EPA Method 8082A.
E8260:ALL = Volatile organic compounds performed by EPA Method 8260.
E8330LOW:ALL = High explosive compounds performed by EPA Method 8330.
E8330:R+H = High explosive compounds RDX and HMX performed by EPA Method 8330.
E8330:TNT = Trinitrotoluene performed by EPA Method 8330.
E906:ALL = Tritium performed by EPA Method 906.
EM8015:DIESEL = Diesel range organic compounds performed by modified EPA Method 8015.
GENMIN:ALL = General minerals suite performed by various analytical methods.
MS:UISO = Uranium isotopes performed by mass spectrometry.
T26METALS:ALL = Title 26 metals.
TBOS:ALL = Tetrabutylorthosilicate/ Tetrakis (2-ethylbutyl) silane.

## Ground Water Elevation Table Notes

ABD = Abandoned.
AD = Drilling of adjacent new wells disturbed water level.
BLOC = Well Blocked.
BS = Water detected below bottom of screened interval.
CB = Installation completed as a Christy box.
DRY = No water detected in well casing at time of measurement.
FA = Flowing artesian well, water elevation converted.
FL = Flowing.
ME = Measuring error suspected.
MSL = Mean Sea Level.
MT = Measured twice.
NA = Information not available.
NM = Not Measured.
NOM = Not on field map.
PD = Predevelopment measurement.
PE = Pump Extraction.
PF = Pump not running at time of measurement.
PS = Measurement taken just before sampling.
PT = Pump test interfered with measurement.
RA = Restricted access.
UC = Unsafe conditions.
VE = Vacuum Extraction.
WE = Well equilibrium suspect.
WR = Well recovery.

# List of Tables

**Table Summ-1. Mass removed, January 1, 2011 through December 31, 2011.**

| Treatment facility | Volume of ground water treated (thousands of gal) | Volume of soil vapor treated (thousands of ft³) | Estimated total VOC mass removed (g) | Estimated total perchlorate mass removed (g) | Estimated total nitrate mass removed (kg) | Estimated total RDX mass removed (g) | Estimated total TBOS/ TKEBS mass removed (g) | Estimated total Uranium mass removed (g) |
|---|---|---|---|---|---|---|---|---|
| CGSA GWTS | 2,440 | NA | 370 | NA | NA | NA | NA | NA |
| CGSA SVTS | NA | 12,020 | 1,800 | NA | NA | NA | NA | NA |
| 834 GWTS | 94 | NA | 1,200 | NA | 30 | NA | 0.85 | NA |
| 834 SVTS | NA | 17,106 | 4,300 | NA | NA | NA | NA | NA |
| 815-SRC GWTS | 642 | NA | 15 | 10 | 240 | 120 | NA | NA |
| 815-PRX GWTS | 796 | NA | 65 | 20 | 250 | NA | NA | NA |
| 815-DSB GWTS | 1,132 | NA | 54 | NA | NA | NA | NA | NA |
| 817-SRC GWTS | 3 | NA | 0 | 0.33 | 1.0 | 0.60 | NA | NA |
| 817-PRX GWTS | 772 | NA | 35 | 69 | 300 | 23 | NA | NA |
| 829-SRC GWTS | <1 | NA | 0.014 | 0.0062 | 0.062 | NA | NA | NA |
| PIT7-SRC GWTS | 47 | NA | 0.48 | 2.1 | 6.8 | NA | NA | 4.8 |
| 854-SRC GWTS | 960 | NA | 200 | 8.9 | 170 | NA | NA | NA |
| 854-SRC SVTS | NA | 8,814 | 570 | NA | NA | NA | NA | NA |
| 854-PRX GWTS | 290 | NA | 22 | 11 | 44 | NA | NA | NA |
| 854-DIS GWTS | 10 | NA | 1.4 | 0.21 | 0.83 | NA | NA | NA |
| 832-SRC GWTS | 101 | NA | 38 | 2.3 | 35 | NA | NA | NA |
| 832-SRC SVTS | NA | 1,191 | 26 | NA | NA | NA | NA | NA |
| 830-SRC GWTS | 1,927 | NA | 1,100 | 3.4 | 130 | NA | NA | NA |
| 830-SRC SVTS | NA | 6,194 | 680 | NA | NA | NA | NA | NA |
| 830-DISS GWTS | 1,433 | NA | 110 | 14 | 350 | NA | NA | NA |
| **Total** | 10,646 | 45,325 | 11,000 | 140 | 1,600 | 140 | 0.85 | 4.8 |

**Notes:**

815 = Building 815.
817 = Building 817.
829 = Building 829.
830 = Building 830.
832 = Building 832.
834 = Building 834.
854 = Building 854.
CGSA = Central General Services Area.
DIS = Distal.
DISS = Distal south.
DSB = Distal site boundary.
$ft^3$ = Cubic feet.
g = Grams.
gal = Gallons.
GWTS = Ground water treatment system.
kg = Kilograms.
NA = Not applicable.
PRX = Proximal.
RDX = Research Department Explosive.
SRC = Source.
SVTS = Soil vapor treatment system.
TBOS = Tetra 2-ethylbutylorthosilicate.
TKEBS = Tetrakis (2-ethylbutyl) silane.
VOC = Volatile organic compound.

Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign $N_2$ gas by anaerobic denitrifying bacteria. Nitrate mass removal is calculated assuming complete removal of nitrate from treated ground water. At Pit7, re-injected effluent may contain nitrate concentrations below the discharge limit but above the detection limit. Thus, nitrate mass removal calculations at Pit7 are overestimated.

**Table Summ-2. Summary of cumulative remediation.**

| Treatment facility | Volume of ground water treated (thousands of gallons) | Volume of soil vapor treated (thousands of Cubic feet) | Estimated total VOC mass removed (kg) | Estimated total perchlorate mass removed (g) | Estimated total nitrate mass removed (kg) | Estimated total RDX mass removed (kg) | Estimated total TBOS/ TKEBS mass removed (kg) | Estimated total Uranium mass removed (kg) |
|---|---|---|---|---|---|---|---|---|
| EGSA GWTS | 309,379 | NA | 7.6 | NA | NA | NA | NA | NA |
| CGSA GWTS | 22,672 | NA | 26 | NA | NA | NA | NA | NA |
| CGSA SVTS | NA | 146,455 | 76 | NA | NA | NA | NA | NA |
| 834 GWTS | 1,081 | NA | 44 | NA | 270 | NA | 9.5 | NA |
| 834 SVTS | NA | 317,333 | 330 | NA | NA | NA | NA | NA |
| 815-SRC GWTS* | 5,788 | NA | 0.14 | 260 | 2,000 | 1.5 | NA | NA |
| 815-PRX GWTS* | 7,116 | NA | 0.77 | 170 | 2,100 | NA | NA | NA |
| 815-DSB GWTS | 14,394 | NA | 0.54 | NA | NA | NA | NA | NA |
| 817-SRC GWTS* | 34 | NA | 0 | 3.4 | 11 | 0.0058 | NA | NA |
| 817-PRX GWTS* | 3,624 | NA | 0.15 | 330 | 1,300 | 0.10 | NA | NA |
| 829-SRC GWTS | 5 | NA | 0.00033 | 0.16 | 1.4 | NA | NA | NA |
| PIT7-SRC GWTS | 127 | NA | 0.0026 | 5.4 | 18 | NA | NA | 0.013 |
| 854-SRC GWTS | 9,629 | NA | 5.5 | 150 | 1,800 | NA | NA | NA |
| 854-SRC SVTS | NA | 80,983 | 11 | NA | NA | NA | NA | NA |
| 854-PRX GWTS | 3,354 | NA | 0.65 | 140 | 570 | NA | NA | NA |
| 854-DIS GWTS | 48 | NA | 0.0062 | 0.82 | 3.7 | NA | NA | NA |
| 832-SRC GWTS | 797 | NA | 0.25 | 21 | 310 | NA | NA | NA |
| 832-SRC SVTS | NA | 21,915 | 2.0 | NA | NA | NA | NA | NA |
| 830-SRC GWTS | 9,004 | NA | 5.7 | 18 | 670 | NA | NA | NA |
| 830-SRC SVTS | NA | 53,920 | 51 | NA | NA | NA | NA | NA |
| 830-PRXN GWTS | 1,949 | NA | 0.26 | NA | 22 | NA | NA | NA |
| 830-DISS GWTS | 7,308 | NA | 1.5 | 61 | 1,800 | NA | NA | NA |
| Total | 396,309 | 620,606 | 560 | 1,200 | 11,000 | 1.6 | 9.5 | 0.013 |

Notes:
815 = Building 815.
817 = Building 817.
829 = Building 829.
830 = Building 830.
832 = Building 832.
834 = Building 834.
854 = Building 854.
CGSA = Central General Services Area.
DIS = Distal.
DISS = Distal south.
DSB = Distal site boundary.
EGSA = Eastern General Services Area.
GWTS = Ground water treatment system.
kg = Kilograms.
NA = Not applicable.
PRX = Proximal.
PRXN = Proximal North.
RDX = Research Department Explosive.
SRC = Source.
SVTS = Soil vapor treatment system.
TBOS = Tetra 2-ethylbutylorthosilicate.
TKEBS = Tetrakis (2-ethylbutyl) silane.
VOC = Volatile organic compound.
Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign $N_2$ gas by anaerobic denitrifying bacteria. Nitrate mass removal is calculated assuming complete removal of nitrate from treated ground water. At Pit7, re-injected effluent may contain nitrate concentrations below the discharge limit but above the detection limit. Thus, nitrate mass removal calculations at Pit7 are overestimated.

**Table 2-1. Wells and boreholes installed during 2011.**

| Well name | Well type | OU | Well/Borehole installation date | HSU | Drill Depth (ft) | Casing depth (ft) | Screened interval (ft-bgs) | Primary COCs | Primary COC sampling frequency | Secondary COCs | Secondary COC sampling frequency |
|---|---|---|---|---|---|---|---|---|---|---|---|
| W-830-2701 | MW (1) | OU7 | 1/20/11 | $Tnsc_{1a}$ | 91 | 90.6 | 63.8-90.8 | VOCs | Semi-annually | Perchlorate, Nitrate | Annually |
| W-PIT7-2704 | MW (1) | OU5 | 5/9/11 | Qal/WBR | 39.5 | 37.3 | 13-38.7 | Tritium | Semi-annually | Uranium, Perchlorate, Nitrate, VOCs | Annually |
| W-PIT7-2705 | MW (1) | OU5 | 5/23/11 | Qal/WBR | 31 | 30.5 | 7-30.8 | Tritium | Semi-annually | Uranium, Perchlorate, Nitrate, VOCs | Annually |
| W-PIT7-2703 | MW (1) | OU5 | 6/13/11 | Qal/WBR | 46 | 45.5 | 21-44.8 | Tritium | Semi-annually | Uranium, Perchlorate, Nitrate, VOCs | Annually |
| W-CGSA-2708 | MW (1) | OU1 | 6/28/11 | $Qt/Tnsc_1$ | 70 | 55 | 31.5-55.5 | VOCs | Semi-annually | none | none |

**Notes:**

bgs = Below ground surface.
COC = Contaminant of concern.
MW = Monitor well.
ft = Feet.
HSU = Hydrostratigraphic unit.
OU = Operable Unit.
VOCs = Volatile organic compounds.

**Footnote:**

(1) This well will be converted to an extraction well, in the future.

**Table 2.1-1. Central General Services Area (CGSA) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| CGSA | July | 672 | 456 | 1,371 | 90,286 |
| | August | 840 | 840 | 1,723 | 258,269 |
| | September | 696 | 696 | 1,434 | 289,288 |
| | October | 648 | 648 | 1,346 | 263,782 |
| | November | 816 | 792 | 1,777 | 314,735 |
| | December | 0 | 0 | 0 | 0 |
| Total | | 3,672 | 3,432 | 7,651 | 1,216,360 |

**Table 2.1-2. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.**

| Location | Date | TCE (μg/L) | PCE (μg/L) | cis-1,2-DCE (μg/L) | trans-1,2-DCE (μg/L) | Carbon tetra-chloride (μg/L) | Chloro-form (μg/L) | 1,1-DCA (μg/L) | 1,2-DCA (μg/L) | 1,1-DCE (μg/L) | 1,1,1-TCA (μg/L) | 1,1,2-TCA (μg/L) | Freon 11 (μg/L) | Freon 113 (μg/L) | Vinyl chloride (μg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CGSA-I | 7/19/11 | 71 | 3.7 | 3.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CGSA-I | 10/3/11 | 33 | 1.5 | 1.0 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CGSA-E | 7/19/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CGSA-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CGSA-E | 9/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CGSA-E | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CGSA-E | 11/7/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CGSA-E[a] | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

**Notes:**

[a] No samples collected in December due to GWTS non-operational.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

**Table 2.1-2 (Cont.). Analyte detected but not reported in main table.**

| Location | Date | Detection frequency | 1,2-DCE (total) (μg/L) |
|---|---|---|---|
| CGSA-I | 7/19/11 | 1 of 18 | 3.9 |
| CGSA-I | 10/3/11 | 1 of 18 | 1.0 |
| CGSA-E | 7/19/11 | 0 of 18 | – |
| CGSA-E | 8/1/11 | 0 of 18 | – |
| CGSA-E | 9/6/11 | 0 of 18 | – |
| CGSA-E | 10/3/11 | 0 of 18 | – |
| CGSA-E | 11/7/11 | 0 of 18 | – |
| CGSA-E[a] | – | – | – |

**Notes:**

[a] No samples collected in December due to GWTS non-operational.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

**Table 2.1-3. Central General Services Area Operable Unit treatment facility sampling and analysis plan.**

| Sample location | Sample identification | Parameter | Frequency |
|---|---|---|---|
| ***CGSA GWTS*** | | | |
| **Influent Port** | **CGSA-I** | **VOCs** | **Quarterly** |
| | | **pH** | **Quarterly** |
| **Effluent Port** | **CGSA-E** | **VOCs** | **Monthly** |
| | | **pH** | **Monthly** |
| ***834 SVTS*** | | | |
| **Influent Port** | **CGSA-VI** | **No Monitoring Requirements** | |
| **Effluent Port** | **CGSA-VE** | **VOCs** | **Weekly[a]** |
| **Intermediate GAC** | **CGSA-VCF4I** | **VOCs** | **Weekly[a]** |

**Notes:**

**[a] Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.**

**One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.1-4. Central General Services Area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-35A-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | N | Inoperable pump. |
| W-35A-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | N | Inoperable pump. |
| W-35A-02 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-02 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-03 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-03 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-04 | PTMW | Qt-Tnsc1 | A | WGMG | E502.2:ALL | 4 | Y | |
| W-35A-04 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-04 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-05 | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-05 | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-06 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-06 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-07 | PTMW | LTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-07 | PTMW | LTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-08 | GW | Qt-Tnsc1 | Q | CMP | E601:ALL | 1 | Y | |
| W-35A-08 | GW | Qt-Tnsc1 | Q | CMP | E601:ALL | 2 | Y | |
| W-35A-08 | GW | Qt-Tnsc1 | Q | CMP | E601:ALL | 3 | Y | |
| W-35A-08 | GW | Qt-Tnsc1 | Q | CMP | E601:ALL | 4 | Y | |
| W-35A-09 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-09 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-10 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-10 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-11 | PTMW | LTnbs1 | S | CMP | E601:ALL | 2 | N | Unsafe conditions. |
| W-35A-11 | PTMW | LTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-12 | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-12 | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-13 | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-35A-13 | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-35A-14 | GW | Qt-Tnsc1 | Q | CMP | E601:ALL | 1 | Y | |
| W-35A-14 | GW | Qt-Tnsc1 | Q | CMP | E601:ALL | 2 | Y | |
| W-35A-14 | GW | Qt-Tnsc1 | Q | CMP | E601:ALL | 3 | Y | |
| W-35A-14 | GW | Qt-Tnsc1 | Q | CMP | E601:ALL | 4 | Y | |
| W-7A | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | N | Inoperable pump. |
| W-7A | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | N | Inoperable pump. |
| W-7B | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-7B | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-7C | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | N | Inoperable pump. |
| W-7C | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | N | Inoperable pump. |
| W-7E | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-7E | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-7ES | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-7ES | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-7F | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-7F | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-7G | PTMW | LTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-7G | PTMW | LTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-7H | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-7H | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |

**Table 2.1-4 (Cont.). Central General Services Area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-7I | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-7I | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-7I | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-7I | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-7J | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-7J | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-7K | PTMW | LTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-7K | PTMW | LTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-7L | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-7L | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-7M | PTMW | LTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-7M | PTMW | LTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-7N | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-7N | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-7O | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-7O | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-7O | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-7O | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-7P | EW | Qal-Tnbs1 | S | DIS-TF | E601:ALL | 1 | N | Insufficient water. |
| W-7P | EW | Qal-Tnbs1 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-7P | EW | Qal-Tnbs1 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-7P | EW | Qal-Tnbs1 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-7PS | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-7PS | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-7Q | PTMW | Qt-Tnsc1 | S | DIS | E601:ALL | 2 | Y | |
| W-7Q | PTMW | Qt-Tnsc1 | S | DIS | E601:ALL | 4 | Y | |
| W-7R | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-7R | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-7R | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-7R | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-7S | PTMW | Qt-Tnsc1 | S | DIS | E601:ALL | 2 | Y | |
| W-7S | PTMW | Qt-Tnsc1 | S | DIS | E601:ALL | 4 | Y | |
| W-7T | PTMW | Qt-Tnsc1 | S | DIS | E601:ALL | 2 | Y | |
| W-7T | PTMW | Qt-Tnsc1 | S | DIS | E601:ALL | 4 | Y | |
| W-843-01 | PTMW | LTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-843-01 | PTMW | LTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-843-02 | PTMW | UTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-843-02 | PTMW | UTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-872-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-872-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-872-02 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | N | Inoperable pump. |
| W-872-02 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | N | Inoperable pump. |
| W-872-02 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-872-02 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-873-01 | PTMW | LTnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-873-01 | PTMW | LTnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-873-02 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-873-02 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-873-03 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |

**Table 2.1-4 (Cont.). Central General Services Area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-873-03 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | N | Inoperable pump. |
| W-873-04 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-873-04 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-873-06 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-873-06 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-873-07 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-873-07 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-873-07 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-873-07 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-875-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-875-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-875-02 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-875-02 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-875-03 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-875-03 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-875-04 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-875-04 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-875-05 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-875-05 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-875-06 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-875-06 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-875-07 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-875-07 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-875-07 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-875-07 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-875-08 | EW | Qt-Tnsc1 | A | DIS-TF | AS:UISO | 4 | Y | |
| W-875-08 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-875-08 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-875-08 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-875-08 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-875-08 | EW | Qt-Tnsc1 | A | DIS-TF | E9060:ALL | 4 | Y | |
| W-875-08 | EW | Qt-Tnsc1 | A | DIS-TF | GENMIN:ALL | 4 | Y | |
| W-875-09 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-875-09 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-875-09 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | N | Dry. |
| W-875-09 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | N | Dry. |
| W-875-10 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-875-10 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | N | Dry. |
| W-875-10 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | N | Dry. |
| W-875-10 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | N | Dry. |
| W-875-11 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | N | Dry. |
| W-875-11 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-875-11 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-875-11 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-875-15 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-875-15 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 2 | N | Dry. |
| W-875-15 | EW | Qt-Tnsc1 | S | DIS-TF | E601:ALL | 3 | N | Dry. |
| W-875-15 | EW | Qt-Tnsc1 | S | CMP-TF | E601:ALL | 4 | N | Dry. |
| W-876-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |

**Table 2.1-4 (Cont.). Central General Services Area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-876-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-879-01 | PTMW | Qt-Tnsc1 | A | DIS | E300.0:NO3 | 4 | Y | |
| W-879-01 | PTMW | Qt-Tnsc1 | A | DIS | E300.0:PERC | 4 | Y | |
| W-879-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-879-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-889-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-889-01 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-CGSA-1732 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | N | Dry. |
| W-CGSA-1732 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | N | Insufficient water. |
| W-CGSA-1733 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-CGSA-1733 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-CGSA-1735 | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-CGSA-1735 | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 4 | N | Insufficient water. |
| W-CGSA-1736 | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-CGSA-1736 | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 4 | N | Insufficient Water. |
| W-CGSA-1737 | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-CGSA-1737 | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-CGSA-1739 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 2 | Y | |
| W-CGSA-1739 | PTMW | Qt-Tnsc1 | S | CMP | E601:ALL | 4 | Y | |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | DWMETALS:ALL | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | E200.7:SI | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | E300.0:PERC | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | E624:ALL | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | E8330LOW:ALL | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | E900:ALL | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | E906:ALL | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | GENMIN:ALL | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | KPA:UTOT | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | MS:UISO | 4 | Y | New well Baseline sampling. |
| W-CGSA-2708 | PTMW | Qt-Tnsc1 | U | DIS | TBOS:ALL | 4 | Y | New well Baseline sampling. |

**Notes:**

**1) General Services Area primary COC: VOCs (E601 or E624).**

**2) Samples with sample driver WGMG are part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) see the LLNL Site Annual Environmental Report for additional constituents.**

**3) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.1-5. Eastern General Services Area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| CDF1 | WS | LTnbs1 | A | WGMG | E502.2:ALL | 1 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CDF1 | WS | LTnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CON1 | WS | LTnbs1 | A | WGMG | E502.2:ALL | 1 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CON1 | WS | LTnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CON2 | WS | LTnbs1 | A | WGMG | E601:ALL | 1 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CON2 | WS | LTnbs1 | M | CMP | E601:ALL | 4 | Y | |
| W-24P-03 | PTMW | Qal-Tnbs1 | A | CMP | E601:ALL | 2 | N | Restricted access. |
| W-25D-01 | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | N | Restricted access. |
| W-25D-02 | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25M-01 | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25M-02 | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25M-03 | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-01 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 2 | Y | |
| W-25N-01 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 4 | Y | |
| W-25N-04 | PTMW | LTnbs1 | A | DIS | AS:UISO | 4 | Y | |
| W-25N-04 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-04 | PTMW | LTnbs1 | A | DIS | E9060:ALL | 4 | Y | |
| W-25N-04 | PTMW | LTnbs1 | A | DIS | GENMIN:ALL | 4 | Y | |
| W-25N-05 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 2 | Y | |
| W-25N-05 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 4 | Y | |
| W-25N-06 | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-07 | GW | Qal-Tnbs1 | Q | PSDMP | E601:ALL | 1 | Y | |
| W-25N-07 | GW | Qal-Tnbs1 | Q | PSDMP | E601:ALL | 2 | Y | |
| W-25N-07 | GW | Qal-Tnbs1 | Q | PSDMP | E601:ALL | 3 | Y | |

**Table 2.1-5 (Cont.). Eastern General Services Area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-25N-07 | GW | Qal-Tnbs1 | Q | PSDMP | E601:ALL | 4 | Y | |
| W-25N-08 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-09 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-10 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 1 | Y | |
| W-25N-10 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 2 | Y | |
| W-25N-10 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 3 | Y | |
| W-25N-10 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 4 | Y | |
| W-25N-11 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 1 | Y | |
| W-25N-11 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 2 | Y | |
| W-25N-11 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 3 | Y | |
| W-25N-11 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 4 | Y | |
| W-25N-12 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 1 | Y | |
| W-25N-12 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 2 | Y | |
| W-25N-12 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 3 | Y | |
| W-25N-12 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 4 | Y | |
| W-25N-13 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 1 | Y | |
| W-25N-13 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 2 | Y | |
| W-25N-13 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 3 | Y | |
| W-25N-13 | GW | LTnbs1 | Q | PSDMP | E601:ALL | 4 | Y | |
| W-25N-15 | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | N | Inoperable pump. |
| W-25N-18 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-20 | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-21 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-22 | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | N | Inoperable pump. |
| W-25N-23 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 2 | Y | |
| W-25N-23 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 4 | N | Inoperable pump. |
| W-25N-24 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 2 | Y | |
| W-25N-24 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 4 | Y | |
| W-25N-25 | PTMW | UTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-26 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-25N-28 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-26R-01 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 2 | Y | |
| W-26R-01 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 4 | Y | |
| W-26R-02 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-26R-03 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 2 | Y | |
| W-26R-03 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 4 | Y | |
| W-26R-04 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 2 | Y | |
| W-26R-04 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 4 | N | Inoperable pump. |
| W-26R-05 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 2 | Y | |
| W-26R-05 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 4 | Y | |
| W-26R-06 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 2 | Y | |
| W-26R-06 | PTMW | Qal-Tnbs1 | S | PSDMP | E601:ALL | 4 | Y | |
| W-26R-07 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-26R-08 | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-26R-11 | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-26R-11 | PTMW | Qal-Tnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-7D | PTMW | LTnbs1 | A | PSDMP | E601:ALL | 2 | Y | |
| W-7DS | PTMW | Qal-Tnbs1 | A | PSDMP | E601:ALL | 2 | Y | |

**Notes:**

**1) Sampling frequency is described in the Eastern GSA Post Shut-down Monitoring Plan (Holtzapple, 2006).**

**2) General Services Area primary COC: VOCs (E601 or E624).**

**3) Samples with sample driver WGMG are part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) see the LLNL Site Annual Environmental Report for additional constituents.**

**4) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.1-6. Central General Services Area (CGSA) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| CGSA | July | 260 | 15 | NA | NA | NA | NA |
| | August | 310 | 45 | NA | NA | NA | NA |
| | September | 67 | 33 | NA | NA | NA | NA |
| | October | 63 | 28 | NA | NA | NA | NA |
| | November | 110 | 31 | NA | NA | NA | NA |
| | December | 0 | 0 | NA | NA | NA | NA |
| Total | | 820 | 150 | NA | NA | NA | NA |

**Table 2.2-1. Building 834 (834) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 834 | July | 98 | 98 | 255 | 2,149 |
| | August | 534 | 534 | 2,641 | 17,150 |
| | September | 555 | 555 | 2,886 | 14,560 |
| | October | 794 | 794 | 4,578 | 17,849 |
| | November | 672 | 671 | 3,902 | 13,890 |
| | December | 0 | 0 | 0 | 0 |
| Total | | 2,653 | 2,652 | 14,262 | 65,598 |

**Table 2.2-2. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.**

| Location | Date | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetra-chloride (µg/L) | Chloro-form (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 834-I | 7/25/11 | 4,000 D | 16 | 890 D | <25 D | <0.5 | 0.87 | <0.5 | <0.5 | 2 | <0.5 | 1.1 | <0.5 | <0.5 | 0.9 |
| 834-I | 10/3/11 | 2,100 D | 21 D | 360 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| 834-E | 7/25/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 834-E | 8/2/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 834-E | 9/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 834-E | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 834-E | 11/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 834-E[a] | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

**Notes:**

[a] No samples collected in December due to GWTS shut down for freeze protection.

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.2-2 (Cont.). Analyte detected but not reported in main table.**

| Location | Date | Detection frequency | 1,2-DCE (total) (µg/L) |
|---|---|---|---|
| 834-I | 7/25/11 | 1 of 18 | 890 D |
| 834-I | 10/3/11 | 1 of 18 | 360 D |
| 834-E | 7/25/11 | 0 of 18 | – |
| 834-E | 8/2/11 | 0 of 18 | – |
| 834-E | 9/6/11 | 0 of 18 | – |
| 834-E | 10/3/11 | 0 of 18 | – |
| 834-E | 11/1/11 | 0 of 18 | – |
| 834-E[a] | – | – | – |

**Notes:**

[a] No samples collected in December due to GWTS shut down for freeze protection.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

**Table 2.2-3. Building 834 Operable Unit diesel range organic compounds in ground water extraction and treatment system influent and effluent.**

| Location | Date | Diesel Range Organics (C12-C24) (µg/L) |
|---|---|---|
| 834-I | 7/25/11 | <200 |
| 834-I | 10/3/11 | <200 |
| 834-E | 7/25/11 | <200 |
| 834-E | 8/2/11 | <200 |
| 834-E | 9/6/11 | <200 |
| 834-E | 10/3/11 | <200 |
| 834-E | 11/1/11 | <200 |
| 834-E[a] | – | – |

**Notes:**

[a] No samples collected in December due to GWTS shut down for freeze protection.

See Acronyms and Abbreviations in the Tables section of this report foracronym and abbreviation definitions.

**Table 2.2-4. Building 834 Operable Unit tetrabutyl orthosilicate/tetrakis (2-ethylbutyl) silane (TBOS/TKEBS) in ground water extraction and treatment system influent and effluent.**

| Location | Date | TBOS ($\mu$g/L) |
|---|---|---|
| 834-I | 7/25/11 | 17 |
| 834-I | 10/3/11 | <10 |
| 834-E | 7/25/11 | <10 |
| 834-E | 8/2/11 | <10 |
| 834-E | 9/6/11 | <10 |
| 834-E | 10/3/11 | <10 |
| 834-E | 11/1/11 | <10 |
| 834-E[a] | – | – |

**Notes:**

[a] No samples collected in December due to GWTS shut down for freeze protection.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

## Table 2.2-5. Building 834 Operable Unit treatment facility sampling and analysis plan.

| Sample location | Sample identification | Parameter | Frequency |
|---|---|---|---|
| ***834 GWTS*** | | | |
| **Influent Port** | **834-I** | **VOCs** | **Quarterly** |
| | | **TBOS/TKEBS** | **Quarterly** |
| | | **Diesel** | **Quarterly** |
| | | **pH** | **Quarterly** |
| **Effluent Port** | **834-E** | **VOCs** | **Monthly** |
| | | **TBOS/TKEBS** | **Monthly** |
| | | **Diesel** | **Monthly** |
| | | **pH** | **Monthly** |
| ***834 SVTS*** | | | |
| **Influent Port** | **834-VI** | **No Monitoring Requirements** | |
| **Effluent Port** | **834-VE** | **VOCs** | **Weekly**[a] |
| **Intermediate GAC** | **834-VCF4I** | **VOCs** | **Weekly**[a] |

**Notes:**

[a] **Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.**

**One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.2-6. Building 834 Operable Unit ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-834-1709 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-1709 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-1709 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-1709 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-1711 | PTMW | Tps-Tnsc2 | A | CMP | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-1711 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-834-1711 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-834-1711 | PTMW | Tps-Tnsc2 | A | CMP | TBOS:ALL | 1 | N | Insufficient water. |
| W-834-1824 | PTMW | Tpsg | A | DIS | E200.7:FE | 1 | Y | |
| W-834-1824 | PTMW | Tpsg | A | DIS | E200.8:MN | 1 | Y | |
| W-834-1824 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-1824 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-1824 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-1824 | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-1825 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-1825 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-834-1825 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-1825 | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | N | Insufficient water. |
| W-834-1833 | PTMW | Tpsg | A | DIS | E200.7:FE | 1 | Y | |
| W-834-1833 | PTMW | Tpsg | A | DIS | E200.8:MN | 1 | Y | |
| W-834-1833 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-1833 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-1833 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-1833 | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-2001 | EW | Tps-Tnsc2 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-834-2001 | EW | Tps-Tnsc2 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-2001 | EW | Tps-Tnsc2 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-2001 | EW | Tps-Tnsc2 | S | DIS-TF | E624:ALL | 2 | Y | |
| W-834-2001 | EW | Tps-Tnsc2 | S | DIS-TF | E624:ALL | 4 | Y | |
| W-834-2001 | EW | Tps-Tnsc2 | S | DIS-TF | EM8015:DIESEL | 1 | Y | |
| W-834-2001 | EW | Tps-Tnsc2 | S | DIS-TF | EM8015:DIESEL | 3 | Y | |
| W-834-2001 | EW | Tps-Tnsc2 | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-2001 | EW | Tps-Tnsc2 | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-2113 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-2113 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-2113 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-2113 | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-2117 | PTMW | Tpsg | A | DIS | E200.7:FE | 1 | Y | |
| W-834-2117 | PTMW | Tpsg | A | DIS | E200.8:MN | 1 | Y | |
| W-834-2117 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-2117 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-2117 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-2117 | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | Y | |
| W-834-2118 | PTMW | Tpsg | A | DIS | E200.7:FE | 1 | Y | |
| W-834-2118 | PTMW | Tpsg | A | DIS | E200.8:MN | 1 | Y | |
| W-834-2118 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-2118 | PTMW | Tpsg | S | DIS | E300.0:PERC | 1 | Y | |
| W-834-2118 | PTMW | Tpsg | S | DIS | E300.0:PERC | 3 | Y | |
| W-834-2118 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-2118 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-2118 | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | Y | |
| W-834-2119 | PTMW | Tps-Tnsc2 | A | DIS | E200.7:FE | 1 | Y | |
| W-834-2119 | PTMW | Tps-Tnsc2 | A | DIS | E200.8:MN | 1 | Y | |
| W-834-2119 | PTMW | Tps-Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-2119 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-834-2119 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 3 | Y | |

**Table 2.2-6 (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-834-2119 | PTMW | Tps-Tnsc2 | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-A1 | PTMW | Tps-Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-A1 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-834-A1 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-834-A1 | PTMW | Tps-Tnsc2 | E | DIS | EM8015:DRANGE | 1 | N | To be sampled in 2012. |
| W-834-A1 | PTMW | Tps-Tnsc2 | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-A2 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-A2 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-834-A2 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Insufficient water. |
| W-834-A2 | PTMW | Tpsg | O | DIS | EM8015:DRANGE | 1 | N | Insufficient water. |
| W-834-A2 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | N | Insufficient water. |
| W-834-B2 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-B2 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | N | Insufficient water. |
| W-834-B2 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-B2 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-B2 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-B2 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | N | Insufficient water. |
| W-834-B2 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-B3 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-834-B3 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-B3 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-B3 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-B3 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-B3 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-B3 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-B4 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-B4 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-B4 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-B4 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-C2 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-C2 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-834-C2 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-C2 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | N | Insufficient water. |
| W-834-C4 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-C4 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-C4 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-C4 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-C5 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-C5 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-C5 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-C5 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-D2 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-D2 | PTMW | LTnbs1 | A | CMP | E601:ALL | 1 | N | Dry. |
| W-834-D2 | PTMW | LTnbs1 | A | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-D3 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-D3 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-D3 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-D3 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-D4 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-834-D4 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-D4 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-D4 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-D4 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-D4 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-D4 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-D5 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | Y | |

**Table 2.2-6 (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-834-D5 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-D5 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-D5 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-D6 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-834-D6 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-D6 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-D6 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-D6 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-D6 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-D6 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-D7 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-834-D7 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-D7 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-D7 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-D7 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-D7 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-D7 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-D9A | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-D9A | PTMW | Tnbs2 | A | CMP | E601:ALL | 1 | N | Dry. |
| W-834-D9A | PTMW | Tnbs2 | A | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-D10 | PTMW | Tps-Tnsc2 | A | CMP | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-D10 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-834-D10 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-834-D10 | PTMW | Tps-Tnsc2 | O | DIS | EM8015:DRANGE | 1 | N | Insufficient water. |
| W-834-D10 | PTMW | Tps-Tnsc2 | A | CMP | TBOS:ALL | 1 | N | Insufficient water. |
| W-834-D11 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-D11 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-834-D11 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Insufficient water. |
| W-834-D11 | PTMW | Tpsg | E | DIS | EM8015:DRANGE | 1 | N | To be sampled in 2012. |
| W-834-D11 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | N | Insufficient water. |
| W-834-D12 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-834-D12 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-D12 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-D12 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-D12 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-D12 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-D12 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-D13 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-834-D13 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-D13 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-D13 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-D13 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-D13 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-D13 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-D14 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-D14 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-D14 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-D14 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-D15 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-D15 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-D15 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-D15 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-D16 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-D16 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-D16 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-D16 | PTMW | Tpsg | O | DIS | EM8015:DRANGE | 1 | N | Dry. |

**Table 2.2-6 (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-834-D16 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-D17 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-D17 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-D17 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-D17 | PTMW | Tpsg | O | DIS | EM8015:DRANGE | 1 | N | Dry. |
| W-834-D17 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-D18 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-D18 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-D18 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-D18 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-G3 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-G3 | PTMW | Tpsg | A | CMP | E601:ALL | 1 | N | Dry. |
| W-834-G3 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-H2 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-H2 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-H2 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-H2 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-J1 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-834-J1 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-J1 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-J1 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-J1 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-J1 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-J1 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-J2 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-J2 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-J2 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-J2 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | Y | |
| W-834-J3 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-J3 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-J3 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-J3 | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-K1A | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-K1A | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-K1A | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-K1A | PTMW | Tpsg | E | DIS | EM8015:DRANGE | 1 | N | To be sampled in 2012. |
| W-834-K1A | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-M1 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-M1 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-M1 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-M1 | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-M2 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-M2 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-M2 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-M2 | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-S1 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-834-S1 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | Y | |
| W-834-S1 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-S1 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-S1 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-S1 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | Y | |
| W-834-S1 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-S10 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-S10 | PTMW | Tpsg | S | CMP | E624:ALL | 1 | N | Dry. |
| W-834-S10 | PTMW | Tpsg | S | CMP | E624:ALL | 3 | N | Dry. |
| W-834-S10 | PTMW | Tpsg | E | DIS | EM8015:DRANGE | 1 | N | To be sampled in 2012. |

**Table 2.2-6 (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-834-S10 | PTMW | Tpsg | A | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-S12A | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-S12A | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | N | Insufficient water. |
| W-834-S12A | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-S12A | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-S12A | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-S12A | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | N | Insufficient water. |
| W-834-S12A | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-S13 | EW | Tpsg | A | CMP-TF | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-S13 | EW | Tpsg | S | CMP-TF | E601:ALL | 1 | N | Insufficient water. |
| W-834-S13 | EW | Tpsg | S | DIS-TF | E601:ALL | 2 | Y | |
| W-834-S13 | EW | Tpsg | S | CMP-TF | E601:ALL | 3 | Y | |
| W-834-S13 | EW | Tpsg | S | DIS-TF | E601:ALL | 4 | Y | |
| W-834-S13 | EW | Tpsg | A | CMP-TF | TBOS:ALL | 1 | N | Insufficient water. |
| W-834-S13 | EW | Tpsg | A | DIS-TF | TBOS:ALL | 3 | Y | |
| W-834-S4 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-S4 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-S4 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-S4 | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | Y | |
| W-834-S5 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-S5 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-S5 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-S5 | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-S6 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Insufficient water. |
| W-834-S6 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-834-S6 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Insufficient water. |
| W-834-S6 | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-S7 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-S7 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-S7 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-S7 | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-S8 | PTMW | Tps-Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-S8 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-834-S8 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-834-S8 | PTMW | Tps-Tnsc2 | O | DIS | EM8015:DRANGE | 1 | Y | |
| W-834-S8 | PTMW | Tps-Tnsc2 | O | CMP | TBOS:ALL | 1 | Y | |
| W-834-S9 | PTMW | Tps-Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-S9 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-834-S9 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-834-S9 | PTMW | Tps-Tnsc2 | E | DIS | EM8015:DRANGE | 1 | N | To be sampled in 2012. |
| W-834-S9 | PTMW | Tps-Tnsc2 | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-T1 | GW | LTnbs1 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-834-T1 | GW | LTnbs1 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-834-T1 | GW | LTnbs1 | Q | CMP | E601:ALL | 1 | Y | |
| W-834-T1 | GW | LTnbs1 | Q | CMP | E601:ALL | 2 | Y | |
| W-834-T1 | GW | LTnbs1 | Q | CMP | E601:ALL | 3 | Y | |
| W-834-T1 | GW | LTnbs1 | Q | CMP | E601:ALL | 4 | Y | |
| W-834-T1 | GW | LTnbs1 | S | CMP | TBOS:ALL | 1 | Y | |
| W-834-T1 | GW | LTnbs1 | S | CMP | TBOS:ALL | 3 | Y | |
| W-834-T11 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-T11 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-T11 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-T11 | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-T2 | PTMW | Tpsg | A | DIS | E200.7:FE | 1 | Y | |
| W-834-T2 | PTMW | Tpsg | A | DIS | E200.8:MN | 1 | Y | |
| W-834-T2 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |

**Table 2.2-6 (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-834-T2 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-T2 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-T2 | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | Y | |
| W-834-T2A | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-T2A | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-T2A | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-T2A | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-T2B | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-T2B | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-T2B | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-T2B | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-T2C | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-T2C | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-T2C | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-T2C | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-T2D | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-T2D | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-834-T2D | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-834-T2D | PTMW | Tpsg | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-T3 | GW | LTnbs1 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-834-T3 | GW | LTnbs1 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-834-T3 | GW | LTnbs1 | Q | CMP | E601:ALL | 1 | Y | |
| W-834-T3 | GW | LTnbs1 | Q | CMP | E601:ALL | 2 | Y | |
| W-834-T3 | GW | LTnbs1 | Q | CMP | E601:ALL | 3 | Y | |
| W-834-T3 | GW | LTnbs1 | Q | CMP | E601:ALL | 4 | Y | |
| W-834-T3 | GW | LTnbs1 | S | CMP | TBOS:ALL | 1 | Y | |
| W-834-T3 | GW | LTnbs1 | S | CMP | TBOS:ALL | 3 | Y | |
| W-834-T5 | PTMW | Tps-Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-T5 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-834-T5 | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-834-T5 | PTMW | Tps-Tnsc2 | E | CMP | TBOS:ALL | 1 | N | To be sampled in 2012. |
| W-834-T7A | PTMW | Tps-Tnsc2 | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-T7A | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-T7A | PTMW | Tps-Tnsc2 | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-T7A | PTMW | Tps-Tnsc2 | O | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-T8A | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-T8A | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-T8A | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-T8A | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-T9 | PTMW | Tpsg | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-834-T9 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | N | Dry. |
| W-834-T9 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | N | Dry. |
| W-834-T9 | PTMW | Tpsg | O | CMP | TBOS:ALL | 1 | N | Dry. |
| W-834-U1 | PTMW | Tps-Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-834-U1 | PTMW | Tps-Tnsc2 | S | CMP | E624:ALL | 1 | Y | |
| W-834-U1 | PTMW | Tps-Tnsc2 | S | CMP | E624:ALL | 3 | Y | |
| W-834-U1 | PTMW | Tps-Tnsc2 | A | DIS | EM8015:DIESEL | 1 | Y | |
| W-834-U1 | PTMW | Tps-Tnsc2 | A | CMP | TBOS:ALL | 1 | Y | |

**Notes:**
**1) Building 834 primary COC: VOCs (E601).**
**2) Building 834 secondary COC: Nitrate (E300.0:NO3).**
**3) Building 834 secondary COC: TBOS/TKEBS.**
**4) A limited set of wells in the Core area will be sampled for diesel (EM8015) due to an underground storage tank.**
**5) A limited set of wells will be sampled for perchlorate semiannually.**
**6) Well W-834-D5 is hooked up to the Building 834 treatment system but is not currently being used as an extraction well.**
**7) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.2-7. Building 834 (834) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 834 | July | 130 | 47 | NA | 0.60 | NA | 0.11 |
| | August | 630 | 210 | NA | 6.0 | NA | 0.034 |
| | September | 700 | 170 | NA | 4.9 | NA | 0.027 |
| | October | 760 | 220 | NA | 6.2 | NA | 0.039 |
| | November | 660 | 180 | NA | 4.6 | NA | 0.036 |
| | December | 0 | 0 | NA | 0 | NA | 0 |
| Total | | 2,900 | 820 | NA | 22 | NA | 0.25 |

**Table 2.3-1. Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| BC6-10 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| BC6-10 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| BC6-10 | PTMW | LTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| BC6-10 | PTMW | LTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| BC6-10 | PTMW | LTnbs1 | S | CMP | E906:ALL | 1 | Y | |
| BC6-10 | PTMW | LTnbs1 | S | CMP | E906:ALL | 3 | Y | |
| BC6-13 | PTMW | Qt-Tnbs1 | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| BC6-13 | PTMW | Qt-Tnbs1 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| BC6-13 | PTMW | Qt-Tnbs1 | E | CMP | E601:ALL | 1 | N | To be sampled in 2012. |
| BC6-13 | PTMW | Qt-Tnbs1 | E | CMP | E906:ALL | 1 | N | To be sampled in 2012. |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | Q | WGMG | E624:ALL | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | Q | WGMG | E624:ALL | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | Q | WGMG | E624:ALL | 3 | Y | |

**Table 2.3-1 (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| CARNRW1 | WS | Qt-Tnbs1 | Q | WGMG | E624:ALL | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW1 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | Q | WGMG | E502.2:ALL | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | Q | WGMG | E502.2:ALL | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | Q | WGMG | E502.2:ALL | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | Q | WGMG | E502.2:ALL | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |

**Table 2.3-1 (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW2 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |

**Table 2.3-1 (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW3 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |

**Table 2.3-1 (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E601:ALL | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 1 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 2 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 3 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| CARNRW4 | WS | Qt-Tnbs1 | M | CMP | E906:ALL | 4 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E300.0:PERC | 1 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E300.0:PERC | 2 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E300.0:PERC | 3 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E300.0:PERC | 4 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E8260:ALL | 1 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E8260:ALL | 2 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E8260:ALL | 3 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E8260:ALL | 4 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E906:ALL | 1 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E906:ALL | 2 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E906:ALL | 3 | Y | |
| EP6-06 | DMW | LTnbs1 | Q | WGMG | E906:ALL | 4 | Y | |
| EP6-07 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| EP6-07 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| EP6-07 | PTMW | LTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| EP6-07 | PTMW | LTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| EP6-07 | PTMW | LTnbs1 | S | CMP | E906:ALL | 1 | Y | |
| EP6-07 | PTMW | LTnbs1 | S | CMP | E906:ALL | 3 | Y | |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 1 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 2 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 3 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 4 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 1 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 2 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 3 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 4 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 1 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 2 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 3 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 4 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 1 | N | Dry. |

**Table 2.3-1 (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 2 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 3 | N | Dry. |
| EP6-08 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 4 | N | Dry. |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 1 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 2 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 3 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 4 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 1 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 2 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 3 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 4 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 1 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 2 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 3 | Y | |
| EP6-09 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 4 | Y | |
| K6-01 | DMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-01 | DMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-01 | DMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-01 | DMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-01 | DMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-01 | DMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 1 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 2 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 3 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 4 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 1 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 2 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 3 | Y | |
| K6-01S | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 4 | Y | |
| K6-03 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-03 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-03 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-03 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-03 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-03 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-04 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-04 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | Y | |

**Table 2.3-1 (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K6-04 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-04 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-04 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-04 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-14 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-14 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-14 | PTMW | LTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-14 | PTMW | LTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-14 | PTMW | LTnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-14 | PTMW | LTnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-15 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| K6-15 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | N | Dry. |
| K6-15 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | N | Dry. |
| K6-15 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | N | Dry. |
| K6-15 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | N | Dry. |
| K6-15 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | N | Dry. |
| K6-16 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-16 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-16 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-16 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-16 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-16 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-17 | GW | Qt-Tnbs1 | S | CMP | E300.0:NO3 | 1 | Y | |
| K6-17 | GW | Qt-Tnbs1 | S | CMP | E300.0:NO3 | 3 | Y | |
| K6-17 | GW | Qt-Tnbs1 | S | CMP | E300.0:PERC | 1 | Y | |
| K6-17 | GW | Qt-Tnbs1 | S | CMP | E300.0:PERC | 3 | Y | |
| K6-17 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 1 | Y | |
| K6-17 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 2 | Y | |
| K6-17 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 3 | Y | |
| K6-17 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 4 | Y | |
| K6-17 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 1 | Y | |
| K6-17 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 2 | Y | |
| K6-17 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 3 | Y | |
| K6-17 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 4 | Y | |
| K6-18 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-18 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-18 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-18 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-18 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-18 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 1 | Y | |

**Table 2.3-1 (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 2 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 3 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 4 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 1 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 2 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 3 | Y | |
| K6-19 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 4 | Y | |
| K6-21 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| K6-21 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | N | Dry. |
| K6-21 | PTMW | LTnbs1 | A | CMP | E601:ALL | 1 | N | Dry. |
| K6-21 | PTMW | LTnbs1 | A | CMP | E906:ALL | 1 | N | Dry. |
| K6-22 | GW | Qt-Tnbs1 | S | CMP | E300.0:NO3 | 1 | Y | |
| K6-22 | GW | Qt-Tnbs1 | S | CMP | E300.0:NO3 | 3 | Y | |
| K6-22 | GW | Qt-Tnbs1 | S | CMP | E300.0:PERC | 1 | Y | |
| K6-22 | GW | Qt-Tnbs1 | S | CMP | E300.0:PERC | 3 | Y | |
| K6-22 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 1 | Y | |
| K6-22 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 2 | N | Dry. |
| K6-22 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 3 | Y | |
| K6-22 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 4 | Y | |
| K6-22 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 1 | Y | |
| K6-22 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 2 | N | Dry. |
| K6-22 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 3 | Y | |
| K6-22 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 4 | Y | |
| K6-23 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-23 | PTMW | Qt-Tnbs1 | A | DIS | E300.0:NO3 | 3 | Y | |
| K6-23 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-23 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-23 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-23 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-23 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-24 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-24 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-24 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-24 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | N | Dry. |
| K6-24 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-24 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | N | Dry. |
| K6-25 | PTMW | Tmss | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-25 | PTMW | Tmss | A | CMP | E300.0:PERC | 1 | Y | |
| K6-25 | PTMW | Tmss | S | CMP | E601:ALL | 1 | Y | |
| K6-25 | PTMW | Tmss | S | CMP | E601:ALL | 3 | Y | |
| K6-25 | PTMW | Tmss | S | CMP | E906:ALL | 1 | Y | |
| K6-25 | PTMW | Tmss | S | CMP | E906:ALL | 3 | Y | |
| K6-26 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-26 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-26 | PTMW | LTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-26 | PTMW | LTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-26 | PTMW | LTnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-26 | PTMW | LTnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-27 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |

**Table 2.3-1 (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K6-27 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-27 | PTMW | LTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-27 | PTMW | LTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-27 | PTMW | LTnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-27 | PTMW | LTnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-32 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| K6-32 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | N | Dry. |
| K6-32 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | N | Dry. |
| K6-32 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | N | Dry. |
| K6-32 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | N | Dry. |
| K6-32 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | N | Dry. |
| K6-33 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-33 | PTMW | Qt-Tnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-33 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-33 | PTMW | Qt-Tnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-33 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-33 | PTMW | Qt-Tnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-34 | GW | LTnbs1 | S | CMP | E300.0:NO3 | 1 | Y | |
| K6-34 | GW | LTnbs1 | S | CMP | E300.0:NO3 | 3 | Y | |
| K6-34 | GW | LTnbs1 | S | CMP | E300.0:PERC | 1 | Y | |
| K6-34 | GW | LTnbs1 | S | CMP | E300.0:PERC | 3 | Y | |
| K6-34 | GW | LTnbs1 | Q | CMP | E601:ALL | 1 | Y | |
| K6-34 | GW | LTnbs1 | Q | CMP | E601:ALL | 2 | Y | |
| K6-34 | GW | LTnbs1 | Q | CMP | E601:ALL | 3 | Y | |
| K6-34 | GW | LTnbs1 | Q | CMP | E601:ALL | 4 | Y | |
| K6-34 | GW | LTnbs1 | Q | CMP | E906:ALL | 1 | Y | |
| K6-34 | GW | LTnbs1 | Q | CMP | E906:ALL | 2 | Y | |
| K6-34 | GW | LTnbs1 | Q | CMP | E906:ALL | 3 | Y | |
| K6-34 | GW | LTnbs1 | Q | CMP | E906:ALL | 4 | Y | |
| K6-35 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| K6-35 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| K6-35 | PTMW | LTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| K6-35 | PTMW | LTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| K6-35 | PTMW | LTnbs1 | S | CMP | E906:ALL | 1 | Y | |
| K6-35 | PTMW | LTnbs1 | S | CMP | E906:ALL | 3 | Y | |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 1 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 2 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 3 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:NO3 | 4 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 1 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 2 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 3 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E300.0:PERC | 4 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 1 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 2 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 3 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E8260:ALL | 4 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 1 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 2 | N | Dry. |

**Table 2.3-1 (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 3 | N | Dry. |
| K6-36 | DMW | Qt-Tnbs1 | Q | WGMG | E906:ALL | 4 | N | Dry. |
| W-33C-01 | PTMW | Tts | A | CMP | E300.0:NO3 | 1 | Y | |
| W-33C-01 | PTMW | Tts | A | CMP | E300.0:PERC | 1 | Y | |
| W-33C-01 | PTMW | Tts | S | CMP | E601:ALL | 1 | Y | |
| W-33C-01 | PTMW | Tts | S | CMP | E601:ALL | 3 | Y | |
| W-33C-01 | PTMW | Tts | S | CMP | E906:ALL | 1 | Y | |
| W-33C-01 | PTMW | Tts | S | CMP | E906:ALL | 3 | Y | |
| W-34-01 | MWB | UTnbs1 | A | DIS | E300.0:NO3 | 1 | Y | |
| W-34-01 | MWB | UTnbs1 | A | DIS | E300.0:PERC | 1 | Y | |
| W-34-01 | MWB | UTnbs1 | A | DIS | E601:ALL | 1 | Y | |
| W-34-01 | MWB | UTnbs1 | A | DIS | E906:ALL | 1 | Y | |
| W-34-02 | MWB | LTnbs1 | A | DIS | E300.0:NO3 | 1 | Y | |
| W-34-02 | MWB | LTnbs1 | A | DIS | E300.0:PERC | 1 | Y | |
| W-34-02 | MWB | LTnbs1 | A | DIS | E601:ALL | 1 | Y | |
| W-34-02 | MWB | LTnbs1 | A | DIS | E906:ALL | 1 | Y | |
| SPRING15 | SPR | Qt-Tnbs1 | O | CMP | E300.0:NO3 | 1 | N | Dry. |
| SPRING15 | SPR | Qt-Tnbs1 | O | CMP | E300.0:PERC | 1 | N | Dry. |
| SPRING15 | SPR | Qt-Tnbs1 | O | CMP | E601:ALL | 1 | N | Dry. |
| SPRING15 | SPR | Qt-Tnbs1 | O | CMP | E906:ALL | 1 | N | Dry. |
| W-PIT6-1819 | GW | Qt-Tnbs1 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | S | CMP | E300.0:PERC | 1 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | S | CMP | E300.0:PERC | 3 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 1 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 2 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 3 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | Q | CMP | E601:ALL | 4 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 1 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 2 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 3 | Y | |
| W-PIT6-1819 | GW | Qt-Tnbs1 | Q | CMP | E906:ALL | 4 | Y | |

**Notes:**

**1) Detection Monitoring conducted per the Pit 6 Post-Closure Plan.**

**2) Pit 6 Landfill primary COC: VOCs (E601).**

**3) Pit 6 Landfill primary COC: tritium (E906).**

**4) Pit 6 Landfill secondary COC: nitrate (E300:NO3).**

**5) Pit 6 Landfill secondary COC: perchlorate (E300.0:PERC).**

**6) Samples with sample driver WGMG are part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) see the LLNL Site Annual Environmental Report for additional constituents.**

**7) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.4-1. Building 815-Source (815-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 815-SRC | July | NA | 466 | NA | 32,722 |
| | August | NA | 813 | NA | 69,137 |
| | September | NA | 620 | NA | 57,191 |
| | October | NA | 838 | NA | 80,425 |
| | November | NA | 668 | NA | 69,042 |
| | December | NA | 688 | NA | 72,321 |
| Total | | NA | 4,093 | NA | 380,838 |

**Table 2.4-2. Building 815-Proximal (815-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 815-PRX | July | NA | 563 | NA | 78,335 |
| | August | NA | 847 | NA | 113,601 |
| | September | NA | 609 | NA | 78,492 |
| | October | NA | 851 | NA | 104,989 |
| | November | NA | 677 | NA | 81,171 |
| | December | NA | 0 | NA | 0 |
| Total | | NA | 3,547 | NA | 456,588 |

**Table 2.4-3. Building 815-Distal Site Boundary (815-DSB) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of ft$^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 815-DSB | July | NA | 679 | NA | 129,719 |
| | August | NA | 467 | NA | 87,919 |
| | September | NA | 0 | NA | 0 |
| | October | NA | 0 | NA | 0 |
| | November | NA | 260 | NA | 26,330 |
| | December | NA | 344 | NA | 56,380 |
| Total | | NA | 1,750 | NA | 300,348 |

**Table 2.4-4. Building 817-Source (817-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of ft$^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 817-SRC | July | NA | 8 | NA | 447 |
| | August | NA | 8 | NA | 553 |
| | September | NA | 2 | NA | 209 |
| | October | NA | 13 | NA | 768 |
| | November | NA | 13 | NA | 696 |
| | December | NA | 0 | NA | 0 |
| Total | | NA | 44 | NA | 2,673 |

**Table 2.4-5. Building 817-Proximal (817-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 817-PRX | July | NA | 51 | NA | 1,578 |
| | August | NA | 704 | NA | 98,799 |
| | September | NA | 605 | NA | 100,996 |
| | October | NA | 849 | NA | 140,980 |
| | November | NA | 587 | NA | 84,394 |
| | December | NA | 697 | NA | 97,710 |
| Total | | NA | 3,493 | NA | 524,457 |

**Table 2.4-6. Building 829-Source (829-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 829-SRC | July | NA | 671 | NA | 129 |
| | August | NA | 286 | NA | 91 |
| | September | NA | 0 | NA | 0 |
| | October | NA | 0 | NA | 0 |
| | November | NA | 0 | NA | 0 |
| | December | NA | 0 | NA | 0 |
| Total | | NA | 957 | NA | 220 |

**Table 2.4-7. High Explosives Process Area Operable Unit Volatile Organic Compounds (VOCs) in ground water extraction and treatment system influent and effluent.**

| Location | Date | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetra-chloride (µg/L) | Chloro-form (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Building 815-Distal Site Boundry*[a] | | | | | | | | | | | | | | | |
| 815-DSB-I | 7/11/11 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-DSB-I | 11/7/11 | 7.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-DSB-I[b] | 11/16/11 | 16 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-DSB-E | 7/11/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-DSB-E | 8/2/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-DSB-E | 11/7/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-DSB-E[b] | 11/16/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-DSB-E | 12/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Building 815-Proximal* | | | | | | | | | | | | | | | |
| 815-PRX-I | 7/13/11 | 27 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-PRX-I | 10/3/11 | 28 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-PRX-E | 7/13/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-PRX-E | 8/2/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-PRX-E | 9/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-PRX-E | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-PRX-E | 11/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-PRX-E[b] | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| *Building 815-Source* | | | | | | | | | | | | | | | |
| 815-SRC-I | 7/11/11 | 3.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.63 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-SRC-I | 10/3/11 | 5.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.71 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-SRC-E | 7/11/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-SRC-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-SRC-E | 9/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-SRC-E | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-SRC-E | 11/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-SRC-E | 12/5/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 815-SRC-E[c] | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

**Table 2.4-7 (Cont.). High Explosives Process Area Operable Unit Volatile Organic Compounds (VOCs) in ground water extraction and treatment system influent and effluent.**

| Location | Date | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetra-chloride (µg/L) | Chloro-form (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Building 817-Proximal*** | | | | | | | | | | | | | | | |
| 817-PRX-I | 7/18/11 | 10 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-PRX-I | 10/3/11 | 6.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-PRX-E | 7/18/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-PRX-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-PRX-E | 9/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-PRX-E | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-PRX-E | 11/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-PRX-E | 12/2/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ***Building 817-Source*** | | | | | | | | | | | | | | | |
| 817-SRC-I | 7/13/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-SRC-I | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-SRC-E | 7/13/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-SRC-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-SRC-E | 9/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-SRC-E | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-SRC-E | 11/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 817-SRC-E[c] | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| ***Building 829-Source[d]*** | | | | | | | | | | | | | | | |
| 829-SRC-I | 7/12/11 | 17 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 829-SRC-I | 8/15/11 | 12 | <0.5 | <0.5 | <0.5 | <0.5 | 1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 829-SRC-E | 7/12/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 829-SRC-E | 8/15/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

**Notes appear on the following page.**

**Table 2.4-7 (Cont.). High Explosives Process Area Operable Unit Volatile Organic Compounds (VOCs) in ground water extraction and treatment system influent and effluent.**

**Notes:**

[a] No compliance monitoring conducted in September or October; system offline for evaluation and construction.

[b] Extra monitoring conducted for facility re-start.

[c] No samples collected in December due to GWTS shut down for freeze protection.

[d] No compliance monitoring conducted after August 15; system offline for evaluation due to VOC detections.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

**Table 2.4-7 (Cont.). Analyte detected but not reported in main table.**

| Location | Date | Detection frequency | Chloromethane (µg/L) | Methylene Chloride (µg/L) |
|---|---|---|---|---|
| *Building 815-Distal Site Boundry*[a] | | | | |
| 815-DSB-I | 7/11/11 | 0 of 18 | – | – |
| 815-DSB-I | 11/7/11 | 0 of 18 | – | – |
| 815-DSB-I[b] | 11/16/11 | 0 of 18 | – | – |
| 815-DSB-E | 7/11/11 | 0 of 18 | – | – |
| 815-DSB-E | 8/2/11 | 0 of 18 | – | – |
| 815-DSB-E | – | – | – | – |
| 815-DSB-E[b] | 11/7/11 | 0 of 18 | – | – |
| 815-DSB-E | 11/16/11 | 0 of 18 | – | – |
| *Building 815-Proximal* | 12/6/11 | 0 of 18 | – | – |
| 815-PRX-I | | | | |
| 815-PRX-I | 7/13/11 | 0 of 18 | – | – |
| 815-PRX-E | 10/3/11 | 0 of 18 | – | – |
| 815-PRX-E | 7/13/11 | 0 of 18 | – | – |
| 815-PRX-E | 8/2/11 | 0 of 18 | – | – |
| 815-PRX-E | 9/6/11 | 0 of 18 | – | – |
| 815-PRX-E | 10/3/11 | 0 of 18 | – | – |
| 815-PRX-E[b] | 11/1/11 | 0 of 18 | – | – |
| | – | – | – | – |
| *Building 815-Source* | | | | |
| 815-SRC-I | 7/11/11 | 0 of 18 | – | – |
| 815-SRC-I | 10/3/11 | 0 of 18 | – | – |
| 815-SRC-E | 7/11/11 | 0 of 18 | – | – |
| 815-SRC-E | 8/1/11 | 0 of 18 | – | – |
| 815-SRC-E | 9/6/11 | 0 of 18 | – | – |
| 815-SRC-E | 10/3/11 | 0 of 18 | – | – |
| 815-SRC-E | 11/1/11 | 0 of 18 | – | – |
| 815-SRC-E | 12/5/11 | 0 of 18 | – | – |
| 815-SRC-E[c] | – | – | – | – |
| *Building 817-Proximal* | | | | |
| 817-PRX-I | 7/18/11 | 0 of 18 | – | – |
| 817-PRX-I | 10/3/11 | 0 of 18 | – | – |
| 817-PRX-E | 7/18/11 | 0 of 18 | – | – |
| 817-PRX-E | 8/1/11 | 0 of 18 | – | – |
| 817-PRX-E | 9/6/11 | 0 of 18 | – | – |
| 817-PRX-E | 10/3/11 | 0 of 18 | – | – |
| 817-PRX-E | 11/1/11 | 0 of 18 | – | – |
| 817-PRX-E | 12/2/11 | 0 of 18 | – | – |
| *Building 817-Source* | | | | |
| 817-SRC-I | 7/13/11 | 0 of 18 | – | – |
| 817-SRC-I | 10/3/11 | 0 of 18 | – | – |
| 817-SRC-E | 7/13/11 | 0 of 18 | – | – |

**Table 2.4-7 (Cont.). Analyte detected but not reported in main table.**

| Location | Date | Detection frequency | Chloromethane (µg/L) | Methylene Chloride (µg/L) |
|---|---|---|---|---|
| **817-SRC-E** | **8/1/11** | **0 of 18** | **–** | **–** |
| **817-SRC-E** | **9/6/11** | **0 of 18** | **–** | **–** |
| **817-SRC-E** | **10/3/11** | **0 of 18** | **–** | **–** |
| **817-SRC-E** | **11/1/11** | **0 of 18** | **–** | **–** |
| **817-SRC-E**[c] | **–** | **–** | **–** | **–** |
| ***Building 829-Source***[d] | | | | |
| **829-SRC-I** | **7/12/11** | **0 of 18** | **–** | **–** |
| **829-SRC-I** | **8/15/11** | **1 of 18** | **0.69** | **–** |
| **829-SRC-E** | **7/12/11** | **1 of 18** | **–** | **1.4 S** |
| **829-SRC-E** | **8/15/11** | **1 of 18** | **–** | **2.2 S** |

**Notes:**

[a] **No compliance monitoring conducted in September or October; system offline for evaluation and construction.**

[b] **Extra monitoring conducted for facility re-start.**

[c] **No samples collected in December due to GWTS shut down for freeze protection.**

[d] **No compliance monitoring conducted after August 15; system offline for evaluation due to VOC detections.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.4-8. High Explosives Process Area Operable Unit nitrate and perchlorate in ground water extraction and treatment system influent and effluent.**

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| ***Building 815-Distal Site Boundry[a]*** | | | |
| **815-DSB-I** | **7/11/11** | **<0.5** | **–** |
| **815-DSB-I** | **11/7/11** | **<0.5** | **–** |
| **815-DSB-I** | **11/16/11** | **<0.5** | **–** |
| ***Building 815-Proximal*** | | | |
| **815-PRX-I** | **7/13/11** | **NR** | **6.8** |
| **815-PRX-I** | **10/3/11** | **NR** | **7.1** |
| **815-PRX-E** | **7/13/11** | **NR** | **<4** |
| **815-PRX-E** | **8/2/11** | **NR** | **<4** |
| **815-PRX-E** | **9/6/11** | **NR** | **<4** |
| **815-PRX-E** | **10/3/11** | **NR** | **<4** |
| **815-PRX-E** | **11/1/11** | **NR** | **<4** |
| **815-PRX-E[b]** | **–** | **–** | **–** |
| ***Building 815-Source*** | | | |
| **815-SRC-I** | **7/11/11** | **NR** | **5.2** |
| **815-SRC-I** | **10/3/11** | **NR** | **4.3** |
| **815-SRC-E** | **7/11/11** | **NR** | **<4** |
| **815-SRC-E** | **8/1/11** | **NR** | **<4** |
| **815-SRC-E** | **9/6/11** | **NR** | **<4** |
| **815-SRC-E** | **10/3/11** | **NR** | **<4** |
| **815-SRC-E** | **11/1/11** | **NR** | **<4** |
| **815-SRC-E** | **12/5/11** | **NR** | **<4** |
| **815-SRC-E[b]** | **–** | **–** | **–** |
| ***Building 817-Proximal*** | | | |
| **817-PRX-I** | **7/18/11** | **NR** | **25 D** |
| **817-PRX-I** | **10/3/11** | **NR** | **17** |
| **817-PRX-E** | **7/18/11** | **NR** | **<20 D** |
| **817-PRX-E** | **7/28/11** | **NR** | **<4** |
| **817-PRX-E** | **8/1/11** | **NR** | **<4** |
| **817-PRX-E** | **9/6/11** | **NR** | **<4** |
| **817-PRX-E** | **10/3/11** | **NR** | **<4** |
| **817-PRX-E** | **11/1/11** | **NR** | **<4** |
| **817-PRX-E** | **12/2/11** | **NR** | **<4** |

**Table 2.4-8 (Cont.). High Explosives Process Area Operable Unit nitrate and perchlorate in ground water extraction and treatment system influent and effluent.**

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate ($\mu$g/L) |
|---|---|---|---|
| ***Building 817-Source*** | | | |
| **817-SRC-I** | **7/13/11** | **NR** | **25 D** |
| **817-SRC-I** | **10/3/11** | **NR** | **28 D** |
| **817-SRC-E** | **7/13/11** | **NR** | **<4** |
| **817-SRC-E** | **8/1/11** | **NR** | **<4** |
| **817-SRC-E** | **9/6/11** | **NR** | **<4** |
| **817-SRC-E** | **10/3/11** | **NR** | **<4** |
| **817-SRC-E** | **11/1/11** | **NR** | **<4** |
| **817-SRC-E**[b] | **–** | **–** | **–** |
| ***Building 829-Source***[c] | | | |
| **829-SRC-I** | **7/12/11** | **74 D** | **7.4** |
| **829-SRC-I** | **8/15/11** | **39 D** | **8.9** |
| **829-SRC-E** | **7/12/11** | **<1 D** | **<4** |

**Notes:**

[a] **No nitrate or perchlorate monitoring required.**

[b] **No samples collected in December due to GWTS shut down for freeze protection.**

[c] **No compliance monitoring conducted after August 15; system offline for evaluation due to VOC detections.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.4-9. High Explosives Process Area Operable Unit high explosive compounds in ground water extraction and treatment system influent and effluent.**

| Location | Date | 1,3,5-TNB (µg/L) | 1,3-DNB (µg/L) | TNT (µg/L) | 2,4-DNT (µg/L) | 2,6-DNT (µg/L) | 2-Amino-4,6- DNT (µg/L) | 2-NT (µg/L) | 3-NT (µg/L) | 4-Amino-2,6- DNT (µg/L) | 4-NT (µg/L) | HMX (µg/L) | NB (µg/L) | RDX (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Building 815-Distal Site Boundry*[a] | | | | | | | | | | | | | | |
| *Building 815-Proximal*[b] | | | | | | | | | | | | | | |
| 815-PRX-E | 7/13/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 O | <1 | <2 |
| 815-PRX-E[c] | 10/3/11 | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 DO | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <1.2 DO | <2.4 D | <1.2 D | <2.4 DO |
| *Building 815-Source* | | | | | | | | | | | | | | |
| 815-SRC-I | 7/11/11 | <2.6 D | <2.6 DO | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | 9.1 DO | <2.6 DO | 64 DO | <2.6 D |
| 815-SRC-I | 10/3/11 | <2 | <2 | <2 LO | <2 | <2 | <2 | <2 | <2 | <2 | 4.9 | <2 | 49 | <2 LO |
| 815-SRC-E | 7/11/11 | R | <2 O | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 O | <2 O | <1 O | <2 |
| 815-SRC-E | 8/1/11 | <2 O | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| 815-SRC-E | 9/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| 815-SRC-E | 10/3/11 | <2 | <2 | <2 | <2 | <2 O | <2 | <2 | <2 | <2 | <1 O | <2 | <1 | <2 O |
| 815-SRC-E[c] | 11/1/11 | <17 D | <17 D | <17 D | <17 D | <17 D | <17 D | <17 D | <17 D | <17 D | <8.3 D | <17 D | <8.3 D | <17 D |
| 815-SRC-E | 12/5/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 O | <2 | <1 | <2 |
| *Building 817-Proximal* | | | | | | | | | | | | | | |
| 817-PRX-I | 7/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| 817-PRX-I | 10/3/11 | <2 | <2 | <2 O | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | 9.2 | <2 O |
| 817-PRX-E | 7/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| 817-PRX-E | 8/1/11 | <2 DO | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <1 D | <2 D | <1 D | <2 D |
| 817-PRX-E | 9/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| 817-PRX-E | 10/3/11 | <2 D | <2 D | <2 D | <2 D | <2 DO | <2 D | <2 D | <2 D | <2 D | <1 DO | <2 D | <1 D | <2 DO |
| 817-PRX-E | 11/1/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| 817-PRX-E | 12/2/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 O | <2 | <1 | <2 |

**Table 2.4-9 (Cont.). High Explosives Process Area Operable Unit high explosive compounds in ground water extraction and treatment system influent and effluent.**

| Location | Date | 1,3,5-TNB (µg/L) | 1,3-DNB (µg/L) | TNT (µg/L) | 2,4-DNT (µg/L) | 2,6-DNT (µg/L) | 2-Amino-4,6- DNT (µg/L) | 2-NT (µg/L) | 3-NT (µg/L) | 4-Amino-2,6- DNT (µg/L) | 4-NT (µg/L) | HMX (µg/L) | NB (µg/L) | RDX (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Building 817-Source* | | | | | | | | | | | | | | |
| 817-SRC-I | 7/13/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 21 | <2 | 47 | <2 |
| 817-SRC-I | 10/3/11 | <2 | <2 | <2 O | <2 | <2 | <2 | <2 | <2 | <2 | <1 S | <2 | <1 S | <2 O |
| 817-SRC-I[d] | 10/17/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 19 O | <2 | 56 J | <2 |
| 817-SRC-E | 7/13/11 | <2 IJO | <2 IJO | <2 IJO | <2 IJO | <2 IJO | <2 IJO | <2 IJO | <2 IJO | <2 IJO | <1 IJO | <2 O | <1 IJO | <2 IJO |
| 817-SRC-E | 8/1/11 | <2 O | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| 817-SRC-E | 9/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| 817-SRC-E | 10/3/11 | <2 D | <2 D | <2 D | <2 D | <2 DO | <2 D | <2 D | <2 D | <2 D | <1 DO | <2 D | <1 D | <2 DO |
| 817-SRC-E | 11/1/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| 817-SRC-E[e] | – | | | | | | | | | | | | | |
| *Building 829-Source[f]* | | | | | | | | | | | | | | |

**Notes:**

[a] No high explosive compound monitoring required.

[b] No influent and only quarterly effluent high explosive monitoring required.

[c] Due to sample dilution at CAL, PQLs were raised above normal reporting limit.

[d] Additional influent sample collected due to non-detects in previous sample.

[e] No samples collected in December due to GWTS shut down for freeze protection.

[f] No high explosive compound monitoring required.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

**Table 2.4-10. High Explosives Process Area Operable Unit treatment facility sampling and analysis plan.**

| Sample location | Sample identification | Parameter | Frequency |
|---|---|---|---|
| ***815-SRC GWTS*** | | | |
| **Influent Port** | **815-SRC-I** | **VOCs** | **Quarterly** |
| | | **HE Compounds** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| **Effluent Port** | **815-SRC-E** | **VOCs** | **Monthly** |
| | | **HE Compounds** | **Monthly** |
| | | **Perchlorate** | **Monthly** |
| | | **pH** | **Monthly** |
| ***815-PRX GWTS*** | | | |
| **Influent Port** | **815-PRX-I** | **VOCs** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| **Effluent Port** | **815-PRX-E** | **VOCs** | **Monthly** |
| | | **HE Compounds** | **Quarterly** |
| | | **Perchlorate** | **Monthly** |
| | | **pH** | **Monthly** |
| ***815-DSB GWTS*** | | | |
| **Influent Port** | **815-DSB-I** | **VOCs** | **Quarterly** |
| **Effluent Port** | **815-DSB-E** | **VOCs** | **Monthly** |
| | | **pH** | **Monthly** |
| ***817-SRC GWTS*** | | | |
| **Influent Port** | **W-817-01-817-SRC-I** | **VOCs** | **Quarterly** |
| | | **HE Compounds** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| **Effluent Port** | **817-SRC-E** | **VOCs** | **Monthly** |
| | | **HE Compounds** | **Monthly** |
| | | **Perchlorate** | **Monthly** |
| | | **pH** | **Monthly** |

**Table 2.4-10 (Con't.). High Explosives Process Area Operable Unit treatment facility sampling and analysis plans.**

| Sample location | Sample identification | Parameter | Frequency |
|---|---|---|---|
| ***817-PRX GWTS*** | | | |
| **Influent Port** | **817-PRX-I** | **VOCs** | **Quarterly** |
| | | **HE Compounds** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| **Effluent Port** | **817-PRX-E** | **VOCs** | **Monthly** |
| | | **HE Compounds** | **Monthly** |
| | | **Perchlorate** | **Monthly** |
| | | **pH** | **Monthly** |
| ***829-SRC GWTS*** | | | |
| **Influent Port** | **W-829-06-829-SRC-I** | **VOCs** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| | | **Nitrate** | **Quarterly** |
| **Effluent Port** | **829-SRC-E** | **VOCs** | **Monthly** |
| | | **Perchlorate** | **Monthly** |
| | | **Nitrate** | **Monthly** |
| | | **pH** | **Monthly** |

**Notes:**

**One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.4-11. High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:NO3 | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E300.0:PERC | 4 | Y | |
| GALLO1 | WS | Tnbs2 | Q | WGMG | E502.2:ALL | 1 | Y | |
| GALLO1 | WS | Tnbs2 | Q | WGMG | E502.2:ALL | 2 | Y | |
| GALLO1 | WS | Tnbs2 | Q | WGMG | E502.2:ALL | 3 | Y | |
| GALLO1 | WS | Tnbs2 | Q | WGMG | E502.2:ALL | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E601:ALL | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 1 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 2 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 3 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 3 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 4 | Y | |
| GALLO1 | WS | Tnbs2 | M | CMP | E8330LOW:ALL | 4 | Y | |
| SPRING14 | SPR | Tpsg-Tps | O | CMP | E300.0:NO3 | 1 | Y | |
| SPRING14 | SPR | Tpsg-Tps | O | CMP | E300.0:PERC | 1 | Y | |
| SPRING14 | SPR | Tpsg-Tps | O | CMP | E601:ALL | 1 | Y | |
| SPRING14 | SPR | Tpsg-Tps | O | CMP | E8330LOW:ALL | 1 | Y | |
| SPRING5 | SPR | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| SPRING5 | SPR | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | N | Dry. |
| SPRING5 | SPR | Tpsg-Tps | S | CMP | E601:ALL | 1 | N | Dry. |
| SPRING5 | SPR | Tpsg-Tps | S | CMP | E601:ALL | 3 | N | Dry. |
| SPRING5 | SPR | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | N | Dry. |
| W-35B-01 | GW | Qal/WBR | S | CMP | E300.0:NO3 | 1 | Y | |
| W-35B-01 | GW | Qal/WBR | S | CMP | E300.0:NO3 | 3 | Y | |
| W-35B-01 | GW | Qal/WBR | S | CMP | E300.0:PERC | 1 | Y | |
| W-35B-01 | GW | Qal/WBR | S | CMP | E300.0:PERC | 3 | Y | |
| W-35B-01 | GW | Qal/WBR | Q | CMP | E601:ALL | 1 | Y | |
| W-35B-01 | GW | Qal/WBR | Q | CMP | E601:ALL | 2 | Y | |
| W-35B-01 | GW | Qal/WBR | Q | CMP | E601:ALL | 3 | Y | |
| W-35B-01 | GW | Qal/WBR | Q | CMP | E601:ALL | 4 | Y | |
| W-35B-01 | GW | Qal/WBR | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-35B-01 | GW | Qal/WBR | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-35B-02 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-35B-02 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-35B-02 | GW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-35B-02 | GW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-35B-02 | GW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-35B-02 | GW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |
| W-35B-02 | GW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-35B-02 | GW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-35B-02 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-35B-02 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-35B-03 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-35B-03 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-35B-03 | GW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-35B-03 | GW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-35B-03 | GW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-35B-03 | GW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |
| W-35B-03 | GW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-35B-03 | GW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-35B-03 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-35B-03 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-35B-04 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-35B-04 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-35B-04 | GW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-35B-04 | GW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-35B-04 | GW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-35B-04 | GW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |
| W-35B-04 | GW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-35B-04 | GW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-35B-04 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-35B-04 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-35B-05 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-35B-05 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-35B-05 | GW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-35B-05 | GW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-35B-05 | GW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-35B-05 | GW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |
| W-35B-05 | GW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-35B-05 | GW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-35B-05 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-35B-05 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-35C-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-35C-01 | PTMW | Tpsg-Tps | O | CMP | E300.0:PERC | 1 | Y | |
| W-35C-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-35C-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-35C-01 | PTMW | Tpsg-Tps | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-35C-02 | PTMW | Tnbs1 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-35C-02 | PTMW | Tnbs1 | O | CMP | E300.0:PERC | 1 | Y | |
| W-35C-02 | PTMW | Tnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-35C-02 | PTMW | Tnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-35C-02 | PTMW | Tnbs1 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-35C-04 | EW | Tnbs2 | O | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-35C-04 | EW | Tnbs2 | O | CMP-TF | E300.0:PERC | 1 | Y | |
| W-35C-04 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-35C-04 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 2 | Y | |
| W-35C-04 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-35C-04 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-35C-04 | EW | Tnbs2 | O | CMP-TF | E8330LOW:ALL | 1 | Y | |
| W-35C-05 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-35C-05 | PTMW | Tpsg-Tps | O | CMP | E300.0:PERC | 1 | Y | |
| W-35C-05 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-35C-05 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-35C-05 | PTMW | Tpsg-Tps | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-35C-06 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 1 | N | Inoperable pump. |
| W-35C-06 | PTMW | Qal/WBR | O | CMP | E300.0:PERC | 1 | N | Inoperable pump. |
| W-35C-06 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | N | Inoperable pump. |
| W-35C-06 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | Y | |
| W-35C-06 | PTMW | Qal/WBR | A | CMP | E8330LOW:ALL | 1 | N | Inoperable pump. |
| W-35C-07 | PTMW | Tnsc2 | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-35C-07 | PTMW | Tnsc2 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-35C-07 | PTMW | Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-35C-07 | PTMW | Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-35C-07 | PTMW | Tnsc2 | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-35C-08 | PTMW | Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-35C-08 | PTMW | Tnsc2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-35C-08 | PTMW | Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-35C-08 | PTMW | Tnsc2 | S | CMP | E601:ALL | 3 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-35C-08 | PTMW | Tnsc2 | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-4A | PTMW | Tnbs2 | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-4A | PTMW | Tnbs2 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-4A | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-4A | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | N | Inoperable pump. |
| W-4A | PTMW | Tnbs2 | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-4AS | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-4AS | PTMW | Tpsg-Tps | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-4AS | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-4AS | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-4AS | PTMW | Tpsg-Tps | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-4B | PTMW | Tnbs2 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-4B | PTMW | Tnbs2 | O | CMP | E300.0:PERC | 1 | Y | |
| W-4B | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-4B | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-4B | PTMW | Tnbs2 | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-4C | GW | Tnsc1b | S | CMP | E300.0:NO3 | 1 | Y | |
| W-4C | GW | Tnsc1b | S | CMP | E300.0:NO3 | 3 | Y | |
| W-4C | GW | Tnsc1b | S | CMP | E300.0:PERC | 1 | Y | |
| W-4C | GW | Tnsc1b | S | CMP | E300.0:PERC | 3 | Y | |
| W-4C | GW | Tnsc1b | Q | CMP | E601:ALL | 1 | Y | |
| W-4C | GW | Tnsc1b | Q | CMP | E601:ALL | 2 | Y | |
| W-4C | GW | Tnsc1b | Q | CMP | E601:ALL | 3 | Y | |
| W-4C | GW | Tnsc1b | Q | CMP | E601:ALL | 4 | Y | |
| W-6BD | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-6BD | PTMW | Tpsg-Tps | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-6BD | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-6BD | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-6BD | PTMW | Tpsg-Tps | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-6BS | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| W-6BS | PTMW | Qal/WBR | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-6BS | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| W-6BS | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | Y | |
| W-6BS | PTMW | Qal/WBR | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-6CD | PTMW | Tnbs2 | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-6CD | PTMW | Tnbs2 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-6CD | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-6CD | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-6CD | PTMW | Tnbs2 | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-6CI | PTMW | Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-6CI | PTMW | Tnsc2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-6CI | PTMW | Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-6CI | PTMW | Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-6CI | PTMW | Tnsc2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-6CS | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-6CS | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | Y | |
| W-6CS | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-6CS | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-6CS | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-6EI | PTMW | Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-6EI | PTMW | Tnsc2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-6EI | PTMW | Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-6EI | PTMW | Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-6EI | PTMW | Tnsc2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-6ER | EW | Tnbs2 | O | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-6ER | EW | Tnbs2 | O | CMP-TF | E300.0:PERC | 1 | Y | |
| W-6ER | EW | Tnbs2 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-6ER | EW | Tnbs2 | S | DIS-TF | E601:ALL | 2 | Y | |
| W-6ER | EW | Tnbs2 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-6ER | EW | Tnbs2 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-6ER | EW | Tnbs2 | O | CMP-TF | E8330LOW:ALL | 1 | Y | |
| W-6ES | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-6ES | PTMW | Qal/WBR | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-6ES | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| W-6ES | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | N | Inoperable pump. |
| W-6ES | PTMW | Qal/WBR | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-6F | PTMW | Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-6F | PTMW | Tnsc2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-6F | PTMW | Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-6F | PTMW | Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-6F | PTMW | Tnsc2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-6G | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-6G | PTMW | Tnbs2 | O | CMP | E300.0:PERC | 1 | Y | |
| W-6G | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-6G | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-6G | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-6H | GW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-6H | GW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-6H | GW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-6H | GW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-6H | GW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-6H | GW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |
| W-6H | GW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-6H | GW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-6H | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-6H | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-6I | PTMW | Tpsg-Tps | O | CMP | E300.0:NO3 | 1 | Y | |
| W-6I | PTMW | Tpsg-Tps | O | CMP | E300.0:PERC | 1 | Y | |
| W-6I | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-6I | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-6I | PTMW | Tpsg-Tps | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-6J | GW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-6J | GW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-6J | GW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-6J | GW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-6J | GW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-6J | GW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |
| W-6J | GW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-6J | GW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-6J | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-6J | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-6K | PTMW | Tnbs2 | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-6K | PTMW | Tnbs2 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-6K | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-6K | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-6K | PTMW | Tnbs2 | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-6L | PTMW | Tnbs2 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-6L | PTMW | Tnbs2 | O | CMP | E300.0:PERC | 1 | Y | |
| W-6L | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-6L | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-6L | PTMW | Tnbs2 | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-806-07 | PTMW | Tnbs2 | O | CMP | E300.0:NO3 | 1 | N | Restricted access. |
| W-806-07 | PTMW | Tnbs2 | O | CMP | E300.0:PERC | 1 | N | Restricted access. |
| W-806-07 | PTMW | Tnbs2 | O | CMP | E601:ALL | 1 | N | Restricted access. |
| W-806-07 | PTMW | Tnbs2 | O | CMP | E8330LOW:ALL | 1 | N | Restricted access. |
| W-808-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-808-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | Y | |
| W-808-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-808-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-808-01 | PTMW | Tpsg-Tps | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-808-02 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-808-02 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | N | Dry. |
| W-808-02 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | N | Dry. |
| W-808-02 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | N | Dry. |
| W-808-02 | PTMW | Tpsg-Tps | O | CMP | E8330LOW:ALL | 1 | N | Dry. |
| W-808-03 | PTMW | UTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-808-03 | PTMW | UTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| W-808-03 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-808-03 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-808-03 | PTMW | UTnbs1 | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-809-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-809-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | Y | |
| W-809-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-809-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-809-01 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-809-02 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-809-02 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-809-02 | PTMW | Tnbs2 | A | DIS | E300.0:PERC | 3 | Y | |
| W-809-02 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-809-02 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-809-02 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-809-03 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-809-03 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-809-03 | PTMW | Tnbs2 | A | DIS | E300.0:PERC | 3 | Y | |
| W-809-03 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-809-03 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-809-03 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-809-03 | PTMW | Tnbs2 | A | DIS | E8330LOW:ALL | 3 | Y | |
| W-809-04 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-809-04 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | Y | |
| W-809-04 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-809-04 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | N | Insufficient water. |
| W-809-04 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-810-01 | PTMW | UTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-810-01 | PTMW | UTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| W-810-01 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-810-01 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | N | Unsafe conditions. |
| W-810-01 | PTMW | UTnbs1 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-814-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-814-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | Y | |
| W-814-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-814-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-814-01 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-814-02 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | N | Inoperable pump. |
| W-814-02 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | N | Inoperable pump. |
| W-814-02 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | N | Inoperable pump. |
| W-814-02 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | N | Inoperable pump. |
| W-814-02 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | N | Inoperable pump. |
| W-814-03 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-814-03 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | N | Dry. |
| W-814-03 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | N | Dry. |
| W-814-03 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | N | Dry. |
| W-814-03 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | N | Dry. |
| W-814-04 | GW | Tnsc1b | S | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-814-04 | GW | Tnsc1b | S | CMP | E300.0:NO3 | 3 | N | Inoperable pump. |
| W-814-04 | GW | Tnsc1b | S | CMP | E300.0:PERC | 1 | N | Dry. |
| W-814-04 | GW | Tnsc1b | S | CMP | E300.0:PERC | 3 | N | Inoperable pump. |
| W-814-04 | GW | Tnsc1b | Q | CMP | E601:ALL | 1 | N | Dry. |
| W-814-04 | GW | Tnsc1b | Q | CMP | E601:ALL | 2 | N | Inoperable pump. |
| W-814-04 | GW | Tnsc1b | Q | CMP | E601:ALL | 3 | N | Inoperable pump. |
| W-814-04 | GW | Tnsc1b | Q | CMP | E601:ALL | 4 | N | Inoperable pump. |
| W-814-2138 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-814-2138 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | Y | |
| W-814-2138 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-814-2138 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-814-2138 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-815-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-815-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | N | Dry. |
| W-815-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | N | Dry. |
| W-815-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | N | Dry. |
| W-815-01 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | N | Dry. |
| W-815-02 | EW | Tnbs2 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-815-02 | EW | Tnbs2 | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-815-02 | EW | Tnbs2 | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-815-02 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-815-02 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 2 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-815-02 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-815-02 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-815-02 | EW | Tnbs2 | A | CMP-TF | E8330LOW:ALL | 1 | Y | |
| W-815-02 | EW | Tnbs2 | A | DIS-TF | E8330LOW:ALL | 3 | Y | |
| W-815-03 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-815-03 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | N | Dry. |
| W-815-03 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | N | Dry. |
| W-815-03 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | N | Dry. |
| W-815-03 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | N | Dry. |
| W-815-04 | EW | Tnbs2 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-815-04 | EW | Tnbs2 | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-815-04 | EW | Tnbs2 | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-815-04 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-815-04 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 2 | Y | |
| W-815-04 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-815-04 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-815-04 | EW | Tnbs2 | A | CMP-TF | E8330LOW:ALL | 1 | Y | |
| W-815-04 | EW | Tnbs2 | A | DIS-TF | E8330LOW:ALL | 3 | Y | |
| W-815-05 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-815-05 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | Y | |
| W-815-05 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-815-05 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-815-05 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-815-06 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-815-06 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-815-06 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-815-06 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-815-06 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-815-07 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-815-07 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-815-07 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-815-07 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-815-07 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-815-08 | PTMW | UTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-815-08 | PTMW | UTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| W-815-08 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-815-08 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-815-08 | PTMW | UTnbs1 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-815-1928 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-815-1928 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | N | Dry. |
| W-815-1928 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | N | Dry. |
| W-815-1928 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-815-1928 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | N | Dry. |
| W-815-2110 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-815-2110 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-815-2110 | GW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-815-2110 | GW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-815-2110 | GW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-815-2110 | GW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-815-2110 | GW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-815-2110 | GW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-815-2110 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-815-2110 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-815-2111 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-815-2111 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-815-2111 | GW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-815-2111 | GW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-815-2111 | GW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-815-2111 | GW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |
| W-815-2111 | GW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-815-2111 | GW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-815-2111 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-815-2111 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-815-2217 | PTMW | Tnbs2 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-815-2217 | PTMW | Tnbs2 | O | CMP | E300.0:PERC | 1 | Y | |
| W-815-2217 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-815-2217 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-815-2217 | PTMW | Tnbs2 | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-815-2608 | PTMW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-815-2608 | PTMW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-815-2608 | PTMW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-815-2608 | PTMW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-815-2608 | PTMW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-815-2608 | PTMW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |
| W-815-2608 | PTMW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-815-2608 | PTMW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-815-2608 | PTMW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-815-2608 | PTMW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-815-2621 | PTMW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-815-2621 | PTMW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-815-2621 | PTMW | Tnbs2 | Q | CMP | E601:ALL | 2 | N | Artesian well not flowing at the time of the sampling event. |
| W-815-2621 | PTMW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-815-2621 | PTMW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-815-2621 | PTMW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-817-01 | EW | Tnbs2 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E300.0:PERC | 1 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E300.0:PERC | 2 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E300.0:PERC | 3 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E300.0:PERC | 4 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E601:ALL | 1 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E601:ALL | 2 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E601:ALL | 3 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E601:ALL | 4 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E8330LOW:ALL | 1 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E8330LOW:ALL | 2 | Y | |
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E8330LOW:ALL | 3 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-817-01 | EW | Tnbs2 | Q | CMP-TF | E8330LOW:ALL | 4 | Y | |
| W-817-03 | EW | Tnbs2 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-817-03 | EW | Tnbs2 | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-817-03 | EW | Tnbs2 | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-817-03 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-817-03 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 2 | Y | |
| W-817-03 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-817-03 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-817-03 | EW | Tnbs2 | A | CMP-TF | E8330LOW:ALL | 1 | Y | |
| W-817-03 | EW | Tnbs2 | A | DIS-TF | E8330LOW:ALL | 3 | Y | |
| W-817-03A | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-817-03A | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | Y | |
| W-817-03A | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-817-03A | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-817-03A | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-817-04 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-817-04 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-817-04 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-817-04 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-817-04 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-817-05 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-817-05 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-817-05 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-817-05 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-817-05 | PTMW | Tnsc1b | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-817-07 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-817-07 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-817-07 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-817-07 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-817-07 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-817-2318 | EW | Tpsg-Tps | A | CMP-TF | E300.0:NO3 | 1 | N | Inoperable unit. |
| W-817-2318 | EW | Tpsg-Tps | A | CMP-TF | E300.0:PERC | 1 | N | Inoperable unit. |
| W-817-2318 | EW | Tpsg-Tps | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-817-2318 | EW | Tpsg-Tps | S | CMP-TF | E601:ALL | 1 | N | Inoperable unit. |
| W-817-2318 | EW | Tpsg-Tps | S | DIS-TF | E601:ALL | 2 | Y | |
| W-817-2318 | EW | Tpsg-Tps | S | CMP-TF | E601:ALL | 3 | Y | |
| W-817-2318 | EW | Tpsg-Tps | S | DIS-TF | E601:ALL | 4 | Y | |
| W-817-2318 | EW | Tpsg-Tps | A | CMP-TF | E8330LOW:ALL | 1 | N | Inoperable unit. |
| W-817-2318 | EW | Tpsg-Tps | A | DIS-TF | E8330LOW:ALL | 3 | Y | |
| W-817-2609 | PTMW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-817-2609 | PTMW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-817-2609 | PTMW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-817-2609 | PTMW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-817-2609 | PTMW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-817-2609 | PTMW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-817-2609 | PTMW | Tnbs2 | Q | CMP | E624:ALL | 1 | Y | |
| W-817-2609 | PTMW | Tnbs2 | Q | CMP | E624:ALL | 2 | Y | |
| W-817-2609 | PTMW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-817-2609 | PTMW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-818-01 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-818-01 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-818-01 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-818-01 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-818-01 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-818-03 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-818-03 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-818-03 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-818-03 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-818-03 | PTMW | Tnbs2 | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-818-04 | PTMW | Tnsc2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-818-04 | PTMW | Tnsc2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-818-04 | PTMW | Tnsc2 | S | CMP | E601:ALL | 1 | Y | |
| W-818-04 | PTMW | Tnsc2 | S | CMP | E601:ALL | 3 | Y | |
| W-818-04 | PTMW | Tnsc2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-818-06 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-818-06 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-818-06 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-818-06 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-818-06 | PTMW | Tnbs2 | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-818-07 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-818-07 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-818-07 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-818-07 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-818-07 | PTMW | Tnbs2 | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-818-08 | EW | Tnbs2 | A | DIS-TF | AS:UISO | 4 | Y | |
| W-818-08 | EW | Tnbs2 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-818-08 | EW | Tnbs2 | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-818-08 | EW | Tnbs2 | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-818-08 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-818-08 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 2 | Y | |
| W-818-08 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-818-08 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-818-08 | EW | Tnbs2 | A | CMP-TF | E8330LOW:ALL | 1 | Y | |
| W-818-08 | EW | Tnbs2 | A | DIS-TF | E9060:ALL | 4 | Y | |
| W-818-08 | EW | Tnbs2 | A | DIS-TF | GENMIN:ALL | 4 | Y | |
| W-818-09 | EW | Tnbs2 | A | DIS-TF | AS:UISO | 4 | Y | |
| W-818-09 | EW | Tnbs2 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-818-09 | EW | Tnbs2 | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-818-09 | EW | Tnbs2 | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-818-09 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-818-09 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 2 | Y | |
| W-818-09 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-818-09 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-818-09 | EW | Tnbs2 | A | CMP-TF | E8330LOW:ALL | 1 | Y | |
| W-818-09 | EW | Tnbs2 | A | DIS-TF | E9060:ALL | 4 | Y | |
| W-818-09 | EW | Tnbs2 | A | DIS-TF | GENMIN:ALL | 4 | Y | |
| W-818-11 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-818-11 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-818-11 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-818-11 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-818-11 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-819-02 | PTMW | UTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-819-02 | PTMW | UTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| W-819-02 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-819-02 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-819-02 | PTMW | UTnbs1 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-823-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:NO3 | 1 | Y | |
| W-823-01 | PTMW | Tpsg-Tps | A | CMP | E300.0:PERC | 1 | Y | |
| W-823-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 1 | Y | |
| W-823-01 | PTMW | Tpsg-Tps | S | CMP | E601:ALL | 3 | Y | |
| W-823-01 | PTMW | Tpsg-Tps | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-823-01 | PTMW | Tpsg-Tps | A | DIS | EM8015:DIESEL | 1 | Y | |
| W-823-02 | PTMW | Tnbs2 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-823-02 | PTMW | Tnbs2 | O | CMP | E300.0:PERC | 1 | Y | |
| W-823-02 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-823-02 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-823-02 | PTMW | Tnbs2 | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-823-02 | PTMW | Tnbs2 | A | DIS | EM8015:DIESEL | 1 | Y | |
| W-823-03 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-823-03 | PTMW | Tnbs2 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-823-03 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-823-03 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-823-03 | PTMW | Tnbs2 | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-823-03 | PTMW | Tnbs2 | A | DIS | EM8015:DIESEL | 1 | Y | |
| W-823-13 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-823-13 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-823-13 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-823-13 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-823-13 | PTMW | Tnbs2 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-827-01 | PTMW | Tnbs2 | O | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-827-01 | PTMW | Tnbs2 | O | CMP | E300.0:PERC | 1 | N | Dry. |
| W-827-01 | PTMW | Tnbs2 | O | CMP | E601:ALL | 1 | N | Dry. |
| W-827-01 | PTMW | Tnbs2 | O | CMP | E8330LOW:ALL | 1 | N | Dry. |
| W-827-02 | PTMW | Tnsc1 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-827-02 | PTMW | Tnsc1 | O | CMP | E300.0:PERC | 1 | Y | |
| W-827-02 | PTMW | Tnsc1 | O | CMP | E601:ALL | 1 | Y | |
| W-827-02 | PTMW | Tnsc1 | O | CMP | E8330LOW:ALL | 1 | Y | |
| W-827-03 | PTMW | UTnbs1 | O | CMP | E300.0:NO3 | 1 | N | Inoperable pump. |
| W-827-03 | PTMW | UTnbs1 | O | CMP | E300.0:PERC | 1 | N | Inoperable pump. |
| W-827-03 | PTMW | UTnbs1 | O | CMP | E601:ALL | 1 | N | Inoperable pump. |
| W-827-03 | PTMW | UTnbs1 | O | CMP | E8330LOW:ALL | 1 | N | Inoperable pump. |
| W-827-05 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-827-05 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| W-827-05 | PTMW | LTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-827-05 | PTMW | LTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-827-05 | PTMW | LTnbs1 | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E300.0:NO3 | 1 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E300.0:NO3 | 2 | N | Inoperable pump. |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E300.0:NO3 | 3 | Y | |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E300.0:NO3 | 4 | N | Inoperable pump. |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E300.0:PERC | 1 | Y | |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E300.0:PERC | 2 | N | Inoperable pump. |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E300.0:PERC | 3 | Y | |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E300.0:PERC | 4 | N | Inoperable pump. |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E601:ALL | 1 | Y | |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E601:ALL | 2 | N | Inoperable pump. |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E601:ALL | 3 | Y | |
| W-829-06 | EW | Tnsc1b | Q | CMP-TF | E601:ALL | 4 | N | Inoperable pump. |
| W-829-06 | EW | Tnsc1b | A | CMP-TF | E8330LOW:ALL | 1 | Y | |
| W-829-15 | DMW | LTnbs1 | A | WGMG | E300.0:PERC | 2 | Y | |
| W-829-15 | DMW | LTnbs1 | A | WGMG | E624:ALL | 2 | Y | |
| W-829-15 | DMW | LTnbs1 | A | WGMG | E8330:R+H | 2 | Y | |
| W-829-15 | DMW | LTnbs1 | A | WGMG | E8330:TNT | 2 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E300.0:PERC | 1 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E300.0:PERC | 2 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E300.0:PERC | 3 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E300.0:PERC | 4 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E624:ALL | 1 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E624:ALL | 2 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E624:ALL | 3 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E624:ALL | 4 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E8330:R+H | 1 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E8330:R+H | 2 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E8330:R+H | 3 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E8330:R+H | 4 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E8330:TNT | 1 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E8330:TNT | 2 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E8330:TNT | 3 | Y | |
| W-829-1938 | DMW | LTnbs1 | Q | WGMG | E8330:TNT | 4 | Y | |
| W-829-1940 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-829-1940 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-829-1940 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-829-1940 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-829-1940 | PTMW | Tnsc1b | A | CMP | E8330LOW:ALL | 1 | Y | |
| W-829-22 | DMW | LTnbs1 | A | WGMG | E300.0:PERC | 2 | Y | |
| W-829-22 | DMW | LTnbs1 | A | WGMG | E624:ALL | 2 | Y | |
| W-829-22 | DMW | LTnbs1 | A | WGMG | E8330:R+H | 2 | Y | |
| W-829-22 | DMW | LTnbs1 | A | WGMG | E8330:TNT | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E300.0:PERC | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E601:ALL | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 1 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 2 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 3 | Y | |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 4 | N | Inoperable pump. |
| WELL18 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 4 | N | Inoperable pump. |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 3 | Y | |

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:NO3 | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E300.0:PERC | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | WGMG | E502.2:ALL | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 1 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 2 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 3 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 4 | Y | |
| WELL20 | WS | Tnbs1 | M | CMP | E8330LOW:ALL | 4 | Y | |
| W-806-06A | PTMW | Tnsc1 | O | CMP | E300.0:NO3 | 1 | N | Unsafe conditions. |
| W-806-06A | PTMW | Tnsc1 | O | CMP | E300.0:PERC | 1 | N | Unsafe conditions. |
| W-806-06A | PTMW | Tnsc1 | O | CMP | E601:ALL | 1 | N | Unsafe conditions. |
| W-806-06A | PTMW | Tnsc1 | O | CMP | E8330LOW:ALL | 1 | N | Unsafe conditions. |

**Notes appear on the following page.**

**Table 2.4-11 (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|

**Notes:**

**1) W-829-15, W-829-22, and W-829-1938 are detection monitoring wells. Analytes and sampling frequency are specified in the RCRA Closure Plan for the High Explosives Open Burn Facility.**

**2) HEPA primary COC: VOCs (E601 or E624).**

**3) HEPA secondary COC: nitrate (E300:NO3).**

**4) HEPA secondary COC: perchlorate (E300.0:PERC).**

**5) HEPA secondary COC: HE compounds (E8330).**

**6) Samples with sample driver WGMG are part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) see the LLNL Site Annual Environmental Report for additional constituents.**

**7) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.4-12. Building 815-Source (815-SRC) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 815-SRC | July | NA | 0.72 | 0.49 | 12 | 6.7 | NA |
| | August | NA | 1.5 | 0.93 | 26 | 14 | NA |
| | September | NA | 1.2 | 0.69 | 22 | 11 | NA |
| | October | NA | 1.9 | 1.0 | 30 | 16 | NA |
| | November | NA | 1.7 | 0.86 | 26 | 14 | NA |
| | December | NA | 1.7 | 0.90 | 27 | 14 | NA |
| Total | | NA | 8.7 | 4.9 | 140 | 76 | NA |

**Notes:**

*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign $N_2$ gas by anaerobic denitrifying bacteria.

**Table 2.4-13. Building 815-Proximal (815-PRX) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 815-PRX | July | NA | 8.1 | 2.0 | 25 | NA | NA |
| | August | NA | 12 | 2.9 | 36 | NA | NA |
| | September | NA | 8.1 | 2.0 | 25 | NA | NA |
| | October | NA | 12 | 2.6 | 32 | NA | NA |
| | November | NA | 9.4 | 2.0 | 25 | NA | NA |
| | December | NA | 0 | 0 | 0 | NA | NA |
| Total | | NA | 49 | 11 | 140 | NA | NA |

**Notes:**

*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign $N_2$ gas by anaerobic denitrifying bacteria.

**Table 2.4-14. Building 815-Distal Site Boundary (815-DSB) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 815-DSB | July | NA | 6.9 | NA | NA | NA | NA |
| | August | NA | 4.6 | NA | NA | NA | NA |
| | September | NA | 0 | NA | NA | NA | NA |
| | October | NA | 0 | NA | NA | NA | NA |
| | November | NA | 1.4 | NA | NA | NA | NA |
| | December | NA | 3.2 | NA | NA | NA | NA |
| Total | | NA | 16 | NA | NA | NA | NA |

**Table 2.4-15. Building 817-Source (817-SRC) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 817-SRC | July | NA | 0 | 0.042 | 0.14 | 0.080 | NA |
| | August | NA | 0 | 0.052 | 0.17 | 0.098 | NA |
| | September | NA | 0 | 0.020 | 0.063 | 0.037 | NA |
| | October | NA | 0 | 0.073 | 0.23 | 0.14 | NA |
| | November | NA | 0 | 0.066 | 0.21 | 0.12 | NA |
| | December | NA | 0 | 0 | 0 | 0 | NA |
| Total | | NA | 0 | 0.25 | 0.81 | 0.48 | NA |

**Notes:**

***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign $N_2$ gas by anaerobic denitrifying bacteria.**

**Table 2.4-16. Building 817-Proximal (817-PRX) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 817-PRX | July | NA | 0.23 | 0.098 | 0.82 | 0.019 | NA |
| | August | NA | 6.2 | 8.6 | 39 | 3.0 | NA |
| | September | NA | 5.4 | 9.1 | 38 | 3.2 | NA |
| | October | NA | 4.1 | 13 | 53 | 4.5 | NA |
| | November | NA | 2.8 | 7.4 | 33 | 2.6 | NA |
| | December | NA | 3.4 | 8.5 | 38 | 2.9 | NA |
| Total | | NA | 22 | 46 | 200 | 16 | NA |

**Notes:**
***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign $N_2$ gas by anaerobic denitrifying bacteria.**

**Table 2.4-17. Building 829-Source (829-SRC) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 829-SRC | July | NA | 0.0083 | 0.0036 | 0.036 | NA | NA |
| | August | NA | 0.0059 | 0.0026 | 0.025 | NA | NA |
| | September | NA | 0 | 0 | 0 | NA | NA |
| | October | NA | 0 | 0 | 0 | NA | NA |
| | November | NA | 0 | 0 | 0 | NA | NA |
| | December | NA | 0 | 0 | 0 | NA | NA |
| Total | | NA | 0.014 | 0.0062 | 0.062 | NA | NA |

**Table 2.5-1. Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 1 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 2 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 3 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 4 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 1 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 2 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 3 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 4 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 1 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 2 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 3 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 4 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| K1-01C | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 1 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 2 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 3 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 4 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 1 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 2 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 3 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 4 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 1 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 2 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 3 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 4 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| K1-02B | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 1 | Y | |

**Table 2.5-1 (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 2 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 3 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 4 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 1 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 2 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 3 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 4 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 1 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 2 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 3 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 4 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| K1-04 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 1 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 2 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 3 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 4 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 1 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 2 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 3 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 4 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 1 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 2 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 3 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 4 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| K1-05 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| K1-06 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| K1-06 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |

**Table 2.5-1 (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K1-06 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K1-06 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K1-06 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K1-06 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K1-06 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| K1-06 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| K1-06 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| K1-06 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 1 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 2 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 3 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 4 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 1 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 2 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 3 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 4 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 1 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 2 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 3 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 4 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| K1-07 | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 1 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 2 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 3 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 4 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 1 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 2 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 3 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 4 | Y | |

**Table 2.5-1 (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 1 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 2 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 3 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 4 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| K1-08 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 1 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 2 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 3 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 4 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 1 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 2 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 3 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 4 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 1 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 2 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 3 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 4 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| K1-09 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| K2-03 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| K2-03 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K2-03 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| K2-03 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| K2-03 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| K2-03 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| K2-04D | PTMW | Tnbs1-Tnbs0 | O | CMP | AS:UISO | 2 | Y | |
| K2-04D | PTMW | Tnbs1-Tnbs0 | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| K2-04D | PTMW | Tnbs1-Tnbs0 | A | WGMG | E300.0:PERC | 2 | Y | |
| K2-04D | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| K2-04D | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| K2-04D | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| K2-04S | PTMW | Qal/WBR | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| K2-04S | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| K2-04S | PTMW | Qal/WBR | A | WGMG | E300.0:PERC | 2 | Y | |
| K2-04S | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| K2-04S | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |

**Table 2.5-1 (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K2-04S | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC2-05 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-05 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-05 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-05 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-05 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-05 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-05A | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-05A | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-05A | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-05A | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-05A | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-05A | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-06 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-06 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-06 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-06 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-06 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-06 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-06A | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-06A | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-06A | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-06A | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-06A | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-06A | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-06A | PTMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| NC2-09 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-09 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-09 | PTMW | Tnbs1-Tnbs0 | A | DIS | E300.0:PERC | 2 | Y | |
| NC2-09 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-09 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-10 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-10 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-10 | PTMW | Tnbs1-Tnbs0 | A | DIS | E300.0:PERC | 2 | Y | |
| NC2-10 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-10 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-11D | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-11D | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-11D | PTMW | Tnbs1-Tnbs0 | S | WGMG | E300.0:PERC | 2 | Y | |
| NC2-11D | PTMW | Tnbs1-Tnbs0 | S | WGMG | E300.0:PERC | 4 | Y | |
| NC2-11D | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-11D | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-11D | PTMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| NC2-11I | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | N | Inoperable pump. |
| NC2-11I | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | N | Inoperable pump. |
| NC2-11I | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | N | Inoperable pump. |
| NC2-11I | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | N | Inoperable pump. |
| NC2-11I | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | N | Inoperable pump. |
| NC2-11I | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | N | Inoperable pump. |

**Table 2.5-1 (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC2-11S | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-11S | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-11S | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-11S | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-11S | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-11S | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-12D | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-12D | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-12D | PTMW | Tnbs1-Tnbs0 | A | WGMG | E300.0:PERC | 2 | Y | |
| NC2-12D | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-12D | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-12D | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-12I | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-12I | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-12I | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-12I | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-12I | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-12I | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-12S | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-12S | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-12S | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-12S | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-12S | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-12S | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-13 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-13 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-13 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-13 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-13 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-13 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-14S | PTMW | Qal/WBR | O | CMP | AS:UISO | 2 | Y | |
| NC2-14S | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| NC2-14S | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 1 | Y | |
| NC2-14S | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 3 | Y | |
| NC2-14S | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC2-14S | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC2-15 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-15 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-15 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-15 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-15 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-15 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-16 | PTMW | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| NC2-16 | PTMW | Tnbs1-Tnbs0 | O | CMP | E300.0:NO3 | 2 | Y | |
| NC2-16 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 1 | Y | |
| NC2-16 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 3 | Y | |
| NC2-16 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-16 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-17 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | N | Inoperable pump. |

**Table 2.5-1 (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC2-17 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | N | Inoperable pump. |
| NC2-17 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | N | Inoperable pump. |
| NC2-17 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | N | Inoperable pump. |
| NC2-17 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | N | Inoperable pump. |
| NC2-17 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | N | Inoperable pump. |
| NC2-18 | PTMW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 2 | Y | |
| NC2-18 | PTMW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 4 | Y | |
| NC2-18 | PTMW | Tnbs1-Tnbs0 | O | CMP | E300.0:NO3 | 2 | Y | |
| NC2-18 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-18 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-18 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-18 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-19 | PTMW | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| NC2-19 | PTMW | Tnbs1-Tnbs0 | O | CMP | E300.0:NO3 | 2 | Y | |
| NC2-19 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-19 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-19 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-19 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-20 | PTMW | Tnbs1-Tnbs0 | O | CMP | AS:UISO | 2 | Y | |
| NC2-20 | PTMW | Tnbs1-Tnbs0 | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| NC2-20 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| NC2-20 | PTMW | Tnbs1-Tnbs0 | A | CMP | E906:ALL | 2 | Y | |
| NC2-21 | PTMW | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| NC2-21 | PTMW | Tnbs1-Tnbs0 | O | CMP | E300.0:NO3 | 2 | Y | |
| NC2-21 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| NC2-21 | PTMW | Tnbs1-Tnbs0 | A | CMP | E906:ALL | 2 | Y | |
| NC7-10 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-10 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-10 | PTMW | Qal/WBR | S | DIS | E300.0:PERC | 1 | Y | |
| NC7-10 | PTMW | Qal/WBR | S | DIS | E300.0:PERC | 3 | Y | |
| NC7-10 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-10 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-10 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-10 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-10 | PTMW | Qal/WBR | A | DIS | MS:UISO | 2 | Y | |
| NC7-11 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-11 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-11 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-11 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-11 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-11 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-11 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-11 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-14 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Insufficient water. |
| NC7-14 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | N | Insufficient water. |
| NC7-14 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | N | Insufficient water. |
| NC7-14 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | N | Dry. |
| NC7-14 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | N | Insufficient water. |
| NC7-14 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | N | Dry. |

**Table 2.5-1 (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC7-14 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Insufficient water. |
| NC7-14 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| NC7-15 | PTMW | Qal/WBR | O | CMP | AS:UISO | 2 | Y | |
| NC7-15 | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| NC7-15 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-15 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-15 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-15 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-15 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-19 | PTMW | Qal/WBR | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| NC7-19 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-19 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-19 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-19 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-19 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-19 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-19 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-27 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-27 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-27 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-27 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-27 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-27 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-27 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-27 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | Q | DIS | DWMETALS:ALL | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:PERC | 1 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:PERC | 3 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | M | DIS | E300.0:PERC | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | M | DIS | E300.0:PERC | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | M | DIS | E300.0:PERC | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | Q | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | Q | DIS | E9060:ALL | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | M | DIS | E906:ALL | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | M | DIS | E906:ALL | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | Q | DIS | GENMIN:ALL | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | M | DIS | KPA:UTOT | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | M | DIS | KPA:UTOT | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | M | DIS | KPA:UTOT | 4 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | Q | DIS | MS:UISO | 1 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | Q | DIS | MS:UISO | 2 | Y | |
| NC7-28 | PTMW | Tnbs1-Tnbs0 | Q | DIS | MS:UISO | 3 | Y | |

**Table 2.5-1 (Cont). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC7-28 | PTMW | Tnbs1-Tnbs0 | Q | DIS | MS:UISO | 4 | Y | |
| NC7-29 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-29 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-29 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-29 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-29 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-29 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-43 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-43 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-43 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-43 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-43 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-43 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-43 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-43 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-44 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-44 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-44 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-44 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-44 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-44 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-44 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-44 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-46 | PTMW | Qal/WBR | O | CMP | AS:UISO | 2 | Y | |
| NC7-46 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| NC7-46 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-46 | PTMW | Qal/WBR | A | CMP | E906:ALL | 2 | Y | |
| NC7-54 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Insufficient water. |
| NC7-54 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-54 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-54 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | N | Dry. |
| NC7-54 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | N | Insufficient water. |
| NC7-54 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | N | Dry. |
| NC7-54 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-54 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| NC7-54 | PTMW | Qal/WBR | A | DIS | MS:UISO | 2 | Y | |
| NC7-55 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Dry. |
| NC7-55 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | N | Dry. |
| NC7-55 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | N | Dry. |
| NC7-55 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | N | Dry. |
| NC7-55 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | N | Dry. |
| NC7-55 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | N | Dry. |
| NC7-55 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Dry. |
| NC7-55 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| NC7-55 | PTMW | Qal/WBR | A | DIS | MS:UISO | 4 | N | Dry. |
| NC7-56 | PTMW | Qal/WBR | O | CMP | AS:UISO | 2 | Y | |
| NC7-56 | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| NC7-56 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-56 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |

**Table 2.5-1 (Cont). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC7-56 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-56 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-56 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-56 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-57 | PTMW | Qal/WBR | O | CMP | AS:UISO | 2 | N | Dry. |
| NC7-57 | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| NC7-57 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | N | Dry. |
| NC7-57 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | N | Dry. |
| NC7-57 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Dry. |
| NC7-57 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| NC7-58 | PTMW | Qal/WBR | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| NC7-58 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| NC7-58 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-58 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-58 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-58 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-59 | PTMW | Qal/WBR | O | CMP | AS:UISO | 2 | Y | |
| NC7-59 | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| NC7-59 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-59 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-59 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-59 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-60 | PTMW | Tnsc0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| NC7-60 | PTMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-60 | PTMW | Tnsc0 | S | CMP | E300.0:PERC | 1 | Y | |
| NC7-60 | PTMW | Tnsc0 | S | CMP | E300.0:PERC | 3 | Y | |
| NC7-60 | PTMW | Tnsc0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-60 | PTMW | Tnsc0 | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-60 | PTMW | Tnsc0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-60 | PTMW | Tnsc0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | Q | DIS | DWMETALS:ALL | 4 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | O | DIS | E8082A:ALL | 2 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | Q | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | Q | DIS | E9060:ALL | 4 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | S | WGMG | E906:ALL | 2 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | S | WGMG | E906:ALL | 4 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | Q | DIS | GENMIN:ALL | 4 | Y | |
| NC7-61 | PTMW | Tnbs1-Tnbs0 | Q | DIS | MS:UISO | 4 | Y | |
| NC7-62 | PTMW | Qal/WBR | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| NC7-62 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| NC7-62 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-62 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |

**Table 2.5-1 (Cont). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC7-62 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-62 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-69 | PTMW | Tmss | A | CMP | AS:UISO | 2 | Y | |
| NC7-69 | PTMW | Tmss | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-69 | PTMW | Tmss | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-69 | PTMW | Tmss | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-69 | PTMW | Tmss | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-69 | PTMW | Tmss | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-69 | PTMW | Tmss | S | CMP | E906:ALL | 2 | Y | |
| NC7-69 | PTMW | Tmss | S | CMP | E906:ALL | 4 | Y | |
| NC7-70 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-70 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-70 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-70 | PTMW | Tnbs1-Tnbs0 | O | CMP | E8082A:ALL | 2 | Y | |
| NC7-70 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-70 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-70 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-70 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-70 | PTMW | Tnbs1-Tnbs0 | A | CMP | MS:UISO | 2 | Y | |
| NC7-71 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-71 | PTMW | Qal/WBR | Q | DIS | DWMETALS:ALL | 4 | Y | |
| NC7-71 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-71 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-71 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-71 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-71 | PTMW | Qal/WBR | Q | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-71 | PTMW | Qal/WBR | Q | DIS | E9060:ALL | 4 | Y | |
| NC7-71 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-71 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-71 | PTMW | Qal/WBR | Q | DIS | GENMIN:ALL | 4 | Y | |
| NC7-71 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 4 | Y | |
| NC7-72 | PTMW | Qal/WBR | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| NC7-72 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| NC7-72 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-72 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-72 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-72 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-72 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-72 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-73 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-73 | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| NC7-73 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-73 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-73 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| NC7-73 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | Y | |
| NC7-73 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-73 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| SPRING24 | SPR | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| SPRING24 | SPR | Tnbs1-Tnbs0 | O | CMP | E300.0:NO3 | 2 | N | Dry. |

**Table 2.5-1 (Cont). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| SPRING24 | SPR | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | N | Dry. |
| SPRING24 | SPR | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | N | Dry. |
| SPRING24 | SPR | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | N | Dry. |
| SPRING24 | SPR | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | N | Dry. |
| W-850-05 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-850-05 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| W-850-05 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| W-850-05 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| W-850-05 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| W-850-05 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | Y | |
| W-850-05 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| W-850-05 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| W-850-05 | PTMW | Qal/WBR | A | DIS | MS:UISO | 4 | Y | |
| W-850-2145 | PTMW | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| W-850-2145 | PTMW | Tnbs1-Tnbs0 | O | CMP | E300.0:NO3 | 2 | Y | |
| W-850-2145 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-850-2145 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-850-2145 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-850-2145 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-850-2312 | PTMW | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| W-850-2312 | PTMW | Tnbs1-Tnbs0 | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| W-850-2312 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-850-2312 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-850-2312 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-850-2312 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-850-2313 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-850-2313 | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| W-850-2313 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| W-850-2313 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| W-850-2313 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 2 | Y | |
| W-850-2313 | PTMW | Qal/WBR | S | DIS | E8330LOW:ALL | 4 | Y | |
| W-850-2313 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| W-850-2313 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| W-850-2313 | PTMW | Qal/WBR | A | DIS | MS:UISO | 2 | Y | |
| W-850-2314 | PTMW | Tnbs1-Tnbs0 | O | CMP | AS:UISO | 2 | Y | |
| W-850-2314 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-850-2314 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-850-2314 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-850-2314 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| W-850-2314 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 4 | Y | |
| W-850-2314 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-850-2314 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-850-2315 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| W-850-2315 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-850-2315 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-850-2315 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-850-2315 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-850-2315 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-850-2316 | PTMW | Tnbs1-Tnbs0 | O | CMP | AS:UISO | 2 | Y | |

**Table 2.5-1 (Cont). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-850-2316 | PTMW | Tnbs1-Tnbs0 | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| W-850-2316 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-850-2316 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-850-2316 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-850-2316 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | A | CMP | AS:UISO | 2 | Y | |
| W-850-2416 | PTMW | Tnsc0 | Q | DIS | DWMETALS:ALL | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-850-2416 | PTMW | Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-850-2416 | PTMW | Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | M | DIS | E300.0:PERC | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | M | DIS | E300.0:PERC | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| W-850-2416 | PTMW | Tnsc0 | Q | DIS | E8330LOW:ALL | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | Q | DIS | E9060:ALL | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | S | CMP | E906:ALL | 2 | Y | |
| W-850-2416 | PTMW | Tnsc0 | S | CMP | E906:ALL | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | M | DIS | E906:ALL | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | M | DIS | E906:ALL | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | Q | DIS | GENMIN:ALL | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | M | DIS | KPA:UTOT | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | M | DIS | KPA:UTOT | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | M | DIS | KPA:UTOT | 4 | Y | |
| W-850-2416 | PTMW | Tnsc0 | A | DIS | MS:UISO | 2 | Y | |
| W-850-2416 | PTMW | Tnsc0 | Q | DIS | MS:UISO | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | Q | DIS | DWMETALS:ALL | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | M | DIS | E300.0:PERC | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | M | DIS | E300.0:PERC | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | Q | DIS | E8330LOW:ALL | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | Q | DIS | E9060:ALL | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | M | DIS | E906:ALL | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | M | DIS | E906:ALL | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | Q | DIS | GENMIN:ALL | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | M | DIS | KPA:UTOT | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | M | DIS | KPA:UTOT | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | M | DIS | KPA:UTOT | 4 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | Q | DIS | MS:UISO | 1 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | Q | DIS | MS:UISO | 2 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | Q | DIS | MS:UISO | 3 | Y | |
| W-850-2417 | PTMW | Tnbs1-Tnbs0 | Q | DIS | MS:UISO | 4 | Y | |
| W-865-02 | PTMW | Tnbs1-Tnbs0 | A | DIS | DWMETALS:ALL | 1 | Y | |
| W-865-02 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 1 | Y | |

**Table 2.5-1 (Cont). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-865-02 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 3 | Y | |
| W-865-02 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 1 | Y | |
| W-865-02 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 1 | Y | |
| W-865-02 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 3 | Y | |
| W-865-02 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 1 | Y | |
| W-865-02 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 3 | Y | |
| W-865-05 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 1 | N | Dry. |
| W-865-05 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 3 | N | Dry. |
| W-865-05 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 1 | N | Dry. |
| W-865-05 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 1 | N | Dry. |
| W-865-05 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 3 | N | Dry. |
| W-865-05 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 1 | N | Dry. |
| W-865-05 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 3 | N | Dry. |
| W-865-1802 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| W-865-1802 | PTMW | Tnbs1-Tnbs0 | A | DIS | E300.0:NO3 | 2 | Y | |
| W-865-1802 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| W-865-1802 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 1 | Y | |
| W-865-1802 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 3 | Y | |
| W-865-1802 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-865-1802 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-865-1803 | PTMW | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| W-865-1803 | PTMW | Tnbs1-Tnbs0 | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| W-865-1803 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-865-1803 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-865-1803 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-865-1803 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | A | DIS | DWMETALS:ALL | 1 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 1 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 3 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 1 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 3 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| W-865-2005 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| W-865-2121 | PTMW | Tnbs1-Tnbs0 | A | DIS | DWMETALS:ALL | 1 | Y | |
| W-865-2121 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 1 | Y | |
| W-865-2121 | PTMW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 3 | Y | |
| W-865-2121 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 1 | Y | |
| W-865-2121 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 1 | Y | |
| W-865-2121 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 3 | Y | |
| W-865-2121 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-865-2121 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 1 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 3 | Y | |

**Table 2.5-1 (Cont). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-865-2133 | GW | Tnbs1-Tnbs0 | A | DIS | DWMETALS:ALL | 1 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 1 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | S | DIS | E300.0:NO3 | 3 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 1 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 2 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 3 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 4 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 1 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 3 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 1 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 2 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 3 | Y | |
| W-865-2133 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 4 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 2 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 4 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 2 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 4 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 1 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 2 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 3 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 4 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 2 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 4 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 1 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 2 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 3 | Y | |
| W-865-2224 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 4 | Y | |
| W-PIT1-01 | PTMW | Tnbs1-Tnbs0 | O | CMP | AS:UISO | 1 | N | Dry. |
| W-PIT1-01 | PTMW | Tnbs1-Tnbs0 | A | DIS | E300.0:NO3 | 1 | N | Dry. |
| W-PIT1-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 1 | N | Dry. |
| W-PIT1-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 3 | N | Dry. |
| W-PIT1-01 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 1 | N | Dry. |
| W-PIT1-01 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 3 | N | Dry. |
| W-PIT1-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 1 | N | Dry. |
| W-PIT1-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 3 | N | Dry. |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | A | DIS | DWMETALS:ALL | 2 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | A | DIS | E300.0:NO3 | 2 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 2 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 4 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| W-PIT1-02 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| W-PIT1-2204 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-PIT1-2204 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |

**Table 2.5-1 (Cont). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-PIT1-2204 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| W-PIT1-2204 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | Y | |
| W-PIT1-2204 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| W-PIT1-2204 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 2 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 4 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 4 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 2 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 4 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| W-PIT1-2209 | GW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 2 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 4 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 4 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 1 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 2 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 3 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 4 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 1 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 2 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 3 | Y | |
| W-PIT1-2225 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 4 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 1 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 2 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 3 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | AS:UISO | 4 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 1 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 2 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 3 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:NO3 | 4 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 1 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 2 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 1 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 2 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 3 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8260:ALL | 4 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 1 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 2 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 3 | Y | |

**Table 2.5-1 (Cont). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E8330:R+H | 4 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 1 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 2 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| W-PIT1-2326 | DMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| W-PIT1-2620 | PTMW | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| W-PIT1-2620 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 3 | Y | |
| W-PIT1-2620 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E300.0:PERC | 4 | Y | |
| W-PIT1-2620 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 3 | Y | |
| W-PIT1-2620 | PTMW | Tnbs1-Tnbs0 | Q | WGMG | E906:ALL | 4 | Y | |
| W-PIT7-16 | PTMW | Tnsc0 | A | CMP | AS:UISO | 2 | Y | |
| W-PIT7-16 | PTMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-16 | PTMW | Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-16 | PTMW | Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-PIT7-16 | PTMW | Tnsc0 | S | DIS | E8330LOW:ALL | 2 | Y | |
| W-PIT7-16 | PTMW | Tnsc0 | S | DIS | E8330LOW:ALL | 4 | Y | |
| W-PIT7-16 | PTMW | Tnsc0 | S | CMP | E906:ALL | 2 | Y | |
| W-PIT7-16 | PTMW | Tnsc0 | S | CMP | E906:ALL | 4 | Y | |
| W8SPRNG | SPR | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | N | Dry. |
| W8SPRNG | SPR | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W8SPRNG | SPR | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | N | Dry. |
| W8SPRNG | SPR | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | N | Dry. |
| W8SPRNG | SPR | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 2 | N | Dry. |
| W8SPRNG | SPR | Tnbs1-Tnbs0 | S | DIS | E8330LOW:ALL | 4 | N | Dry. |
| W8SPRNG | SPR | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | N | Dry. |
| W8SPRNG | SPR | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | N | Dry. |

**Notes:**

**1) K1-01C, K1-02B, K1-04, K1-05, K1-07, K1-08, K1-09, and W-PIT1-2326 are Pit 1 Landfill detection monitoring wells. Analytes and sampling frequency are**

**2) Building 850 primary COC: tritium (E906).**

**3) Building 850 secondary COC: nitrate (E300.0:NO3).**

**4) Building 850 primary COC: perchlorate (E300.0:PERC).**

**5) Building 850 secondary COC: uranium (MS:UISO).**

**6) Samples with sample driver WGMG are part of the surveillance monitoring performed by the Water Guidance and Monitoring Group (WGMG) see the LLNL Site Annual Environmental Report for additional constituents.**

**7) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.5-2. PIT7-Source (PIT7-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| PIT7-SRC | July | NA | 696 | NA | 2,490 |
| | August | NA | 720 | NA | 3,497 |
| | September | NA | 629 | NA | 4,394 |
| | October | NA | 552 | NA | 3,772 |
| | November | NA | 793 | NA | 4,949 |
| | December | NA | 420 | NA | 2,341 |
| Total | | NA | 3,810 | NA | 21,443 |

**Table 2.5-3. Pit 7-Source (PIT7-SRC) Volatile Organic Compounds (VOCs) in ground water extraction and treatment system influent and effluent.**

| Location | Date | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetra-chloride (µg/L) | Chloro-form (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIT7-SRC-I | 7/13/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| PIT7-SRC-I | 10/3/11 | 2.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.85 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| PIT7-SRC-E | 7/13/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| PIT7-SRC-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| PIT7-SRC-E | 9/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| PIT7-SRC-E | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| PIT7-SRC-E | 11/7/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| PIT7-SRC-E | 12/5/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

**Notes:**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.5-3 (Cont.). Analyte detected but not reported in main table.**

| Location | Date | Detection frequency |
|---|---|---|
| PIT7-SRC-I | 7/13/11 | 0 of 18 |
| PIT7-SRC-I | 10/3/11 | 0 of 18 |
| PIT7-SRC-E | 7/13/11 | 0 of 18 |
| PIT7-SRC-E | 8/1/11 | 0 of 18 |
| PIT7-SRC-E | 9/6/11 | 0 of 18 |
| PIT7-SRC-E | 10/3/11 | 0 of 18 |
| PIT7-SRC-E | 11/7/11 | 0 of 18 |
| PIT7-SRC-E | 12/5/11 | 0 of 18 |

**Notes:**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.5-4. Pit 7-Source (PIT7-SRC) nitrate and perchlorate in ground water extraction and treatment system influent and effluent.**

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (μg/L) |
|---|---|---|---|
| PIT7-SRC-I | 7/13/11 | 42 | 13 |
| PIT7-SRC-I | 10/3/11 | 40 | 15 |
| PIT7-SRC-E | 7/13/11 | 5.7 | <4 |
| PIT7-SRC-E | 8/1/11 | 9.9 | <4 |
| PIT7-SRC-E | 9/6/11 | 23 | <4 |
| PIT7-SRC-E[a] | 9/19/11 | 24 | – |
| PIT7-SRC-E | 10/3/11 | 22 | <4 |
| PIT7-SRC-E | 11/7/11 | 22 | <4 |
| PIT7-SRC-E | 12/5/11 | 23 | <4 |

**Notes:**

[a] **Extra effluent sample for nitrate only.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.5-5. Pit 7-Source (PIT7-SRC) total uranium in ground water extraction and treatment system influent and effluent.**

| Location | Date | Total Uranium (pCi/L) |
|---|---|---|
| PIT7-SRC-I | 7/13/11 | 13.4 ± 1.68 |
| PIT7-SRC-I | 10/3/11 | 27.9 ± 2.91 |
| PIT7-SRC-E | 7/13/11 | <0.3 |
| PIT7-SRC-E | 8/1/11 | <0.3 |
| PIT7-SRC-E | 9/6/11 | <0.3 |
| PIT7-SRC-E | 10/3/11 | <0.3 |
| PIT7-SRC-E | 11/7/11 | <0.3 |
| PIT7-SRC-E | 12/5/11 | <0.3 |

**Notes:**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.5-6. Pit 7-Source (PIT7-SRC) tritium in ground water extraction and treatment system influent and effluent.**

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| PIT7-SRC-I | 7/13/11 | 41,600 ± 8,090 L |
| PIT7-SRC-I | 10/3/11 | 42,800 ± 8,320 L |
| PIT7-SRC-E | 7/13/11 | 41,100 ± 7,980 L |
| PIT7-SRC-E | 8/1/11 | 40,800 ± 7,940 |
| PIT7-SRC-E | 9/6/11 | 45,000 ± 8,740 |
| PIT7-SRC-E | 10/3/11 | 45,300 ± 8,800 L |
| PIT7-SRC-E | 11/7/11 | 45,400 ± 8,820 |
| PIT7-SRC-E | 12/5/11 | 26,600 ± 5,170 |

**Notes:**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

## Table 2.5-7. Pit 7-Source (PIT7-SRC) treatment facility sampling and analysis plan.

| Sample location | Sample identification | Parameter | Frequency |
|---|---|---|---|
| ***PIT7-SRC GWTS*** | | | |
| **Influent Port** | **PIT7-SRC-I** | **VOCs** | **Quarterly** |
| | | **Uranium** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| | | **Nitrate** | **Quarterly** |
| | | **Tritium**[a] | **Quarterly** |
| | | **pH** | **Quarterly** |
| **Effluent Port** | **PIT7-SRC-E** | **VOCs** | **Monthly** |
| | | **Uranium** | **Monthly** |
| | | **Perchlorate** | **Monthly** |
| | | **Nitrate** | **Monthly** |
| | | **Tritium**[a] | **Monthly** |
| | | **pH** | **Monthly** |

**Notes:**

**[a] Although tritium is not treated/removed by the PIT7-SRC GWTS, tritium activities will be monitoring to determine levels that are being discharged to the infiltration trench.**

**One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.5-8. Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K7-01 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 1 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | A | CMP | E8082A:ALL | 2 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| K7-01 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | CMP | E8082A:ALL | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| K7-03 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | A | CMP | E8082A:ALL | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| K7-06 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| K7-07 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Insufficient water. |
| K7-07 | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| K7-07 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | N | Insufficient water. |
| K7-07 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | N | Insufficient water. |
| K7-07 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Insufficient water. |
| K7-07 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| K7-09 | DMW | Tnsc0 | A | CMP | AS:UISO | 2 | Y | |
| K7-09 | DMW | Tnsc0 | A | CMP | E200.7:LI | 2 | Y | |
| K7-09 | DMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K7-09 | DMW | Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| K7-09 | DMW | Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| K7-09 | DMW | Tnsc0 | A | CMP | E340.2:ALL | 2 | Y | |
| K7-09 | DMW | Tnsc0 | A | CMP | E601:ALL | 2 | Y | |

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K7-09 | DMW | Tnsc0 | A | CMP | E8082A:ALL | 2 | Y | |
| K7-09 | DMW | Tnsc0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K7-09 | DMW | Tnsc0 | S | CMP | E906:ALL | 2 | Y | |
| K7-09 | DMW | Tnsc0 | S | CMP | E906:ALL | 4 | Y | |
| K7-09 | DMW | Tnsc0 | A | CMP | T26METALS:ALL | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | A | CMP | E8082A:ALL | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| K7-10 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| NC7-12 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-12 | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| NC7-12 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-12 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-12 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-12 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-12 | PTMW | Qal/WBR | A | DIS | MS:UISO | 2 | Y | |
| NC7-16 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-16 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-16 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-16 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-16 | PTMW | Qal/WBR | S | DIS | E906:ALL | 1 | Y | |
| NC7-16 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-16 | PTMW | Qal/WBR | S | DIS | E906:ALL | 3 | Y | |
| NC7-16 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-16 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 1 | Y | |
| NC7-16 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 2 | Y | |
| NC7-16 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 3 | Y | |
| NC7-16 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 4 | Y | |
| NC7-17 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-17 | PTMW | Qal/WBR | A | DIS | E200.7:SI | 2 | Y | |
| NC7-17 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-17 | PTMW | Qal/WBR | E | CMP | E300.0:PERC | 2 | N | To be sampled in 2012. |
| NC7-17 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-17 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-17 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-17 | PTMW | Qal/WBR | A | DIS | GENMIN:ALL | 2 | Y | |
| NC7-18 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-18 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-18 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-18 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-18 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-18 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC7-20 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-20 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| NC7-20 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-20 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-20 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-20 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-21 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-21 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-21 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-21 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-21 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-21 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-22 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Dry. |
| NC7-22 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| NC7-22 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | N | Dry. |
| NC7-22 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | N | Dry. |
| NC7-22 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Dry. |
| NC7-22 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| NC7-24 | PTMW | Qal/WBR | A | CMP | MS:UISO | 2 | Y | |
| NC7-24 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-24 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-24 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-24 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| NC7-25 | EW | Tnbs1-Tnbs0 | A | CMP-TF | AS:UISO | 2 | Y | |
| NC7-25 | EW | Tnbs1-Tnbs0 | A | CMP-TF | E300.0:NO3 | 2 | Y | |
| NC7-25 | EW | Tnbs1-Tnbs0 | A | CMP-TF | E300.0:PERC | 2 | Y | |
| NC7-25 | EW | Tnbs1-Tnbs0 | A | DIS-TF | E300.0:PERC | 4 | Y | |
| NC7-25 | EW | Tnbs1-Tnbs0 | A | CMP-TF | E601:ALL | 2 | Y | |
| NC7-25 | EW | Tnbs1-Tnbs0 | A | DIS-TF | E601:ALL | 4 | Y | |
| NC7-25 | EW | Tnbs1-Tnbs0 | S | CMP-TF | E906:ALL | 2 | Y | |
| NC7-25 | EW | Tnbs1-Tnbs0 | S | CMP-TF | E906:ALL | 4 | Y | |
| NC7-25 | EW | Tnbs1-Tnbs0 | A | DIS-TF | KPA:UTOT | 2 | Y | |
| NC7-25 | EW | Tnbs1-Tnbs0 | A | DIS-TF | MS:UISO | 4 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | DIS | E300.0:PERC | 4 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | CMP | E8082A:ALL | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| NC7-26 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| NC7-34 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-34 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-34 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC7-34 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-34 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-34 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-36 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-36 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-36 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-36 | PTMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| NC7-36 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-36 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-37 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Dry. |
| NC7-37 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| NC7-37 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | N | Dry. |
| NC7-37 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | N | Dry. |
| NC7-37 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Dry. |
| NC7-37 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-40 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-40 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-40 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-40 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-40 | PTMW | Qal/WBR | S | DIS | E906:ALL | 1 | Y | |
| NC7-40 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-40 | PTMW | Qal/WBR | S | DIS | E906:ALL | 3 | Y | |
| NC7-40 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-40 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 1 | Y | |
| NC7-40 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 2 | Y | |
| NC7-40 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 3 | Y | |
| NC7-40 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 4 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | E8082A:ALL | 2 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | E906:ALL | 2 | Y | |
| NC7-47 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | A | CMP | E200.7:LI | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | A | CMP | E340.2:ALL | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | A | CMP | E8082A:ALL | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | A | CMP | E8330LOW:ALL | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-48 | DMW | Qal/WBR | A | DIS | MS:UISO | 2 | Y | |
| NC7-48 | DMW | Qal/WBR | A | CMP | T26METALS:ALL | 2 | Y | |

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC7-49A | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-49A | PTMW | Qal/WBR | E | CMP | E300.0:NO3 | 2 | N | To be sampled in 2012. |
| NC7-49A | PTMW | Qal/WBR | E | CMP | E300.0:PERC | 2 | N | To be sampled in 2012. |
| NC7-49A | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-49A | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-51 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-51 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-51 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-51 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| NC7-51 | PTMW | Qal/WBR | S | DIS | E906:ALL | 1 | Y | |
| NC7-51 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-51 | PTMW | Qal/WBR | S | DIS | E906:ALL | 3 | Y | |
| NC7-51 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| NC7-51 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 1 | Y | |
| NC7-51 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 2 | Y | |
| NC7-51 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 3 | Y | |
| NC7-51 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 4 | Y | |
| NC7-52 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-52 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-52 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-52 | PTMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| NC7-52 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 1 | Y | |
| NC7-52 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 3 | Y | |
| NC7-53 | PTMW | Qal/WBR | A | DIS | AS:UISO | 2 | Y | |
| NC7-53 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| NC7-53 | PTMW | Qal/WBR | O | CMP | E300.0:PERC | 2 | Y | |
| NC7-53 | PTMW | Qal/WBR | O | DIS | E906:ALL | 2 | Y | |
| NC7-63 | EW | Qal/WBR | A | CMP-TF | AS:UISO | 2 | Y | |
| NC7-63 | EW | Qal/WBR | A | CMP-TF | E300.0:NO3 | 2 | Y | |
| NC7-63 | EW | Qal/WBR | A | CMP-TF | E300.0:PERC | 2 | Y | |
| NC7-63 | EW | Qal/WBR | A | DIS-TF | E300.0:PERC | 4 | Y | |
| NC7-63 | EW | Qal/WBR | A | CMP-TF | E601:ALL | 2 | Y | |
| NC7-63 | EW | Qal/WBR | A | DIS-TF | E601:ALL | 4 | Y | |
| NC7-63 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 2 | Y | |
| NC7-63 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 4 | Y | |
| NC7-63 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 1 | Y | |
| NC7-63 | EW | Qal/WBR | S | DIS-TF | KPA:UTOT | 2 | Y | |
| NC7-63 | EW | Qal/WBR | S | DIS-TF | KPA:UTOT | 4 | Y | |
| NC7-63 | EW | Qal/WBR | A | DIS-TF | MS:UISO | 4 | Y | |
| NC7-64 | EW | Qal/WBR | A | CMP-TF | AS:UISO | 2 | Y | |
| NC7-64 | EW | Qal/WBR | A | CMP-TF | E300.0:NO3 | 2 | Y | |
| NC7-64 | EW | Qal/WBR | A | CMP-TF | E300.0:PERC | 2 | Y | |
| NC7-64 | EW | Qal/WBR | A | DIS-TF | E300.0:PERC | 4 | Y | |
| NC7-64 | EW | Qal/WBR | A | CMP-TF | E601:ALL | 2 | Y | |
| NC7-64 | EW | Qal/WBR | A | DIS-TF | E601:ALL | 4 | Y | |
| NC7-64 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 2 | Y | |
| NC7-64 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 4 | Y | |
| NC7-64 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 1 | Y | |
| NC7-64 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 2 | Y | |

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| NC7-64 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 3 | Y | |
| NC7-64 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 4 | Y | |
| NC7-64 | EW | Qal/WBR | A | DIS-TF | MS:UISO | 4 | Y | |
| NC7-65 | PTMW | Tnsc0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-65 | PTMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-65 | PTMW | Tnsc0 | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-65 | PTMW | Tnsc0 | A | CMP | E601:ALL | 2 | Y | |
| NC7-65 | PTMW | Tnsc0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-65 | PTMW | Tnsc0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-65 | PTMW | Tnsc0 | A | DIS | MS:UISO | 2 | Y | |
| NC7-67 | PTMW | Tnsc0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-67 | PTMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-67 | PTMW | Tnsc0 | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-67 | PTMW | Tnsc0 | A | CMP | E601:ALL | 2 | Y | |
| NC7-67 | PTMW | Tnsc0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-67 | PTMW | Tnsc0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-68 | PTMW | Tnbs1-Tnbs0 | A | DIS | AS:UISO | 2 | Y | |
| NC7-68 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-68 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-68 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-68 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-75 | PTMW | Tnsc0 | A | CMP | AS:UISO | 2 | Y | |
| NC7-75 | PTMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC7-75 | PTMW | Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC7-75 | PTMW | Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC7-75 | PTMW | Tnsc0 | A | CMP | E601:ALL | 2 | Y | |
| NC7-75 | PTMW | Tnsc0 | S | CMP | E906:ALL | 2 | Y | |
| NC7-75 | PTMW | Tnsc0 | S | CMP | E906:ALL | 4 | Y | |
| NC7-76 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| NC7-76 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| NC7-76 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| NC7-76 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| NC7-76 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| W-865-01 | PTMW | Tnbs1-Tnbs0 | A | DIS | DWMETALS:ALL | 1 | Y | |
| W-865-01 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-865-01 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 1 | Y | |
| W-865-01 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 1 | Y | |
| W-865-01 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 3 | Y | |
| W-865-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 1 | Y | |
| W-865-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 3 | Y | |
| W-865-03 | PTMW | Tnbs1-Tnbs0 | A | DIS | E300.0:NO3 | 1 | Y | |
| W-865-03 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 1 | Y | |
| W-865-03 | PTMW | Tnbs1-Tnbs0 | A | DIS | E906:ALL | 1 | Y | |
| W-865-1804 | PTMW | Tnbs1-Tnbs0 | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-865-1804 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 1 | Y | |
| W-865-1804 | PTMW | Tnbs1-Tnbs0 | A | DIS | E300.0:PERC | 3 | Y | |
| W-865-1804 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 1 | Y | |
| W-865-1804 | PTMW | Tnbs1-Tnbs0 | S | DIS | E601:ALL | 3 | Y | |
| W-865-1804 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 1 | Y | |

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-865-1804 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 3 | Y | |
| W-PIT3-01 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Dry. |
| W-PIT3-01 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-PIT3-01 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | N | Dry. |
| W-PIT3-01 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Dry. |
| W-PIT3-01 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| W-PIT3-01 | PTMW | Qal/WBR | A | CMP | MS:UISO | 2 | N | Dry. |
| W-PIT3-02 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Dry. |
| W-PIT3-02 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-PIT3-02 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | N | Dry. |
| W-PIT3-02 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Dry. |
| W-PIT3-02 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| W-PIT5-01 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Dry. |
| W-PIT5-01 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-PIT5-01 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | N | Dry. |
| W-PIT5-01 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Dry. |
| W-PIT5-01 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| W-PIT5-02 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Dry. |
| W-PIT5-02 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-PIT5-02 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | N | Dry. |
| W-PIT5-02 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Dry. |
| W-PIT5-02 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| W-PIT7-02 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-PIT7-02 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-02 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-02 | PTMW | Qal/WBR | S | CMP | E906:ALL | 1 | Y | |
| W-PIT7-02 | PTMW | Qal/WBR | S | CMP | E906:ALL | 3 | Y | |
| W-PIT7-03 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-PIT7-03 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-03 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-03 | PTMW | Qal/WBR | S | CMP | E601:ALL | 2 | Y | |
| W-PIT7-03 | PTMW | Qal/WBR | S | CMP | E601:ALL | 4 | Y | |
| W-PIT7-03 | PTMW | Qal/WBR | A | CMP | E906:ALL | 1 | Y | |
| W-PIT7-10 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-PIT7-10 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-10 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-10 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| W-PIT7-10 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| W-PIT7-10 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| W-PIT7-11 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | N | Dry. |
| W-PIT7-11 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-PIT7-11 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | N | Dry. |
| W-PIT7-11 | PTMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | N | Dry. |
| W-PIT7-11 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | N | Dry. |
| W-PIT7-11 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | N | Dry. |
| W-PIT7-11 | PTMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | N | Dry. |
| W-PIT7-12 | PTMW | Tnbs1-Tnbs0 | O | CMP | AS:UISO | 2 | Y | |
| W-PIT7-12 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-12 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-PIT7-12 | PTMW | Tnbs1-Tnbs0 | A | DIS | E300.0:PERC | 4 | Y | |
| W-PIT7-12 | PTMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| W-PIT7-12 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-PIT7-12 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-PIT7-13 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| W-PIT7-13 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-13 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-13 | PTMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| W-PIT7-13 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-PIT7-13 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-PIT7-14 | PTMW | Tnsc0 | O | DIS | AS:UISO | 2 | Y | |
| W-PIT7-14 | PTMW | Tnsc0 | A | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-14 | PTMW | Tnsc0 | A | CMP | E906:ALL | 2 | Y | |
| W-PIT7-14 | PTMW | Tnsc0 | A | DIS | MS:UISO | 2 | Y | |
| W-PIT7-15 | PTMW | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| W-PIT7-15 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-15 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-15 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-PIT7-15 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-PIT7-15 | PTMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| W-PIT7-1860 | PTMW | Tnbs1-Tnbs0 | E | CMP | E300.0:PERC | 2 | N | To be sampled in 2012. |
| W-PIT7-1860 | PTMW | Tnbs1-Tnbs0 | E | CMP | E906:ALL | 2 | N | To be sampled in 2012. |
| W-PIT7-1861 | PTMW | Qal/WBR | O | CMP | AS:UISO | 2 | Y | |
| W-PIT7-1861 | PTMW | Qal/WBR | O | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-1861 | PTMW | Qal/WBR | O | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-1861 | PTMW | Qal/WBR | O | CMP | E906:ALL | 2 | Y | |
| W-PIT7-1903 | PTMW | Qal/WBR | A | DIS | AS:UISO | 2 | Y | |
| W-PIT7-1903 | PTMW | Qal/WBR | A | DIS | E300.0:O-PO2 | 2 | Y | |
| W-PIT7-1904 | PTMW | Qal/WBR | A | DIS | AS:UISO | 2 | Y | |
| W-PIT7-1904 | PTMW | Qal/WBR | A | DIS | E300.0:O-PO2 | 2 | Y | |
| W-PIT7-1905 | PTMW | Qal/WBR | A | DIS | AS:UISO | 2 | Y | |
| W-PIT7-1905 | PTMW | Qal/WBR | A | DIS | E300.0:O-PO2 | 2 | Y | |
| W-PIT7-1907 | PTMW | Qal/WBR | A | DIS | AS:UISO | 2 | Y | |
| W-PIT7-1907 | PTMW | Qal/WBR | A | DIS | E300.0:O-PO2 | 2 | Y | |
| W-PIT7-1915 | PTMW | Qal/WBR | A | DIS | AS:UISO | 2 | Y | |
| W-PIT7-1915 | PTMW | Qal/WBR | A | DIS | E300.0:O-PO2 | 2 | Y | |
| W-PIT7-1916 | PTMW | Qal/WBR | A | DIS | AS:UISO | 2 | Y | |
| W-PIT7-1916 | PTMW | Qal/WBR | A | DIS | E300.0:O-PO2 | 2 | Y | |
| W-PIT7-1917 | PTMW | Qal/WBR | A | DIS | AS:UISO | 2 | Y | |
| W-PIT7-1917 | PTMW | Qal/WBR | A | DIS | E300.0:O-PO2 | 2 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | S | DIS | AS:UISO | 4 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | A | DIS | E300.0:O-PO2 | 2 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | A | DIS | E300.0:PERC | 4 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | A | DIS | E601:ALL | 4 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-PIT7-1918 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | Q | DIS | MS:UISO | 1 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | S | DIS | MS:UISO | 2 | Y | |
| W-PIT7-1918 | PTMW | Qal/WBR | S | DIS | MS:UISO | 4 | Y | |
| W-PIT7-1919 | PTMW | Qal/WBR | A | DIS | AS:UISO | 2 | Y | |
| W-PIT7-1919 | PTMW | Qal/WBR | A | DIS | E300.0:O-PO2 | 2 | Y | |
| W-PIT7-2141 | PTMW | Tnbs1-Tnbs0 | E | CMP | AS:UISO | 2 | N | To be sampled in 2012. |
| W-PIT7-2141 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-2141 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-2141 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-PIT7-2141 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-PIT7-2141 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-PIT7-2141 | PTMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | A | CMP-TF | AS:UISO | 2 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | A | CMP-TF | E300.0:NO3 | 2 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | A | CMP-TF | E300.0:PERC | 2 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | A | DIS-TF | E300.0:PERC | 4 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | A | CMP-TF | E601:ALL | 2 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | A | DIS-TF | E601:ALL | 4 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 2 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 4 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 1 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 2 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 3 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 4 | Y | |
| W-PIT7-2305 | EW | Qal/WBR | A | DIS-TF | MS:UISO | 4 | Y | |
| W-PIT7-2306 | EW | Qal/WBR | A | CMP-TF | AS:UISO | 2 | N | Inoperable pump. |
| W-PIT7-2306 | EW | Qal/WBR | A | CMP-TF | E300.0:NO3 | 2 | N | Inoperable pump. |
| W-PIT7-2306 | EW | Qal/WBR | A | CMP-TF | E300.0:PERC | 2 | N | Inoperable pump. |
| W-PIT7-2306 | EW | Qal/WBR | A | DIS-TF | E300.0:PERC | 4 | Y | |
| W-PIT7-2306 | EW | Qal/WBR | A | CMP-TF | E601:ALL | 2 | N | Inoperable pump. |
| W-PIT7-2306 | EW | Qal/WBR | A | DIS-TF | E601:ALL | 4 | Y | |
| W-PIT7-2306 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 2 | N | Inoperable pump. |
| W-PIT7-2306 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 4 | Y | |
| W-PIT7-2306 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 1 | N | Dry. |
| W-PIT7-2306 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 2 | N | Inoperable pump. |
| W-PIT7-2306 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 3 | Y | |
| W-PIT7-2306 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 4 | Y | |
| W-PIT7-2306 | EW | Qal/WBR | A | DIS-TF | MS:UISO | 4 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | A | CMP-TF | AS:UISO | 2 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | A | CMP-TF | E300.0:NO3 | 2 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | A | CMP-TF | E300.0:PERC | 2 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | A | DIS-TF | E300.0:PERC | 4 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | A | CMP-TF | E601:ALL | 2 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | A | DIS-TF | E601:ALL | 4 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 2 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | S | CMP-TF | E906:ALL | 4 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 1 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 2 | Y | |

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-PIT7-2307 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 3 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | Q | DIS-TF | KPA:UTOT | 4 | Y | |
| W-PIT7-2307 | EW | Qal/WBR | A | DIS-TF | MS:UISO | 4 | Y | |
| W-PIT7-2309 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-PIT7-2309 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT7-2309 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 2 | Y | |
| W-PIT7-2309 | PTMW | Qal/WBR | A | CMP | E601:ALL | 2 | Y | |
| W-PIT7-2309 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| W-PIT7-2309 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | Y | |
| W-PIT7-2309 | PTMW | Qal/WBR | A | DIS | MS:UISO | 2 | Y | |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | DWMETALS:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | E200.7:SI | 4 | Y | New well Baseline sampling. |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | E300.0:PERC | 4 | Y | New well Baseline sampling. |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | E624:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | E8330LOW:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | E900:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | E906:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | GENMIN:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | KPA:UTOT | 4 | Y | New well Baseline sampling. |
| W-PIT7-2703 | PTMW | Qal/WBR | U | DIS | MS:UISO | 4 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | DWMETALS:ALL | 3 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | E200.7:SI | 3 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | E300.0:PERC | 3 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | E624:ALL | 2 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | E624:ALL | 3 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | E8330LOW:ALL | 3 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | E900:ALL | 3 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | E906:ALL | 2 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | E906:ALL | 3 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | GENMIN:ALL | 3 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | KPA:UTOT | 3 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | MS:UISO | 2 | Y | New well Baseline sampling. |
| W-PIT7-2704 | PTMW | Qal/WBR | U | DIS | MS:UISO | 3 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | DWMETALS:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | E200.7:SI | 4 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | E300.0:PERC | 4 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | E624:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | E8330LOW:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | E900:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | E906:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | GENMIN:ALL | 4 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | KPA:UTOT | 4 | Y | New well Baseline sampling. |
| W-PIT7-2705 | PTMW | Qal/WBR | U | DIS | MS:UISO | 4 | Y | New well Baseline sampling. |

**Notes appear on the following page.**

**Table 2.5-8 (Cont.). Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|

**Notes:**
**1) Pit 7 Complex primary COC: tritium (E906).**
**2) Pit 7 Complex secondary COC: nitrate (E300.0:NO3).**
**3) Pit 7 Complex secondary COC: perchlorate (E300.0:PERC)**
**4) Pit 7 Complex secondary COC: uranium (AS:UISO and/or MS:UISO).**
**5) Pit 7 Complex secondary COC: VOCs (E601).**
**6) CMP Detection monitoring analyte: tritium (E906) sampled annually.**
**7) CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.**
**8) CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.**
**9) CMP Detection monitoring analyte: HE compounds (E8330) sampled annually.**
**10) CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.**
**11) CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.**
**12) CMP Detection monitoring analytes: Title 26 metals plus Li (T26METALS and E200.8:Li) sampled annually.**
**13) CMP Detection monitoring analytes: uranium isotopes (AS:UISO) sampled annually.**
**14) CMP Detection monitoring analytes: polychlorinated biphenyls (E8082) sampled annually.**
**15) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.5-9. PIT7-Source (PIT7-SRC) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | Total Uranium mass removed (g) |
|---|---|---|---|---|---|---|
| PIT7-SRC | July | NA | 0.0049 | 0.12 | 0.39 | 0.17 |
| | August | NA | 0.020 | 0.17 | 0.53 | 0.34 |
| | September | NA | 0.043 | 0.22 | 0.65 | 0.64 |
| | October | NA | 0.035 | 0.21 | 0.56 | 0.62 |
| | November | NA | 0.041 | 0.27 | 0.74 | 0.73 |
| | December | NA | 0.020 | 0.14 | 0.34 | 0.17 |
| Total | | NA | 0.16 | 1.1 | 3.2 | 2.7 |

**Table 2.6-1. Building 854-Source (854-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of ft$^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 854-SRC | July | 381 | 672 | 1,041 | 75,387 |
| | August | 830 | 830 | 2,251 | 89,629 |
| | September | 486 | 625 | 1,303 | 64,407 |
| | October | 721 | 721 | 1,974 | 71,339 |
| | November | 640 | 790 | 1,763 | 76,376 |
| | December | 0 | 0 | 0 | 0 |
| Total | | 3,058 | 3,638 | 8,332 | 377,138 |

**Table 2.6-2. Building 854-Proximal (854-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of ft$^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 854-PRX | July | NA | 667 | NA | 38,136 |
| | August | NA | 839 | NA | 47,940 |
| | September | NA | 90 | NA | 5,039 |
| | October | NA | 720 | NA | 41,870 |
| | November | NA | 788 | NA | 45,084 |
| | December | NA | 692 | NA | 41,711 |
| Total | | NA | 3,796 | NA | 219,780 |

**Table 2.6-3. Building 854-Distal (854-DIS) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 854-DIS | July | NA | 13 | NA | 830 |
| | August | NA | 17 | NA | 1,113 |
| | September | NA | 15 | NA | 1,067 |
| | October | NA | 16 | NA | 1,144 |
| | November | NA | 16 | NA | 1,189 |
| | December | NA | 0 | NA | 0 |
| Total | | NA | 77 | NA | 5,343 |

**Table 2.6-4. Building 854 Operable Unit volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.**

| Location | Date | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetra-chloride (µg/L) | Chloro-form (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Building 854-Distal*** | | | | | | | | | | | | | | | |
| 854-DIS-I | 7/11/11 | 36 | <0.5 | 0.69 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-DIS-I | 10/5/11 | 38 | <0.5 | 0.73 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-DIS-E | 7/11/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-DIS-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-DIS-E | 9/7/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-DIS-E | 10/5/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-DIS-E | 11/7/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-DIS-E[a] | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| ***Building 854-Proximal*** | | | | | | | | | | | | | | | |
| 854-PRX-I | 7/11/11 | 22 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-PRX-I | 10/5/11 | 21 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-PRX-E | 7/11/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-PRX-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-PRX-E | 9/7/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-PRX-E | 10/5/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-PRX-E | 11/7/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-PRX-E | 12/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ***Building 854-Source*** | | | | | | | | | | | | | | | |
| 854-SRC-I | 7/11/11 | 68 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-SRC-I | 8/15/11 | 66 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

**Table 2.6-4 (Cont.). Building 854 Operable Unit volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.**

| Location | Date | TCE (μg/L) | PCE (μg/L) | cis-1,2-DCE (μg/L) | trans-1,2-DCE (μg/L) | Carbon tetra-chloride (μg/L) | Chloro-form (μg/L) | 1,1-DCA (μg/L) | 1,2-DCA (μg/L) | 1,1-DCE (μg/L) | 1,1,1-TCA (μg/L) | 1,1,2-TCA (μg/L) | Freon 11 (μg/L) | Freon 113 (μg/L) | Vinyl chloride (μg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Building 854-Source (continued)*** | | | | | | | | | | | | | | | |
| 854-SRC-I | 10/5/11 | 73 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-SRC-E | 7/11/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-SRC-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-SRC-E | 9/7/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-SRC-E | 10/5/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-SRC-E | 11/7/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 854-SRC-E[a] | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

**Notes:**

[a] **No samples collected in December due to GWTS shut down for freeze protection.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.6-4 (Cont.). Analyte detected but not reported in main table.**

| Location | Date | Detection frequency |
|---|---|---|
| ***Building 854-Distal*** | | |
| 854-DIS-I | 7/11/11 | 0 of 18 |
| 854-DIS-I | 10/5/11 | 0 of 18 |
| 854-DIS-E | 7/11/11 | 0 of 18 |
| 854-DIS-E | 8/1/11 | 0 of 18 |
| 854-DIS-E | 9/7/11 | 0 of 18 |
| 854-DIS-E | 10/5/11 | 0 of 18 |
| 854-DIS-E | 11/7/11 | 0 of 18 |
| 854-DIS-E[a] | – | – |
| ***Building 854-Proximal*** | | |
| 854-PRX-I | 7/11/11 | 0 of 18 |
| 854-PRX-I | 10/5/11 | 0 of 18 |
| 854-PRX-E | 7/11/11 | 0 of 18 |
| 854-PRX-E | 8/1/11 | 0 of 18 |
| 854-PRX-E | 9/7/11 | 0 of 18 |
| 854-PRX-E | 10/5/11 | 0 of 18 |
| 854-PRX-E | 11/7/11 | 0 of 18 |
| 854-PRX-E | 12/6/11 | 0 of 18 |
| ***Building 854-Source*** | | |
| 854-SRC-I | 7/11/11 | 0 of 18 |
| 854-SRC-I | 8/15/11 | 0 of 18 |
| 854-SRC-I | 10/5/11 | 0 of 18 |
| 854-SRC-E | 7/11/11 | 0 of 18 |
| 854-SRC-E | 8/1/11 | 0 of 18 |
| 854-SRC-E | 9/7/11 | 0 of 18 |
| 854-SRC-E | 10/5/11 | 0 of 18 |
| 854-SRC-E | 11/7/11 | 0 of 18 |
| 854-SRC-E[a] | – | – |

**Notes:**

[a] **No samples collected in December due to GWTS shut down for freeze protection.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.6-5. Building 854 Operable Unit nitrate and perchlorate in ground water extraction and treatment system influent and effluent.**

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| ***Building 854-Distal*** | | | |
| 854-DIS-I | 7/11/11 | 21 | 5.1 |
| 854-DIS-I | 10/5/11 | 22 | 4.5 |
| 854-DIS-E | 7/11/11 | 2.8 | <4 |
| 854-DIS-E | 8/1/11 | 2.1 | <4 |
| 854-DIS-E | 9/7/11 | 3.9 | <4 |
| 854-DIS-E | 10/5/11 | 9 | <4 |
| 854-DIS-E | 11/7/11 | 8.7 | <4 |
| 854-DIS-E[a] | – | – | – |
| ***Building 854-Proximal***[b] | | | |
| 854-PRX-I | 7/11/11 | 39 | 9.7 |
| 854-PRX-I | 8/1/11 | 41 | – |
| 854-PRX-I | 9/7/11 | 40 | – |
| 854-PRX-I | 10/5/11 | 42 | 11 |
| 854-PRX-I | 11/7/11 | 42 | – |
| 854-PRX-I | 12/6/11 | 39 | – |
| 854-PRX-E | 7/11/11 | <0.5 | <4 |
| 854-PRX-E | 8/1/11 | <0.5 | <4 |
| 854-PRX-E | 9/7/11 | <0.5 | <4 |
| 854-PRX-E | 10/5/11 | <0.5 | <4 |
| 854-PRX-E | 11/7/11 | <0.5 | <4 |
| 854-PRX-E | 12/6/11 | <0.5 | <4 |
| ***Building 854-Source*** | | | |
| 854-SRC-I | 7/11/11 | NR | <4 |
| 854-SRC-I | 10/5/11 | NR | 4 |
| 854-SRC-E | 7/11/11 | NR | <4 |
| 854-SRC-E | 8/1/11 | NR | <4 |
| 854-SRC-E | 9/7/11 | NR | <4 |
| 854-SRC-E | 10/5/11 | NR | <4 |
| 854-SRC-E | 11/7/11 | NR | <4 |
| 854-SRC-E[a] | – | – | – |

**Notes:**

[a] No samples collected in December due to GWTS shut down for freeze protection.

[b] Monthly influent nitrate samples collected for internal purposes.

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

**Table 2.6-6. Building 854 Operable Unit treatment facility sampling and analysis plan.**

| Sample location | Sample identification | Parameter | Frequency |
|---|---|---|---|
| ***854-SRC GWTS*** | | | |
| **Influent Port** | **854-SRC-I** | **VOCs** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| | | **pH** | **Quarterly** |
| **Effluent Port** | **854-SRC-E** | **VOCs** | **Monthly** |
| | | **Perchlorate** | **Monthly** |
| | | **pH** | **Monthly** |
| ***854-SRC SVTS*** | | | |
| **Influent Port** | **W-854-1834-854-SRC-VI** | **No Monitoring Requirements** | |
| **Effluent Port** | **854-SRC-E** | **VOCs** | **Weekly[a]** |
| **Intermediate GAC** | **854-SRC-VCF3I** | **VOCs** | **Weekly[a]** |
| ***854-PRX GWTS*** | | | |
| **Influent Port** | **W-854-03-854-PRX-I** | **VOCs** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| | | **Nitrate** | **Quarterly** |
| | | **pH** | **Quarterly** |
| **Effluent Port** | **854-PRX-BTU-I** | **VOCs** | **Monthly** |
| **Effluent Port** | **854-PRX-E** | **Perchlorate** | **Monthly** |
| | | **Nitrate** | **Monthly** |
| | | **pH** | **Monthly** |
| ***854-DIS GWTS*** | | | |
| **Influent Port** | **W-854-2139-854-DIS-I** | **VOCs** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| | | **Nitrate** | **Quarterly** |
| | | **pH** | **Quarterly** |
| **Effluent Port** | **854-DIS-E** | **VOCs** | **Monthly** |
| | | **Perchlorate** | **Monthly** |
| | | **Nitrate** | **Monthly** |
| | | **pH** | **Monthly** |

**Notes:**

**[a] Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.**

**One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.6-7. Building 854 Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-854-01 | PTWM | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-01 | PTWM | Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-01 | PTWM | Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-01 | PTWM | Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-01 | PTWM | Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-02 | EW | Tnbs1-Tnsc0 | A | CMP-TF | E300.0:NO3 | 2 | Y | |
| W-854-02 | EW | Tnbs1-Tnsc0 | S | DIS-TF | E300.0:PERC | 1 | Y | |
| W-854-02 | EW | Tnbs1-Tnsc0 | S | CMP-TF | E300.0:PERC | 2 | Y | |
| W-854-02 | EW | Tnbs1-Tnsc0 | S | DIS-TF | E300.0:PERC | 3 | Y | |
| W-854-02 | EW | Tnbs1-Tnsc0 | S | CMP-TF | E300.0:PERC | 4 | Y | |
| W-854-02 | EW | Tnbs1-Tnsc0 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-854-02 | EW | Tnbs1-Tnsc0 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-854-02 | EW | Tnbs1-Tnsc0 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-854-02 | EW | Tnbs1-Tnsc0 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:NO3 | 2 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | M | DIS-TF | E300.0:NO3 | 2 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | M | DIS-TF | E300.0:NO3 | 2 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:NO3 | 3 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | M | DIS-TF | E300.0:NO3 | 3 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | M | DIS-TF | E300.0:NO3 | 3 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:NO3 | 4 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | M | DIS-TF | E300.0:NO3 | 4 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | M | DIS-TF | E300.0:NO3 | 4 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:PERC | 1 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:PERC | 2 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:PERC | 3 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:PERC | 4 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E601:ALL | 1 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E601:ALL | 2 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E601:ALL | 3 | Y | |
| W-854-03 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E601:ALL | 4 | Y | |
| W-854-04 | PTWM | Tmss | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-04 | PTWM | Tmss | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-04 | PTWM | Tmss | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-04 | PTWM | Tmss | S | CMP | E601:ALL | 2 | Y | |
| W-854-04 | PTWM | Tmss | S | CMP | E601:ALL | 4 | Y | |
| W-854-05 | PTWM | Qls-Tnbs1 | A | CMP | E300.0:NO3 | 2 | N | Inoperable pump. |
| W-854-05 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 2 | N | Inoperable pump. |
| W-854-05 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-05 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 2 | N | Inoperable pump. |
| W-854-05 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-854-06 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-06 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-06 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-06 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-06 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-07 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-07 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |

**Table 2.6-7 (Cont.). Building 854 Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-854-07 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-07 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-07 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-08 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-08 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-08 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-08 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-08 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-09 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-09 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-09 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-09 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-09 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-10 | PTWM | Qls-Tnbs1 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-10 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-10 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-10 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-854-10 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-854-11 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-854-11 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | N | Dry. |
| W-854-11 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | N | Dry. |
| W-854-11 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | N | Dry. |
| W-854-11 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | N | Dry. |
| W-854-12 | PTWM | Tmss | A | CMP | E300.0:NO3 | 2 | N | Insufficient water. |
| W-854-12 | PTWM | Tmss | S | CMP | E300.0:PERC | 2 | N | Insufficient water. |
| W-854-12 | PTWM | Tmss | S | CMP | E300.0:PERC | 4 | N | Insufficient water. |
| W-854-12 | PTWM | Tmss | S | CMP | E601:ALL | 2 | N | Insufficient water. |
| W-854-12 | PTWM | Tmss | S | CMP | E601:ALL | 4 | N | Insufficient water. |
| W-854-13 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-13 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-13 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-13 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-13 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-14 | PTWM | Qls-Tnbs1 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-14 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-14 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-14 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-854-14 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-854-15 | PTWM | Qls-Tnbs1 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-15 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-15 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-15 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 2 | Y | |
| W-854-15 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 4 | Y | |
| W-854-17 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-17 | PTWM | Tnbs1-Tnsc0 | S | DIS | E300.0:PERC | 1 | Y | |
| W-854-17 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-17 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-17 | PTWM | Tnbs1-Tnsc0 | S | DIS | E601:ALL | 1 | Y | |
| W-854-17 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |

**Table 2.6-7 (Cont.). Building 854 Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-854-17 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-18A | EW | Tnbs1-Tnsc0 | A | CMP-TF | E300.0:NO3 | 2 | Y | |
| W-854-18A | EW | Tnbs1-Tnsc0 | S | DIS-TF | E300.0:PERC | 1 | Y | |
| W-854-18A | EW | Tnbs1-Tnsc0 | S | CMP-TF | E300.0:PERC | 2 | Y | |
| W-854-18A | EW | Tnbs1-Tnsc0 | S | DIS-TF | E300.0:PERC | 3 | Y | |
| W-854-18A | EW | Tnbs1-Tnsc0 | S | CMP-TF | E300.0:PERC | 4 | Y | |
| W-854-18A | EW | Tnbs1-Tnsc0 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-854-18A | EW | Tnbs1-Tnsc0 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-854-18A | EW | Tnbs1-Tnsc0 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-854-18A | EW | Tnbs1-Tnsc0 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-854-19 | PTWM | Qls-Tnbs1 | O | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-854-19 | PTWM | Qls-Tnbs1 | O | CMP | E300.0:PERC | 2 | N | Dry. |
| W-854-19 | PTWM | Qls-Tnbs1 | O | CMP | E601:ALL | 2 | N | Dry. |
| W-854-1701 | PTWM | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-1701 | PTWM | Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-1701 | PTWM | Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-1701 | PTWM | Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-1701 | PTWM | Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-1706 | PTWM | Qls-Tnbs1 | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-854-1706 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 2 | N | Dry. |
| W-854-1706 | PTWM | Qls-Tnbs1 | S | CMP | E300.0:PERC | 4 | N | Dry. |
| W-854-1706 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 2 | N | Dry. |
| W-854-1706 | PTWM | Qls-Tnbs1 | S | CMP | E601:ALL | 4 | N | Dry. |
| W-854-1707 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-1707 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-1707 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-1707 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-1707 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-1731 | PTWM | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-1731 | PTWM | Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-1731 | PTWM | Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-1731 | PTWM | Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-1731 | PTWM | Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-1822 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-1822 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-1822 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-1822 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-1822 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-1823 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-1823 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-1823 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-1823 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-1823 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-1902 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-1902 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-1902 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-1902 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-1902 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-2115 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |

**Table 2.6-7 (Cont.). Building 854 Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-854-2115 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-2115 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-2115 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-2115 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:NO3 | 2 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:NO3 | 3 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:NO3 | 4 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:PERC | 1 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:PERC | 2 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:PERC | 3 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E300.0:PERC | 4 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E601:ALL | 1 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E601:ALL | 2 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E601:ALL | 3 | Y | |
| W-854-2139 | EW | Tnbs1-Tnsc0 | Q | CMP-TF | E601:ALL | 4 | Y | |
| W-854-2218 | EW | Tnbs1-Tnsc0 | A | CMP-TF | E300.0:NO3 | 2 | Y | |
| W-854-2218 | EW | Tnbs1-Tnsc0 | S | DIS-TF | E300.0:PERC | 1 | Y | |
| W-854-2218 | EW | Tnbs1-Tnsc0 | S | CMP-TF | E300.0:PERC | 2 | Y | |
| W-854-2218 | EW | Tnbs1-Tnsc0 | S | DIS-TF | E300.0:PERC | 3 | Y | |
| W-854-2218 | EW | Tnbs1-Tnsc0 | S | CMP-TF | E300.0:PERC | 4 | Y | |
| W-854-2218 | EW | Tnbs1-Tnsc0 | S | DIS-TF | E601:ALL | 1 | Y | |
| W-854-2218 | EW | Tnbs1-Tnsc0 | S | CMP-TF | E601:ALL | 2 | Y | |
| W-854-2218 | EW | Tnbs1-Tnsc0 | S | DIS-TF | E601:ALL | 3 | Y | |
| W-854-2218 | EW | Tnbs1-Tnsc0 | S | CMP-TF | E601:ALL | 4 | Y | |
| W-854-2611 | PTMW | Tnbs1/Tnsc0 | A | CMP | E300.0:NO3 | 2 | N | Insufficient water. |
| W-854-2611 | PTMW | Tnbs1/Tnsc0 | S | CMP | E300.0:PERC | 2 | N | Insufficient water. |
| W-854-2611 | PTMW | Tnbs1/Tnsc0 | S | CMP | E300.0:PERC | 4 | N | Insufficient water. |
| W-854-2611 | PTMW | Tnbs1/Tnsc0 | S | CMP | E601:ALL | 2 | N | Insufficient water. |
| W-854-2611 | PTMW | Tnbs1/Tnsc0 | S | CMP | E601:ALL | 4 | N | Insufficient water. |
| W-854-45 | PTWM | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-854-45 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-854-45 | PTWM | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-854-45 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| W-854-45 | PTWM | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| W-854-F2 | PTWM | Qls-Tnbs1 | O | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-854-F2 | PTWM | Qls-Tnbs1 | O | CMP | E300.0:PERC | 2 | N | Dry. |
| W-854-F2 | PTWM | Qls-Tnbs1 | O | CMP | E601:ALL | 2 | N | Dry. |
| SPRING10 | SPR | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| SPRING10 | SPR | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| SPRING10 | SPR | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| SPRING10 | SPR | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| SPRING10 | SPR | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |
| SPRING11 | SPR | Tnbs1-Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| SPRING11 | SPR | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 2 | Y | |
| SPRING11 | SPR | Tnbs1-Tnsc0 | S | CMP | E300.0:PERC | 4 | Y | |
| SPRING11 | SPR | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 2 | Y | |
| SPRING11 | SPR | Tnbs1-Tnsc0 | S | CMP | E601:ALL | 4 | Y | |

**Notes appear on the following page.**

**Table 2.6-7 (Cont.). Building 854 Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|

**Notes:**

**1) Building 854 primary Contaminants of Concern in Ground Water: VOCs (E601 or E624) and perchlorate (E300.0:PERC ).**

**2) Building 854 secondary COC: nitrate (E300:NO3).**

**3) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.6-8. Building 854-Source (854-SRC) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 854-SRC | July | 73 | 19 | 0.71 | 13 | NA | NA |
| | August | 160 | 23 | 0.87 | 16 | NA | NA |
| | September | 91 | 17 | 0.66 | 11 | NA | NA |
| | October | 110 | 20 | 0.86 | 12 | NA | NA |
| | November | 100 | 21 | 0.94 | 13 | NA | NA |
| | December | 0 | 0 | 0 | 0 | NA | NA |
| Total | | 540 | 100 | 4.0 | 66 | NA | NA |

**Table 2.6-9. Building 854-Proximal (854-PRX) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 854-PRX | July | NA | 3.2 | 1.4 | 5.6 | NA | NA |
| | August | NA | 4.0 | 1.8 | 7.4 | NA | NA |
| | September | NA | 0.42 | 0.18 | 0.76 | NA | NA |
| | October | NA | 3.5 | 1.5 | 6.3 | NA | NA |
| | November | NA | 3.8 | 1.7 | 6.8 | NA | NA |
| | December | NA | 3.5 | 1.5 | 6.2 | NA | NA |
| Total | | NA | 18 | 8.1 | 33 | NA | NA |

**Table 2.6-10. Building 854-Distal (854-DIS) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 854-DIS | July | NA | 0.12 | 0.016 | 0.066 | NA | NA |
| | August | NA | 0.15 | 0.022 | 0.088 | NA | NA |
| | September | NA | 0.15 | 0.021 | 0.085 | NA | NA |
| | October | NA | 0.16 | 0.022 | 0.091 | NA | NA |
| | November | NA | 0.17 | 0.023 | 0.095 | NA | NA |
| | December | NA | 0 | 0 | 0 | NA | NA |
| Total | | NA | 0.74 | 0.10 | 0.42 | NA | NA |

**Table 2.7-1. Building 832-Source (832-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 832-SRC | July | 456 | 456 | 70 | 7,353 |
| | August | 840 | 840 | 132 | 11,528 |
| | September | 672 | 672 | 106 | 6,612 |
| | October | 792 | 792 | 163 | 7,157 |
| | November | 672 | 672 | 157 | 4,886 |
| | December | 708 | 708 | 168 | 2,450 |
| Total | | 4,140 | 4,140 | 796 | 39,986 |

**Table 2.7-2. Building 830-Source (830-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 830-SRC | July | 19 | 315 | 8 | 112,573 |
| | August | 724 | 393 | 976 | 239,976 |
| | September | 626 | 324 | 1,133 | 185,054 |
| | October | 793 | 531 | 1,237 | 246,964 |
| | November | 675 | 478 | 1,071 | 208,869 |
| | December | 703 | 417 | 1,337 | 198,615 |
| Total | | 3,540 | 2,458 | 5,762 | 1,192,051 |

**Table 2.7-3. Building 830-Distal South (830-DISS) volumes of ground water and soil vapor extracted and discharged, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS Operational hours | GWTS Operational hours | Volume of vapor extracted (thousands of $ft^3$) | Volume of ground water discharged (gal) |
|---|---|---|---|---|---|
| 830-DISS | July | NA | 696 | NA | 85,914 |
| | August | NA | 840 | NA | 177,076 |
| | September | NA | 696 | NA | 143,592 |
| | October | NA | 648 | NA | 130,746 |
| | November | NA | 792 | NA | 156,515 |
| | December | NA | 0 | NA | 0 |
| Total | | NA | 3,672 | NA | 693,843 |

**Table 2.7-4. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.**

| Location | Date | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetra-chloride (µg/L) | Chloro-form (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Building 830-Distal South*[a]** | | | | | | | | | | | | | | | |
| ***Building 830-Source*** | | | | | | | | | | | | | | | |
| 830-SRC-I | 7/11/11 | 2,000 D | 2.8 | 0.91 | <0.5 | <0.5 | 0.95 | <0.5 | 0.88 | <0.5 | <0.5 | 0.51 | <0.5 | <0.5 | <0.5 |
| 830-SRC-I | 10/3/11 | 85 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 830-SRC-I2 | 7/11/11 | 1,100 D | 1.6 | 1.9 | <0.5 | <0.5 | 0.83 | <0.5 | 0.88 | 1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 830-SRC-I2 | 9/6/11 | 22 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 830-SRC-I2 | 10/3/11 | 19 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 830-SRC-E | 7/11/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 830-SRC-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 830-SRC-E | 9/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 830-SRC-E | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 830-SRC-E | 11/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 830-SRC-E | 12/5/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ***Building 832-Source*** | | | | | | | | | | | | | | | |
| 832-SRC-I | 7/18/11 | 62 | <0.5 | 1.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 832-SRC-I | 10/3/11 | 160 D | <0.5 | 2.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 832-SRC-E | 7/18/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 832-SRC-E | 8/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 832-SRC-E | 9/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 832-SRC-E | 10/3/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 832-SRC-E | 11/1/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 832-SRC-E | 12/5/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

**Notes:**

[a] **No influent or effluent monitoring conducted due to VOC treatment at CGSA GWTS.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.7-4 (Cont.). Analyte detected but not reported in main table.**

| Location | Date | Detection frequency | 1,2-DCE (Total) ($\mu$g/l) |
|---|---|---|---|
| ***Building 830-Distal South***[a] | | | |
| ***Building 830-Source*** | | | |
| 830-SRC-I | 7/11/11 | 0 of 18 | – |
| 830-SRC-I | 10/3/11 | 0 of 18 | – |
| 830-SRC-I2 | 7/11/11 | 1 of 18 | 1.9 |
| 830-SRC-I2 | 9/6/11 | 0 of 18 | – |
| 830-SRC-I2 | 10/3/11 | 0 of 18 | – |
| 830-SRC-E | 7/11/11 | 0 of 18 | – |
| 830-SRC-E | 8/1/11 | 0 of 18 | – |
| 830-SRC-E | 9/6/11 | 0 of 18 | – |
| 830-SRC-E | 10/3/11 | 0 of 18 | – |
| 830-SRC-E | 11/1/11 | 0 of 18 | – |
| 830-SRC-E | 12/5/11 | 0 of 18 | – |
| ***Building 832-Source*** | | | |
| 832-SRC-I | 7/18/11 | 1 of 18 | 1.5 |
| 832-SRC-I | 10/3/11 | 1 of 18 | 2.7 |
| 832-SRC-E | 7/18/11 | 0 of 18 | – |
| 832-SRC-E | 8/1/11 | 0 of 18 | – |
| 832-SRC-E | 9/6/11 | 0 of 18 | – |
| 832-SRC-E | 10/3/11 | 0 of 18 | – |
| 832-SRC-E | 11/1/11 | 0 of 18 | – |
| 832-SRC-E | 12/5/11 | 0 of 18 | – |

**Notes:**

[a] **No influent or effluent monitoring conducted due to VOC treatment at CGSA GWTS.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.7-5. Building 832 Canyon Operable Unit perchlorate in ground water extraction and treatment system influent and effluent.**

| Location | Date | Perchlorate (µg/L) |
|---|---|---|
| ***Building 830-Distal South*** | | |
| 830-DISS-I | 7/19/11 | <4 |
| 830-DISS-I | 10/5/11 | <4 |
| 830-DISS-E | 7/19/11 | <4 |
| 830-DISS-E | 8/2/11 | <4 |
| 830-DISS-E | 9/6/11 | <4 |
| 830-DISS-E | 10/5/11 | <4 |
| 830-DISS-E | 11/7/11 | <4 |
| 830-DISS-E[a] | – | – |
| ***Building 830-Source*** | | |
| 830-SRC-I | 7/11/11 | 4 |
| 830-SRC-I | 10/3/11 | <4 |
| 830-SRC-E | 7/11/11 | <4 |
| 830-SRC-E | 8/1/11 | <4 |
| 830-SRC-E | 9/6/11 | <4 |
| 830-SRC-E | 10/3/11 | <4 |
| 830-SRC-E | 11/1/11 | <4 |
| 830-SRC-E | 12/5/11 | <4 |
| ***Building 832-Source*** | | |
| 832-SRC-I | 7/18/11 | 5 |
| 832-SRC-I | 10/3/11 | 6.9 |
| 832-SRC-E | 7/18/11 | <4 |
| 832-SRC-E | 8/1/11 | <4 |
| 832-SRC-E | 9/6/11 | <4 |
| 832-SRC-E | 10/3/11 | <4 |
| 832-SRC-E | 11/1/11 | <4 |
| 832-SRC-E | 12/5/11 | <4 |

**Notes:**

[a] **No compliance monitoring conducted in December due to shut down of GWTS.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.7-6. Building 832 Canyon Operable Unit treatment facility sampling and analysis plan.**

| Sample location | Sample identification | Parameter | Frequency |
|---|---|---|---|
| ***832-SRC GWTS*** | | | |
| **Influent Port** | **832-SRC-I** | **VOCs** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| | | **pH** | **Quarterly** |
| **Effluent Port** | **832-SRC-E** | **VOCs** | **Monthly** |
| | | **Perchlorate** | **Monthly** |
| | | **PH** | **Monthly** |
| ***832-SRC SVTS*** | | | |
| **Influent Port** | **832-SRC-VI** | **No Monitoring Requirements** | |
| **Effluent Port** | **832-SRC-VE** | **VOCs** | **Weekly**[a] |
| **Intermediate GAC** | **832-SRC-VCF3I** | **VOCs** | **Weekly**[a] |
| ***830-SRC GWTS*** | | | |
| **Influent Port** | **830-SRC-I** | **VOCs** | **Quarterly** |
| | | **Perchlorate** | **Quarterly** |
| | | **PH** | **Quarterly** |
| **Effluent Port** | **830-SRC-E** | **VOCs** | **Monthly** |
| | | **Perchlorate** | **Monthly** |
| | | **PH** | **Monthly** |
| ***830-SRC SVTS*** | | | |
| **Influent Port** | **830-SRC-VI** | **No Monitoring Requirements** | |
| **Effluent Port** | **830-SRC-VE** | **VOCs** | **Weekly**[a] |
| **Intermediate GAC** | **830-SRC-VCF3I** | **VOCs** | **Weekly**[a] |
| ***830-DISS GWTS*** | | | |
| **Influent Port** | **830-DISS-I** | **Perchlorate** | **Quarterly** |
| | | **pH** | **Quarterly** |
| **Effluent Port** | **830-DISS-E** | **Perchlorate** | **Monthly** |
| | | **pH** | **Monthly** |

**Notes:**

[a] **Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.**

**One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.7-7. Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| SPRING3 | SPR | Qal/WBR | S | CMP | E601:ALL | 3 | N | Dry. |
| SPRING3 | SPR | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| SPRING3 | SPR | Qal/WBR | A | CMP | E300.0:PERC | 1 | Y | |
| SPRING3 | SPR | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| SPRING4 | SPR | Tpsg-Tps | O | CMP | E300.0:NO3 | 1 | N | Dry. |
| SPRING4 | SPR | Tpsg-Tps | O | CMP | E300.0:PERC | 1 | N | Dry. |
| SPRING4 | SPR | Tpsg-Tps | O | CMP | E601:ALL | 1 | N | Dry. |
| SVI-830-031 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | Y | |
| SVI-830-031 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| SVI-830-031 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 1 | Y | |
| SVI-830-031 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| SVI-830-032 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | Y | |
| SVI-830-032 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| SVI-830-032 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 1 | Y | |
| SVI-830-032 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| SVI-830-033 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | Y | |
| SVI-830-033 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| SVI-830-033 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 1 | Y | |
| SVI-830-033 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| SVI-830-035 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | Y | |
| SVI-830-035 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| SVI-830-035 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 1 | Y | |
| SVI-830-035 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| W-830-04A | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-04A | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-04A | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-04A | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-05 | PTMW | Tnsc1c | S | CMP | E601:ALL | 3 | Y | |
| W-830-05 | PTMW | Tnsc1c | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-05 | PTMW | Tnsc1c | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-05 | PTMW | Tnsc1c | S | CMP | E601:ALL | 1 | Y | |
| W-830-07 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | N | Dry. |
| W-830-07 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-830-07 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 1 | N | Dry. |
| W-830-07 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | N | Dry. |
| W-830-09 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-830-09 | PTMW | UTnbs1 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-830-09 | PTMW | UTnbs1 | O | CMP | E300.0:PERC | 1 | Y | |
| W-830-09 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-830-10 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-10 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-10 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-10 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-11 | PTMW | Tnsc1c | S | CMP | E601:ALL | 3 | Y | |
| W-830-11 | PTMW | Tnsc1c | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-11 | PTMW | Tnsc1c | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-11 | PTMW | Tnsc1c | S | CMP | E601:ALL | 1 | Y | |
| W-830-12 | GW | LTnbs1 | Q | CMP | E601:ALL | 4 | N | Inoperable pump. |
| W-830-12 | GW | LTnbs1 | S | CMP | E300.0:NO3 | 3 | N | Inoperable pump. |

**Table 2.7-7 (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-830-12 | GW | LTnbs1 | S | CMP | E300.0:PERC | 3 | N | Inoperable pump. |
| W-830-12 | GW | LTnbs1 | Q | CMP | E601:ALL | 3 | N | Inoperable pump. |
| W-830-12 | GW | LTnbs1 | Q | CMP | E601:ALL | 2 | N | Inoperable pump. |
| W-830-12 | GW | LTnbs1 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-830-12 | GW | LTnbs1 | S | CMP | E300.0:PERC | 1 | Y | |
| W-830-12 | GW | LTnbs1 | Q | CMP | E601:ALL | 1 | Y | |
| W-830-13 | PTMW | Tnbs2 | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-830-13 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-830-13 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | N | Inoperable pump. |
| W-830-13 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | N | Inoperable pump. |
| W-830-13 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | N | Inoperable pump. |
| W-830-14 | PTMW | Tnsc1b | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-830-14 | PTMW | Tnsc1b | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-830-14 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-14 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-15 | GW | UTnbs1 | Q | CMP | E601:ALL | 4 | Y | |
| W-830-15 | GW | UTnbs1 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-830-15 | GW | UTnbs1 | S | CMP | E300.0:PERC | 3 | Y | |
| W-830-15 | GW | UTnbs1 | Q | CMP | E601:ALL | 3 | Y | |
| W-830-15 | GW | UTnbs1 | Q | CMP | E601:ALL | 2 | Y | |
| W-830-15 | GW | UTnbs1 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-830-15 | GW | UTnbs1 | S | CMP | E300.0:PERC | 1 | Y | |
| W-830-15 | GW | UTnbs1 | Q | CMP | E601:ALL | 1 | Y | |
| W-830-16 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-16 | PTMW | Tnsc1b | O | CMP | E300.0:NO3 | 1 | Y | |
| W-830-16 | PTMW | Tnsc1b | O | CMP | E300.0:PERC | 1 | Y | |
| W-830-16 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-17 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-830-17 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-17 | PTMW | Tnbs2 | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-17 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-830-1730 | GW | Tnsc1b | Q | CMP | E601:ALL | 4 | Y | |
| W-830-1730 | GW | Tnsc1b | S | CMP | E300.0:NO3 | 3 | Y | |
| W-830-1730 | GW | Tnsc1b | S | CMP | E300.0:PERC | 3 | Y | |
| W-830-1730 | GW | Tnsc1b | Q | CMP | E601:ALL | 3 | Y | |
| W-830-1730 | GW | Tnsc1b | Q | CMP | E601:ALL | 2 | Y | |
| W-830-1730 | GW | Tnsc1b | S | CMP | E300.0:NO3 | 1 | Y | |
| W-830-1730 | GW | Tnsc1b | S | CMP | E300.0:PERC | 1 | Y | |
| W-830-1730 | GW | Tnsc1b | Q | CMP | E601:ALL | 1 | Y | |
| W-830-18 | PTMW | UTnbs1 | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-830-18 | PTMW | UTnbs1 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-830-18 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-830-18 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-830-1807 | EW | Qal/WBR-Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-1807 | EW | Qal/WBR-Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-830-1807 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-1807 | EW | Qal/WBR-Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-830-1807 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-1807 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |

**Table 2.7-7 (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-830-1807 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-1829 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-1829 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-1829 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-1829 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-1830 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-1830 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-1830 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-1830 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-1831 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-1831 | PTMW | Tnsc1b | O | CMP | E300.0:NO3 | 1 | Y | |
| W-830-1831 | PTMW | Tnsc1b | O | CMP | E300.0:PERC | 1 | Y | |
| W-830-1831 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-1832 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-830-1832 | PTMW | UTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-1832 | PTMW | UTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-1832 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-830-19 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-19 | EW | Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-830-19 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-19 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-830-19 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-19 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-19 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-20 | PTMW | UTnbs1 | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-830-20 | PTMW | UTnbs1 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-830-20 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-830-20 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-830-21 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-21 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-21 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-21 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-22 | PTMW | Tnsc1a | S | CMP | E601:ALL | 3 | Y | |
| W-830-22 | PTMW | Tnsc1a | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-22 | PTMW | Tnsc1a | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-22 | PTMW | Tnsc1a | S | CMP | E601:ALL | 1 | Y | |
| W-830-2213 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-2213 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | N | Insufficient water. |
| W-830-2213 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | N | Insufficient water. |
| W-830-2213 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-830-2214 | EW | Tnsc1a | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-2214 | EW | Tnsc1a | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-830-2214 | EW | Tnsc1a | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-2214 | EW | Tnsc1a | S | DIS-TF | E601:ALL | 2 | Y | |
| W-830-2214 | EW | Tnsc1a | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-2214 | EW | Tnsc1a | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-2214 | EW | Tnsc1a | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-2215 | EW | UTnbs1 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-2215 | EW | UTnbs1 | S | CMP-TF | E601:ALL | 3 | Y | |

**Table 2.7-7 (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-830-2215 | EW | UTnbs1 | S | DIS-TF | E601:ALL | 2 | Y | |
| W-830-2215 | EW | UTnbs1 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-2215 | EW | UTnbs1 | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-2215 | EW | UTnbs1 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-2216 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-2216 | EW | Tnbs2 | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-830-2216 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-2216 | EW | Tnbs2 | O | CMP-TF | E8330LOW:ALL | 3 | Y | |
| W-830-2216 | EW | Tnbs2 | S | DIS-TF | E601:ALL | 2 | Y | |
| W-830-2216 | EW | Tnbs2 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-2216 | EW | Tnbs2 | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-2216 | EW | Tnbs2 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-2311 | PTMW | Tnsc1a | S | CMP | E601:ALL | 3 | Y | |
| W-830-2311 | PTMW | Tnsc1a | A | CMP | E300.0:NO3 | 1 | N | Inoperable pump. |
| W-830-2311 | PTMW | Tnsc1a | A | CMP | E300.0:PERC | 1 | N | Inoperable pump. |
| W-830-2311 | PTMW | Tnsc1a | S | CMP | E601:ALL | 1 | N | Inoperable pump. |
| W-830-25 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | N | Dry. |
| W-830-25 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-830-25 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | N | Dry. |
| W-830-25 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | N | Dry. |
| W-830-26 | PTMW | UTnbs1 | E | CMP | E300.0:NO3 | 1 | N | To be sampled in 2012. |
| W-830-26 | PTMW | UTnbs1 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-830-26 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | N | Dry. |
| W-830-26 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | N | Dry. |
| W-830-27 | PTMW | Tnsc1a | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-27 | PTMW | Tnsc1a | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-27 | PTMW | Tnsc1a | S | CMP | E601:ALL | 1 | Y | |
| W-830-2701 | PTMW | Tnsc1a | Q | CMP | E601:ALL | 4 | Y | New well. |
| W-830-2701 | PTMW | Tnsc1a | S | CMP | E300.0:NO3 | 3 | Y | New well. |
| W-830-2701 | PTMW | Tnsc1a | S | CMP | E300.0:PERC | 3 | Y | New well. |
| W-830-2701 | PTMW | Tnsc1a | Q | CMP | E601:ALL | 3 | Y | New well. |
| W-830-2701 | PTMW | Tnsc1a | Q | CMP | E624:ALL | 2 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | DWMETALS:ALL | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | E200.7:SI | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | E300.0:PERC | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | E624:ALL | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | E8330LOW:ALL | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | E900:ALL | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | E906:ALL | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | GENMIN:ALL | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | KPA:UTOT | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | MS:UISO | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | TBOS:ALL | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | E624:ALL | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | U | DIS | E624:ALL | 1 | Y | New well Baseline sampling. |
| W-830-2701 | PTMW | Tnsc1a | S | CMP | E601:ALL | 3 | Y | |
| W-830-28 | PTMW | UTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-830-28 | PTMW | UTnbs1 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-830-28 | PTMW | UTnbs1 | O | CMP | E300.0:PERC | 1 | Y | |

**Table 2.7-7 (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-830-28 | PTMW | UTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-830-29 | PTMW | LTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-830-29 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-29 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-29 | PTMW | LTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-830-30 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | Y | |
| W-830-30 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-30 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-30 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| W-830-34 | PTMW | Qal/WBR | E | CMP | E8330LOW:ALL | 1 | N | To be sampled in 2012. |
| W-830-34 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | Y | |
| W-830-34 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-34 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-34 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| W-830-49 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-49 | EW | Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-830-49 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-49 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-830-49 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-49 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-49 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-50 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-50 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-50 | PTMW | Tnsc1b | O | CMP | E300.0:PERC | 1 | Y | |
| W-830-50 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-51 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-51 | EW | Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-830-51 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-51 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-830-51 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-51 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-51 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-52 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 4 | N | Artesian well not flowing at the time of the sampling event. |
| W-830-52 | EW | Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-830-52 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-52 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 2 | N | Artesian well not flowing at the time of the sampling event. |
| W-830-52 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-52 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-52 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-53 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-53 | EW | Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-830-53 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-53 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 2 | N | Artesian well not flowing at the time of the sampling event. |
| W-830-53 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |

**Table 2.7-7 (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-830-53 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-53 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-54 | PTMW | Tnsc1c | S | CMP | E601:ALL | 3 | Y | |
| W-830-54 | PTMW | Tnsc1c | O | CMP | E300.0:NO3 | 1 | Y | |
| W-830-54 | PTMW | Tnsc1c | O | CMP | E300.0:PERC | 1 | Y | |
| W-830-54 | PTMW | Tnsc1c | S | CMP | E601:ALL | 1 | Y | |
| W-830-55 | PTMW | Tnsc1b | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-830-55 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-55 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-55 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-56 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-56 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-56 | PTMW | Tnsc1b | O | CMP | E300.0:PERC | 1 | Y | |
| W-830-56 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-57 | EW | UTnbs1 | S | DIS-TF | E601:ALL | 4 | N | Inoperable pump. |
| W-830-57 | EW | UTnbs1 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-57 | EW | UTnbs1 | S | DIS-TF | E601:ALL | 2 | Y | |
| W-830-57 | EW | UTnbs1 | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-57 | EW | UTnbs1 | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-57 | EW | UTnbs1 | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-58 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-830-58 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-830-58 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-830-58 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-830-59 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-59 | EW | Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-830-59 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-59 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-830-59 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-830-59 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-830-59 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-830-60 | EW | UTnbs1 | S | DIS-TF | E601:ALL | 4 | Y | |
| W-830-60 | EW | UTnbs1 | S | CMP-TF | E601:ALL | 3 | Y | |
| W-830-60 | EW | UTnbs1 | S | DIS-TF | E601:ALL | 2 | N | Inoperable pump. |
| W-830-60 | EW | UTnbs1 | A | CMP-TF | E300.0:NO3 | 1 | N | Inoperable pump. |
| W-830-60 | EW | UTnbs1 | A | CMP-TF | E300.0:PERC | 1 | N | Inoperable pump. |
| W-830-60 | EW | UTnbs1 | S | CMP-TF | E601:ALL | 1 | N | Inoperable pump. |
| W-831-01 | PTMW | LTnbs1 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-831-01 | PTMW | LTnbs1 | O | CMP | E300.0:PERC | 1 | Y | |
| W-831-01 | PTMW | LTnbs1 | O | CMP | E601:ALL | 1 | Y | |
| W-832-01 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-832-01 | EW | Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-832-01 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-832-01 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-832-01 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-832-01 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-832-01 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-832-06 | PTMW | Tnsc1a | S | CMP | E601:ALL | 3 | Y | |
| W-832-06 | PTMW | Tnsc1a | A | CMP | E300.0:NO3 | 1 | Y | |

**Table 2.7-7 (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-832-06 | PTMW | Tnsc1a | A | CMP | E300.0:PERC | 1 | Y | |
| W-832-06 | PTMW | Tnsc1a | S | CMP | E601:ALL | 1 | Y | |
| W-832-09 | PTMW | LTnbs1 | S | CMP | E601:ALL | 3 | Y | |
| W-832-09 | PTMW | LTnbs1 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-832-09 | PTMW | LTnbs1 | A | CMP | E300.0:PERC | 1 | Y | |
| W-832-09 | PTMW | LTnbs1 | S | CMP | E601:ALL | 1 | Y | |
| W-832-10 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-832-10 | EW | Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-832-10 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-832-10 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-832-10 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-832-10 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-832-10 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-832-11 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-832-11 | EW | Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-832-11 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-832-11 | EW | Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-832-11 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-832-11 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-832-11 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-832-12 | EW | Qal/WBR-Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-832-12 | EW | Qal/WBR-Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-832-12 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-832-12 | EW | Qal/WBR-Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-832-12 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-832-12 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-832-12 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-832-13 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | Inactive extraction well. |
| W-832-13 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | Inactive extraction well. |
| W-832-13 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | Inactive extraction well. |
| W-832-13 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | Inactive extraction well. |
| W-832-14 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | Inactive extraction well. |
| W-832-14 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | Inactive extraction well. |
| W-832-14 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | Inactive extraction well. |
| W-832-14 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | Inactive extraction well. |
| W-832-15 | EW | Qal/WBR-Tnsc1b | E | CMP-TF | E8330LOW:ALL | 2 | N | To be sampled in 2012. |
| W-832-15 | EW | Qal/WBR-Tnsc1b | S | DIS-TF | E601:ALL | 4 | Y | |
| W-832-15 | EW | Qal/WBR-Tnsc1b | A | DIS-TF | E300.0:NO3 | 3 | Y | |
| W-832-15 | EW | Qal/WBR-Tnsc1b | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-832-15 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | |
| W-832-15 | EW | Qal/WBR-Tnsc1b | S | DIS-TF | E601:ALL | 2 | Y | |
| W-832-15 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-832-15 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-832-15 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | |
| W-832-16 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | N | Insufficient water. Inactive extraction well. |
| W-832-16 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | Inactive extraction well. |
| W-832-16 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | Inactive extraction well. |
| W-832-16 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | Inactive extraction well. |

**Table 2.7-7 (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-832-17 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | Y | Inactive extraction well. |
| W-832-17 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | Inactive extraction well. |
| W-832-17 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | Inactive extraction well. |
| W-832-17 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | Inactive extraction well. |
| W-832-18 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 3 | N | Dry. Inactive extraction well. |
| W-832-18 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | Inactive extraction well. |
| W-832-18 | EW | Qal/WBR-Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | Inactive extraction well. |
| W-832-18 | EW | Qal/WBR-Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | Inactive extraction well. |
| W-832-19 | PTMW | Qal/WBR-Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-832-19 | PTMW | Qal/WBR-Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-832-19 | PTMW | Qal/WBR-Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-832-19 | PTMW | Qal/WBR-Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-832-1927 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-832-1927 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-832-1927 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-832-1927 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-832-20 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 3 | N | Dry. Inactive extraction well. |
| W-832-20 | EW | Tnsc1b | A | CMP-TF | E300.0:NO3 | 1 | Y | Inactive extraction well. |
| W-832-20 | EW | Tnsc1b | A | CMP-TF | E300.0:PERC | 1 | Y | Inactive extraction well. |
| W-832-20 | EW | Tnsc1b | S | CMP-TF | E601:ALL | 1 | Y | Inactive extraction well. |
| W-832-21 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | N | Dry. |
| W-832-21 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-832-21 | PTMW | Qal/WBR | A | CMP | E300.0:PERC | 1 | N | Dry. |
| W-832-21 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | N | Dry. |
| W-832-2112 | GW | UTnbs1 | Q | CMP | E601:ALL | 4 | Y | |
| W-832-2112 | GW | UTnbs1 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-832-2112 | GW | UTnbs1 | S | CMP | E300.0:PERC | 3 | Y | |
| W-832-2112 | GW | UTnbs1 | Q | CMP | E601:ALL | 3 | Y | |
| W-832-2112 | GW | UTnbs1 | Q | CMP | E601:ALL | 2 | Y | |
| W-832-2112 | GW | UTnbs1 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-832-2112 | GW | UTnbs1 | S | CMP | E300.0:PERC | 1 | Y | |
| W-832-2112 | GW | UTnbs1 | Q | CMP | E601:ALL | 1 | Y | |
| W-832-22 | EW | UTnbs1 | S | CMP | E601:ALL | 3 | N | Dry. Inactive extraction well. |
| W-832-22 | EW | UTnbs1 | A | CMP-TF | E300.0:NO3 | 1 | N | Insufficient water. Inactive extraction well. |
| W-832-22 | EW | UTnbs1 | A | CMP-TF | E300.0:PERC | 1 | N | Insufficient water. Inactive extraction well. |
| W-832-22 | EW | UTnbs1 | S | CMP-TF | E601:ALL | 1 | N | Insufficient water. Inactive extraction well. |
| W-832-23 | PTMW | Tnsc1b | S | CMP | E601:ALL | 3 | Y | |
| W-832-23 | PTMW | Tnsc1b | A | CMP | E300.0:NO3 | 1 | Y | |
| W-832-23 | PTMW | Tnsc1b | A | CMP | E300.0:PERC | 1 | Y | |
| W-832-23 | PTMW | Tnsc1b | S | CMP | E601:ALL | 1 | Y | |
| W-832-24 | PTMW | Tnsc1a | S | CMP | E601:ALL | 3 | Y | |
| W-832-24 | PTMW | Tnsc1a | A | CMP | E300.0:NO3 | 1 | Y | |
| W-832-24 | PTMW | Tnsc1a | A | CMP | E300.0:PERC | 1 | Y | |
| W-832-24 | PTMW | Tnsc1a | S | CMP | E601:ALL | 1 | Y | |
| W-832-25 | EW | Tnsc1a | S | DIS-TF | E601:ALL | 4 | Y | |
| W-832-25 | EW | Tnsc1a | A | DIS-TF | E300.0:PERC | 3 | Y | |
| W-832-25 | EW | Tnsc1a | S | CMP-TF | E624:ALL | 3 | Y | |

**Table 2.7-7 (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-832-25 | EW | Tnsc1a | S | DIS-TF | E601:ALL | 2 | Y | |
| W-832-25 | EW | Tnsc1a | A | CMP-TF | E300.0:NO3 | 1 | Y | |
| W-832-25 | EW | Tnsc1a | A | CMP-TF | E300.0:PERC | 1 | Y | |
| W-832-25 | EW | Tnsc1a | S | CMP-TF | E624:ALL | 1 | Y | |
| W-832-SC1 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | N | Dry. |
| W-832-SC1 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-832-SC1 | PTMW | Qal/WBR | O | CMP | E300.0:PERC | 1 | N | Dry. |
| W-832-SC1 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | N | Dry. |
| W-832-SC2 | PTMW | Qal/WBR | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-832-SC2 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | N | Dry. |
| W-832-SC2 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-832-SC2 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | N | Dry. |
| W-832-SC3 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | Y | |
| W-832-SC3 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| W-832-SC3 | PTMW | Qal/WBR | O | CMP | E300.0:PERC | 1 | Y | |
| W-832-SC3 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| W-832-SC4 | PTMW | Qal/WBR | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-832-SC4 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | N | Dry. |
| W-832-SC4 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | Y | |
| W-832-SC4 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | Y | |
| W-870-01 | PTMW | Qal/WBR | S | CMP | E601:ALL | 3 | N | Dry. |
| W-870-01 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-870-01 | PTMW | Qal/WBR | O | CMP | E300.0:PERC | 1 | N | Dry. |
| W-870-01 | PTMW | Qal/WBR | S | CMP | E601:ALL | 1 | N | Dry. |
| W-870-02 | PTMW | Tnbs2 | E | CMP | E300.0:PERC | 1 | N | To be sampled in 2012. |
| W-870-02 | PTMW | Tnbs2 | S | CMP | E601:ALL | 3 | Y | |
| W-870-02 | PTMW | Tnbs2 | A | CMP | E300.0:NO3 | 1 | Y | |
| W-870-02 | PTMW | Tnbs2 | S | CMP | E601:ALL | 1 | Y | |
| W-880-01 | GW | Tnbs2 | Q | CMP | E601:ALL | 4 | Y | |
| W-880-01 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 3 | Y | |
| W-880-01 | GW | Tnbs2 | S | CMP | E300.0:PERC | 3 | Y | |
| W-880-01 | GW | Tnbs2 | Q | CMP | E601:ALL | 3 | Y | |
| W-880-01 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-880-01 | GW | Tnbs2 | Q | CMP | E601:ALL | 2 | Y | |
| W-880-01 | GW | Tnbs2 | S | CMP | E300.0:NO3 | 1 | Y | |
| W-880-01 | GW | Tnbs2 | S | CMP | E300.0:PERC | 1 | Y | |
| W-880-01 | GW | Tnbs2 | Q | CMP | E601:ALL | 1 | Y | |
| W-880-01 | GW | Tnbs2 | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-880-02 | GW | Qal/WBR | Q | CMP | E601:ALL | 4 | Y | |
| W-880-02 | GW | Qal/WBR | S | CMP | E300.0:NO3 | 3 | N | Insufficuent water. |
| W-880-02 | GW | Qal/WBR | S | CMP | E300.0:PERC | 3 | N | Insufficuent water. |
| W-880-02 | GW | Qal/WBR | Q | CMP | E601:ALL | 3 | N | Insufficuent water. |
| W-880-02 | GW | Qal/WBR | S | CMP | E8330LOW:ALL | 3 | N | Insufficuent water. |
| W-880-02 | GW | Qal/WBR | Q | CMP | E601:ALL | 2 | Y | |
| W-880-02 | GW | Qal/WBR | S | CMP | E300.0:NO3 | 1 | Y | |
| W-880-02 | GW | Qal/WBR | S | CMP | E300.0:PERC | 1 | Y | |
| W-880-02 | GW | Qal/WBR | Q | CMP | E601:ALL | 1 | Y | |
| W-880-02 | GW | Qal/WBR | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-880-03 | GW | Tnsc1b | Q | CMP | E601:ALL | 4 | Y | |

**Table 2.7-7 (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-880-03 | GW | Tnsc1b | S | CMP | E300.0:NO3 | 3 | Y | |
| W-880-03 | GW | Tnsc1b | S | CMP | E300.0:PERC | 3 | Y | |
| W-880-03 | GW | Tnsc1b | Q | CMP | E601:ALL | 3 | Y | |
| W-880-03 | GW | Tnsc1b | S | CMP | E8330LOW:ALL | 3 | Y | |
| W-880-03 | GW | Tnsc1b | Q | CMP | E601:ALL | 2 | N | Inoperable pump. |
| W-880-03 | GW | Tnsc1b | S | CMP | E300.0:NO3 | 1 | Y | |
| W-880-03 | GW | Tnsc1b | S | CMP | E300.0:PERC | 1 | Y | |
| W-880-03 | GW | Tnsc1b | S | CMP | E8330LOW:ALL | 1 | Y | |
| W-880-03 | GW | Tnsc1b | Q | CMP | E601:ALL | 1 | Y | |

**Notes:**
**1) Building 830 primary Contaminants of Concern in Ground Water: VOCs (E601 or E624).**
**2) Building 830 secondary COC: nitrate (E300:NO3).**
**3) Building 830 secondary COC: perchlorate (E300.0:PERC).**
**4) Building 832 primary Contaminants of Concern in Ground Water: VOCs (E601 or E624).**
**5) Building 832 secondary COC: nitrate (E300:NO3).**
**6) Building 832 secondary COC: perchlorate (E300.0:PERC).**
**7) Building 830 vadose zone COC: HMX.**
**8) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.7-8. Building 832-Source (832-SRC) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 832-SRC | July | 0.27 | 2.4 | 0.16 | 2.4 | NA | NA |
| | August | 4.8 | 3.7 | 0.25 | 3.9 | NA | NA |
| | September | 3.8 | 1.8 | 0.14 | 2.2 | NA | NA |
| | October | 5.2 | 2.7 | 0.16 | 2.4 | NA | NA |
| | November | 5.0 | 1.8 | 0.11 | 1.6 | NA | NA |
| | December | 5.3 | 0.47 | 0.042 | 0.86 | NA | NA |
| Total | | 24 | 13 | 0.86 | 13 | NA | NA |

**Table 2.7-9. Building 830-Source (830-SRC) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 830-SRC | July | 16 | 110 | 0.41 | 9.0 | NA | NA |
| | August | 110 | 100 | 0.20 | 14 | NA | NA |
| | September | 110 | 80 | 0.16 | 12 | NA | NA |
| | October | 76 | 150 | 0.44 | 18 | NA | NA |
| | November | 64 | 110 | 0.41 | 16 | NA | NA |
| | December | 78 | 39 | 0.051 | 12 | NA | NA |
| Total | | 460 | 590 | 1.7 | 81 | NA | NA |

**Table 2.7-10. Building 830-Distal South (830-DISS) mass removed, July 1, 2011 through December 31, 2011.**

| Treatment facility | Month | SVTS VOC mass removed (g) | GWTS VOC mass removed (g) | Perchlorate mass removed (g) | Nitrate mass removed (kg) | RDX mass removed (g) | TBOS/TKEBS mass removed (g) |
|---|---|---|---|---|---|---|---|
| 830-DISS | July | NA | 6.2 | 0.91 | 21 | NA | NA |
| | August | NA | 13 | 1.9 | 43 | NA | NA |
| | September | NA | 11 | 1.6 | 35 | NA | NA |
| | October | NA | 9.5 | 1.5 | 32 | NA | NA |
| | November | NA | 12 | 1.9 | 39 | NA | NA |
| | December | NA | 0 | 0 | 0 | NA | NA |
| Total | | NA | 51 | 7.9 | 170 | NA | NA |

**Table 2.8-1. Building 801 and Pit 8 Landfill area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K8-01 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| K8-01 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K8-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| K8-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| K8-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E601:ALL | 2 | Y | |
| K8-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E601:ALL | 4 | Y | |
| K8-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| K8-01 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 2 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 4 | N | Inoperable pump. |
| K8-02B | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 2 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 4 | N | Inoperable pump. |
| K8-02B | DMW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 1 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 2 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 3 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 4 | N | Inoperable pump. |
| K8-02B | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 1 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 2 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 3 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 4 | N | Inoperable pump. |
| K8-02B | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| K8-02B | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| K8-03B | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| K8-03B | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K8-03B | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| K8-03B | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| K8-03B | PTMW | Tnbs1-Tnbs0 | S | CMP | E601:ALL | 2 | Y | |
| K8-03B | PTMW | Tnbs1-Tnbs0 | S | CMP | E601:ALL | 4 | Y | |
| K8-03B | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| K8-03B | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| K8-04 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| K8-05 | DMW | Tnbs1-Tnbs0 | O | CMP | AS:UISO | 2 | N | Dry. |
| K8-05 | DMW | Tnbs1-Tnbs0 | O | CMP | E200.7:LI | 2 | N | Dry. |
| K8-05 | DMW | Tnbs1-Tnbs0 | O | CMP | E300.0:NO3 | 2 | N | Dry. |

**Table 2.8-1 (Cont.). Building 801 and Pit 8 Landfill area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K8-05 | DMW | Tnbs1-Tnbs0 | O | CMP | E300.0:PERC | 2 | N | Dry. |
| K8-05 | DMW | Tnbs1-Tnbs0 | O | CMP | E340.2:ALL | 2 | N | Dry. |
| K8-05 | DMW | Tnbs1-Tnbs0 | O | CMP | E601:ALL | 2 | N | Dry. |
| K8-05 | DMW | Tnbs1-Tnbs0 | O | CMP | E8330LOW:ALL | 2 | N | Dry. |
| K8-05 | DMW | Tnbs1-Tnbs0 | O | CMP | E906:ALL | 2 | N | Dry. |
| K8-05 | DMW | Tnbs1-Tnbs0 | O | CMP | T26METALS:ALL | 2 | N | Dry. |

**Notes:**

**1) CMP Detection monitoring analyte: tritium (E906) sampled annually.**
**2) CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.**
**3) CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.**
**4) CMP Detection monitoring analyte: HE compounds (E8330) sampled annually.**
**5) CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.**
**6) CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.**
**7) CMP Detection monitoring analytes: Title 26 metals plus Li (T26METALS and E200.8:Li) sampled annually.**
**8) CMP Detection monitoring analytes: uranium isotopes (AS:UISO) sampled annually.**
**9) Building 801 primary COC: VOCs (E601 or E624).**
**10) Building 801 secondary COC: nitrate (E300.0:NO3).**
**11) Building 801 secondary COC: perchlorate (E300:PERC) .**
**12) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.8-2. Building 833 area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-833-03 | PTMW | Tpsg | A | CMP | E601:ALL | 1 | N | Dry. |
| W-833-12 | PTMW | Tpsg | A | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-833-18 | PTMW | Tpsg | A | CMP | E601:ALL | 1 | N | Dry. |
| W-833-22 | PTMW | Tpsg | A | CMP | E601:ALL | 1 | N | Dry. |
| W-833-28 | PTMW | Tpsg | A | CMP | E601:ALL | 1 | N | Insufficient water. |
| W-833-30 | PTMW | Tpsg | S | CMP | E601:ALL | 1 | Y | |
| W-833-30 | PTMW | Tpsg | S | CMP | E601:ALL | 3 | Y | |
| W-833-33 | PTMW | Tpsg | A | CMP | E601:ALL | 1 | Y | |
| W-833-34 | PTMW | Tpsg | A | CMP | E601:ALL | 1 | N | Dry. |
| W-833-43 | PTMW | Tpsg | A | CMP | E601:ALL | 1 | N | Dry. |
| W-840-01 | PTMW | LTnbs1 | O | CMP | E300.0:NO3 | 1 | Y | |
| W-840-01 | PTMW | LTnbs1 | O | CMP | E300.0:PERC | 1 | Y | |
| W-840-01 | PTMW | LTnbs1 | A | CMP | E601:ALL | 1 | Y | |
| W-841-01 | PTMW | UTnbs1 | A | CMP | E601:ALL | 1 | N | Dry. |
| W-841-01 | PTMW | UTnbs1 | A | CMP | E300.0:NO3 | 1 | N | Dry. |
| W-841-01 | PTMW | UTnbs1 | A | CMP | E300.0:PERC | 1 | N | Dry. |

**Notes:**

**1) Building 833 primary COC: VOCs (E601).**

**2) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 2.8-3. Building 845 Firing Table and Pit 9 Landfill area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K9-01 | DMW | Tnsc0 | A | CMP | AS:UISO | 2 | Y | |
| K9-01 | DMW | Tnsc0 | A | CMP | E200.7:LI | 2 | Y | |
| K9-01 | DMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K9-01 | DMW | Tnsc0 | A | CMP | E300.0:PERC | 2 | Y | |
| K9-01 | DMW | Tnsc0 | A | CMP | E340.2:ALL | 2 | Y | |
| K9-01 | DMW | Tnsc0 | A | CMP | E601:ALL | 2 | Y | |
| K9-01 | DMW | Tnsc0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K9-01 | DMW | Tnsc0 | A | CMP | E906:ALL | 2 | Y | |
| K9-01 | DMW | Tnsc0 | A | DIS | MS:UISO | 2 | Y | |
| K9-01 | DMW | Tnsc0 | A | CMP | T26METALS:ALL | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | CMP | AS:UISO | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | CMP | E200.7:LI | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | CMP | E300.0:PERC | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | CMP | E340.2:ALL | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | CMP | E601:ALL | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | CMP | E906:ALL | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | DIS | MS:UISO | 2 | Y | |
| K9-02 | DMW | Tnsc0 | A | CMP | T26METALS:ALL | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | CMP | AS:UISO | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | CMP | E200.7:LI | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | CMP | E300.0:PERC | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | CMP | E340.2:ALL | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | CMP | E601:ALL | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | CMP | E906:ALL | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | DIS | MS:UISO | 2 | Y | |
| K9-03 | DMW | Tnsc0 | A | CMP | T26METALS:ALL | 2 | Y | |
| K9-04 | DMW | Tnsc0 | A | CMP | AS:UISO | 2 | N | Inoperable pump. |
| K9-04 | DMW | Tnsc0 | A | CMP | E200.7:LI | 2 | N | Inoperable pump. |
| K9-04 | DMW | Tnsc0 | A | CMP | E300.0:NO3 | 2 | N | Inoperable pump. |
| K9-04 | DMW | Tnsc0 | A | CMP | E300.0:PERC | 2 | N | Inoperable pump. |
| K9-04 | DMW | Tnsc0 | A | CMP | E340.2:ALL | 2 | N | Inoperable pump. |
| K9-04 | DMW | Tnsc0 | A | CMP | E601:ALL | 2 | N | Inoperable pump. |
| K9-04 | DMW | Tnsc0 | A | CMP | E8330LOW:ALL | 2 | N | Inoperable pump. |
| K9-04 | DMW | Tnsc0 | A | CMP | E906:ALL | 2 | N | Inoperable pump. |
| K9-04 | DMW | Tnsc0 | A | CMP | T26METALS:ALL | 2 | N | Inoperable pump. |

**Notes:**
**1) No COCs in ground water.**
**2) CMP Detection monitoring analyte: tritium (E906) sampled annually.**
**3) CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.**
**4) CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.**
**5) CMP Detection monitoring analyte: HE compounds (E8330) sampled annually.**
**6) CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.**
**7) CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.**
**8) CMP Detection monitoring analytes: Title 26 metals plus Li (T26METALS and E200.8:Li) sampled annually.**
**9) CMP Detection monitoring analytes: uranium isotopes (AS:UISO) sampled annually.**
**10) COC in the Vadose Zone not detected in Ground Water: HE Compounds and uranium.**
**11) See Acronyms and Abbreviations in the Table section of this report for acronym and abbreviation definitions.**

**Table 2.8-4. Building 851 area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-851-05 | PTMW | Tmss | S | CMP | AS:UISO | 2 | Y | |
| W-851-05 | PTMW | Tmss | S | CMP | AS:UISO | 4 | Y | |
| W-851-05 | PTMW | Tmss | O | CMP | E601:ALL | 2 | Y | |
| W-851-05 | PTMW | Tmss | A | DIS | MS:UISO | 2 | Y | |
| W-851-06 | PTMW | Tmss | S | CMP | AS:UISO | 2 | Y | |
| W-851-06 | PTMW | Tmss | S | CMP | AS:UISO | 4 | Y | |
| W-851-06 | PTMW | Tmss | A | DIS | MS:UISO | 2 | Y | |
| W-851-07 | PTMW | Tmss | S | CMP | AS:UISO | 2 | Y | |
| W-851-07 | PTMW | Tmss | S | CMP | AS:UISO | 4 | Y | |
| W-851-07 | PTMW | Tmss | A | DIS | MS:UISO | 2 | Y | |
| W-851-08 | PTMW | Tmss | S | CMP | AS:UISO | 2 | Y | |
| W-851-08 | PTMW | Tmss | S | CMP | AS:UISO | 4 | Y | |
| W-851-08 | PTMW | Tmss | A | DIS | MS:UISO | 2 | Y | |

**Notes:**

**1) Building 851 primary COC: uranium (AS:UISO).**

**2) Contaminants of Concern in the Vadose Zone not detected in Ground Water: VOCs (E601).**

**3) See Acronyms and Abbreviations in the Table section of this report for acronym and abbreviation definitions.**

**Table 3.1-1. Pit 2 Landfill area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| K2-01C | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | N | Unsafe conditions. |
| K2-01C | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | N | Unsafe conditions. |
| NC2-08 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| NC2-08 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| W-PIT2-1934 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | A | CMP | E200.7:LI | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | A | CMP | E340.2:ALL | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | A | CMP | E601:ALL | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | A | CMP | E8330LOW:ALL | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | Y | |
| W-PIT2-1935 | DMW | Tnbs1-Tnbs0 | A | CMP | T26METALS:ALL | 2 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 2 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | S | CMP | AS:UISO | 4 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | S | CMP | E300.0:NO3 | 4 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 1 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 2 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 3 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | Q | CMP | E300.0:PERC | 4 | Y | |

**Table 3.1-1 (Cont.). Pit 2 Landfill area ground water sampling and analysis plan.**

| Sample Location | Location Type | HSU | Sampling Frequency | Sample Driver | Requested Analysis | Sampling Quarter | Sampled (Y/N) | Comment |
|---|---|---|---|---|---|---|---|---|
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 1 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 2 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 3 | Y | |
| W-PIT2-2226 | GW | Tnbs1-Tnbs0 | Q | CMP | E906:ALL | 4 | Y | |
| W-PIT2-2301 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-PIT2-2301 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT2-2301 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| W-PIT2-2301 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | N | Insufficient water. |
| W-PIT2-2301 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| W-PIT2-2301 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Insufficient water. |
| W-PIT2-2301 | PTMW | Qal/WBR | A | DIS | MS:UISO | 2 | Y | |
| W-PIT2-2302 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | Y | |
| W-PIT2-2302 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | Y | |
| W-PIT2-2302 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | Y | |
| W-PIT2-2302 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | N | Insufficient water. |
| W-PIT2-2302 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | Y | |
| W-PIT2-2302 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Insufficient water. |
| W-PIT2-2302 | PTMW | Qal/WBR | A | CMP | MS:UISO | 2 | Y | |
| W-PIT2-2303 | PTMW | Qal/WBR | A | CMP | AS:UISO | 2 | N | Dry. |
| W-PIT2-2303 | PTMW | Qal/WBR | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-PIT2-2303 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 2 | N | Dry. |
| W-PIT2-2303 | PTMW | Qal/WBR | S | CMP | E300.0:PERC | 4 | N | Dry. |
| W-PIT2-2303 | PTMW | Qal/WBR | S | CMP | E906:ALL | 2 | N | Dry. |
| W-PIT2-2303 | PTMW | Qal/WBR | S | CMP | E906:ALL | 4 | N | Dry. |
| W-PIT2-2303 | PTMW | Qal/WBR | A | DIS | MS:UISO | 2 | N | Dry. |
| W-PIT2-2304 | PTMW | Tnbs1-Tnbs0 | A | CMP | AS:UISO | 2 | N | Dry. |
| W-PIT2-2304 | PTMW | Tnbs1-Tnbs0 | A | CMP | E300.0:NO3 | 2 | N | Dry. |
| W-PIT2-2304 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 2 | N | Dry. |
| W-PIT2-2304 | PTMW | Tnbs1-Tnbs0 | S | CMP | E300.0:PERC | 4 | N | Dry. |
| W-PIT2-2304 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 2 | N | Dry. |
| W-PIT2-2304 | PTMW | Tnbs1-Tnbs0 | S | CMP | E906:ALL | 4 | N | Dry. |
| W-PIT2-2304 | PTMW | Tnbs1-Tnbs0 | A | DIS | MS:UISO | 2 | N | Dry. |

**Notes:**

**1) CMP Detection monitoring analyte: tritium (E906) sampled annually.**
**2) CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.**
**3) CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.**
**4) CMP Detection monitoring analyte: HE compounds (E8330) sampled annually.**
**5) CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.**
**6) CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.**
**7) CMP Detection monitoring analytes: Title 26 metals plus Li (T26METALS and E200.8:Li) sampled annually.**
**8) CMP Detection monitoring analytes: uranium isotopes (AS:UISO) sampled annually.**
**9) See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 4.1-1. Summary of inhalation risks and hazards resulting from transport of contaminant vapors to indoor and outdoor ambient air.**

| Area | Pathway and Model | Contaminant | Incremental Risk | Hazard Quotient | Comment |
|---|---|---|---|---|---|
| Building 834D | Indoor – JEM | TCE | $1.2 \times 10^{-4}$ | $3.4 \times 10^{+1}$ | Based on a TCE concentration of 23,000 µg/L (01-Aug-2011) in well W-834-D15 |
| | Indoor – JEM | PCE | $1.6 \times 10^{-6}$ | $1.2 \times 10^{-1}$ | Based on a PCE concentration of 150 µg/L (23-Mar-2011) in well W-834-D13 |
| **Cumulative risk and hazard index** | | | **$1.2 \times 10^{-4}$** | **$3.4 \times 10^{+1}$** | **Institutional controls in place, building only used for storage.** |
| Building 830 | Indoor – JEM | Vinyl Chloride | $6.1 \times 10^{-7}$ | $1.2 \times 10^{-3}$ | Based on the vinyl chloride detection limit of 50 µg/L (10-Feb-2011) in well SVI-830-031 |
| | Indoor – JEM | TCE | $8.6 \times 10^{-6}$ | 2.5 | Based on a TCE concentration of 1,080 µg/L (10-Aug-2011) in well SVI-830-035 |
| **Cumulative risk and hazard index** | | | **$9.2 \times 10^{-6}$** | **2.5** | **Institutional controls in place.** |
| Building 833 | Indoor – JEM | TCE | $7.0 \times 10^{-7}$ | $2.1 \times 10^{-1}$ | Based on a TCE concentration of 150 µg/L (2-Feb-2011) in well W-833-33 |
| | Indoor – JEM | Chloroform | $9.2 \times 10^{-9}$ | $2.7 \times 10^{-5}$ | Based on the chloroform detection limit of 2.5 µg/L (2-Feb-2011) in well W-833-33 |
| **Cumulative risk and hazard index** | | | **$7.1 \times 10^{-7}$** | **$2.1 \times 10^{-1}$** | **Institutional and engineering controls are in place. The air conditioning unit in Bldg. 833 is operated continuously to maintain neutral pressure differential between the subsurface and indoor air, and to maintain high exchange rates.** |

**Notes:**

**JEM – Johnson-Ettinger Model for indoor air pathway (USEPA, GW-ADV Version 3.1; 02/04), incorporates the updated risk values in DTSC (2005) Interim Final Vapor Intrusion Guidance.**

**See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.**

**Table 4.2-1. Summary of U.S. Environmental Protection Agency Ecological Soil Screening Levels for cadmium.**

| Receptor | EcoSSL mg/kg[a] | Assumptions |
|---|---|---|
| Terrestrial Plants | 32 | 14 studies using bioavailable forms. Test organisms: ryegrass, lettuce, tomato, oats, corn, garlic, barley, white pine, yellow birch, choke cherry, loblolly pine, red oak, alfalfa |
| Soil Invertebrates | 140 | 10 studies using bioavailable forms. Test organism: earthworms (2 studies), springtails (7 studies), nematode (1 study) |
| Birds | | Toxicity Reference Value based on 33 studies |
| Avian herbivore (dove) | 28 | Assumed to eat all plants |
| Avian ground insectivore (woodcock) | 0.77 | Assumed to eat all earthworms |
| Avian carnivore (hawk) | 630 | Assumed to eat all mammals |
| Mammals | | Toxicity Reference Value based on 145 studies |
| Mammalian herbivore (vole) | 73 | Assumed to eat all plants |
| Mammalian ground insectivore (shrew) | 0.36 | Assumed to eat all earthworms |
| Mammalian carnivore (weasel) | 84 | Assumed to eat all mammals |

**Notes:**

EcoSSL = Ecological Soil Screening Level.
mg/kg = Milligrams per kilogram.

[a] U.S. EPA (2005). Ecological Soil Screening Levels for Cadmium Interim Final. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C. OSWER Directive 9285.7-65. March 2005.

**Table 4.2-2. Cadmium concentrations in the vicinity of Building 801 used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| 3SS-06-03 | <0.1 | 8/31/94 | Collected as part of Site Wide Remedial Investigation and Site Wide Feasibility Study background determination. |
| 3SS-07-01 | 0.2 | 9/20/91 | |
| 3SS-08-01 | <0.1 | 9/20/91 | |
| 3SS-11-01 | 0.2 | 9/20/91 | |
| 3SS-11-02 | 0.3 | 9/20/91 | |
| 3SS-12-01 | <0.1 | 9/18/91 | |
| 3SS-12-02 | <0.1 | 9/18/91 | |
| 3SS-12-03 | <0.1 | 8/30/94 | |
| 3SS-13-01 | 0.1 | 9/18/91 | |
| 3SS-13-02 | <0.1 | 8/31/94 | |
| 3SS-43-01 | 0.1 | 9/18/91 | |
| 3SS-57-01 | 0.1 | 8/31/94 | |
| 3SS-58-01 | <0.1 | 8/30/94 | |
| 3SS-58-02 | 0.1 | 8/30/94 | |
| 3SS-58-03 | <0.1 | 8/31/94 | |
| 3SS-801-001 | <0.5 | 11/1/11 | Collected as part of the current evaluation of cadmium impacts on ecological receptors. |
| 3SS-801-002 | <0.5 | 11/1/11 | |
| 3SS-801-003 | <0.5 | 11/1/11 | |
| 3SS-801-004 | <0.5 | 11/1/11 | |
| 3SS-801-005 | <0.5 | 11/1/11 | |
| 3SS-801-006 | <0.5 | 11/1/11 | |
| MS-B801-001 | <1 | 10/4/94 | Collected as part of an investigation into the environmental impact of Building 801 cooling tower discharge. Estimated coordinates are available. Cooling tower discharge subsequently re-routed. |
| MS-B801-002 | 3.1 | 10/4/94 | |
| MS-B801-003 | 14 | 10/4/94 | |
| MS-B801-004 | 1.1 | 10/4/94 | |
| MS-B801-011 | <1 | 2/3/95 | Collected as part of an investigation into the environmental impact of Building 801 cooling tower discharge. Estimated coordinates are not available but available documentation indicates the locations to be a bit further downgradient from above locations. |
| MS-B801-012 | <1 | 2/3/95 | |
| MS-B801-013 | <1 | 2/3/95 | |
| PC-B801-031 | <1 | 6/27/97 | Pre-construction soil sampling location for the construction of the Contained Firing Facility. The only preconstruction soil sample that was not subsequently paved over. Estimated coordinates available. |

**Table 4.2-2 (Cont.). Cadmium concentrations in the vicinity of Building 801 used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| 3SS-PIT1-100 | <2 | 6/29/06 | One of four samples collected as part of the Pit 1 investigation. Represents the approximate median of the samples. |
| 3-DTPDDW01-03-SO | 1.2 | 5/19/09 | Collected adjacent to the Explosive Waste Treatment Detonation Pad near Building 845 as part of an ongoing permit application. Each data point represents the approximate median of four samples collected from each location. Locations are approximate. |
| 3-DTPDDW02-01-SO | 1.1 | 5/20/09 | |
| 3-EWTFDW01-02-SO | 0.97 | 5/18/09 | Collected downwind of the Explosive Waste Treatment Facility at Building 845 as part of an ongoing permit application. Each data point represents the approximate median of four samples collected from each location. Locations are approximate. |
| 3-EWTFDW02-04-SO | 0.91 | 5/18/09 | |
| 3-EWTFDW03-02-SO | 1.3 | 5/19/09 | |
| 3-EWTFDW04-02-SO | 1.2 | 5/19/09 | |
| 3-EWTFUW01-01-SO | 1.3 | 5/21/09 | Collected upwind of the Explosive Waste Treatment Facility at Building 845 as part of an ongoing permit application. The data point represents the approximate median of four samples collected from the location. Location is approximate. |
| N | 37 | | |
| Average[a] | -0.8323 | | |
| Std[b] | 1.2524 | | |
| H statistic[c] | 2.6930 | | |
| 95% UCL[d] | 1.67 mg/kg | | |

**Notes:**

**N = Number of soil samples used in calculation.**
**mg/kg = Milligrams per kilogram.**
**Std = Standard Deviation.**
**95% UCL = 95 Percent Upper Confidence Limit of the Mean.**
**ID = Identification.**

[a] **Average of the lognormally-transposed data.**

[b] **Standard Deviation of the lognormally-transposed data.**

[c] **H statistic interpolated from Table A12 (pg. 265) in Gilbert, 1987.**

[d] **95% Upper Confidence Limit of the mean in standard un-transposed units.**

**Table 4.2-3. Cadmium concentrations in the vicinity of Building 851 used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| 3SS-45-01 D[a] | 0.1 | 9/24/91 | Collected as part of Site Wide Remedial Investigation and Site Wide Feasibility Study background determination. |
| 3SS-45-01 | 12 | 9/24/91 | |
| 3SS-45-02 | <0.1 | 9/2/94 | |
| 3SS-45-03 | 0.11 | 9/13/94 | |
| 3SS-46-01 | <0.1 | 9/17/91 | |
| 3SS-46-01 | <0.1 | 9/17/91 | |
| 3SS-46-02 | <0.1 | 9/17/91 | |
| 3SS-46-03 | <0.1 | 9/2/94 | |
| 3SS-48-01 | <1 | 9/24/91 | |
| 3SS-48-02 | <0.1 | 9/23/91 | |
| 3SS-48-03 | <0.1 | 9/24/91 | |
| 3SS-48-04 | <0.1 | 9/24/91 | |
| 3SS-48-05 | <0.1 | 8/31/94 | |
| 3SS-48-06 | <0.1 | 8/31/94 | |
| 3SS-48-08 | <0.1 | 8/31/94 | |
| 3SS-56-05 | <0.1 | 9/2/94 | |
| 3SS-57-02 | <0.1 | 9/14/94 | |
| 3SS-850-110 | 0.11 | 7/26/94 | Collected as part of the Building 850 investigation. |
| 3SS-851-004 | <0.5 | 11/1/11 | Collected as part of the current evaluation of cadmium impacts on ecological receptors. |
| 3SS-851-005 | <0.5 | 11/1/11 | |
| 3SS-851-006 | <0.5 | 11/1/11 | |
| 3SS-854-016 | 0.23 | 11/22/95 | Representative locations from the Building 854 investigation. All locations are on native soil and have available coordinates. |
| 3SS-854-022 | 0.53 | 11/22/95 | |
| 3SS-854-025 | <1 | 11/22/95 | |
| 3SS-854-026 | <1 | 11/22/95 | |
| N | 24 | | |
| Average[b] | -1.5019 | | |
| Std[c] | 1.2283 | | |
| H statistic[d] | 2.826 | | |
| 95% UCL[e] | 0.98 mg/kg | | |

**Notes appear on the following page.**

**Table 4.2-3 (Cont.). Cadmium concentrations in the vicinity of Building 851 used to calculate the 95% Upper Confidence Limit of the mean.**

**Notes:**

| | |
|---|---|
| **N =** | **Number of soil samples used in calculation.** |
| **mg/kg =** | **Milligrams per kilogram.** |
| **Std =** | **Standard Deviation.** |
| **95% UCL =** | **95 Percent Upper Confidence Limit of the Mean.** |
| **ID =** | **Identification.** |

[a] **Not used in the calculation of the 95% UCL.**

[b] **Average of the lognormally-transposed data.**

[c] **Standard Deviation of the lognormally-transposed data.**

[d] **H statistic interpolated from Table A12 (pg. 265) in Gilbert, 1987.**

[e] **95% Upper Confidence Limit of the mean in standard un-transposed units.**

**Table 4.2-4. Cadmium concentrations in the vicinity of Buildings 815 and 818 used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| 3SS-29-03 | <0.1 | 9/13/94 | Collected as part of Site Wide Remedial Investigation and Site Wide Feasibility Study background determination. |
| 3SS-30-01 | 0.8 | 9/26/91 | |
| 3SS-30-02 | <0.1 | 9/26/91 | |
| 3SS-30-03 | 0.1 | 9/26/91 | |
| 3SS-30-09 | <0.1 | 9/13/94 | |
| 3SS-31-02 | 0.18 | 9/13/94 | |
| 3SS-31-03 | <0.5 | 9/7/94 | |
| 3SS-31-03 | 0.11 | 9/13/94 | |
| 3SS-31-04 | <0.1 | 9/13/94 | |
| 3SS-32-05 | <0.1 | 9/13/94 | |
| 3SS-32-06 | <0.1 | 9/15/94 | |
| 3SS-32-07 | <0.1 | 9/15/94 | |
| 3SS-33-03 | 0.11 | 9/13/94 | |
| 3SS-33-04 | <0.1 | 9/13/94 | |
| 3SS-33-05 | <0.1 | 9/13/94 | |
| 3SS-815-001 | <0.5 | 11/1/11 | Collected as part of the current evaluation of cadmium impacts on ecological receptors. |
| 3SS-815-002 | <0.5 | 11/1/11 | |
| 3SS-815-003 | <0.5 | 11/1/11 | |
| 3SS-815-004 | <0.5 | 11/1/11 | |
| 3SS-815-005 | <0.5 | 11/1/11 | |
| 3SS-818-001 | <0.5 | 11/1/11 | |
| 3SS-818-002 | <0.5 | 11/1/11 | |
| 3SS-818-003 | <0.5 | 11/1/11 | |
| 3SS-818-004 | <0.5 | 11/1/11 | |
| 3SS-818-005 | <0.5 | 11/1/11 | |
| 815-09 | 15 | 11/5/91 | Collected as part of the High Explosives Process Area investigation. |
| 818-10 | 14 | 11/4/91 | |
| 823-04 | <0.1 | 2/13/95 | |
| 823-08 | <0.1 | 2/13/95 | |
| 823-09 | <0.1 | 2/13/95 | |
| B-6H | <0.1 | 6/3/94 | |

**Table 4.2-4 (Cont.). Cadmium concentrations in the vicinity of Buildings 815 and 818 used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| B-830-13 | <0.1 | 11/8/94 | Collected as part of the Building 830 investigation. |
| B-830-20 | <0.1 | 6/13/96 | |
| B-830-25 | <1 | 8/6/96 | |
| N | 34 | | |
| Average[a] | -1.3374 | | |
| Std[b] | 1.3066 | | |
| H statistic[c] | 2.794 | | |
| 95% UCL[d] | 1.16 mg/kg | | |

**Notes:**

**N = Number of soil samples used in calculation.**
**mg/kg = Milligrams per kilogram.**
**Std = Standard Deviation.**
**95% UCL = 95 Percent Upper Confidence Limit of the Mean.**
**ID = Identification.**

[a] **Average of the lognormally-transposed data.**

[b] **Standard Deviation of the lognormally-transposed data.**

[c] **H statistic interpolated from Table A12 (pg. 265) in Gilbert, 1987.**

[d] **95% Upper Confidence Limit of the mean in standard un-transposed units.**

**Table 4.2-5. Cadmium data in the vicinity of Building 801 reviewed but not used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| FT-801-3-I -02 | 6.1 | 01-DEC-89 | Samples taken along two transects going in from the old Building 801 berm in meters. Described in the SWRI and used in baseline risk assessment. Area is now occupied by the Building 801 Contained Firing Facility. |
| FT-801-3-I -08 | 6.7 | 01-DEC-89 | |
| FT-801-3-I -16 | 7.4 | 01-DEC-89 | |
| FT-801-5-I -01 | 4.9 | 01-DEC-89 | |
| FT-801-3-O +01 | 5.8 | 01-DEC-89 | Samples taken along two transects going out from the old Building 801 berm in meters. Described in the SWRI and used in baseline risk assessment. Area is now occupied by the Building 801 Contained Firing Facility. |
| FT-801-3-O +02 | 5.1 | 01-DEC-89 | |
| FT-801-3-O +04 | 5.2 | 01-DEC-89 | |
| FT-801-3-O +08 | 3.9 | 01-DEC-89 | |
| FT-801-3-O +16 | 6 | 01-DEC-89 | |
| FT-801-3-O +32 | 7.9 | 01-DEC-89 | |
| FT-801-5-O +01 | 5.8 | 01-DEC-89 | |
| FT-801-5-O +02 | 5.5 | 01-DEC-89 | |
| FT-801-5-O +04 | 6.3 | 01-DEC-89 | |
| FT-801-5-O +08 | 6.1 | 01-DEC-89 | |
| FT-801-5-O +16 | 7.8 | 01-DEC-89 | |
| FT-801-5-O +32 | 7.2 | 01-DEC-89 | |
| PC-B801-001-01-01-SC-0U | <1 | 19-MAY-96 | No documentation available. Most likely preconstruction soil samples taken during construction of the Building 801 Contained Firing Facility in locations now occupied by the building or pavement. |
| PC-B801-001-02-01-SC-0U | <1 | 19-MAY-96 | |
| PC-B801-001-05-01-SC-0U | <1 | 19-MAY-96 | |
| PC-B801-001-06-01-SC-0U | <1 | 19-MAY-96 | |
| PC-B801-001-08-01-SC-0U | <1 | 19-MAY-96 | |
| PC-B801-001-09-01-SC-0U | <1 | 19-MAY-96 | |
| PC-B801-001-10-01-SC-0U | <1 | 19-MAY-96 | |
| MS-B804-001 | <1 | 21-JUL-00 | Composite sample taken after a vehicle fire cleanup near Building 804. |
| PC-B804-001-01-02-SC-OU | <1 | 13-DEC-95 | No documentation available. |
| PC-B804-002-01-01-SC-OU | <1 | 11-AUG-97 | Composite sample from soil pile excavated for pad installation. |
| PC-B806-001-01-01-SC-0.5U | <1 | 11-SEP-00 | Composite sample from soil pile excavated for pad installation. |

**Table 4.2-5 (Cont.). Cadmium data in the vicinity of Building 801 reviewed but not used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| 3-801R301-01-SO | <1 | 20-SEP-00 | No documentation available. |
| 3-801R301-02-SO | <1 | 20-SEP-00 | |
| MS-B801-014 | 0.64 | 17-NOV-97 | No documentation available. |
| 3SS-PIT1-101 | <2 | 29-JUL-06 | Collected as part of the Pit 1 investigation. Not used in the calculation of the 95% UCL so as not to bias the calculation towards Pit 1. |
| 3SS-PIT1-102 | <2 | 29-JUL-06 | |
| 3SS-PIT1-103 | <2 | 29-JUL-06 | |
| 3-DTPDDW01-01-SO | 1.1 | 19-MAY-09 | Two locations sampled adjacent to the Explosive Waste Treatment Detonation Pad near Building 845 as part of an ongoing permit application. Each location was sampled four times with one quality control sample (indicated by a Q). Each sample was analyzed both at ambient moisture and after drying. Only ambient moisture results were considered to be consistent with other samples. Not used in the calculation of the 95% UCL so as not to bias the calculation towards Building 845. |
| 3-DTPDDW01-02-SO | 1.3 | 19-MAY-09 | |
| 3-DTPDDW01-03-SO | 1.2 | 19-MAY-09 | |
| 3-DTPDDW01-04-SO | 1.1 | 19-MAY-09 | |
| 3-DTPDDW02-01-SO | 1.1 | 20-MAY-09 | |
| 3-DTPDDW02-02-SO | 1.1 | 20-MAY-09 | |
| 3-DTPDDW02-03-SO | 1.1 | 20-MAY-09 | |
| 3-DTPDDW02-04-SO | 1.2 | 20-MAY-09 | |
| 3-DTPDDWQ1-01-SO | 1.3 | 19-MAY-09 | |
| 3-EWTFUW01-01-SO | 1.3 | 21-MAY-09 | A single location sampled upwind of the Explosive Waste Treatment Facility at Building 845 as part of an ongoing permit application. The location was sampled four times with one quality control sample (indicated by a Q). Each sample was analyzed both at ambient moisture and after drying. Only ambient moisture results were considered to be consistent with other samples. Not used in the calculation of the 95% UCL so as not to bias the calculation towards Building 845. |
| 3-EWTFUW01-02-SO | 1.4 | 21-MAY-09 | |
| 3-EWTFUW01-03-SO | 1.3 | 21-MAY-09 | |
| 3-EWTFUW01-04-SO | 1.1 | 21-MAY-09 | |
| 3-EWTFUWQ1-01-SO | 1.2 | 21-MAY-09 | |

**Table 4.2-5 (Cont.). Cadmium data in the vicinity of Building 801 reviewed but not used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| 3-EWTFDW01-01-SO | 1.1 | 18-MAY-09 | Four locations collected downwind of the Explosive Waste Treatment Facility at Building 845 as part of an ongoing permit application. Each location was sampled four times with a periodic quality control sample (indicated by a Q). Each sample was analyzed both at ambient moisture and after drying. Only ambient moisture results were considered to be consistent with other samples. Not used in the calculation of the 95% UCL so as not to bias the calculation towards Building 845. |
| 3-EWTFDW01-02-SO | 0.97 | 18-MAY-09 | |
| 3-EWTFDW01-03-SO | 0.64 | 18-MAY-09 | |
| 3-EWTFDW01-04-SO | 1 | 18-MAY-09 | |
| 3-EWTFDW02-01-SO | 0.86 | 18-MAY-09 | |
| 3-EWTFDW02-02-SO | 0.82 | 18-MAY-09 | |
| 3-EWTFDW02-03-SO | 1.1 | 18-MAY-09 | |
| 3-EWTFDW02-04-SO | 0.91 | 18-MAY-09 | |
| 3-EWTFDW03-01-SO | 1.4 | 18-MAY-09 | |
| 3-EWTFDW03-02-SO | 1.3 | 19-MAY-09 | |
| 3-EWTFDW03-03-SO | 1.3 | 19-MAY-09 | |
| 3-EWTFDW03-04-SO | 1.4 | 19-MAY-09 | |
| 3-EWTFDW04-01-SO | 1.3 | 19-MAY-09 | |
| 3-EWTFDW04-02-SO | 1.2 | 19-MAY-09 | |
| 3-EWTFDW04-03-SO | 1.3 | 22-MAY-09 | |
| 3-EWTFDW04-04-SO | 1.1 | 19-MAY-09 | |
| 3-EWTFDWQ3-01-SO | 1.2 | 19-MAY-09 | |

**Notes:**

**ID = Identification.**
**mg/kg = Milligrams per kilogram.**
**95% UCL = 95 Percent Upper Confidence Limit of the Mean.**

**Table 4.2-6. Cadmium data in the vicinity of Building 851 reviewed but not used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| FT-851-7-I -04 | 7.2 | 01-DEC-89 | Samples taken along one transect going in from the Building 851 berm in meters. Described in the SWRI and used in baseline risk assessment. Unclear if berm has been replaced during facility upgrades. |
| FT-851-7-I -08 | 7.5 | 01-DEC-89 | |
| FT-851-1-O +01 | 6.9 | 01-DEC-89 | Samples taken along two transects going out from the Building 851 berm in meters. Described in the SWRI and used in baseline risk assessment. Unclear if berm has been replaced during facility upgrades. |
| FT-851-1-O +02 | 6.5 | 01-DEC-89 | |
| FT-851-1-O +04 | 6.1 | 01-DEC-89 | |
| FT-851-1-O +08 | 6.4 | 01-DEC-89 | |
| FT-851-1-O +16 | 7.3 | 01-DEC-89 | |
| FT-851-1-O +32 | 7.4 | 01-DEC-89 | |
| FT-851-7-O +01 | 7.4 | 01-DEC-89 | |
| FT-851-7-O +02 | 6.2 | 01-DEC-89 | |
| FT-851-7-O +04 | 7 | 01-DEC-89 | |
| FT-851-7-O +08 | 9 | 01-DEC-89 | |
| FT-851-7-O +16 | 7.2 | 01-DEC-89 | |
| FT-851-7-O +32 | 7.9 | 01-DEC-89 | |
| 3SS-854-030 | 0.29 | 29-NOV-95 | Collected as part of the Building 854 investigation. Not used in the calculation of the 95% UCL so as not to bias the calculation towards Building 854. |
| 3SS-854-19 | <1 | 22-NOV-95 | |
| 3SS-854-20 | <1 | 22-NOV-95 | |
| 3SS-854-001 | 0.13 | 29-NOV-95 | Collected as part of the Building 854 investigation in a paved area. |
| 3SS-854-002 | <0.1 | 29-NOV-95 | |
| 3SS-854-003 | 0.12 | 21-NOV-95 | Collected as part of the Building 854 investigation. Coordinates not available. |
| 3SS-854-004 | 0.2 | 21-NOV-95 | |
| 3SS-854-005 | 0.11 | 21-NOV-95 | |
| 3SS-854-006 | 0.93 | 21-NOV-95 | |
| 3SS-854-007 | 0.29 | 21-NOV-95 | |
| 3SS-854-008 | 1.4 | 21-NOV-95 | |
| 3SS-854-009 | 4 | 21-NOV-95 | |
| 3SS-854-010 | 0.18 | 21-NOV-95 | |
| 3SS-854-010 | <1 | 21-NOV-95 | |
| 3SS-854-011 | 2.4 | 22-NOV-95 | |
| 3SS-854-012 | 0.25 | 22-NOV-95 | |
| 3SS-854-013 | 1.2 | 22-NOV-95 | |

**Table 4.2-6 (Cont.). Cadmium data in the vicinity of Building 851 reviewed but not used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| 3SS-854-014 | 0.1 | 22-NOV-95 | Collected as part of the Building 854 investigation. Coordinates not available. |
| 3SS-854-014 | 0.1 | 22-NOV-95 | |
| 3SS-854-015 | <1 | 22-NOV-95 | |
| 3SS-854-016 | 0.23 | 22-NOV-95 | |
| 3SS-854-017 | <1 | 22-NOV-95 | |
| 3SS-854-018 | <1 | 22-NOV-95 | |
| 3SS-854-021 | 1.1 | 22-NOV-95 | |
| 3SS-854-023 | <1 | 22-NOV-95 | |
| 3SS-854-024 | <1 | 22-NOV-95 | |
| 3SS-854-027 | 0.71 | 29-NOV-95 | |
| 3SS-854-028 | 0.47 | 29-NOV-95 | |
| 3SS-854-029 | 0.72 | 29-NOV-95 | |

**Notes:**

ID = Identification.
mg/kg = Milligrams per kilogram.
SWRI = Site Wide Remedial Investigation.
95% UCL = 95 Percent Upper Confidence Limit of the Mean.

**Table 4.2-7. Cadmium data in the vicinity of Buildings 815 and 818 reviewed but not used to calculate the 95% Upper Confidence Limit of the mean.**

| Location ID | Cadmium mg/kg | Date Sampled | Description |
|---|---|---|---|
| 823-05 | <0.1 | 13-FEB-95 | Collected as part of the Building 823 investigation. Not used in the calculation of the 95% UCL so as not to bias the calculation towards Building 823. |
| 823-06 | <0.1 | 13-FEB-95 | |
| MS-RT3-001 | <1 | 27-JAN-94 | Spill cleanup on Route 3. No coordinates available. Available documentation indicates sample MS-RT3-001 from spill location, sample MS-RT3-001 after cleanup, and MS-RT3-003 from background location. |
| MS-RT3-002 | <1 | 27-JAN-94 | |
| MS-RT3-003 | <1 | 27-JAN-94 | |
| B-812-SO | 1.3 | 21-NOV-00 | No coordinates available. Likely somewhere near Building 821. |
| 3SS-33-05 | <0.1 | 13-SEP-94 | Within the High Explosives Process area but outside of the area used to calculate 95% UCL. |
| 3SS-34-01 | <0.1 | 14-SEP-94 | |
| 3SS-35-04 | <0.1 | 14-SEP-94 | |
| 3SS-61-02 | <0.1 | 13-SEP-94 | |
| TK03-829-01 | 1.2 | 20-OCT-94 | |
| B829-12 | <1 | 11-JUL-94 | |
| PC-B827-009 | <1 | 11-APR-94 | |
| PC-B827-013 | <1 | 14-MAY-98 | |

**Notes:**

mg/kg = Milligrams per kilogram.
95% UCL = 95 Percent Upper Confidence Limit of the Mean.
ID = Identification.

# Appendix A

# Results of Influent and Effluent pH Monitoring

# Appendix A

# Results of Influent and Effluent pH Monitoring

Table A-1. Results of influent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2011.

**A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2011.**

| Sample Location | Sample Date | Effluent pH Result |
|---|---|---|
| *GSA OU* | | |
| **CGSA GWTS** | **07/19/2011** | **7.0** |
| **CGSA GWTS** | **08/01/2011** | **7.0** |
| **CGSA GWTS** | **09/06/2011** | **7.0** |
| **CGSA GWTS** | **10/03/2011** | **7.2** |
| **CGSA GWTS** | **11/07/2011** | **7.0** |
| **CGSA GWTS** | **12/31/2011** | **NM** |
| *Building 834 OU* | | |
| **834 GWTS** | **07/25/2011** | **7.9** |
| **834 GWTS** | **08/02/2011** | **7.9** |
| **834 GWTS** | **09/06/2011** | **7.8** |
| **834 GWTS** | **10/03/2011** | **7.6** |
| **834 GWTS** | **11/01/2011** | **7.7** |
| **834 GWTS** | **12/31/2011** | **NM** |
| *HEPA OU* | | |
| **815-SRC GWTS** | **07/11/2011** | **7.0** |
| **815-SRC GWTS** | **08/01/2011** | **7.0** |
| **815-SRC GWTS** | **09/06/2011** | **7.0** |
| **815-SRC GWTS** | **10/03/2011** | **7.1** |
| **815-SRC GWTS** | **11/01/2011** | **7.3** |
| **815-SRC GWTS** | **12/05/2011** | **7.4** |
| **815-PRX GWTS** | **07/13/2011** | **7.0** |
| **815-PRX GWTS** | **08/02/2011** | **7.0** |
| **815-PRX GWTS** | **09/06/2011** | **7.2** |
| **815-PRX GWTS** | **10/03/2011** | **7.2** |
| **815-PRX GWTS** | **11/01/2011** | **7.7** |
| **815-PRX GWTS** | **11/29/2011** | **7.7** |
| **815-DSB GWTS** | **07/11/2011** | **7.0** |
| **815-DSB GWTS** | **08/02/2011** | **7.0** |

**A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2011.**

| Sample Location | Sample Date | Effluent pH Result |
|---|---|---|
| 815-DSB GWTS | 09/30/2011 | NM |
| 815-DSB GWTS | 10/27/2011 | 7.0 |
| 815-DSB GWTS | 10/31/2011 | NM |
| 815-DSB GWTS | 12/06/2011 | 7.0 |
| 817-SRC GWTS | 07/13/2011 | 7.0 |
| 817-SRC GWTS | 08/01/2011 | 7.0 |
| 817-SRC GWTS | 09/06/2011 | 7.0 |
| 817-SRC GWTS | 10/03/2011 | 7.7 |
| 817-SRC GWTS | 11/01/2011 | 7.9 |
| 817-SRC GWTS | 11/29/2011 | 7.9 |
| 817-PRX GWTS | 07/18/2011 | 7.9 |
| 817-PRX GWTS | 08/01/2011 | 8.4 |
| 817-PRX GWTS | 09/06/2011 | 7.9 |
| 817-PRX GWTS | 10/03/2011 | 7.4 |
| 817-PRX GWTS | 11/01/2011 | 7.5 |
| 817-PRX GWTS | 12/05/2011 | 7.7 |
| 829-SRC GWTS | 07/12/2011 | 6.8 |
| 829-SRC GWTS | 08/15/2011 | 6.9 |
| 829-SRC GWTS | 09/30/2011 | NM |
| 829-SRC GWTS | 10/31/2011 | NM |
| 829-SRC GWTS | 11/30/2011 | NM |
| 829-SRC GWTS | 12/31/2011 | NM |
| *Building 850/Pit 7 Complex OU* | | |
| PIT7-SRC GWTS | 07/13/2011 | 7.0 |
| PIT7-SRC GWTS | 08/01/2011 | 7.0 |
| PIT7-SRC GWTS | 09/06/2011 | 7.0 |
| PIT7-SRC GWTS | 10/03/2011 | 7.0 |
| PIT7-SRC GWTS | 11/07/2011 | 7.0 |
| PIT7-SRC GWTS | 12/05/2011 | 7.0 |

**A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2011.**

| Sample Location | Sample Date | Effluent pH Result |
|---|---|---|
| *Building 854 OU* | | |
| **854-SRC GWTS** | **07/11/2011** | **7.0** |
| **854-SRC GWTS** | **08/01/2011** | **7.0** |
| **854-SRC GWTS** | **09/07/2011** | **7.0** |
| **854-SRC GWTS** | **10/05/2011** | **7.0** |
| **854-SRC GWTS** | **11/07/2011** | **7.0** |
| **854-SRC GWTS** | **12/31/2011** | **NM** |
| **854-PRX GWTS** | **07/11/2011** | **7.0** |
| **854-PRX GWTS** | **08/01/2011** | **7.0** |
| **854-PRX GWTS** | **09/07/2011** | **7.0** |
| **854-PRX GWTS** | **10/05/2011** | **7.0** |
| **854-PRX GWTS** | **11/07/2011** | **7.0** |
| **854-PRX GWTS** | **12/06/2011** | **7.0** |
| **854-DIS GWTS** | **07/11/2011** | **7.0** |
| **854-DIS GWTS** | **08/01/2011** | **7.0** |
| **854-DIS GWTS** | **09/07/2011** | **7.0** |
| **854-DIS GWTS** | **10/05/2011** | **7.0** |
| **854-DIS GWTS** | **11/07/2011** | **7.0** |
| **854-DIS GWTS** | **12/31/2011** | **NM** |
| *832 Canyon OU* | | |
| **832-SRC GWTS** | **07/18/2011** | **7.9** |
| **832-SRC GWTS** | **08/01/2011** | **7.8** |
| **832-SRC GWTS** | **09/06/2011** | **7.6** |
| **832-SRC GWTS** | **10/03/2011** | **7.8** |
| **832-SRC GWTS** | **11/01/2011** | **7.4** |
| **832-SRC GWTS** | **12/05/2011** | **7.3** |
| **830-SRC GWTS** | **07/11/2011** | **7.3** |
| **830-SRC GWTS** | **08/01/2011** | **7.6** |
| **830-SRC GWTS** | **09/06/2011** | **7.8** |

**A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2011.**

| Sample Location | Sample Date | Effluent pH Result |
|---|---|---|
| 830-SRC GWTS | 10/03/2011 | 7.8 |
| 830-SRC GWTS | 11/01/2011 | 7.3 |
| 830-SRC GWTS | 12/05/2011 | 7.4 |
| 830-DISS GWTS | 07/19/2011 | 7.0 |
| 830-DISS GWTS | 08/02/2011 | 7.0 |
| 830-DISS GWTS | 09/06/2011 | 7.0 |
| 830-DISS GWTS | 10/05/2011 | 7.0 |
| 830-DISS GWTS | 11/07/2011 | 7.0 |
| 830-DISS GWTS | 12/31/2011 | NM |

**Notes:**

834 = Building 834.
815 = Building 815.
817 = Building 817.
829 = Building 829.
854 = Building 854.
832 = Building 832.
830 = Building 830.
CGSA = Central General Services Area.
EGSA = Eastern General Services Area.
DISS = Distal south.
DSB = Distal site boundary.
GWTS = Ground water treatment system.
PRX = Proximal.
PRXN = Proximal North.
SRC = Source.
NA = Not applicable.
NM = Not measured due to facility not operating during this period.
NR = Not required.
OU = Operable unit.
pH = A measure of the acidity or alkalinity of an aqueous solution.
mg/L = Milligrams per liter.

# Appendix B

# Analytical Results for Routine Monitoring During 2011

# Appendix B

# Analytical Results for Routine Monitoring During 2011

OU1A-VOC [ug/L] 2011 data (prepared 2012-02-23 04:52:56, Oracle epprd02.llnl.gov)

Table B-1.01. Central General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-35A-02 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-02 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-03 | 5/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-03 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-04 | 5/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-04 | 11/16/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-04 | 11/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-05 | 5/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-05 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-06 | 5/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-06 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-07 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-07 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-08 | 2/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-08 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-08 | 9/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-08 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-09 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-09 | 6/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-09 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-10 | 6/1/11 | E601 | 17 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 5.6 | <0.5 | <0.5 |
| W-35A-10 | 6/1/11 DUP | E601 | 19 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 6.6 | <0.5 | <0.5 |
| W-35A-10 | 12/19/11 | E601 | 6.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 3.4 | <0.5 | <0.5 |
| W-35A-10 | 12/19/11 DUP | E601 | 6.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 4.4 | <0.5 | <0.5 |
| W-35A-11 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-12 | 5/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-12 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-13 | 6/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-13 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-14 | 2/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-14 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-14 | 9/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35A-14 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7B | 6/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7B | 6/22/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7B | 12/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7B | 12/12/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7E | 5/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7E | 11/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.53 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7ES | 5/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7ES | 5/4/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7ES | 11/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7F | 6/16/11 | E601 | 0.72 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-1.01. Central General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-7F | 12/8/11 | E601 | 4.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7G | 6/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7G | 12/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7G | 12/8/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7H | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7H | 12/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7I | 2/15/11 | E601 | 830 D | 53 D | 24 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | 8.7 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-7I | 4/6/11 | E601 | 590 D | 64 | 30 | 1.5 | <0.5 | <0.5 | <0.5 | <0.5 | 8.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7I | 4/6/11 DUP | E601 | 600 D | 60 | 30 | 1.5 | <0.5 | <0.5 | <0.5 | <0.5 | 8.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7I | 8/1/11 | E601 | 620 D | 62 | 39 | 1.4 | <0.5 | <0.5 | <0.5 | 0.67 | 7.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7I | 10/3/11 | E601 | 380 D | 32 | 24 | 0.67 | <0.5 | <0.5 | <0.5 | 0.61 | 4.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7J | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7J | 12/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7K | 6/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7K | 12/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7L | 6/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7L | 12/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7M | 6/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7M | 12/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7N | 6/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7N | 12/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7O | 2/15/11 | E601 | 47 | 3 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.87 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7O | 4/6/11 | E601 | 55 | 3.8 | 0.55 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7O | 9/6/11 | E601 | 22 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7O | 10/3/11 | E601 | 19 | 1.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7P | 4/6/11 | E601 | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-7P | 9/6/11 | E601 | 2.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7P | 10/3/11 | E601 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7PS | 5/3/11 | E601 | 0.89 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7PS | 11/15/11 | E601 | 1.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7PS | 11/15/11 DUP | E601 | 1.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7Q | 6/16/11 | E601 | 21 | 3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7Q | 12/8/11 | E601 | 28 | 3.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7Q | 12/8/11 DUP | E601 | 21 | 2.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7R | 2/15/11 | E601 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7R | 4/6/11 | E601 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7R | 8/1/11 | E601 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7R | 10/3/11 | E601 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7S | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7S | 12/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7T | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7T | 12/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-843-01 | 6/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-843-01 | 12/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-843-02 | 6/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-1.01. Central General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-843-02 | 12/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-872-01 | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-872-01 | 12/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-872-02 | 9/6/11 | E601 | 9.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 3.5 | <0.5 | <0.5 |
| W-872-02 | 10/3/11 | E601 | 8.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 2.9 | <0.5 | <0.5 |
| W-873-01 | 6/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-873-01 | 12/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-873-02 | 6/20/11 | E601 | 5.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 4.6 | <0.5 | <0.5 |
| W-873-02 | 12/7/11 | E601 | 5.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 4 | <0.5 | <0.5 |
| W-873-03 | 6/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-873-04 | 6/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-873-04 | 12/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-873-06 | 6/20/11 | E601 | 4.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-873-06 | 12/1/11 | E601 | 3.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-873-07 | 2/15/11 | E601 | 5.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 8.1 | <0.5 | <0.5 |
| W-873-07 | 4/6/11 | E601 | 19 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 2.4 | <0.5 | <0.5 |
| W-873-07 | 8/1/11 | E601 | 4.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 7.6 | <0.5 | <0.5 |
| W-873-07 | 10/3/11 | E601 | 4.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 9.5 | <0.5 | <0.5 |
| W-875-01 | 6/16/11 | E601 | 1.4 | <0.5 | 4.4 | 4.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-01 | 12/6/11 | E601 | 0.91 | <0.5 | 4.2 | 2.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-02 | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-02 | 12/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-03 | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-03 | 12/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-04 | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-04 | 12/6/11 | E601 | <0.5 | <0.5 | 0.75 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-05 | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-05 | 12/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-06 | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-06 | 12/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-07 | 2/15/11 | E601 | 720 D | 60 | 26 | 0.7 | <0.5 | <0.5 | 0.52 | 0.58 | 8.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-07 | 4/6/11 | E601 | 420 D | 55 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 5.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-07 | 4/6/11 DUP | E601 | 410 D | 52 | 12 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 5.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-07 | 8/1/11 | E601 | 430 D | 59 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-07 | 10/3/11 | E601 | 430 D | 44 | 23 | <0.5 | <0.5 | <0.5 | <0.5 | 0.82 | 3.3 | <0.5 | 0.73 | <0.5 | <0.5 | <0.5 |
| W-875-08 | 3/14/11 | E601 | 1,000 D | 93 | 41 | <0.5 | <0.5 | <0.5 | <0.5 | 0.68 | 27 | <0.5 | 0.51 | <0.5 | <0.5 | <0.5 |
| W-875-08 | 4/6/11 | E601 | 230 D | 6.1 | 28 | 2.4 | <0.5 | <0.5 | <0.5 | <0.5 | 4.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-08 | 4/6/11 DUP | E601 | 220 D | 5.3 | 26 | 2.2 | <0.5 | <0.5 | <0.5 | <0.5 | 4.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-08 | 8/1/11 | E601 | 390 D | 8.4 | 27 | 2 | <0.5 | <0.5 | <0.5 | <0.5 | 7.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-08 | 10/3/11 | E601 | 480 D | 8.5 | 35 | 2.6 | <0.5 | <0.5 | <0.5 | <0.5 | 10 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-09 | 3/14/11 | E601 | 170 D | 11 | 15 | 0.73 | <0.5 | <0.5 | <0.5 | <0.5 | 3.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-09 | 4/6/11 | E601 | 340 D | 27 | 14 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 3.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-10 | 3/14/11 | E601 | 19 | 0.76 | 3.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-11 | 4/6/11 | E601 | 45 | 3.1 | 2.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-11 | 9/6/11 | E601 | 12 | 0.68 | 3.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-1.01. Central General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-875-11 | 10/3/11 | E601 | 9.4 | 0.62 | 2.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-875-15 | 3/14/11 | E601 | 770 D | 76 | 22 | <0.5 | <0.5 | 0.53 | 0.52 | 1.5 | 7.2 | <0.5 | 1.6 | <0.5 | <0.5 | <0.5 |
| W-876-01 | 6/20/11 | E601 | 6.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-876-01 | 12/6/11 | E601 | 2.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-879-01 | 6/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-879-01 | 12/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-889-01 | 6/15/11 | E601 | 28 | <0.5 | 0.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-889-01 | 12/7/11 | E601 | 14 | <0.5 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-1733 | 6/14/11 | E601 | 6 | 0.81 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-1733 | 12/12/11 | E601 | 5.5 | 0.82 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-1735 | 6/14/11 | E601 | 0.55 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-1736 | 6/14/11 | E601 | 4.4 | 0.63 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-1736 | 12/14/11 | E601 | 4.4 | 0.67 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-1737 | 6/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-1737 | 12/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-1739 | 6/14/11 | E601 | 2.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-1739 | 12/12/11 | E601 | 3.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-CGSA-2708 | 11/9/11 | E624 | 2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

Table B-1.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromoform (µg/L) | Dibromo-chloro-methane (µg/L) |
|---|---|---|---|---|---|---|
| W-35A-02 | 6/6/11 | E601 | 0 of 18 | - | - | - |
| W-35A-02 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-03 | 5/31/11 | E601 | 0 of 18 | - | - | - |
| W-35A-03 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-04 | 5/9/11 | E601 | 0 of 18 | - | - | - |
| W-35A-04 | 11/16/11 | E502.2 | 1 of 46 | - | - | 2.1 |
| W-35A-04 | 11/16/11 | E601 | 2 of 18 | - | 0.61 | 0.59 |
| W-35A-05 | 5/31/11 | E601 | 0 of 18 | - | - | - |
| W-35A-05 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-06 | 5/31/11 | E601 | 0 of 18 | - | - | - |
| W-35A-06 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-07 | 6/6/11 | E601 | 0 of 18 | - | - | - |
| W-35A-07 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-08 | 2/9/11 | E601 | 0 of 18 | - | - | - |
| W-35A-08 | 6/1/11 | E601 | 0 of 18 | - | - | - |
| W-35A-08 | 9/20/11 | E601 | 0 of 18 | - | - | - |
| W-35A-08 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-09 | 6/1/11 | E601 | 0 of 18 | - | - | - |
| W-35A-09 | 6/1/11 DUP | E601 | 0 of 18 | - | - | - |
| W-35A-09 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-10 | 6/1/11 | E601 | 0 of 18 | - | - | - |
| W-35A-10 | 6/1/11 DUP | E601 | 0 of 18 | - | - | - |
| W-35A-10 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-10 | 12/19/11 DUP | E601 | 0 of 18 | - | - | - |
| W-35A-11 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-12 | 5/24/11 | E601 | 0 of 18 | - | - | - |
| W-35A-12 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-13 | 6/29/11 | E601 | 0 of 18 | - | - | - |
| W-35A-13 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-35A-14 | 2/9/11 | E601 | 0 of 18 | - | - | - |
| W-35A-14 | 6/6/11 | E601 | 0 of 18 | - | - | - |
| W-35A-14 | 9/20/11 | E601 | 0 of 18 | - | - | - |
| W-35A-14 | 12/19/11 | E601 | 0 of 18 | - | - | - |
| W-7B | 6/22/11 | E601 | 0 of 18 | - | - | - |
| W-7B | 6/22/11 DUP | E601 | 0 of 18 | - | - | - |
| W-7B | 12/12/11 | E601 | 0 of 18 | - | - | - |
| W-7B | 12/12/11 DUP | E601 | 0 of 18 | - | - | - |
| W-7E | 5/4/11 | E601 | 0 of 18 | - | - | - |
| W-7E | 11/16/11 | E601 | 0 of 18 | - | - | - |
| W-7ES | 5/4/11 | E601 | 0 of 18 | - | - | - |
| W-7ES | 5/4/11 DUP | E601 | 0 of 18 | - | - | - |
| W-7ES | 11/16/11 | E601 | 0 of 18 | - | - | - |

Table B-1.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromoform (µg/L) | Dibromo-chloro-methane (µg/L) |
|---|---|---|---|---|---|---|
| W-7F | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-7F | 12/8/11 | E601 | 0 of 18 | - | - | - |
| W-7G | 6/22/11 | E601 | 0 of 18 | - | - | - |
| W-7G | 12/8/11 | E601 | 0 of 18 | - | - | - |
| W-7G | 12/8/11 DUP | E601 | 0 of 18 | - | - | - |
| W-7H | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-7H | 12/7/11 | E601 | 0 of 18 | - | - | - |
| W-7I | 2/15/11 | E601 | 1 of 18 | 25 D | - | - |
| W-7I | 4/6/11 | E601 | 1 of 18 | 32 | - | - |
| W-7I | 4/6/11 DUP | E601 | 1 of 18 | 32 | - | - |
| W-7I | 8/1/11 | E601 | 1 of 18 | 40 | - | - |
| W-7I | 10/3/11 | E601 | 1 of 18 | 25 | - | - |
| W-7J | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-7J | 12/8/11 | E601 | 0 of 18 | - | - | - |
| W-7K | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-7K | 12/15/11 | E601 | 0 of 18 | - | - | - |
| W-7L | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-7L | 12/12/11 | E601 | 0 of 18 | - | - | - |
| W-7M | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-7M | 12/14/11 | E601 | 0 of 18 | - | - | - |
| W-7N | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-7N | 12/14/11 | E601 | 0 of 18 | - | - | - |
| W-7O | 2/15/11 | E601 | 0 of 18 | - | - | - |
| W-7O | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-7O | 9/6/11 | E601 | 0 of 18 | - | - | - |
| W-7O | 10/3/11 | E601 | 0 of 18 | - | - | - |
| W-7P | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-7P | 9/6/11 | E601 | 0 of 18 | - | - | - |
| W-7P | 10/3/11 | E601 | 0 of 18 | - | - | - |
| W-7PS | 5/3/11 | E601 | 0 of 18 | - | - | - |
| W-7PS | 11/15/11 | E601 | 0 of 18 | - | - | - |
| W-7PS | 11/15/11 DUP | E601 | 0 of 18 | - | - | - |
| W-7Q | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-7Q | 12/8/11 | E601 | 0 of 18 | - | - | - |
| W-7Q | 12/8/11 DUP | E601 | 0 of 18 | - | - | - |
| W-7R | 2/15/11 | E601 | 0 of 18 | - | - | - |
| W-7R | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-7R | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-7R | 10/3/11 | E601 | 0 of 18 | - | - | - |
| W-7S | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-7S | 12/15/11 | E601 | 0 of 18 | - | - | - |
| W-7T | 6/16/11 | E601 | 0 of 18 | - | - | - |

Table B-1.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromoform (µg/L) | Dibromo-chloro-methane (µg/L) |
|---|---|---|---|---|---|---|
| W-7T | 12/15/11 | E601 | 0 of 18 | - | - | - |
| W-843-01 | 6/15/11 | E601 | 0 of 18 | - | - | - |
| W-843-01 | 12/1/11 | E601 | 0 of 18 | - | - | - |
| W-843-02 | 6/15/11 | E601 | 0 of 18 | - | - | - |
| W-843-02 | 12/1/11 | E601 | 0 of 18 | - | - | - |
| W-872-01 | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-872-01 | 12/5/11 | E601 | 0 of 18 | - | - | - |
| W-872-02 | 9/6/11 | E601 | 0 of 18 | - | - | - |
| W-872-02 | 10/3/11 | E601 | 0 of 18 | - | - | - |
| W-873-01 | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-873-01 | 12/1/11 | E601 | 0 of 18 | - | - | - |
| W-873-02 | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-873-02 | 12/7/11 | E601 | 0 of 18 | - | - | - |
| W-873-03 | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-873-04 | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-873-04 | 12/1/11 | E601 | 0 of 18 | - | - | - |
| W-873-06 | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-873-06 | 12/1/11 | E601 | 0 of 18 | - | - | - |
| W-873-07 | 2/15/11 | E601 | 0 of 18 | - | - | - |
| W-873-07 | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-873-07 | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-873-07 | 10/3/11 | E601 | 0 of 18 | - | - | - |
| W-875-01 | 6/16/11 | E601 | 1 of 18 | 8.6 | - | - |
| W-875-01 | 12/6/11 | E601 | 1 of 18 | 6.5 | - | - |
| W-875-02 | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-875-02 | 12/6/11 | E601 | 0 of 18 | - | - | - |
| W-875-03 | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-875-03 | 12/5/11 | E601 | 0 of 18 | - | - | - |
| W-875-04 | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-875-04 | 12/6/11 | E601 | 0 of 18 | - | - | - |
| W-875-05 | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-875-05 | 12/6/11 | E601 | 0 of 18 | - | - | - |
| W-875-06 | 6/16/11 | E601 | 0 of 18 | - | - | - |
| W-875-06 | 12/6/11 | E601 | 0 of 18 | - | - | - |
| W-875-07 | 2/15/11 | E601 | 1 of 18 | 27 | - | - |
| W-875-07 | 4/6/11 | E601 | 1 of 18 | 13 | - | - |
| W-875-07 | 4/6/11 DUP | E601 | 1 of 18 | 13 | - | - |
| W-875-07 | 8/1/11 | E601 | 1 of 18 | 13 | - | - |
| W-875-07 | 10/3/11 | E601 | 1 of 18 | 23 | - | - |
| W-875-08 | 3/14/11 | E601 | 1 of 18 | 41 | - | - |
| W-875-08 | 4/6/11 | E601 | 1 of 18 | 31 | - | - |
| W-875-08 | 4/6/11 DUP | E601 | 1 of 18 | 28 | - | - |

Table B-1.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromoform (µg/L) | Dibromo-chloro-methane (µg/L) |
|---|---|---|---|---|---|---|
| W-875-08 | 8/1/11 | E601 | 1 of 18 | 29 | - | - |
| W-875-08 | 10/3/11 | E601 | 1 of 18 | 37 | - | - |
| W-875-09 | 3/14/11 | E601 | 1 of 18 | 16 | - | - |
| W-875-09 | 4/6/11 | E601 | 1 of 18 | 14 | - | - |
| W-875-10 | 3/14/11 | E601 | 1 of 18 | 3.9 | - | - |
| W-875-11 | 4/6/11 | E601 | 1 of 18 | 2.7 | - | - |
| W-875-11 | 9/6/11 | E601 | 1 of 18 | 3.1 | - | - |
| W-875-11 | 10/3/11 | E601 | 1 of 18 | 2.6 | - | - |
| W-875-15 | 3/14/11 | E601 | 1 of 18 | 22 | - | - |
| W-876-01 | 6/20/11 | E601 | 0 of 18 | - | - | - |
| W-876-01 | 12/6/11 | E601 | 0 of 18 | - | - | - |
| W-879-01 | 6/15/11 | E601 | 0 of 18 | - | - | - |
| W-879-01 | 12/7/11 | E601 | 0 of 18 | - | - | - |
| W-889-01 | 6/15/11 | E601 | 0 of 18 | - | - | - |
| W-889-01 | 12/7/11 | E601 | 1 of 18 | 1.2 | - | - |
| W-CGSA-1733 | 6/14/11 | E601 | 0 of 18 | - | - | - |
| W-CGSA-1733 | 12/12/11 | E601 | 0 of 18 | - | - | - |
| W-CGSA-1735 | 6/14/11 | E601 | 0 of 18 | - | - | - |
| W-CGSA-1736 | 6/14/11 | E601 | 0 of 18 | - | - | - |
| W-CGSA-1736 | 12/14/11 | E601 | 0 of 18 | - | - | - |
| W-CGSA-1737 | 6/14/11 | E601 | 0 of 18 | - | - | - |
| W-CGSA-1737 | 12/14/11 | E601 | 0 of 18 | - | - | - |
| W-CGSA-1739 | 6/14/11 | E601 | 0 of 18 | - | - | - |
| W-CGSA-1739 | 12/12/11 | E601 | 0 of 18 | - | - | - |
| W-CGSA-2708 | 11/9/11 | E624 | 0 of 30 | - | - | - |

OU1B-VOC [ug/L] 2011 data (prepared 2012-02-23 14:17:43, Oracle epprd02.llnl.gov)

Table B-1.02. Eastern General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CDF1 | 1/13/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 1/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 1/13/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| CDF1 | 1/13/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 L | <0.5 | <0.5 |
| CDF1 | 2/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 2/17/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 3/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 3/16/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 4/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 5/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 5/19/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 6/21/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 6/21/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 7/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 7/27/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 8/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 8/16/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 9/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 9/26/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 10/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 10/19/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 11/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 11/28/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 12/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CDF1 | 12/14/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 1/13/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 1/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 1/13/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| CON1 | 1/13/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 L | <0.5 | <0.5 |
| CON1 | 2/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 2/15/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 3/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 3/16/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 4/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 4/18/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 5/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 5/19/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 6/21/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 6/21/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 7/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 7/27/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 8/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-1.02. Eastern General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CON1 | 8/16/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 9/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 9/26/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 10/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 10/19/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 11/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 11/28/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 12/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON1 | 12/14/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 1/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 2/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 3/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 4/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 5/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 6/21/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 7/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 8/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 9/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 10/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 11/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CON2 | 12/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25D-02 | 6/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25M-01 | 6/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25M-02 | 5/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25M-02 | 5/17/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25M-03 | 6/30/11 | E601 | 0.65 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-01 | 5/25/11 | E601 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-01 | 5/25/11 DUP | E601 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-01 | 12/12/11 | E601 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-04 | 5/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-05 | 5/17/11 | E601 | 0.96 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-05 | 12/21/11 | E601 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-06 | 5/17/11 | E601 | 0.74 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-06 | 5/17/11 DUP | E601 | 0.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-07 | 2/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-07 | 5/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-07 | 8/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-07 | 12/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-08 | 6/20/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-09 | 5/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-10 | 2/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-10 | 5/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-10 | 8/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-10 | 12/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-1.02. Eastern General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-25N-11 | 2/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-11 | 5/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-11 | 8/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-11 | 12/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-12 | 2/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-12 | 5/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-12 | 8/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-12 | 12/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-13 | 2/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-13 | 5/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-13 | 8/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-13 | 12/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-18 | 5/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-20 | 5/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-21 | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-23 | 5/26/11 | E601 | 0.88 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-24 | 5/25/11 | E601 | 1.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-24 | 12/12/11 | E601 | 2.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-25 | 6/21/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-26 | 5/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-25N-28 | 5/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-01 | 5/2/11 | E601 | 3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-01 | 5/2/11 DUP | E601 | 3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-01 | 11/14/11 | E601 | 2.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-01 | 11/14/11 DUP | E601 | 2.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-02 | 6/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-03 | 5/25/11 | E601 | 2.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-03 | 12/12/11 | E601 | 1.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-03 | 12/12/11 DUP | E601 | 1.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.8 | <0.5 | <0.5 |
| W-26R-04 | 6/16/11 | E601 | 3.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-05 | 5/2/11 | E601 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-05 | 11/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-06 | 6/13/11 | E601 | 2.9 | 0.53 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-06 | 12/21/11 | E601 | 2.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-07 | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-08 | 6/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-11 | 5/2/11 | E601 | 0.83 | <0.5 | <0.5 | <0.5 L | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 L | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-26R-11 | 11/14/11 | E601 | 0.63 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7D | 6/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-7DS | 5/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-1.02 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| CDF1 | 1/13/11 | E502.2 | 0 of 46 |
| CDF1 | 1/13/11 | E601 | 0 of 18 |
| CDF1 | 1/13/11 DUP | E502.2 | 0 of 45 |
| CDF1 | 1/13/11 DUP | E601 | 0 of 18 |
| CDF1 | 2/17/11 | E601 | 0 of 18 |
| CDF1 | 2/17/11 DUP | E601 | 0 of 18 |
| CDF1 | 3/16/11 | E601 | 0 of 18 |
| CDF1 | 3/16/11 DUP | E601 | 0 of 18 |
| CDF1 | 4/18/11 | E601 | 0 of 18 |
| CDF1 | 5/19/11 | E601 | 0 of 18 |
| CDF1 | 5/19/11 DUP | E601 | 0 of 18 |
| CDF1 | 6/21/11 | E601 | 0 of 18 |
| CDF1 | 6/21/11 DUP | E601 | 0 of 18 |
| CDF1 | 7/27/11 | E601 | 0 of 18 |
| CDF1 | 7/27/11 DUP | E601 | 0 of 18 |
| CDF1 | 8/16/11 | E601 | 0 of 18 |
| CDF1 | 8/16/11 DUP | E601 | 0 of 18 |
| CDF1 | 9/26/11 | E601 | 0 of 18 |
| CDF1 | 9/26/11 DUP | E601 | 0 of 18 |
| CDF1 | 10/19/11 | E601 | 0 of 18 |
| CDF1 | 10/19/11 DUP | E601 | 0 of 18 |
| CDF1 | 11/28/11 | E601 | 0 of 18 |
| CDF1 | 11/28/11 DUP | E601 | 0 of 18 |
| CDF1 | 12/14/11 | E601 | 0 of 18 |
| CDF1 | 12/14/11 DUP | E601 | 0 of 18 |
| CON1 | 1/13/11 | E502.2 | 0 of 46 |
| CON1 | 1/13/11 | E601 | 0 of 18 |
| CON1 | 1/13/11 DUP | E502.2 | 0 of 45 |
| CON1 | 1/13/11 DUP | E601 | 0 of 18 |
| CON1 | 2/15/11 | E601 | 0 of 18 |
| CON1 | 2/15/11 DUP | E601 | 0 of 18 |
| CON1 | 3/16/11 | E601 | 0 of 18 |
| CON1 | 3/16/11 DUP | E601 | 0 of 18 |
| CON1 | 4/18/11 | E601 | 0 of 18 |
| CON1 | 4/18/11 DUP | E601 | 0 of 18 |
| CON1 | 5/19/11 | E601 | 0 of 18 |
| CON1 | 5/19/11 DUP | E601 | 0 of 18 |
| CON1 | 6/21/11 | E601 | 0 of 18 |
| CON1 | 6/21/11 DUP | E601 | 0 of 18 |
| CON1 | 7/27/11 | E601 | 0 of 18 |
| CON1 | 7/27/11 DUP | E601 | 0 of 18 |
| CON1 | 8/16/11 | E601 | 0 of 18 |
| CON1 | 8/16/11 DUP | E601 | 0 of 18 |
| CON1 | 9/26/11 | E601 | 0 of 18 |
| CON1 | 9/26/11 DUP | E601 | 0 of 18 |

Table B-1.02 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| CON1 | 10/19/11 | E601 | 0 of 18 |
| CON1 | 10/19/11 DUP | E601 | 0 of 18 |
| CON1 | 11/28/11 | E601 | 0 of 18 |
| CON1 | 11/28/11 DUP | E601 | 0 of 18 |
| CON1 | 12/14/11 | E601 | 0 of 18 |
| CON1 | 12/14/11 DUP | E601 | 0 of 18 |
| CON2 | 1/13/11 | E601 | 0 of 18 |
| CON2 | 2/15/11 | E601 | 0 of 18 |
| CON2 | 3/16/11 | E601 | 0 of 18 |
| CON2 | 4/18/11 | E601 | 0 of 18 |
| CON2 | 5/19/11 | E601 | 0 of 18 |
| CON2 | 6/21/11 | E601 | 0 of 18 |
| CON2 | 7/27/11 | E601 | 0 of 18 |
| CON2 | 8/16/11 | E601 | 0 of 18 |
| CON2 | 9/26/11 | E601 | 0 of 18 |
| CON2 | 10/19/11 | E601 | 0 of 18 |
| CON2 | 11/28/11 | E601 | 0 of 18 |
| CON2 | 12/14/11 | E601 | 0 of 18 |
| W-25D-02 | 6/27/11 | E601 | 0 of 18 |
| W-25M-01 | 6/27/11 | E601 | 0 of 18 |
| W-25M-02 | 5/17/11 | E601 | 0 of 18 |
| W-25M-02 | 5/17/11 DUP | E601 | 0 of 18 |
| W-25M-03 | 6/30/11 | E601 | 0 of 18 |
| W-25N-01 | 5/25/11 | E601 | 0 of 18 |
| W-25N-01 | 5/25/11 DUP | E601 | 0 of 18 |
| W-25N-01 | 12/12/11 | E601 | 0 of 18 |
| W-25N-04 | 5/25/11 | E601 | 0 of 18 |
| W-25N-05 | 5/17/11 | E601 | 0 of 18 |
| W-25N-05 | 12/21/11 | E601 | 0 of 18 |
| W-25N-06 | 5/17/11 | E601 | 0 of 18 |
| W-25N-06 | 5/17/11 DUP | E601 | 0 of 18 |
| W-25N-07 | 2/9/11 | E601 | 0 of 18 |
| W-25N-07 | 5/24/11 | E601 | 0 of 18 |
| W-25N-07 | 8/31/11 | E601 | 0 of 18 |
| W-25N-07 | 12/6/11 | E601 | 0 of 18 |
| W-25N-08 | 6/20/11 | E601 | 0 of 18 |
| W-25N-09 | 5/26/11 | E601 | 0 of 18 |
| W-25N-10 | 2/9/11 | E601 | 0 of 18 |
| W-25N-10 | 5/24/11 | E601 | 0 of 18 |
| W-25N-10 | 8/31/11 | E601 | 0 of 18 |
| W-25N-10 | 12/6/11 | E601 | 0 of 18 |
| W-25N-11 | 2/9/11 | E601 | 0 of 18 |
| W-25N-11 | 5/24/11 | E601 | 0 of 18 |
| W-25N-11 | 8/31/11 | E601 | 0 of 18 |
| W-25N-11 | 12/6/11 | E601 | 0 of 18 |

Table B-1.02 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| W-25N-12 | 2/9/11 | E601 | 0 of 18 |
| W-25N-12 | 5/24/11 | E601 | 0 of 18 |
| W-25N-12 | 8/31/11 | E601 | 0 of 18 |
| W-25N-12 | 12/6/11 | E601 | 0 of 18 |
| W-25N-13 | 2/9/11 | E601 | 0 of 18 |
| W-25N-13 | 5/24/11 | E601 | 0 of 18 |
| W-25N-13 | 8/31/11 | E601 | 0 of 18 |
| W-25N-13 | 12/6/11 | E601 | 0 of 18 |
| W-25N-18 | 5/17/11 | E601 | 0 of 18 |
| W-25N-20 | 5/2/11 | E601 | 0 of 18 |
| W-25N-21 | 6/16/11 | E601 | 0 of 18 |
| W-25N-23 | 5/26/11 | E601 | 0 of 18 |
| W-25N-24 | 5/25/11 | E601 | 0 of 18 |
| W-25N-24 | 12/12/11 | E601 | 0 of 18 |
| W-25N-25 | 6/21/11 | E601 | 0 of 18 |
| W-25N-26 | 5/17/11 | E601 | 0 of 18 |
| W-25N-28 | 5/17/11 | E601 | 0 of 18 |
| W-26R-01 | 5/2/11 | E601 | 0 of 18 |
| W-26R-01 | 5/2/11 DUP | E601 | 0 of 18 |
| W-26R-01 | 11/14/11 | E601 | 0 of 18 |
| W-26R-01 | 11/14/11 DUP | E601 | 0 of 18 |
| W-26R-02 | 6/13/11 | E601 | 0 of 18 |
| W-26R-03 | 5/25/11 | E601 | 0 of 18 |
| W-26R-03 | 12/12/11 | E601 | 0 of 18 |
| W-26R-03 | 12/12/11 DUP | E601 | 0 of 18 |
| W-26R-04 | 6/16/11 | E601 | 0 of 18 |
| W-26R-05 | 5/2/11 | E601 | 0 of 18 |
| W-26R-05 | 11/14/11 | E601 | 0 of 18 |
| W-26R-06 | 6/13/11 | E601 | 0 of 18 |
| W-26R-06 | 12/21/11 | E601 | 0 of 18 |
| W-26R-07 | 6/16/11 | E601 | 0 of 18 |
| W-26R-08 | 6/13/11 | E601 | 0 of 18 |
| W-26R-11 | 5/2/11 | E601 | 0 of 18 |
| W-26R-11 | 11/14/11 | E601 | 0 of 18 |
| W-7D | 6/16/11 | E601 | 0 of 18 |
| W-7DS | 5/3/11 | E601 | 0 of 18 |

OU1-METALS [mg/L] 2011 data (prepared 2012-02-23 04:52:28, Oracle epprd02.llnl.gov)

Table B-1.03. General Services Area Operable Unit metals and silica in ground water.

| Location | Date | Arsenic (mg/L) | Barium (mg/L) | Cadmium (mg/L) | Chromium (mg/L) | Lead (mg/L) | Mercury (mg/L) | Selenium (mg/L) | Silica (as SiO2) (mg/L) | Silver (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| W-CGSA-2708 | 11/9/11 | 0.011 | <0.025 | <0.001 | <0.001 | <0.005 | <0.0002 | 0.0052 | 27 | <0.001 |

OU1-E300.0 [mg/L; ug/L] 2011 data (prepared 2012-02-23 04:52:15, Oracle epprd02.llnl.gov)

Table B-1.04. General Services Area Operable Unit nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-879-01 | 12/7/11 | <0.5 | <4 |
| W-CGSA-2708 | 11/9/11 | - | <4 |

OU1-E8330LOW [ug/L] 2011 data (prepared 2012-02-23 14:16:34, Oracle epprd02.llnl.gov)

Table B-1.05. General Services Area Operable Unit high explosive compounds in ground water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-CGSA-2708 | 11/9/11 | <1.5 IJ | <1.5 IJ | <1.5 IJ | <1.5 IJ | <1.5 IJ | <1.5 IJ | <1.5 IJ | <1.5 IJ | <1.5 IJ | <0.73 IJO | <1.5 IJO | <0.73 IJ | <1.5 IJ |

OU1-E900 [pCi/L] 2011 data (prepared 2012-02-23 04:52:20, Oracle epprd02.llnl.gov)

Table B-1.06. General Services Area Operable Unit gross alpha and beta in ground water.

| Location | Date | Gross alpha (pCi/L) | Gross beta (pCi/L) |
|---|---|---|---|
| W-CGSA-2708 | 11/9/11 | <2 | 8.32 ± 2.19 |

OU1-E906 [pCi/L] 2011 data (prepared 2012-02-23 04:52:22, Oracle epprd02.llnl.gov)

Table B-1.07. General Services Area Operable Unit tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| W-CGSA-2708 | 11/9/11 | <100 |

OU1-GENMIN [mg/L; Units; umhos/cm] 2011 data (prepared 2012-02-23 04:52:25, Oracle epprd02.llnl.gov)

Table B-1.08. General Services Area Operable Unit general minerals in ground water.

| Constituents of concern | W-25N-04 | W-875-08 | W-875-08 | W-CGSA-1736 | W-CGSA-2708 |
|---|---|---|---|---|---|
| | 12/21/11 | 3/14/11 | 10/3/11 | 12/14/11 | 11/9/11 |
| Total Alkalinity (as CaCO3) (mg/L) | 260 | 210 | 280 | - | 170 |
| Aluminum (mg/L) | <0.2 | <0.2 | <0.2 | - | 0.39 |
| Bicarbonate Alk (as CaCO3) (mg/L) | 210 D | 210 | 280 D | - | 170 D |
| Calcium (mg/L) | 10 | 12 | 20 | - | 23 |
| Carbonate Alk (as CaCO3) (mg/L) | 53 D | <4.1 | <8.2 D | - | <8.2 D |
| Chloride (mg/L) | 220 D | 50 | 130 | - | 240 D |
| Copper (mg/L) | <0.05 | <0.05 | <0.05 | - | <0.05 |
| Fluoride (mg/L) | 1.9 D | 0.49 | 0.64 | - | 0.51 D |
| Hydroxide Alk (as CaCO3) (mg/L) | <8.2 D | <4.1 | <8.2 D | - | <8.2 D |
| Iron (mg/L) | <0.1 | <0.1 | <0.1 | - | 0.16 |
| Magnesium (mg/L) | 0.7 | 4.1 | 5.2 | - | 7.7 |
| Manganese (mg/L) | <0.03 | <0.03 | <0.03 | - | <0.03 |
| Nickel (mg/L) | <0.1 | <0.1 | <0.1 | - | <0.1 |
| Nitrate (as N) (mg/L) | <1 D | 1.5 | <1 D | - | 5.9 D |
| Nitrate (as NO3) (mg/L) | 1.3 | 6.5 | 1.2 H | - | 26 |
| Nitrite (as N) (mg/L) | <0.5 | <0.5 | <0.5 | - | <0.5 |
| pH (Units) | 8.55 H | 8.24 | 8.06 H | - | 8.17 |
| Ortho-Phosphate (mg/L) | 0.3 | 0.26 | <0.05 | - | 0.45 |
| Total Phosphorus (as P) (mg/L) | 0.15 H | 0.11 H | <0.05 H | - | 0.3 H |
| Potassium (mg/L) | 4.8 | 4.5 | 6.9 | - | 11 |
| Sodium (mg/L) | 520 L | 150 | 290 | - | 400 |
| Total dissolved solids (TDS) (mg/L) | 1,600 DH | 360 D | 930 DH | - | 1,600 DH |
| Specific Conductance (µmhos/cm) | 2,290 H | 774 | 1,370 H | - | 1,960 |
| Sulfate (mg/L) | 500 D | 97 | 270 | - | 400 D |
| Surfactants (mg/L) | <1 D | <0.5 | <0.5 | - | <0.5 |
| Total Hardness (as CaCO3) (mg/L) | 28 | 48 | 71 | - | 88 |
| Total Organic Carbon (TOC) (mg/L) | 1.7 | - | 1.1 | 1.9 | - |
| Zinc (mg/L) | <0.05 | <0.05 | <0.05 | - | <0.05 |

OU1-ASMSKPA [pCi/L; ug/L; ratio] 2011 data (prepared 2012-02-23 04:52:12, Oracle epprd02.llnl.gov)

Table B-1.09. General Services Area Operable Unit uranium isotopes in ground water.

| Location | Date | Uranium (µg/L) | Uranium (pCi/L) | Uranium 234 and Uranium 233 (pCi/L) | Uranium 234 by mass (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 235 by mass (pCi/L) | Uranium 236 by mass (pCi/L) | Uranium 238 (pCi/L) | Uranium 238 by mass (pCi/L) | Uranium 235/238 (ratio) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| W-25N-04 | 12/21/11 | - | - | 0.411 ± 0.130 | - | <0.1 | - | - | 0.112 ± 0.0619 | - | - |
| W-35A-04 | 11/16/11 | - | - | 2.33 ± 0.512 | - | <0.1 | - | - | 1.93 ± 0.442 | - | - |
| W-875-08 | 10/3/11 | - | - | 0.858 ± 0.195 | - | <0.1 | - | - | 0.663 ± 0.164 | - | - |
| W-CGSA-2708 | 11/9/11 | 1.26 ± 0.147 | 2.60 ± 0.0610 | - | 1.80 ± 0.0610 | - | 0.0330 ± 0.000350 | <0.00041 | - | 0.700 ± 0.00590 | 0.00725 ± 0.0000500 |

OU1-TBOS [ug/L] 2011 data (prepared 2012-02-23 04:52:30, Oracle epprd02.llnl.gov)

Table B-1.10. General Services Area Operable Unit tetrabutyl orthosilicate/tetrakis (2-ethylbutyl) silane (TBOS/TKEBS) in ground water.

| Location | Date | C24H52O4Si (µg/L) |
|---|---|---|
| W-CGSA-2708 | 11/9/11 | <10 D |

OU2-VOC [ug/L] 2011 data (prepared 2012-02-23 04:54:01, Oracle epprd02.llnl.gov)

Table B-2.01. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-834-1709 | 2/7/11 | E601 | 1,100 D | 8.2 | 37 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-1709 | 7/27/11 | E601 | 3,300 D | 16 D | 170 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-1711 | 2/7/11 | E601 | 1,400 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-834-1711 | 7/27/11 | E601 | 1,300 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-1824 | 3/30/11 | E601 | 100 | <0.5 | 54 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 15 |
| W-834-1824 | 8/4/11 | E601 | 43 | <0.5 | 0.92 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 24 |
| W-834-1824 | 8/4/11 DUP | E601 | 71 | <0.5 | 33 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 21 |
| W-834-1825 | 3/30/11 | E601 | 8.3 | <0.5 | 5.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 10 |
| W-834-1825 | 8/4/11 | E601 | 1.9 | <0.5 | 3.4 | 0.93 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 3.1 |
| W-834-1833 | 3/30/11 | E601 | 7,900 D | 16 D | 78 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-1833 | 8/4/11 | E601 | 5,600 D | 12 D | 49 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-2001 | 3/23/11 | E601 | 290 D | 7.4 | 570 D | <5 D | <0.5 | <0.5 | <0.5 | <0.5 | 0.61 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-2001 | 4/12/11 | E624 | 1,200 D | 18 | 2,100 D | <50 D | <1 | <1 | <1 | <1 | 3.4 | <1 | <1 | <1 | <1 | <1 |
| W-834-2001 | 4/12/11 DUP | E624 | 1,070 D | <25 D | 1,860 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <50 D | <25 D |
| W-834-2001 | 8/9/11 | E601 | 360 D | 6.4 | 400 D | <25 D | <0.5 | <0.5 | <0.5 | <0.5 | 0.85 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-2001 | 10/10/11 | E624 | 2,500 DH | 23 DH | 2,600 DH | <50 DH | <10 DH | <10 DH | <10 DH | <10 DH | <10 DH | <10 DH | <10 DH | <10 DH | <10 DH | <10 DH |
| W-834-2113 | 2/14/11 | E601 | 12,000 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D |
| W-834-2113 | 8/3/11 | E601 | 2,860 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D |
| W-834-2117 | 2/14/11 | E601 | 7,810 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D |
| W-834-2117 | 8/3/11 | E601 | 4,940 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D | <500 D |
| W-834-2118 | 2/3/11 | E601 | 173 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-2118 | 8/8/11 | E601 | 155 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-2119 | 2/15/11 | E601 | 11,500 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D |
| W-834-2119 | 8/4/11 | E601 | 13,400 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D |
| W-834-A1 | 2/7/11 | E601 | 210,000 D | 880 D | 1,500 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D |
| W-834-A1 | 7/27/11 | E601 | 200,000 D | 980 D | 280 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D |
| W-834-A1 | 7/27/11 DUP | E601 | 208,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D | <5,000 D |
| W-834-B2 | 4/12/11 | E601 | 870 D | 10 D | 460 D | <25 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D |
| W-834-B2 | 8/9/11 | E601 | 1,500 D | 34 | 1,200 D | <25 D | <0.5 | <0.5 | <0.5 | <0.5 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-B2 | 10/10/11 | E601 | 1,900 D | 14 D | 950 D | <25 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-834-B3 | 3/23/11 | E601 | 57 | <0.5 | 950 D | <5 D | <0.5 | <0.5 | <0.5 | <0.5 | 4.1 | <0.5 | <0.5 | <0.5 | <0.5 | 2.1 |
| W-834-B3 | 4/12/11 | E601 | 180 D | <0.5 | 1,300 D | <25 D | <0.5 | <0.5 | <0.5 | <0.5 | 5.3 | <0.5 | <0.5 | <0.5 | <0.5 | 3.8 |
| W-834-B3 | 8/9/11 | E601 | 430 D | <2.5 D | 2,500 D | <25 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | 7.8 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | 4.8 D |
| W-834-B3 | 10/10/11 | E601 | 340 D | <5 D | 2,300 D | <25 D | <5 D | <5 D | <5 D | <5 D | 5.8 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-B4 | 2/7/11 | E601 | 3,800 D | <10 D | 5,600 D | <100 D | <10 D | <10 D | <10 D | <10 D | 16 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-B4 | 7/27/11 | E601 | 3,600 D | <25 D | 5,900 D | <50 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-C4 | 2/7/11 | E601 | 48 | <0.5 | 26 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-C4 | 7/27/11 | E601 | 57 | <0.5 | 46 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-C5 | 2/7/11 | E601 | 13,000 D | 44 D | 5,800 D | <250 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-C5 | 7/27/11 | E601 | 31,000 D | 120 D | 22,000 D | <250 D | <25 D | <25 D | <25 D | <25 D | 80 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-C5 | 7/27/11 DUP | E601 | 30,100 D | <1,000 D | 18,100 D | <1,000 D | <1,000 D | <1,000 D | <1,000 D | <1,000 D | <1,000 D | <1,000 D | <1,000 D | <1,000 D | <1,000 D | <1,000 D |
| W-834-D3 | 2/8/11 | E601 | 18 D | <2.5 D | 4,200 D | <25 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | 4 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | 100 D |

Table B-2.01. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-834-D3 | 2/8/11 DUP | E601 | 109 D | <50 D | 5,030 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | 149 D |
| W-834-D3 | 8/1/11 | E601 | 190 D | <5 D | 2,300 D | <25 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | 73 D |
| W-834-D4 | 3/23/11 | E601 | 320 D | 8.3 | 19,000 D | <250 D | <0.5 | <0.5 | <0.5 | 1.4 | 22 | <0.5 | <0.5 | <0.5 | <0.5 | 32 |
| W-834-D4 | 4/12/11 | E601 | 440 D | 8 | 14,000 D | <250 D | <0.5 | <0.5 | <0.5 | 1.5 | 22 | <0.5 | 1.2 | <0.5 | <0.5 | 18 |
| W-834-D4 | 8/9/11 | E601 | 7,400 D | <25 D | 5,100 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-D4 | 10/10/11 | E601 | 7,400 D | 42 D | 8,100 D | <50 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-D5 | 3/23/11 | E601 | 1,300 D | <0.5 | 2,400 D | 22 D | <0.5 | <0.5 | <0.5 | <0.5 | 3.6 | <0.5 | <0.5 | <0.5 | <0.5 | 9.4 |
| W-834-D5 | 8/9/11 | E601 | 690 D | <5 D | 1,600 D | <25 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-D6 | 3/23/11 | E601 | 6,000 D | 18 | 920 D | <5 D | <0.5 | 1.5 | <0.5 | <0.5 | 1.7 | <0.5 | 2.3 | <0.5 | 4.4 | <0.5 |
| W-834-D6 | 4/12/11 | E601 | 7,400 D | 18 D | 1,200 D | <50 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-D6 | 8/9/11 | E601 | 9,800 D | 21 D | 1,500 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-D6 | 10/10/11 | E601 | 2,000 D | <5 D | 660 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | 5.6 D | <5 D |
| W-834-D7 | 3/23/11 | E601 | 870 D | 7.7 | 81 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.55 | <0.5 | <0.5 | <0.5 |
| W-834-D7 | 4/12/11 | E601 | 970 D | 7.4 D | 66 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D |
| W-834-D7 | 4/12/11 DUP | E601 | 919 D | <25 D | 62 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-D7 | 8/9/11 | E601 | 2,800 D | 13 D | 320 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-834-D7 | 10/10/11 | E601 | 4,000 D | 15 D | 390 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-D10 | 8/1/11 | E601 | 4,900 D | 19 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-D11 | 2/8/11 | E601 | 16,000 D | 11 D | 95 D | <5 D | <5 D | <5 D | <5 D | <5 D | 6 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-D12 | 3/23/11 | E601 | 2,800 D | 6.4 | 400 D | <25 D | <0.5 | 0.62 | <0.5 | <0.5 | 1.2 | <0.5 | 0.89 | <0.5 | <0.5 | <0.5 |
| W-834-D12 | 4/12/11 | E601 | 3,800 D | 8.2 D | 660 D | <25 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-D12 | 8/9/11 | E601 | 3,700 D | 8.6 D | 790 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-D12 | 10/10/11 | E601 | 480 D | 2.3 | 160 D | <5 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.69 | <0.5 | <0.5 | <0.5 |
| W-834-D13 | 3/23/11 | E601 | 1,400 D | 150 D | 180 D | <25 D | <5 D | <5 D | <5 D | <5 D | 7 D | <5 D | 5.8 D | <5 D | <5 D | <5 D |
| W-834-D13 | 4/12/11 | E601 | 17,000 D | 110 D | 1,300 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D |
| W-834-D13 | 4/12/11 DUP | E601 | 15,000 D | 117 D | 1,090 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-D13 | 8/9/11 | E601 | 15,000 D | 84 D | 940 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-D13 | 10/10/11 | E601 | 160 DS | 0.59 S | 6 S | <0.5 S | <0.5 S | <0.5 S | <0.5 S | <0.5 S | <0.5 S | <0.5 S | <0.5 S | <0.5 S | <0.5 S | <0.5 S |
| W-834-D14 | 2/8/11 | E601 | 12,000 D | 23 D | 1,200 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-D14 | 8/1/11 | E601 | 12,000 D | 26 D | 2,800 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-D15 | 2/9/11 | E601 | 11,000 D | <25 D | 350 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-D15 | 8/1/11 | E601 | 23,000 D | 28 D | 670 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-D17 | 8/1/11 | E601 | 900 D | 6 D | 100 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D |
| W-834-D18 | 2/9/11 | E601 | 190 D | <0.5 | 230 D | <5 D | <0.5 | <0.5 | <0.5 | <0.5 | 0.82 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-D18 | 8/1/11 | E601 | 29 | <0.5 | 18 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-D18 | 8/1/11 DUP | E601 | 27 | <0.5 | 17 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-H2 | 2/9/11 | E601 | 130 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-H2 | 8/3/11 | E601 | 100 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-J1 | 3/23/11 | E601 | 84 D | <0.5 | 1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-J1 | 4/12/11 | E601 | 120 D | <0.5 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-J1 | 8/9/11 | E601 | 92 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-J1 | 10/10/11 | E601 | 120 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-J2 | 2/9/11 | E601 | 48 | <0.5 | 160 D | <5 D | <0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 73 |
| W-834-J2 | 8/2/11 | E601 | 160 D | <0.5 | 5.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-2.01. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-834-J3 | 8/2/11 | E601 | 1,100 D | <0.5 | <0.5 | <0.5 | <0.5 | 0.61 | <0.5 | <0.5 | <0.5 | <0.5 | 2 | <0.5 | <0.5 | <0.5 |
| W-834-M1 | 2/10/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-M1 | 8/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-S1 | 3/23/11 | E601 | 1,800 D | 37 D | 200 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S1 | 4/12/11 | E601 | 2,300 D | 84 D | 140 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S1 | 4/12/11 DUP | E601 | 2,300 D | 99 D | 138 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-S1 | 8/9/11 | E601 | 2,000 D | 84 D | 88 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S1 | 10/10/11 | E601 | 2,200 D | 77 D | 130 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S12A | 4/12/11 | E601 | 540 D | 1 | 20 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.79 | <0.5 | <0.5 | <0.5 |
| W-834-S12A | 8/9/11 | E601 | 2,200 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S12A | 10/10/11 | E601 | 3,000 D | <5 D | 5.6 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S13 | 4/18/11 | E601 | 840 D | 2 | 49 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 | <0.5 | <0.5 | <0.5 |
| W-834-S13 | 8/9/11 | E601 | 77 | <0.5 | 3.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-S13 | 10/10/11 | E601 | 15,000 DS | 100 S | 1,300 DS | <50 DS | <0.5 S | 2.5 S | <0.5 S | <0.5 S | 4 S | 0.6 S | 4.5 S | <0.5 S | <0.5 S | 0.74 S |
| W-834-S4 | 2/10/11 | E601 | 11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-S4 | 2/10/11 DUP | E601 | 10 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-S4 | 8/2/11 | E601 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-S8 | 2/14/11 | E601 | 2,700 D | 41 D | 49 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S8 | 8/3/11 | E601 | 3,000 D | 47 D | 60 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S8 | 8/3/11 DUP | E601 | 3,020 D | <50 D | 51 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D |
| W-834-S9 | 2/14/11 | E601 | 1,900 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S9 | 2/14/11 DUP | E601 | 1,800 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-834-S9 | 8/2/11 | E601 | 1,000 D | 2.7 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-834-T1 | 2/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T1 | 6/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T1 | 6/7/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T1 | 8/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T1 | 11/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T1 | 11/28/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T2 | 3/30/11 | E601 | 1,100 D | <5 D | 2,200 D | <25 D | <5 D | <5 D | <5 D | <5 D | 5.8 D | <5 D | <5 D | <5 D | <5 D | 600 D |
| W-834-T2 | 8/4/11 | E601 | 27 D | <5 D | 2,100 D | <25 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | 820 D |
| W-834-T2A | 2/15/11 | E601 | 11,000 D | <25 D | 52 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-T2A | 8/4/11 | E601 | 7,100 D | <25 D | 82 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-834-T2D | 2/3/11 | E601 | 7,400 D | 11 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-T2D | 2/3/11 DUP | E601 | 6,800 D | 11 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-T2D | 8/8/11 | E601 | 8,000 D | 19 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D | <10 D |
| W-834-T3 | 2/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T3 | 6/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T3 | 8/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T3 | 11/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T5 | 2/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-T5 | 8/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-834-U1 | 2/10/11 | E624 | 37,000 D | 190 D | 2,500 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D |
| W-834-U1 | 2/10/11 DUP | E624 | 44,800 DH | <500 DH | 2,870 DH | <500 DH | <500 DH | <500 DH | <500 DH | <500 DH | <500 DH | <500 DH | <500 DH | <500 DH | <1,000 DH | <500 DH |

Table B-2.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-834-1709 | 2/7/11 | E601 | 1 of 18 | 37 | - | - |
| W-834-1709 | 7/27/11 | E601 | 1 of 18 | 170 D | - | - |
| W-834-1711 | 2/7/11 | E601 | 0 of 18 | - | - | - |
| W-834-1711 | 7/27/11 | E601 | 0 of 18 | - | - | - |
| W-834-1824 | 3/30/11 | E601 | 1 of 18 | 54 | - | - |
| W-834-1824 | 8/4/11 | E601 | 1 of 18 | 1.2 | - | - |
| W-834-1824 | 8/4/11 DUP | E601 | 1 of 18 | 33 | - | - |
| W-834-1825 | 3/30/11 | E601 | 1 of 18 | 5.5 | - | - |
| W-834-1825 | 8/4/11 | E601 | 1 of 18 | 4.3 | - | - |
| W-834-1833 | 3/30/11 | E601 | 1 of 18 | 78 D | - | - |
| W-834-1833 | 8/4/11 | E601 | 1 of 18 | 49 D | - | - |
| W-834-2001 | 3/23/11 | E601 | 1 of 18 | 570 D | - | - |
| W-834-2001 | 4/12/11 | E624 | 1 of 30 | 2,100 D | - | - |
| W-834-2001 | 4/12/11 DUP | E624 | 1 of 30 | 1,860 D | - | - |
| W-834-2001 | 8/9/11 | E601 | 1 of 18 | 400 D | - | - |
| W-834-2001 | 10/10/11 | E624 | 1 of 30 | 2,600 DH | - | - |
| W-834-2113 | 2/14/11 | E601 | 0 of 18 | - | - | - |
| W-834-2113 | 8/3/11 | E601 | 0 of 18 | - | - | - |
| W-834-2117 | 2/14/11 | E601 | 0 of 18 | - | - | - |
| W-834-2117 | 8/3/11 | E601 | 0 of 18 | - | - | - |
| W-834-2118 | 2/3/11 | E601 | 0 of 18 | - | - | - |
| W-834-2118 | 8/8/11 | E601 | 0 of 18 | - | - | - |
| W-834-2119 | 2/15/11 | E601 | 0 of 18 | - | - | - |
| W-834-2119 | 8/4/11 | E601 | 0 of 18 | - | - | - |
| W-834-A1 | 2/7/11 | E601 | 1 of 18 | 1,500 D | - | - |
| W-834-A1 | 7/27/11 | E601 | 0 of 18 | - | - | - |
| W-834-A1 | 7/27/11 DUP | E601 | 0 of 18 | - | - | - |
| W-834-B2 | 4/12/11 | E601 | 1 of 18 | 460 D | - | - |
| W-834-B2 | 8/9/11 | E601 | 1 of 18 | 1,200 D | - | - |
| W-834-B2 | 10/10/11 | E601 | 1 of 18 | 950 D | - | - |
| W-834-B3 | 3/23/11 | E601 | 1 of 18 | 950 D | - | - |
| W-834-B3 | 4/12/11 | E601 | 1 of 18 | 1,300 D | - | - |
| W-834-B3 | 8/9/11 | E601 | 1 of 18 | 2,500 D | - | - |
| W-834-B3 | 10/10/11 | E601 | 1 of 18 | 2,300 D | - | - |
| W-834-B4 | 2/7/11 | E601 | 1 of 18 | 5,600 D | - | - |
| W-834-B4 | 7/27/11 | E601 | 1 of 18 | 5,900 D | - | - |
| W-834-C4 | 2/7/11 | E601 | 1 of 18 | 26 | - | - |
| W-834-C4 | 7/27/11 | E601 | 1 of 18 | 46 | - | - |
| W-834-C5 | 2/7/11 | E601 | 1 of 18 | 5,800 D | - | - |
| W-834-C5 | 7/27/11 | E601 | 1 of 18 | 22,000 D | - | - |
| W-834-C5 | 7/27/11 DUP | E601 | 1 of 18 | 18,100 D | - | - |
| W-834-D3 | 2/8/11 | E601 | 1 of 18 | 4,200 D | - | - |
| W-834-D3 | 2/8/11 DUP | E601 | 1 of 18 | 5,030 D | - | - |

Table B-2.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-834-D3 | 8/1/11 | E601 | 1 of 18 | 2,300 D | - | - |
| W-834-D4 | 3/23/11 | E601 | 1 of 18 | 19,000 D | - | - |
| W-834-D4 | 4/12/11 | E601 | 1 of 18 | 14,000 D | - | - |
| W-834-D4 | 8/9/11 | E601 | 1 of 18 | 5,100 D | - | - |
| W-834-D4 | 10/10/11 | E601 | 1 of 18 | 8,100 D | - | - |
| W-834-D5 | 3/23/11 | E601 | 1 of 18 | 2,400 D | - | - |
| W-834-D5 | 8/9/11 | E601 | 1 of 18 | 1,600 D | - | - |
| W-834-D6 | 3/23/11 | E601 | 1 of 18 | 930 D | - | - |
| W-834-D6 | 4/12/11 | E601 | 1 of 18 | 1,200 D | - | - |
| W-834-D6 | 8/9/11 | E601 | 1 of 18 | 1,500 D | - | - |
| W-834-D6 | 10/10/11 | E601 | 1 of 18 | 660 D | - | - |
| W-834-D7 | 3/23/11 | E601 | 1 of 18 | 81 | - | - |
| W-834-D7 | 4/12/11 | E601 | 1 of 18 | 66 D | - | - |
| W-834-D7 | 4/12/11 DUP | E601 | 1 of 18 | 62 D | - | - |
| W-834-D7 | 8/9/11 | E601 | 1 of 18 | 320 D | - | - |
| W-834-D7 | 10/10/11 | E601 | 1 of 18 | 390 D | - | - |
| W-834-D10 | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-834-D11 | 2/8/11 | E601 | 1 of 18 | 96 D | - | - |
| W-834-D12 | 3/23/11 | E601 | 1 of 18 | 400 D | - | - |
| W-834-D12 | 4/12/11 | E601 | 1 of 18 | 660 D | - | - |
| W-834-D12 | 8/9/11 | E601 | 1 of 18 | 790 D | - | - |
| W-834-D12 | 10/10/11 | E601 | 1 of 18 | 160 D | - | - |
| W-834-D13 | 3/23/11 | E601 | 2 of 18 | 180 D | - | 14 D |
| W-834-D13 | 4/12/11 | E601 | 1 of 18 | 1,300 D | - | - |
| W-834-D13 | 4/12/11 DUP | E601 | 1 of 18 | 1,090 D | - | - |
| W-834-D13 | 8/9/11 | E601 | 1 of 18 | 940 D | - | - |
| W-834-D13 | 10/10/11 | E601 | 1 of 18 | 6 S | - | - |
| W-834-D14 | 2/8/11 | E601 | 1 of 18 | 1,200 D | - | - |
| W-834-D14 | 8/1/11 | E601 | 1 of 18 | 2,800 D | - | - |
| W-834-D15 | 2/9/11 | E601 | 1 of 18 | 350 D | - | - |
| W-834-D15 | 8/1/11 | E601 | 1 of 18 | 670 D | - | - |
| W-834-D17 | 8/1/11 | E601 | 1 of 18 | 100 D | - | - |
| W-834-D18 | 2/9/11 | E601 | 1 of 18 | 230 D | - | - |
| W-834-D18 | 8/1/11 | E601 | 1 of 18 | 18 | - | - |
| W-834-D18 | 8/1/11 DUP | E601 | 1 of 18 | 17 | - | - |
| W-834-H2 | 2/9/11 | E601 | 0 of 18 | - | - | - |
| W-834-H2 | 8/3/11 | E601 | 0 of 18 | - | - | - |
| W-834-J1 | 3/23/11 | E601 | 1 of 18 | 1 | - | - |
| W-834-J1 | 4/12/11 | E601 | 1 of 18 | 1.6 | - | - |
| W-834-J1 | 8/9/11 | E601 | 0 of 18 | - | - | - |
| W-834-J1 | 10/10/11 | E601 | 0 of 18 | - | - | - |
| W-834-J2 | 2/9/11 | E601 | 1 of 18 | 160 D | - | - |
| W-834-J2 | 8/2/11 | E601 | 1 of 18 | 5.2 | - | - |

Table B-2.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-834-J3 | 8/2/11 | E601 | 0 of 18 | - | - | - |
| W-834-M1 | 2/10/11 | E601 | 0 of 18 | - | - | - |
| W-834-M1 | 8/2/11 | E601 | 0 of 18 | - | - | - |
| W-834-S1 | 3/23/11 | E601 | 2 of 18 | 200 D | - | 14 D |
| W-834-S1 | 4/12/11 | E601 | 1 of 18 | 140 D | - | - |
| W-834-S1 | 4/12/11 DUP | E601 | 1 of 18 | 138 D | - | - |
| W-834-S1 | 8/9/11 | E601 | 1 of 18 | 88 D | - | - |
| W-834-S1 | 10/10/11 | E601 | 1 of 18 | 130 D | - | - |
| W-834-S12A | 4/12/11 | E601 | 1 of 18 | 20 | - | - |
| W-834-S12A | 8/9/11 | E601 | 0 of 18 | - | - | - |
| W-834-S12A | 10/10/11 | E601 | 0 of 18 | - | - | - |
| W-834-S13 | 4/18/11 | E601 | 1 of 18 | 50 | - | - |
| W-834-S13 | 8/9/11 | E601 | 1 of 18 | 3.3 | - | - |
| W-834-S13 | 10/10/11 | E601 | 1 of 18 | 1,300 DS | - | - |
| W-834-S4 | 2/10/11 | E601 | 0 of 18 | - | - | - |
| W-834-S4 | 2/10/11 DUP | E601 | 0 of 18 | - | - | - |
| W-834-S4 | 8/2/11 | E601 | 0 of 18 | - | - | - |
| W-834-S8 | 2/14/11 | E601 | 1 of 18 | 49 D | - | - |
| W-834-S8 | 8/3/11 | E601 | 1 of 18 | 60 D | - | - |
| W-834-S8 | 8/3/11 DUP | E601 | 0 of 18 | - | - | - |
| W-834-S9 | 2/14/11 | E601 | 0 of 18 | - | - | - |
| W-834-S9 | 2/14/11 DUP | E601 | 0 of 18 | - | - | - |
| W-834-S9 | 8/2/11 | E601 | 0 of 18 | - | - | - |
| W-834-T1 | 2/14/11 | E601 | 0 of 18 | - | - | - |
| W-834-T1 | 6/7/11 | E601 | 0 of 18 | - | - | - |
| W-834-T1 | 6/7/11 DUP | E601 | 0 of 18 | - | - | - |
| W-834-T1 | 8/4/11 | E601 | 0 of 18 | - | - | - |
| W-834-T1 | 11/28/11 | E601 | 0 of 18 | - | - | - |
| W-834-T1 | 11/28/11 DUP | E601 | 0 of 18 | - | - | - |
| W-834-T2 | 3/30/11 | E601 | 2 of 18 | 2,200 D | 27 D | - |
| W-834-T2 | 8/4/11 | E601 | 2 of 18 | 2,100 D | 11 D | - |
| W-834-T2A | 2/15/11 | E601 | 1 of 18 | 52 D | - | - |
| W-834-T2A | 8/4/11 | E601 | 1 of 18 | 82 D | - | - |
| W-834-T2D | 2/3/11 | E601 | 0 of 18 | - | - | - |
| W-834-T2D | 2/3/11 DUP | E601 | 0 of 18 | - | - | - |
| W-834-T2D | 8/8/11 | E601 | 0 of 18 | - | - | - |
| W-834-T3 | 2/15/11 | E601 | 0 of 18 | - | - | - |
| W-834-T3 | 6/7/11 | E601 | 0 of 18 | - | - | - |
| W-834-T3 | 8/9/11 | E601 | 0 of 18 | - | - | - |
| W-834-T3 | 11/28/11 | E601 | 0 of 18 | - | - | - |
| W-834-T5 | 2/15/11 | E601 | 0 of 18 | - | - | - |
| W-834-T5 | 8/9/11 | E601 | 0 of 18 | - | - | - |
| W-834-U1 | 2/10/11 | E624 | 1 of 30 | 2,500 D | - | - |

Table B-2.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-834-U1 | 2/10/11 DUP | E624 | 1 of 30 | 2,870 DH | - | - |
| W-834-U1 | 8/2/11 | E624 | 1 of 30 | 2,700 D | - | - |

OU2-E300.0 [mg/L; ug/L] 2011 data (prepared 2012-02-23 04:53:35, Oracle epprd02.llnl.gov)

Table B-2.02. Building 834 Operable Unit nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-834-1709 | 2/7/11 | 5.8 | - |
| W-834-1711 | 2/7/11 | 90 D | - |
| W-834-1824 | 3/30/11 | <25 D | - |
| W-834-1825 | 3/30/11 | <0.5 | - |
| W-834-1833 | 3/30/11 | 48 | - |
| W-834-2001 | 3/23/11 | 39 | - |
| W-834-2113 | 2/14/11 | 68 DL | - |
| W-834-2117 | 2/14/11 | 44 DL | - |
| W-834-2118 | 2/3/11 | 120 D | 4.9 |
| W-834-2118 | 8/8/11 | - | 4.9 |
| W-834-2119 | 2/15/11 | 85 D | - |
| W-834-A1 | 2/7/11 | 1.3 | - |
| W-834-B3 | 3/23/11 | 7.5 | - |
| W-834-B4 | 2/7/11 | 9.7 | - |
| W-834-C4 | 2/7/11 | 59 | - |
| W-834-C5 | 2/7/11 | 96 D | - |
| W-834-D3 | 2/8/11 | <0.5 | - |
| W-834-D3 | 2/8/11 DUP | <0.5 | - |
| W-834-D4 | 3/23/11 | <0.5 | - |
| W-834-D5 | 3/23/11 | 0.63 | - |
| W-834-D6 | 3/23/11 | 38 | - |
| W-834-D7 | 3/23/11 | 77 | - |
| W-834-D11 | 2/8/11 | 22 | - |
| W-834-D12 | 3/23/11 | 140 D | - |
| W-834-D13 | 3/23/11 | 10 | - |
| W-834-D14 | 2/8/11 | 30 | - |
| W-834-D15 | 2/9/11 | 28 | - |
| W-834-D18 | 2/9/11 | 58 | - |
| W-834-H2 | 2/9/11 | 45 | - |
| W-834-J1 | 3/23/11 | 150 D | - |
| W-834-J2 | 2/9/11 | 21 | - |
| W-834-M1 | 2/10/11 | 300 D | - |
| W-834-S1 | 3/23/11 | 120 D | - |
| W-834-S4 | 2/10/11 | 160 D | - |
| W-834-S4 | 2/10/11 DUP | 130 DL | - |
| W-834-S8 | 2/14/11 | 100 | - |
| W-834-S9 | 2/14/11 | 85 | - |
| W-834-S9 | 2/14/11 DUP | 85 | - |
| W-834-T1 | 2/14/11 | <0.5 | - |
| W-834-T1 | 8/4/11 | <0.5 | - |
| W-834-T2 | 3/30/11 | <0.5 | - |
| W-834-T2A | 2/15/11 | 61 | - |
| W-834-T2D | 2/3/11 | 110 | - |
| W-834-T2D | 2/3/11 DUP | 110 | - |

Table B-2.02. Building 834 Operable Unit nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-834-T3 | 2/15/11 | <0.5 | - |
| W-834-T3 | 8/9/11 | <0.5 | - |
| W-834-T5 | 2/15/11 | 88 | - |
| W-834-U1 | 2/10/11 | 0.73 | - |
| W-834-U1 | 2/10/11 DUP | <0.5 L | - |

OU2-TBOS [ug/L] 2011 data (prepared 2012-02-23 04:53:42, Oracle epprd02.llnl.gov)

Table B-2.03. Building 834 Operable Unit tetrabutyl orthosilicate/tetrakis (2-ethylbutyl) silane (TBOS/TKEBS) in ground water.

| Location | Date | C24H52O4Si (µg/L) |
|---|---|---|
| W-834-1709 | 2/7/11 | 77 D |
| W-834-1711 | 2/7/11 | 13 D |
| W-834-2001 | 3/23/11 | <10 |
| W-834-2001 | 8/9/11 | <10 |
| W-834-2117 | 2/14/11 | <10 |
| W-834-2118 | 2/3/11 | <10 |
| W-834-A1 | 2/7/11 | <10 D |
| W-834-B2 | 8/9/11 | 16 |
| W-834-B3 | 3/23/11 | <10 |
| W-834-B3 | 8/9/11 | 31 |
| W-834-B4 | 2/7/11 | 68 D |
| W-834-C4 | 2/7/11 | 96 D |
| W-834-C5 | 2/7/11 | 160 D |
| W-834-D3 | 2/8/11 | 4,800 DIJ |
| W-834-D3 | 2/8/11 DUP | <10 LO |
| W-834-D4 | 3/23/11 | 510 D |
| W-834-D4 | 8/9/11 | 19 |
| W-834-D5 | 3/23/11 | <10 |
| W-834-D6 | 3/23/11 | <10 |
| W-834-D6 | 8/9/11 | <10 |
| W-834-D7 | 3/23/11 | <10 |
| W-834-D7 | 8/9/11 | <10 |
| W-834-D11 | 2/8/11 | 53 D |
| W-834-D12 | 3/23/11 | <10 |
| W-834-D12 | 8/9/11 | <10 |
| W-834-D13 | 3/23/11 | <10 |
| W-834-D13 | 8/9/11 | <10 |
| W-834-D14 | 2/8/11 | 12 D |
| W-834-D15 | 2/9/11 | 14 D |
| W-834-D18 | 2/9/11 | 16 D |
| W-834-H2 | 2/9/11 | <10 D |
| W-834-J1 | 3/23/11 | <10 |
| W-834-J1 | 8/9/11 | <10 |
| W-834-J2 | 2/9/11 | <10 D |
| W-834-S1 | 3/23/11 | <10 |
| W-834-S1 | 8/9/11 | <10 |
| W-834-S12A | 8/9/11 | <10 |
| W-834-S13 | 8/9/11 | <10 |
| W-834-S4 | 2/10/11 | <11 D |
| W-834-S4 | 2/10/11 DUP | <10 |
| W-834-S8 | 2/14/11 | <10 |
| W-834-T1 | 2/14/11 | <10 |
| W-834-T1 | 8/4/11 | <10 |

Table B-2.03. Building 834 Operable Unit tetrabutyl orthosilicate/tetrakis (2-ethylbutyl) silane (TBOS/TKEBS) in ground water.

| Location | Date | $C_{24}H_{52}O_4Si$ (µg/L) |
|---|---|---|
| W-834-T2 | 3/30/11 | <10 |
| W-834-T3 | 2/15/11 | <10 |
| W-834-T3 | 8/9/11 | <10 |
| W-834-U1 | 2/10/11 | 24 D |
| W-834-U1 | 2/10/11 DUP | <10 |

OU2-EM8015 [ug/L] 2011 data (prepared 2012-02-23 04:53:38, Oracle epprd02.llnl.gov)

Table B-2.04. Building 834 Operable Unit diesel range organic compounds in ground water.

| Location | Date | Diesel Fuel (µg/L) | Diesel Range Organics (C12-C24) (µg/L) | Oil (µg/L) |
|---|---|---|---|---|
| W-834-2001 | 3/23/11 | 480 | - | - |
| W-834-2001 | 8/9/11 | <200 | - | - |
| W-834-S8 | 2/14/11 | - | <200 D | - |
| W-834-U1 | 2/10/11 | 290 D | - | - |
| W-834-U1 | 2/10/11 DUP | 304 LO | - | <200 |

OU2-METALS [mg/L] 2011 data (prepared 2012-02-23 04:53:40, Oracle epprd02.llnl.gov)

Table B-2.05. Building 834 Operable Unit metals in ground water.

| Location | Date | Iron (mg/L) | Manganese (mg/L) |
|---|---|---|---|
| W-834-1824 | 3/30/11 | 86 D | 4.9 D |
| W-834-1825 | 3/30/11 | 1.4 D | 0.39 D |
| W-834-1833 | 3/30/11 | <0.1 | <0.01 |
| W-834-2117 | 2/14/11 | <0.1 | <0.01 |
| W-834-2118 | 2/3/11 | <0.1 | 0.097 |
| W-834-2119 | 2/15/11 | <0.1 | <0.01 |
| W-834-T2 | 3/30/11 | <0.2 D | 0.62 D |

OU3-VOC [ug/L] 2011 data (prepared 2012-02-23 04:54:57, Oracle epprd02.llnl.gov)

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BC6-10 | 1/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BC6-10 | 7/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 1/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 1/3/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CARNRW1 | 1/3/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 1/3/11 DUP | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CARNRW1 | 2/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 2/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 3/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 3/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 4/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 4/5/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CARNRW1 | 4/5/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 4/5/11 DUP | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CARNRW1 | 5/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 5/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 6/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 7/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 7/28/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CARNRW1 | 7/28/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 7/28/11 DUP | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CARNRW1 | 8/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 8/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 9/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 9/7/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| CARNRW1 | 10/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 10/4/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CARNRW1 | 10/4/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 10/4/11 DUP | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CARNRW1 | 11/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 11/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 12/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW1 | 12/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 1/3/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 1/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 1/3/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| CARNRW2 | 1/3/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 2/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 2/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 3/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 3/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARNRW2 | 4/5/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 4/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 4/5/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| CARNRW2 | 4/5/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 5/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 5/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 6/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 7/6/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 7/6/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| CARNRW2 | 7/6/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 8/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 9/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 9/7/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| CARNRW2 | 10/4/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 10/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 10/4/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| CARNRW2 | 10/4/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 11/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 11/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 12/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW2 | 12/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 1/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 1/3/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 2/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 2/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 3/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 3/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 4/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 4/5/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 5/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 5/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 6/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 7/6/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 8/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 8/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 9/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 9/7/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| CARNRW3 | 10/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 10/4/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 11/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARNRW3 | 11/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 12/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW3 | 12/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 1/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 1/3/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 2/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 2/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 3/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 3/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 4/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 4/5/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 5/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 5/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 6/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 7/6/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 8/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 8/2/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 9/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 9/7/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| CARNRW4 | 10/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 10/4/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 11/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 11/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 12/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARNRW4 | 12/1/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-06 | 2/7/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-06 | 4/12/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-06 | 4/12/11 DUP | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-06 | 7/12/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-06 | 7/12/11 DUP | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-06 | 10/12/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-07 | 1/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-07 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-09 | 1/4/11 | E8260 | 8.9 | <0.5 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 E | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-09 | 4/12/11 | E8260 | 9.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-09 | 4/12/11 DUP | E8260 | 8.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-09 | 7/7/11 | E8260 | 7.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-09 | 7/7/11 DUP | E8260 | 7.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-09 | 10/10/11 | E8260 | 5.9 | <0.5 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| EP6-09 | 10/10/11 DUP | E8260 | 5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-01 | 1/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-01 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K6-01S | 1/5/11 | E8260 | <0.5 | <0.5 | 3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-01S | 4/12/11 | E8260 | <0.5 | <0.5 | 2.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-01S | 7/7/11 | E8260 | <0.5 | <0.5 | 2.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-01S | 10/12/11 | E8260 | <0.5 E | <0.5 | 2.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-03 | 1/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-03 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-04 | 1/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-04 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-14 | 1/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-14 | 7/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-16 | 1/5/11 | E601 | 1.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-16 | 1/5/11 DUP | E601 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-16 | 7/7/11 | E601 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-16 | 7/7/11 DUP | E601 | 1.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-17 | 1/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-17 | 1/5/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-17 | 4/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-17 | 4/4/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-17 | 7/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-17 | 10/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-17 | 10/3/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-18 | 1/4/11 | E601 | 1.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-18 | 1/4/11 DUP | E601 | 1.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-18 | 7/7/11 | E601 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-18 | 7/7/11 DUP | E601 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-19 | 1/4/11 | E8260 | 2.9 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-19 | 1/4/11 DUP | E8260 | 2.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-19 | 4/12/11 | E8260 | 2.7 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-19 | 7/12/11 | E8260 | 2.7 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-19 | 10/10/11 | E8260 | 3.2 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-19 | 10/10/11 DUP | E8260 | 3.2 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-22 | 1/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-22 | 7/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-22 | 10/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-23 | 1/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-23 | 7/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-24 | 1/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-25 | 1/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-25 | 7/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-26 | 1/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-26 | 7/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-27 | 1/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-27 | 7/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-33 | 1/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K6-33 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-34 | 1/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-34 | 4/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-34 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-34 | 10/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-35 | 1/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K6-35 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-33C-01 | 1/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-33C-01 | 7/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-34-01 | 2/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-34-02 | 2/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT6-1819 | 1/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT6-1819 | 4/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT6-1819 | 7/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT6-1819 | 10/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-3.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Acetone (µg/L) | Bromo-dichloro-methane (µg/L) | Bromoform (µg/L) | Dibromo-chloro-methane (µg/L) |
|---|---|---|---|---|---|---|---|---|
| BC6-10 | 1/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| BC6-10 | 7/12/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 1/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 1/3/11 | E624 | 0 of 30 | - | - | - | - | - |
| CARNRW1 | 1/3/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 1/3/11 DUP | E624 | 0 of 30 | - | - | - | - | - |
| CARNRW1 | 2/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 2/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 3/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 3/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 4/5/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 4/5/11 | E624 | 0 of 30 | - | - | - | - | - |
| CARNRW1 | 4/5/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 4/5/11 DUP | E624 | 0 of 30 | - | - | - | - | - |
| CARNRW1 | 5/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 5/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 6/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 6/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 7/28/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 7/28/11 | E624 | 0 of 30 | - | - | - | - | - |
| CARNRW1 | 7/28/11 DUP | E601 | 0 of 18 | - | - | - | - | - |

Table B-3.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Acetone (µg/L) | Bromo-dichloro-methane (µg/L) | Bromoform (µg/L) | Dibromo-chloro-methane (µg/L) |
|---|---|---|---|---|---|---|---|---|
| CARNRW1 | 7/28/11 DUP | E624 | 0 of 30 | - | - | - | - | - |
| CARNRW1 | 8/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 8/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 9/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 9/7/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 10/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 10/4/11 | E624 | 0 of 30 | - | - | - | - | - |
| CARNRW1 | 10/4/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 10/4/11 DUP | E624 | 0 of 30 | - | - | - | - | - |
| CARNRW1 | 11/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 11/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 12/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW1 | 12/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 1/3/11 | E502.2 | 3 of 46 | - | - | 0.77 | 7.8 | 3.1 |
| CARNRW2 | 1/3/11 | E601 | 3 of 18 | - | - | 0.72 | 8.2 | 2.7 |
| CARNRW2 | 1/3/11 DUP | E502.2 | 3 of 45 | - | - | 0.8 | 8.7 | 2.7 |
| CARNRW2 | 1/3/11 DUP | E601 | 3 of 18 | - | - | 0.8 | 8.9 | 2.6 |
| CARNRW2 | 2/1/11 | E601 | 3 of 18 | - | - | 0.7 | 9.8 | 2.4 |
| CARNRW2 | 2/1/11 DUP | E601 | 3 of 18 | - | - | 0.7 | 13 | 2.6 |
| CARNRW2 | 3/2/11 | E601 | 3 of 18 | - | - | 1.3 | 11 | 4.9 |
| CARNRW2 | 3/2/11 DUP | E601 | 3 of 18 | - | - | 1.4 | 12 | 5.3 |
| CARNRW2 | 4/5/11 | E502.2 | 0 of 46 | - | - | - | - | - |
| CARNRW2 | 4/5/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 4/5/11 DUP | E502.2 | 0 of 45 | - | - | - | - | - |
| CARNRW2 | 4/5/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 5/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 5/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 6/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 6/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 7/6/11 | E502.2 | 0 of 46 | - | - | - | - | - |
| CARNRW2 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 7/6/11 DUP | E502.2 | 0 of 45 | - | - | - | - | - |
| CARNRW2 | 7/6/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 8/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 9/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 9/7/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 10/4/11 | E502.2 | 0 of 46 | - | - | - | - | - |
| CARNRW2 | 10/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 10/4/11 DUP | E502.2 | 0 of 45 | - | - | - | - | - |
| CARNRW2 | 10/4/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 11/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 11/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW2 | 12/1/11 | E601 | 0 of 18 | - | - | - | - | - |

Table B-3.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Acetone (µg/L) | Bromo-dichloro-methane (µg/L) | Bromoform (µg/L) | Dibromo-chloro-methane (µg/L) |
|---|---|---|---|---|---|---|---|---|
| CARNRW2 | 12/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 1/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 1/3/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 2/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 2/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 3/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 3/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 4/5/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 4/5/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 5/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 5/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 6/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 6/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 7/6/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 8/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 8/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 9/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 9/7/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 10/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 10/4/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 11/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 11/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 12/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW3 | 12/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 1/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 1/3/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 2/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 2/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 3/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 3/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 4/5/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 4/5/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 5/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 5/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 6/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 6/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 7/6/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 8/2/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 8/2/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 9/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 9/7/11 DUP | E601 | 0 of 18 | - | - | - | - | - |

Table B-3.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Acetone (µg/L) | Bromo-dichloro-methane (µg/L) | Bromoform (µg/L) | Dibromo-chloro-methane (µg/L) |
|---|---|---|---|---|---|---|---|---|
| CARNRW4 | 10/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 10/4/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 11/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 11/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 12/1/11 | E601 | 0 of 18 | - | - | - | - | - |
| CARNRW4 | 12/1/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| EP6-06 | 2/7/11 | E8260 | 0 of 36 | - | - | - | - | - |
| EP6-06 | 4/12/11 | E8260 | 0 of 36 | - | - | - | - | - |
| EP6-06 | 4/12/11 DUP | E8260 | 0 of 36 | - | - | - | - | - |
| EP6-06 | 7/12/11 | E8260 | 0 of 36 | - | - | - | - | - |
| EP6-06 | 7/12/11 DUP | E8260 | 0 of 36 | - | - | - | - | - |
| EP6-06 | 10/12/11 | E8260 | 0 of 36 | - | - | - | - | - |
| EP6-07 | 1/5/11 | E601 | 0 of 18 | - | - | - | - | - |
| EP6-07 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| EP6-09 | 1/4/11 | E8260 | 1 of 36 | - | 57 | - | - | - |
| EP6-09 | 4/12/11 | E8260 | 0 of 36 | - | - | - | - | - |
| EP6-09 | 4/12/11 DUP | E8260 | 0 of 31 | - | - | - | - | - |
| EP6-09 | 7/7/11 | E8260 | 0 of 36 | - | - | - | - | - |
| EP6-09 | 7/7/11 DUP | E8260 | 0 of 33 | - | - | - | - | - |
| EP6-09 | 10/10/11 | E8260 | 0 of 36 | - | - | - | - | - |
| EP6-09 | 10/10/11 DUP | E8260 | 1 of 33 | - | 12 | - | - | - |
| K6-01 | 1/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-01 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-01S | 1/5/11 | E8260 | 1 of 36 | 3 | - | - | - | - |
| K6-01S | 4/12/11 | E8260 | 1 of 36 | 2.2 | - | - | - | - |
| K6-01S | 7/7/11 | E8260 | 1 of 36 | 2.2 | - | - | - | - |
| K6-01S | 10/12/11 | E8260 | 1 of 36 | 2.5 | - | - | - | - |
| K6-03 | 1/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-03 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-04 | 1/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-04 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-14 | 1/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-14 | 7/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-16 | 1/5/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-16 | 1/5/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| K6-16 | 7/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-16 | 7/7/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| K6-17 | 1/5/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-17 | 1/5/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| K6-17 | 4/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-17 | 4/4/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| K6-17 | 7/12/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-17 | 10/3/11 | E601 | 0 of 18 | - | - | - | - | - |

Table B-3.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Acetone (µg/L) | Bromo-dichloro-methane (µg/L) | Bromoform (µg/L) | Dibromo-chloro-methane (µg/L) |
|---|---|---|---|---|---|---|---|---|
| K6-17 | 10/3/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| K6-18 | 1/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-18 | 1/4/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| K6-18 | 7/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-18 | 7/7/11 DUP | E601 | 0 of 18 | - | - | - | - | - |
| K6-19 | 1/4/11 | E8260 | 0 of 36 | - | - | - | - | - |
| K6-19 | 1/4/11 DUP | E8260 | 0 of 36 | - | - | - | - | - |
| K6-19 | 4/12/11 | E8260 | 0 of 36 | - | - | - | - | - |
| K6-19 | 7/12/11 | E8260 | 0 of 36 | - | - | - | - | - |
| K6-19 | 10/10/11 | E8260 | 0 of 36 | - | - | - | - | - |
| K6-19 | 10/10/11 DUP | E8260 | 0 of 36 | - | - | - | - | - |
| K6-22 | 1/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-22 | 7/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-22 | 10/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-23 | 1/27/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-23 | 7/12/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-24 | 1/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-25 | 1/5/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-25 | 7/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-26 | 1/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-26 | 7/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-27 | 1/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-27 | 7/7/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-33 | 1/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-33 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-34 | 1/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-34 | 4/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-34 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-34 | 10/3/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-35 | 1/5/11 | E601 | 0 of 18 | - | - | - | - | - |
| K6-35 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| W-33C-01 | 1/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| W-33C-01 | 7/12/11 | E601 | 0 of 18 | - | - | - | - | - |
| W-34-01 | 2/23/11 | E601 | 0 of 18 | - | - | - | - | - |
| W-34-02 | 2/23/11 | E601 | 0 of 18 | - | - | - | - | - |
| W-PIT6-1819 | 1/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| W-PIT6-1819 | 4/4/11 | E601 | 0 of 18 | - | - | - | - | - |
| W-PIT6-1819 | 7/6/11 | E601 | 0 of 18 | - | - | - | - | - |
| W-PIT6-1819 | 10/3/11 | E601 | 0 of 18 | - | - | - | - | - |

OU3-E300.0 [mg/L; ug/L] 2011 data (prepared 2012-02-23 04:54:13, Oracle epprd02.llnl.gov)

Table B-3.02. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| BC6-10 | 1/4/11 | <0.5 | <4 |
| CARNRW1 | 1/3/11 | <0.5 | <4 |
| CARNRW1 | 1/3/11 DUP | <0.5 L | <4 |
| CARNRW1 | 2/1/11 | <0.5 | <4 |
| CARNRW1 | 2/1/11 DUP | <0.5 L | <4 |
| CARNRW1 | 3/2/11 | <0.5 | <4 |
| CARNRW1 | 3/2/11 DUP | <0.5 | <4 |
| CARNRW1 | 4/5/11 | <0.5 | <4 |
| CARNRW1 | 4/5/11 DUP | <0.5 L | <4 |
| CARNRW1 | 5/2/11 | <0.5 | <4 |
| CARNRW1 | 5/2/11 DUP | <0.5 L | <4 |
| CARNRW1 | 6/1/11 | <0.5 | <4 |
| CARNRW1 | 6/1/11 DUP | <0.5 L | <4 |
| CARNRW1 | 7/28/11 | <0.5 | <4 |
| CARNRW1 | 7/28/11 DUP | <0.5 | <4 |
| CARNRW1 | 8/2/11 | <0.5 | <4 |
| CARNRW1 | 8/2/11 DUP | <0.5 L | <4 |
| CARNRW1 | 9/7/11 | <0.5 | <4 |
| CARNRW1 | 9/7/11 DUP | <0.5 | <4 |
| CARNRW1 | 10/4/11 | <0.5 | <4 |
| CARNRW1 | 10/4/11 DUP | <0.5 | <4 |
| CARNRW1 | 11/1/11 | <0.5 | <4 |
| CARNRW1 | 11/1/11 DUP | <0.5 | <4 |
| CARNRW1 | 12/1/11 | <0.5 | <4 |
| CARNRW1 | 12/1/11 DUP | <0.5 L | <4 |
| CARNRW2 | 1/3/11 | 0.89 | <4 |
| CARNRW2 | 1/3/11 DUP | <0.5 L | <4 |
| CARNRW2 | 2/1/11 | 1.1 | <4 |
| CARNRW2 | 2/1/11 DUP | <0.5 L | <4 |
| CARNRW2 | 3/2/11 | 1.3 | <4 |
| CARNRW2 | 3/2/11 DUP | <0.5 | <4 |
| CARNRW2 | 4/5/11 | <0.5 | <4 |
| CARNRW2 | 4/5/11 DUP | <0.5 L | <4 |
| CARNRW2 | 5/2/11 | 1 | <4 |
| CARNRW2 | 5/2/11 DUP | <0.5 L | <4 |
| CARNRW2 | 6/1/11 | 0.84 | <4 |
| CARNRW2 | 6/1/11 DUP | <0.5 L | <4 |
| CARNRW2 | 7/6/11 | <0.5 | <4 |
| CARNRW2 | 7/6/11 DUP | <0.5 | <4 |
| CARNRW2 | 8/2/11 | <0.5 | <4 |
| CARNRW2 | 8/2/11 DUP | <0.5 L | <4 |
| CARNRW2 | 9/7/11 | 1.2 | <4 |
| CARNRW2 | 9/7/11 DUP | 0.85 | <4 |
| CARNRW2 | 10/4/11 | <0.5 | <4 |

Table B-3.02. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| CARNRW2 | 10/4/11 DUP | <0.5 | <4 |
| CARNRW2 | 11/1/11 | <0.5 | <4 |
| CARNRW2 | 11/1/11 DUP | <0.5 | <4 |
| CARNRW2 | 12/1/11 | 0.87 | <4 |
| CARNRW2 | 12/1/11 DUP | 0.54 L | <4 |
| CARNRW3 | 1/3/11 | <0.5 | <4 |
| CARNRW3 | 1/3/11 DUP | <0.5 L | <4 |
| CARNRW3 | 2/1/11 | <0.5 | <4 |
| CARNRW3 | 2/1/11 DUP | <0.5 L | <4 |
| CARNRW3 | 3/2/11 | <0.5 | <4 |
| CARNRW3 | 3/2/11 DUP | <0.5 | <4 |
| CARNRW3 | 4/5/11 | <0.5 | <4 |
| CARNRW3 | 4/5/11 DUP | <0.5 L | <4 |
| CARNRW3 | 5/2/11 | <0.5 | <4 |
| CARNRW3 | 5/2/11 DUP | <0.5 L | <4 |
| CARNRW3 | 6/1/11 | <0.5 | <4 |
| CARNRW3 | 6/1/11 DUP | <0.5 L | <4 |
| CARNRW3 | 7/6/11 | <0.5 | <4 |
| CARNRW3 | 7/6/11 DUP | <0.5 | <4 |
| CARNRW3 | 8/2/11 | <0.5 | <4 |
| CARNRW3 | 8/2/11 DUP | <0.5 L | <4 |
| CARNRW3 | 9/7/11 | <0.5 | <4 |
| CARNRW3 | 9/7/11 DUP | <0.5 | <4 |
| CARNRW3 | 10/4/11 | <0.5 | <4 |
| CARNRW3 | 10/4/11 DUP | <0.5 | <4 |
| CARNRW3 | 11/1/11 | <0.5 | <4 |
| CARNRW3 | 11/1/11 DUP | <0.5 | <4 |
| CARNRW3 | 12/1/11 | <0.5 | <4 |
| CARNRW3 | 12/1/11 DUP | <0.5 L | <4 |
| CARNRW4 | 1/3/11 | <0.5 | <4 |
| CARNRW4 | 1/3/11 DUP | <0.5 L | <4 |
| CARNRW4 | 2/1/11 | <0.5 | <4 |
| CARNRW4 | 2/1/11 DUP | <0.5 L | <4 |
| CARNRW4 | 3/2/11 | 4.7 | <4 |
| CARNRW4 | 3/2/11 DUP | 3.3 | <4 |
| CARNRW4 | 4/5/11 | 7.9 | <4 |
| CARNRW4 | 4/5/11 DUP | 5.6 L | <4 |
| CARNRW4 | 5/2/11 | 1.8 | <4 |
| CARNRW4 | 5/2/11 DUP | 0.87 L | <4 |
| CARNRW4 | 6/1/11 | 0.85 | <4 |
| CARNRW4 | 6/1/11 DUP | <0.5 L | <4 |
| CARNRW4 | 7/6/11 | 0.61 | <4 |
| CARNRW4 | 7/6/11 DUP | <0.5 | <4 |
| CARNRW4 | 8/2/11 | 0.58 | <4 |
| CARNRW4 | 8/2/11 DUP | <0.5 L | <4 |
| CARNRW4 | 9/7/11 | <0.5 | <4 |

Table B-3.02. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| CARNRW4 | 9/7/11 DUP | <0.5 | <4 |
| CARNRW4 | 10/4/11 | <0.5 | <4 |
| CARNRW4 | 10/4/11 DUP | <0.5 | <4 |
| CARNRW4 | 11/1/11 | <0.5 | <4 |
| CARNRW4 | 11/1/11 DUP | <0.5 | <4 |
| CARNRW4 | 12/1/11 | <0.5 | <4 |
| CARNRW4 | 12/1/11 DUP | <0.5 L | <4 |
| EP6-06 | 2/7/11 | <0.5 | <4 |
| EP6-06 | 4/12/11 | 0.58 | <4 |
| EP6-06 | 4/12/11 DUP | <0.5 E | <4 |
| EP6-06 | 7/12/11 | <0.5 E | <4 |
| EP6-06 | 7/12/11 DUP | <0.5 E | <4 |
| EP6-06 | 10/12/11 | <0.5 E | <4 |
| EP6-07 | 1/5/11 | <0.5 | <4 |
| EP6-09 | 1/4/11 | <0.5 | <4 |
| EP6-09 | 4/12/11 | <0.5 | <4 |
| EP6-09 | 7/7/11 | 6.4 | <4 E |
| EP6-09 | 10/10/11 | 3.8 D | <4 E |
| K6-01 | 1/6/11 | <0.5 | <4 |
| K6-01S | 1/5/11 | <1 DE | <4 |
| K6-01S | 4/12/11 | <1 D | <4 |
| K6-01S | 7/7/11 | <1 DE | <4 |
| K6-01S | 10/12/11 | <2.5 D | <4 |
| K6-03 | 1/4/11 | <0.5 | <4 |
| K6-04 | 1/4/11 | 5.6 | <4 |
| K6-14 | 1/6/11 | 0.99 | <4 |
| K6-16 | 1/5/11 | 23 D | <4 |
| K6-16 | 1/5/11 DUP | 21 D | <4 |
| K6-17 | 1/5/11 | <0.5 | <4 |
| K6-17 | 1/5/11 DUP | <0.5 | <4 |
| K6-17 | 7/12/11 | <0.5 | <4 |
| K6-18 | 1/4/11 | 10 | <4 |
| K6-18 | 1/4/11 DUP | 9.6 | <4 |
| K6-19 | 1/4/11 | <0.5 | <4 |
| K6-19 | 1/4/11 DUP | <0.5 | <4 |
| K6-19 | 4/12/11 | <0.5 | <4 E |
| K6-19 | 7/12/11 | <0.5 E | <4 E |
| K6-19 | 10/10/11 | <0.5 E | <4 E |
| K6-19 | 10/10/11 DUP | <0.5 E | <4 E |
| K6-22 | 1/6/11 | <1 D | <4 |
| K6-22 | 7/7/11 | <1 D | <4 |
| K6-23 | 1/27/11 | 130 D | <4 |
| K6-23 | 7/12/11 | 150 D | - |
| K6-24 | 1/3/11 | 62 DL | <4 |
| K6-24 | 4/27/11 | 63 D | - |
| K6-25 | 1/5/11 | <0.5 | <4 |

Table B-3.02. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| K6-26 | 1/3/11 | <0.5 | <4 |
| K6-27 | 1/3/11 | <0.5 L | <4 |
| K6-33 | 1/3/11 | <0.5 L | <4 |
| K6-34 | 1/3/11 | <0.5 | <4 |
| K6-34 | 7/6/11 | <0.5 | <4 |
| K6-35 | 1/5/11 | <0.5 | <4 |
| W-33C-01 | 1/6/11 | 2.5 | <4 |
| W-34-01 | 2/23/11 | <0.5 | <4 |
| W-34-02 | 2/23/11 | <0.5 | <4 |
| W-PIT6-1819 | 1/4/11 | <0.5 | <4 |
| W-PIT6-1819 | 7/6/11 | <0.5 | <4 |

OU3-E906 [pCi/L] 2011 data (prepared 2012-02-23 04:54:18, Oracle epprd02.llnl.gov)

Table B-3.03. Pit 6 Landfill Operable Unit tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| BC6-10 | 1/4/11 | <100 |
| BC6-10 | 7/12/11 | <100 |
| CARNRW1 | 1/3/11 | <100 |
| CARNRW1 | 1/3/11 DUP | <100 |
| CARNRW1 | 2/1/11 | <100 |
| CARNRW1 | 2/1/11 DUP | <100 |
| CARNRW1 | 3/2/11 | <100 |
| CARNRW1 | 3/2/11 DUP | <100 |
| CARNRW1 | 4/5/11 | <100 |
| CARNRW1 | 4/5/11 DUP | <100 |
| CARNRW1 | 5/2/11 | <100 |
| CARNRW1 | 5/2/11 DUP | <100 |
| CARNRW1 | 6/1/11 | <100 |
| CARNRW1 | 6/1/11 DUP | <100 |
| CARNRW1 | 7/28/11 | <100 |
| CARNRW1 | 7/28/11 DUP | <100 |
| CARNRW1 | 8/2/11 | <100 |
| CARNRW1 | 8/2/11 DUP | <100 |
| CARNRW1 | 9/7/11 | <100 |
| CARNRW1 | 9/7/11 DUP | <100 |
| CARNRW1 | 10/4/11 | <100 |
| CARNRW1 | 10/4/11 DUP | <100 |
| CARNRW1 | 11/1/11 | <100 |
| CARNRW1 | 11/1/11 DUP | <100 |
| CARNRW1 | 12/1/11 | <100 |
| CARNRW1 | 12/1/11 DUP | <100 |
| CARNRW2 | 1/3/11 | <100 |
| CARNRW2 | 1/3/11 DUP | <100 |
| CARNRW2 | 2/1/11 | <100 |
| CARNRW2 | 2/1/11 DUP | <100 |
| CARNRW2 | 3/2/11 | <100 |
| CARNRW2 | 3/2/11 DUP | <100 |
| CARNRW2 | 4/5/11 | <100 |
| CARNRW2 | 4/5/11 DUP | <100 |
| CARNRW2 | 5/2/11 | <100 |
| CARNRW2 | 5/2/11 DUP | <100 |
| CARNRW2 | 6/1/11 | <100 |
| CARNRW2 | 6/1/11 DUP | <100 |
| CARNRW2 | 7/6/11 | <100 |
| CARNRW2 | 7/6/11 DUP | <100 |
| CARNRW2 | 8/2/11 | <100 |
| CARNRW2 | 8/2/11 DUP | <100 |
| CARNRW2 | 9/7/11 | <100 |
| CARNRW2 | 9/7/11 DUP | <100 |

Table B-3.03. Pit 6 Landfill Operable Unit tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| CARNRW2 | 10/4/11 | <100 |
| CARNRW2 | 10/4/11 DUP | <100 |
| CARNRW2 | 11/1/11 | <100 |
| CARNRW2 | 11/1/11 DUP | <100 |
| CARNRW2 | 12/1/11 | <100 |
| CARNRW2 | 12/1/11 DUP | <100 |
| CARNRW3 | 1/3/11 | <100 |
| CARNRW3 | 1/3/11 DUP | <100 |
| CARNRW3 | 2/1/11 | <100 |
| CARNRW3 | 2/1/11 DUP | <100 |
| CARNRW3 | 3/2/11 | <100 |
| CARNRW3 | 3/2/11 DUP | <100 |
| CARNRW3 | 4/5/11 | <100 |
| CARNRW3 | 4/5/11 DUP | <100 |
| CARNRW3 | 5/2/11 | <100 |
| CARNRW3 | 5/2/11 DUP | <100 |
| CARNRW3 | 6/1/11 | <100 |
| CARNRW3 | 6/1/11 DUP | <100 |
| CARNRW3 | 7/6/11 | <100 |
| CARNRW3 | 7/6/11 DUP | <100 |
| CARNRW3 | 8/2/11 | <100 |
| CARNRW3 | 8/2/11 DUP | <100 |
| CARNRW3 | 9/7/11 | <100 |
| CARNRW3 | 9/7/11 DUP | <100 |
| CARNRW3 | 10/4/11 | <100 |
| CARNRW3 | 10/4/11 DUP | <100 |
| CARNRW3 | 11/1/11 | <100 |
| CARNRW3 | 11/1/11 DUP | <100 |
| CARNRW3 | 12/1/11 | <100 |
| CARNRW3 | 12/1/11 DUP | <100 |
| CARNRW4 | 1/3/11 | <100 |
| CARNRW4 | 1/3/11 DUP | <100 |
| CARNRW4 | 2/1/11 | <100 |
| CARNRW4 | 2/1/11 DUP | <100 |
| CARNRW4 | 3/2/11 | <100 |
| CARNRW4 | 3/2/11 DUP | <100 |
| CARNRW4 | 4/5/11 | <100 |
| CARNRW4 | 4/5/11 DUP | <100 |
| CARNRW4 | 5/2/11 | <100 |
| CARNRW4 | 5/2/11 DUP | <100 |
| CARNRW4 | 6/1/11 | <100 |
| CARNRW4 | 6/1/11 DUP | <100 |
| CARNRW4 | 7/6/11 | <100 |
| CARNRW4 | 7/6/11 DUP | <100 |
| CARNRW4 | 8/2/11 | <100 |
| CARNRW4 | 8/2/11 DUP | <100 |

Table B-3.03. Pit 6 Landfill Operable Unit tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| CARNRW4 | 9/7/11 | <100 |
| CARNRW4 | 9/7/11 DUP | <100 |
| CARNRW4 | 10/4/11 | <100 |
| CARNRW4 | 10/4/11 DUP | <100 |
| CARNRW4 | 11/1/11 | <100 |
| CARNRW4 | 11/1/11 DUP | <100 |
| CARNRW4 | 12/1/11 | <100 |
| CARNRW4 | 12/1/11 DUP | <100 |
| EP6-06 | 2/7/11 | <100 |
| EP6-06 | 4/12/11 | <100 |
| EP6-06 | 4/12/11 DUP | <100 |
| EP6-06 | 7/12/11 | <100 L |
| EP6-06 | 7/12/11 DUP | <100 L |
| EP6-06 | 10/12/11 | <100 |
| EP6-07 | 1/5/11 | <100 |
| EP6-07 | 7/6/11 | <100 |
| EP6-09 | 1/4/11 | <100 |
| EP6-09 | 4/12/11 | <100 |
| EP6-09 | 7/7/11 | <100 L |
| EP6-09 | 10/10/11 | <100 |
| K6-01 | 1/6/11 | <100 |
| K6-01 | 7/6/11 | <100 |
| K6-01S | 1/5/11 | <100 |
| K6-01S | 4/12/11 | <100 |
| K6-01S | 7/7/11 | <100 L |
| K6-01S | 10/12/11 | <100 |
| K6-03 | 1/4/11 | <100 |
| K6-03 | 7/6/11 | <100 |
| K6-04 | 1/4/11 | <100 |
| K6-04 | 7/6/11 | <100 |
| K6-14 | 1/6/11 | <100 |
| K6-14 | 7/7/11 | <100 |
| K6-16 | 1/5/11 | <100 |
| K6-16 | 1/5/11 DUP | <100 |
| K6-16 | 7/7/11 | <100 |
| K6-16 | 7/7/11 DUP | <100 L |
| K6-17 | 1/5/11 | <100 |
| K6-17 | 1/5/11 DUP | <100 |
| K6-17 | 4/4/11 | <100 |
| K6-17 | 4/4/11 DUP | <100 |
| K6-17 | 7/12/11 | <100 |
| K6-17 | 10/3/11 | <100 |
| K6-17 | 10/3/11 DUP | <100 |
| K6-18 | 1/4/11 | 403 ± 120 |
| K6-18 | 1/4/11 DUP | 186 ± 83.1 |
| K6-18 | 7/7/11 | 145 ± 71.1 |

Table B-3.03. Pit 6 Landfill Operable Unit tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| K6-18 | 7/7/11 DUP | 129 ± 58.0 L |
| K6-19 | 1/4/11 | 206 ± 89.3 |
| K6-19 | 1/4/11 DUP | 161 ± 81.1 |
| K6-19 | 4/12/11 | 222 ± 93.1 |
| K6-19 | 7/12/11 | 168 ± 82.5 L |
| K6-19 | 10/10/11 | 190 ± 96.6 F |
| K6-19 | 10/10/11 DUP | 182 ± 94.3 F |
| K6-22 | 1/6/11 | <100 |
| K6-22 | 7/7/11 | <100 |
| K6-22 | 10/3/11 | <100 |
| K6-23 | 1/27/11 | <100 |
| K6-23 | 7/12/11 | <100 |
| K6-24 | 1/3/11 | 361 ± 114 |
| K6-25 | 1/5/11 | <100 |
| K6-25 | 7/7/11 | <100 |
| K6-26 | 1/3/11 | <100 |
| K6-26 | 7/7/11 | <100 |
| K6-27 | 1/3/11 | <100 |
| K6-27 | 7/7/11 | <100 |
| K6-33 | 1/3/11 | 246 ± 92.8 |
| K6-33 | 7/6/11 | 163 ± 89.0 |
| K6-34 | 1/3/11 | <100 |
| K6-34 | 4/4/11 | <100 |
| K6-34 | 7/6/11 | <100 |
| K6-34 | 10/3/11 | <100 |
| K6-35 | 1/5/11 | <100 |
| K6-35 | 7/6/11 | <100 |
| W-33C-01 | 1/6/11 | <100 |
| W-33C-01 | 7/12/11 | <100 |
| W-34-01 | 2/23/11 | <100 |
| W-34-02 | 2/23/11 | <100 |
| W-PIT6-1819 | 1/4/11 | 116 ± 70.7 |
| W-PIT6-1819 | 4/4/11 | 154 ± 82.4 |
| W-PIT6-1819 | 7/6/11 | 270 ± 106 |
| W-PIT6-1819 | 10/3/11 | 189 ± 83.2 |

OU4-VOC [ug/L] 2011 data (prepared 2012-02-23 14:21:07, Oracle epprd02.llnl.gov)

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLO1 | 1/12/11 | E502.2 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 1/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 1/12/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| GALLO1 | 1/12/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 2/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 2/16/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 3/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 3/15/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 4/27/11 | E502.2 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 4/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 4/27/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| GALLO1 | 4/27/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 5/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 5/18/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 6/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 6/29/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 7/20/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| GALLO1 | 7/20/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 7/25/11 REX | E502.2 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 7/25/11 REX | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 8/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 8/16/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 9/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 9/22/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 10/19/11 | E502.2 | 0.55 S | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 10/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 10/19/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 L | <0.5 | <1 | <0.5 |
| GALLO1 | 10/19/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 11/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 11/29/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 12/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| GALLO1 | 12/19/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| SPRING14 | 3/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-01 | 2/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-01 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-01 | 8/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-01 | 12/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-02 | 2/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-02 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-02 | 8/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-02 | 12/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-03 | 2/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-35B-03 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-03 | 8/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-03 | 12/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-04 | 2/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-04 | 6/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-04 | 8/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-04 | 12/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-05 | 2/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-05 | 6/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-05 | 8/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35B-05 | 12/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-01 | 3/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-01 | 9/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-02 | 3/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-02 | 9/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-04 | 1/4/11 | E601 | 12 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 J |
| W-35C-04 | 4/5/11 | E601 | 11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-04 | 4/5/11 DUP | E601 | 12 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-04 | 7/11/11 | E601 | 14 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-04 | 12/6/11 | E601 | 14 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-05 | 2/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-05 | 9/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-06 | 9/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-07 | 2/17/11 | E601 | 3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-07 | 9/15/11 | E601 | 2.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-07 | 9/15/11 DUP | E601 | 2.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-08 | 2/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35C-08 | 9/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4A | 3/17/11 | E601 | 8.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4AS | 3/17/11 | E601 | 2.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4AS | 9/12/11 | E601 | 3.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4AS | 9/12/11 DUP | E601 | 2.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4B | 3/14/11 | E601 | 2.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4B | 9/12/11 | E601 | 4.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4C | 3/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4C | 6/21/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4C | 9/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-4C | 12/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6BD | 3/10/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6BD | 9/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6BS | 3/10/11 | E601 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6BS | 9/19/11 | E601 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6BS | 9/19/11 DUP | E601 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6CD | 3/22/11 | E601 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-6CD | 9/14/11 | E601 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6CI | 2/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6CI | 9/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.7 |
| W-6CS | 2/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6CS | 9/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6EI | 2/28/11 | E601 | 4.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6EI | 9/19/11 | E601 | 3.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6ER | 1/4/11 | E601 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 J |
| W-6ER | 4/5/11 | E601 | 11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6ER | 7/11/11 | E601 | 14 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6ER | 12/6/11 | E601 | 16 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6ES | 2/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6F | 2/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6F | 9/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6G | 2/23/11 | E601 | 5.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6G | 9/14/11 | E601 | 5.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6H | 3/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6H | 6/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6H | 9/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-6H | 11/30/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6I | 3/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6I | 9/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-6J | 3/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6J | 6/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6J | 9/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-6J | 11/30/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6K | 2/28/11 | E601 | 18 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6K | 2/28/11 DUP | E601 | 17 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6K | 9/13/11 | E601 | 19 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6L | 2/28/11 | E601 | 20 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-6L | 9/13/11 | E601 | 21 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-808-01 | 3/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-808-01 | 8/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-808-03 | 3/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-808-03 | 8/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-809-01 | 3/14/11 | E601 | 1.4 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 | <0.5 | <0.5 | 0.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-809-01 | 8/29/11 | E601 | 6.4 | <0.5 | <0.5 | <0.5 | <0.5 | 2 | <0.5 | <0.5 | 5.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-809-01 | 8/29/11 DUP | E601 | 6.8 | <0.5 | <0.5 | <0.5 | <0.5 | 2.1 | <0.5 | <0.5 | 5.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-809-02 | 3/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-809-02 | 8/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-809-03 | 3/10/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-809-03 | 8/29/11 | E601 | 0.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-809-04 | 3/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-810-01 | 3/10/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-814-01 | 3/9/11 | E601 | 1.9 | <0.5 | 1.2 | <0.5 | 0.6 | 0.7 | <0.5 | 0.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-814-01 | 3/9/11 DUP | E601 | 1.8 | <0.5 | 1.2 | <0.5 | 0.62 | 0.71 | <0.5 | 0.75 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-814-01 | 8/24/11 | E601 | 2 | <0.5 | 0.9 | <0.5 | 0.7 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-814-2138 | 3/9/11 | E601 | 4.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-814-2138 | 8/24/11 | E601 | 6.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-02 | 2/7/11 | E601 | 6.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-02 | 4/5/11 | E601 | 5.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.66 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-02 | 4/5/11 DUP | E601 | 5.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-02 | 7/11/11 | E601 | 5.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.77 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-02 | 10/3/11 | E601 | 7.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-03 | 10/13/11 | E601 | 7.4 | <0.5 | <0.5 | <0.5 | <0.5 | 0.9 | <0.5 | <0.5 | 2.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-04 | 2/14/11 | E601 | 2.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.63 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-04 | 4/5/11 | E601 | 5.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-04 | 7/11/11 | E601 | 3.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.79 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-04 | 10/3/11 | E601 | 3.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.54 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-05 | 3/15/11 | E601 | 3.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-05 | 8/29/11 | E601 | 11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-06 | 3/9/11 | E601 | 11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-06 | 3/9/11 DUP | E601 | 11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-06 | 9/7/11 | E601 | 11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-815-07 | 3/9/11 | E601 | 14 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-07 | 8/24/11 | E601 | 14 | <0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | 0.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-08 | 3/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-08 | 8/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-1928 | 8/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2110 | 3/7/11 | E601 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2110 | 6/9/11 | E601 | 1.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2110 | 6/9/11 DUP | E601 | 2.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2110 | 9/6/11 | E601 | 1.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2110 | 11/30/11 | E601 | 2.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2110 | 11/30/11 DUP | E601 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2111 | 3/7/11 | E601 | 1.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2111 | 6/9/11 | E601 | 1.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2111 | 9/6/11 | E601 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2111 | 11/30/11 | E601 | 1.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2217 | 2/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2217 | 9/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2608 | 3/16/11 | E601 | 0.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2608 | 6/9/11 | E601 | 0.99 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2608 | 9/8/11 | E601 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2608 | 11/30/11 | E601 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2621 | 2/8/11 | E624 | 15 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-815-2621 | 9/8/11 | E601 | 20 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-815-2621 | 12/8/11 | E601 | 24 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-817-01 | 2/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-01 | 5/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-01 | 7/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-01 | 10/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-03 | 2/7/11 | E601 | 8.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-03 | 4/5/11 | E601 | 8.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-03 | 4/5/11 DUP | E601 | 7.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-03 | 7/18/11 | E601 | 10 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-03 | 10/3/11 | E601 | 5.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-03A | 3/16/11 | E601 | 40 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-03A | 8/30/11 | E601 | 16 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-04 | 3/16/11 | E601 | 11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-04 | 3/16/11 DUP | E601 | 9.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-04 | 9/8/11 | E601 | 12 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-04 | 9/8/11 DUP | E601 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-05 | 3/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-05 | 8/30/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-07 | 3/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-07 | 8/30/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-2318 | 4/5/11 | E601 | 53 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-2318 | 7/18/11 | E601 | 54 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-2318 | 10/3/11 | E601 | 30 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-2609 | 3/16/11 | E624 | 8.1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-817-2609 | 6/9/11 | E624 | 10 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-817-2609 | 9/8/11 | E601 | 6.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-817-2609 | 12/5/11 | E601 | 5.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-01 | 3/9/11 | E601 | 16 | <0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-01 | 9/7/11 | E601 | 14 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-818-03 | 3/22/11 | E601 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-03 | 9/7/11 | E601 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-818-04 | 3/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-04 | 8/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-06 | 3/3/11 | E601 | 19 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-06 | 3/3/11 DUP | E601 | 19 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-06 | 9/7/11 | E601 | 12 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-818-07 | 3/3/11 | E601 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-07 | 9/7/11 | E601 | 12 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-818-08 | 3/8/11 | E601 | 38 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-08 | 4/11/11 | E601 | 40 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-08 | 4/11/11 DUP | E601 | 40 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-08 | 7/13/11 | E601 | 40 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-08 | 10/3/11 | E601 | 44 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-09 | 3/8/11 | E601 | 16 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-09 | 4/11/11 | E601 | 18 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-818-09 | 7/13/11 | E601 | 18 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-09 | 10/3/11 | E601 | 20 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-11 | 3/9/11 | E601 | 39 | <0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-11 | 3/9/11 DUP | E601 | 37 | <0.5 | <0.5 | <0.5 | <0.5 | 0.53 | <0.5 | <0.5 | 0.77 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-11 | 8/24/11 | E601 | 42 | <0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-818-11 | 8/24/11 DUP | E601 | 38 | <0.5 | <0.5 | <0.5 | <0.5 | 0.58 | <0.5 | <0.5 | 0.76 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-819-02 | 3/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-819-02 | 8/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-823-01 | 3/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-823-01 | 9/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-823-02 | 3/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-823-02 | 9/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-823-03 | 3/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-823-03 | 9/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-823-13 | 3/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-823-13 | 9/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| W-827-02 | 3/15/11 | E601 | 2.1 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-827-02 | 3/15/11 DUP | E601 | 2.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-827-05 | 3/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-827-05 | 8/30/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-829-06 | 3/22/11 | E601 | 6.9 | <0.5 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-829-06 | 7/12/11 | E601 | 17 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-829-06 | 11/15/11 | E601 | 9.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-829-15 | 4/19/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-829-15 | 4/19/11 DUP | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-829-1938 | 1/20/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-829-1938 | 1/20/11 DUP | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-829-1938 | 4/21/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-829-1938 | 7/27/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-829-1938 | 7/27/11 DUP | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-829-1938 | 11/7/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-829-1938 | 11/7/11 DUP | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-829-1940 | 3/10/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-829-1940 | 8/30/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-829-22 | 4/19/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| WELL18 | 1/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 1/12/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 2/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 2/16/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 3/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 3/15/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 4/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 4/27/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 5/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WELL18 | 5/18/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 6/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 6/28/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 7/20/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 7/26/11 REX | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 8/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 8/17/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 9/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL18 | 9/28/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O | <0.5 | <0.5 |
| WELL20 | 1/12/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 1/12/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 2/16/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 2/16/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 3/15/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 3/15/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 4/27/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 4/27/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 5/18/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 5/18/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 6/28/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 6/28/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 7/20/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 7/26/11 REX | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 8/17/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 8/17/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 9/28/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 9/28/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O | <1 | <0.5 |
| WELL20 | 10/27/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 10/27/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 11/29/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 11/29/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |
| WELL20 | 12/14/11 | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| WELL20 | 12/14/11 DUP | E502.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 |

Table B-4.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromo-dichloro-methane (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|---|
| GALLO1 | 1/12/11 | E502.2 | 0 of 46 | - | - | - | - |
| GALLO1 | 1/12/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 1/12/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| GALLO1 | 1/12/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 2/16/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 2/16/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 3/15/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 3/15/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 4/27/11 | E502.2 | 0 of 46 | - | - | - | - |
| GALLO1 | 4/27/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 4/27/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| GALLO1 | 4/27/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 5/18/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 5/18/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 6/29/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 6/29/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 7/20/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| GALLO1 | 7/20/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 7/25/11 REX | E502.2 | 0 of 46 | - | - | - | - |
| GALLO1 | 7/25/11 REX | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 8/16/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 8/16/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 9/22/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 9/22/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 10/19/11 | E502.2 | 0 of 46 | - | - | - | - |
| GALLO1 | 10/19/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 10/19/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| GALLO1 | 10/19/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 11/29/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 11/29/11 DUP | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 12/19/11 | E601 | 0 of 18 | - | - | - | - |
| GALLO1 | 12/19/11 DUP | E601 | 0 of 18 | - | - | - | - |
| SPRING14 | 3/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-01 | 2/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-01 | 6/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-01 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-01 | 12/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-02 | 2/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-02 | 6/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-02 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-02 | 12/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-03 | 2/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-03 | 6/6/11 | E601 | 0 of 18 | - | - | - | - |

Table B-4.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromo-dichloro-methane (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|---|
| W-35B-03 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-03 | 12/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-04 | 2/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-04 | 6/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-04 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-04 | 12/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-05 | 2/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-05 | 6/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-05 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-35B-05 | 12/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-01 | 3/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-01 | 9/27/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-02 | 3/22/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-02 | 9/29/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-04 | 1/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-04 | 4/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-04 | 4/5/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-35C-04 | 7/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-04 | 12/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-05 | 2/17/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-05 | 9/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-06 | 9/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-07 | 2/17/11 | E601 | 1 of 18 | - | - | - | 0.8 |
| W-35C-07 | 9/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-07 | 9/15/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-35C-08 | 2/17/11 | E601 | 0 of 18 | - | - | - | - |
| W-35C-08 | 9/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-4A | 3/17/11 | E601 | 0 of 18 | - | - | - | - |
| W-4AS | 3/17/11 | E601 | 0 of 18 | - | - | - | - |
| W-4AS | 9/12/11 | E601 | 0 of 18 | - | - | - | - |
| W-4AS | 9/12/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-4B | 3/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-4B | 9/12/11 | E601 | 0 of 18 | - | - | - | - |
| W-4C | 3/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-4C | 6/21/11 | E601 | 0 of 18 | - | - | - | - |
| W-4C | 9/12/11 | E601 | 0 of 18 | - | - | - | - |
| W-4C | 12/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-6BD | 3/10/11 | E601 | 0 of 18 | - | - | - | - |
| W-6BD | 9/19/11 | E601 | 0 of 18 | - | - | - | - |
| W-6BS | 3/10/11 | E601 | 0 of 18 | - | - | - | - |
| W-6BS | 9/19/11 | E601 | 0 of 18 | - | - | - | - |
| W-6BS | 9/19/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-6CD | 3/22/11 | E601 | 0 of 18 | - | - | - | - |

Table B-4.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromo-dichloro-methane (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|---|
| W-6CD | 9/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-6CI | 2/23/11 | E601 | 0 of 18 | - | - | - | - |
| W-6CI | 9/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-6CS | 2/23/11 | E601 | 0 of 18 | - | - | - | - |
| W-6CS | 9/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-6EI | 2/28/11 | E601 | 0 of 18 | - | - | - | - |
| W-6EI | 9/19/11 | E601 | 0 of 18 | - | - | - | - |
| W-6ER | 1/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-6ER | 4/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-6ER | 7/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-6ER | 12/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-6ES | 2/28/11 | E601 | 0 of 18 | - | - | - | - |
| W-6F | 2/23/11 | E601 | 0 of 18 | - | - | - | - |
| W-6F | 9/12/11 | E601 | 0 of 18 | - | - | - | - |
| W-6G | 2/23/11 | E601 | 0 of 18 | - | - | - | - |
| W-6G | 9/14/11 | E601 | 1 of 18 | - | - | - | 1.5 |
| W-6H | 3/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-6H | 6/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-6H | 9/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-6H | 11/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-6I | 3/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-6I | 9/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-6J | 3/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-6J | 6/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-6J | 9/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-6J | 11/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-6K | 2/28/11 | E601 | 0 of 18 | - | - | - | - |
| W-6K | 2/28/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-6K | 9/13/11 | E601 | 0 of 18 | - | - | - | - |
| W-6L | 2/28/11 | E601 | 0 of 18 | - | - | - | - |
| W-6L | 9/13/11 | E601 | 0 of 18 | - | - | - | - |
| W-808-01 | 3/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-808-01 | 8/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-808-03 | 3/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-808-03 | 8/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-809-01 | 3/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-809-01 | 8/29/11 | E601 | 0 of 18 | - | - | - | - |
| W-809-01 | 8/29/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-809-02 | 3/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-809-02 | 8/29/11 | E601 | 0 of 18 | - | - | - | - |
| W-809-03 | 3/10/11 | E601 | 0 of 18 | - | - | - | - |
| W-809-03 | 8/29/11 | E601 | 0 of 18 | - | - | - | - |
| W-809-04 | 3/14/11 | E601 | 0 of 18 | - | - | - | - |

Table B-4.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromo-dichloro-methane (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|---|
| W-810-01 | 3/10/11 | E601 | 0 of 18 | - | - | - | - |
| W-814-01 | 3/9/11 | E601 | 1 of 18 | 1.2 | - | - | - |
| W-814-01 | 3/9/11 DUP | E601 | 1 of 18 | 1.2 | - | - | - |
| W-814-01 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-814-2138 | 3/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-814-2138 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-02 | 2/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-02 | 4/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-02 | 4/5/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-815-02 | 7/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-02 | 10/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-03 | 10/13/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-04 | 2/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-04 | 4/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-04 | 7/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-04 | 10/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-05 | 3/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-05 | 8/29/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-06 | 3/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-06 | 3/9/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-815-06 | 9/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-07 | 3/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-07 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-08 | 3/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-08 | 8/29/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-1928 | 8/29/11 | E601 | 1 of 18 | - | 0.9 | - | - |
| W-815-2110 | 3/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2110 | 6/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2110 | 6/9/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-815-2110 | 9/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2110 | 11/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2110 | 11/30/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-815-2111 | 3/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2111 | 6/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2111 | 9/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2111 | 11/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2217 | 2/23/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2217 | 9/12/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2608 | 3/16/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2608 | 6/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2608 | 9/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2608 | 11/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2621 | 2/8/11 | E624 | 0 of 30 | - | - | - | - |

Table B-4.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromo-dichloro-methane (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|---|
| W-815-2621 | 9/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-815-2621 | 12/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-01 | 2/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-01 | 5/18/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-01 | 7/13/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-01 | 10/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-03 | 2/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-03 | 4/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-03 | 4/5/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-817-03 | 7/18/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-03 | 10/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-03A | 3/16/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-03A | 8/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-04 | 3/16/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-04 | 3/16/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-817-04 | 9/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-04 | 9/8/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-817-05 | 3/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-05 | 8/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-07 | 3/16/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-07 | 8/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-2318 | 4/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-2318 | 7/18/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-2318 | 10/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-2609 | 3/16/11 | E624 | 0 of 30 | - | - | - | - |
| W-817-2609 | 6/9/11 | E624 | 0 of 30 | - | - | - | - |
| W-817-2609 | 9/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-817-2609 | 12/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-01 | 3/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-01 | 9/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-03 | 3/22/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-03 | 9/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-04 | 3/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-04 | 8/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-06 | 3/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-06 | 3/3/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-818-06 | 9/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-07 | 3/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-07 | 9/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-08 | 3/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-08 | 4/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-08 | 4/11/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-818-08 | 7/13/11 | E601 | 0 of 18 | - | - | - | - |

Table B-4.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromo-dichloro-methane (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|---|
| W-818-08 | 10/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-09 | 3/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-09 | 4/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-09 | 7/13/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-09 | 10/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-11 | 3/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-11 | 3/9/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-818-11 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-818-11 | 8/24/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-819-02 | 3/3/11 | E601 | 0 of 18 | - | - | - | - |
| W-819-02 | 8/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-823-01 | 3/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-823-01 | 9/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-823-02 | 3/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-823-02 | 9/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-823-03 | 3/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-823-03 | 9/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-823-13 | 3/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-823-13 | 9/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-827-02 | 3/15/11 | E601 | 1 of 18 | - | 0.7 | - | - |
| W-827-02 | 3/15/11 DUP | E601 | 1 of 18 | - | 0.8 | - | - |
| W-827-05 | 3/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-827-05 | 8/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-829-06 | 3/22/11 | E601 | 2 of 18 | 1.2 | - | 0.7 | - |
| W-829-06 | 7/12/11 | E601 | 0 of 18 | - | - | - | - |
| W-829-06 | 11/15/11 | E601 | 0 of 18 | - | - | - | - |
| W-829-15 | 4/19/11 | E624 | 0 of 30 | - | - | - | - |
| W-829-15 | 4/19/11 DUP | E624 | 0 of 30 | - | - | - | - |
| W-829-1938 | 1/20/11 | E624 | 0 of 30 | - | - | - | - |
| W-829-1938 | 1/20/11 DUP | E624 | 0 of 30 | - | - | - | - |
| W-829-1938 | 4/21/11 | E624 | 0 of 30 | - | - | - | - |
| W-829-1938 | 7/27/11 | E624 | 0 of 30 | - | - | - | - |
| W-829-1938 | 7/27/11 DUP | E624 | 0 of 30 | - | - | - | - |
| W-829-1938 | 11/7/11 | E624 | 0 of 30 | - | - | - | - |
| W-829-1938 | 11/7/11 DUP | E624 | 0 of 30 | - | - | - | - |
| W-829-1940 | 3/10/11 | E601 | 0 of 18 | - | - | - | - |
| W-829-1940 | 8/30/11 | E601 | 0 of 18 | - | - | - | - |
| W-829-22 | 4/19/11 | E624 | 0 of 30 | - | - | - | - |
| WELL18 | 1/12/11 | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 1/12/11 DUP | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 2/16/11 | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 2/16/11 DUP | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 3/15/11 | E601 | 0 of 18 | - | - | - | - |

Table B-4.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Bromo-dichloro-methane (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|---|
| WELL18 | 3/15/11 DUP | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 4/27/11 | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 4/27/11 DUP | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 5/18/11 | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 5/18/11 DUP | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 6/28/11 | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 6/28/11 DUP | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 7/20/11 DUP | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 7/26/11 REX | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 8/17/11 | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 8/17/11 DUP | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 9/28/11 | E601 | 0 of 18 | - | - | - | - |
| WELL18 | 9/28/11 DUP | E601 | 0 of 18 | - | - | - | - |
| WELL20 | 1/12/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 1/12/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 2/16/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 2/16/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 3/15/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 3/15/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 4/27/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 4/27/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 5/18/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 5/18/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 6/28/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 6/28/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 7/20/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 7/26/11 REX | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 8/17/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 8/17/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 9/28/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 9/28/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 10/27/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 10/27/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 11/29/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 11/29/11 DUP | E502.2 | 0 of 45 | - | - | - | - |
| WELL20 | 12/14/11 | E502.2 | 0 of 46 | - | - | - | - |
| WELL20 | 12/14/11 DUP | E502.2 | 0 of 45 | - | - | - | - |

OU4-E300.0 [mg/L; ug/L] 2011 data (prepared 2012-02-23 14:19:44, Oracle epprd02.llnl.gov)

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| GALLO1 | 1/12/11 | <0.5 | <4 |
| GALLO1 | 1/12/11 DUP | <0.5 | <4 |
| GALLO1 | 2/16/11 | <0.5 | <4 |
| GALLO1 | 2/16/11 DUP | <0.5 L | <4 |
| GALLO1 | 3/15/11 | <0.5 | <4 |
| GALLO1 | 3/15/11 DUP | <0.5 L | <4 |
| GALLO1 | 4/27/11 | <0.5 | <4 |
| GALLO1 | 4/27/11 DUP | <0.5 | <4 |
| GALLO1 | 5/18/11 | <0.5 | <4 |
| GALLO1 | 5/18/11 DUP | <0.5 L | <4 |
| GALLO1 | 6/29/11 | <0.5 | <4 |
| GALLO1 | 6/29/11 DUP | <0.5 | <4 |
| GALLO1 | 7/20/11 DUP | <0.5 | <4 |
| GALLO1 | 7/25/11 REX | <0.5 | <4 |
| GALLO1 | 8/16/11 | <0.5 | <4 |
| GALLO1 | 8/16/11 DUP | <0.5 | <4 |
| GALLO1 | 9/22/11 | <0.5 | <4 |
| GALLO1 | 9/22/11 DUP | <0.5 | <4 |
| GALLO1 | 10/19/11 | <0.5 | <4 |
| GALLO1 | 10/19/11 DUP | <0.5 | <4 |
| GALLO1 | 11/29/11 | <0.5 | <4 |
| GALLO1 | 11/29/11 DUP | <0.5 | <4 |
| GALLO1 | 12/19/11 | <0.5 | <4 |
| GALLO1 | 12/19/11 DUP | <0.5 | <4 |
| SPRING14 | 3/15/11 | 11 L | <4 |
| W-35B-01 | 2/14/11 | <0.5 L | <4 |
| W-35B-01 | 8/24/11 | <0.5 | <4 |
| W-35B-02 | 2/14/11 | 8.3 L | <4 |
| W-35B-02 | 8/24/11 | 7.5 | <4 |
| W-35B-03 | 2/15/11 | 5.1 | <4 |
| W-35B-03 | 8/24/11 | 5.2 | <4 |
| W-35B-04 | 2/15/11 | <0.5 | <4 |
| W-35B-04 | 8/24/11 | 0.9 | <4 |
| W-35B-05 | 2/15/11 | <0.5 | <4 |
| W-35B-05 | 8/24/11 | 1.1 | <4 |
| W-35C-01 | 3/7/11 | <0.5 | <4 |
| W-35C-02 | 3/22/11 | <0.5 | <4 |
| W-35C-04 | 2/8/11 | <0.5 | <4 |
| W-35C-05 | 2/17/11 | 1.7 | <4 |
| W-35C-08 | 2/17/11 | <0.5 | <4 |
| W-4AS | 3/17/11 | <0.5 | - |
| W-4B | 3/14/11 | <0.5 | <4 |
| W-4C | 3/14/11 | <0.5 | <4 |

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-4C | 9/12/11 | <0.5 | <4 |
| W-6BD | 3/10/11 | <0.5 | - |
| W-6BS | 3/10/11 | 11 | - |
| W-6CI | 2/23/11 | <0.5 L | <4 |
| W-6CS | 2/23/11 | 550 DL | 5.9 |
| W-6EI | 2/28/11 | <0.5 | <4 |
| W-6ER | 2/8/11 | <0.5 | <4 |
| W-6F | 2/23/11 | 1.6 L | <4 |
| W-6G | 2/23/11 | 10 L | <4 |
| W-6H | 3/7/11 | <0.5 | <4 |
| W-6H | 9/6/11 | <0.5 L | <4 |
| W-6I | 3/7/11 | <0.5 | <4 |
| W-6J | 3/7/11 | <0.5 | <4 |
| W-6J | 9/6/11 | <0.5 L | <4 |
| W-6L | 2/28/11 | 9 | <4 |
| W-808-01 | 3/14/11 | 70 D | <4 |
| W-808-03 | 3/14/11 | <0.5 | <4 |
| W-809-01 | 3/14/11 | 74 D | 4.9 |
| W-809-02 | 3/14/11 | 51 D | 9 |
| W-809-02 | 8/29/11 | - | 8.6 |
| W-809-03 | 3/10/11 | 79 D | 5.8 |
| W-809-03 | 8/29/11 | - | 9.1 |
| W-809-04 | 3/14/11 | 3 | <4 |
| W-810-01 | 3/10/11 | <0.5 | <4 |
| W-814-01 | 3/9/11 | 51 D | 5.9 |
| W-814-01 | 3/9/11 DUP | 65 | 5.5 |
| W-814-2138 | 3/9/11 | 84 D | 11.2 |
| W-815-02 | 2/7/11 | 100 D | 8.1 |
| W-815-02 | 7/11/11 | - | 5.8 |
| W-815-03 | 10/13/11 | 76 | - |
| W-815-04 | 2/14/11 | 100 D | <4 |
| W-815-04 | 7/11/11 | - | <4 |
| W-815-05 | 3/15/11 | 71 DL | 7 |
| W-815-06 | 3/9/11 | 67 D | 7 |
| W-815-06 | 3/9/11 DUP | 91 D | 6.9 |
| W-815-07 | 3/9/11 | 69 D | 6.5 |
| W-815-08 | 3/15/11 | <0.5 L | <4 |
| W-815-2110 | 3/7/11 | <0.5 | <4 |
| W-815-2110 | 9/6/11 | 0.99 | <4 |
| W-815-2111 | 3/7/11 | <0.5 | <4 |
| W-815-2111 | 9/6/11 | 1.8 | <4 |
| W-815-2217 | 2/23/11 | 0.82 L | <4 |
| W-815-2608 | 3/16/11 | <0.5 | <4 |
| W-815-2608 | 9/8/11 | <0.5 | <4 |
| W-815-2621 | 2/8/11 | - | <4 |

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-815-2621 | 9/8/11 | 7.8 | <4 |
| W-817-01 | 2/14/11 | 80 | 25 D |
| W-817-01 | 5/18/11 | - | 29 D |
| W-817-01 | 7/13/11 | - | 25 D |
| W-817-01 | 10/3/11 | - | 28 D |
| W-817-03 | 2/7/11 | 93 D | 25 D |
| W-817-03 | 7/18/11 | - | 25 D |
| W-817-03A | 3/16/11 | 110 DL | 12.3 |
| W-817-04 | 3/16/11 | 99 D | 19 |
| W-817-04 | 3/16/11 DUP | 94 D | 19 |
| W-817-05 | 3/15/11 | 0.53 L | <4 |
| W-817-07 | 3/16/11 | 76 DL | 14.5 |
| W-817-2318 | 4/5/11 | 160 D | 14 |
| W-817-2318 | 7/18/11 | - | 12 |
| W-817-2609 | 3/16/11 | 130 D | 18 |
| W-817-2609 | 9/8/11 | 120 D | 17 |
| W-818-01 | 3/9/11 | 64 D | 6.3 |
| W-818-03 | 3/22/11 | 38 D | <4 |
| W-818-04 | 3/3/11 | <0.5 | <4 |
| W-818-06 | 3/3/11 | 21 D | 4.3 |
| W-818-06 | 3/3/11 DUP | 27 D | <4 |
| W-818-07 | 3/3/11 | <0.5 | <4 |
| W-818-08 | 3/8/11 | 81 | 7.5 |
| W-818-08 | 7/13/11 | - | 7.6 |
| W-818-09 | 3/8/11 | 85 | 6.6 |
| W-818-09 | 7/13/11 | - | 5.9 |
| W-818-11 | 3/9/11 | 66 D | 7.4 |
| W-818-11 | 3/9/11 DUP | 84 | 7.9 |
| W-819-02 | 3/3/11 | <0.5 | <4 |
| W-823-01 | 3/8/11 | 15 D | <4 |
| W-823-02 | 3/8/11 | <0.5 | <4 |
| W-823-03 | 3/8/11 | 13 D | - |
| W-823-13 | 3/8/11 | 37 D | <4 |
| W-827-02 | 3/15/11 | 8.1 L | <4 |
| W-827-02 | 3/15/11 DUP | 7.4 L | <4 |
| W-827-05 | 3/14/11 | <0.5 | <4 |
| W-829-06 | 3/22/11 | 56 | 7.2 |
| W-829-06 | 7/12/11 | 74 D | 7.4 |
| W-829-06 | 11/15/11 | 9.2 D | 6.9 |
| W-829-15 | 4/19/11 | - | <4 |
| W-829-15 | 4/19/11 DUP | - | <4 |
| W-829-1938 | 1/20/11 | - | <4 O |
| W-829-1938 | 1/20/11 DUP | - | <4 O |
| W-829-1938 | 4/21/11 | - | <4 |
| W-829-1938 | 7/27/11 | - | <4 |

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-829-1938 | 7/27/11 DUP | - | <4 |
| W-829-1938 | 11/7/11 | - | <4 |
| W-829-1938 | 11/7/11 DUP | - | <4 |
| W-829-1940 | 3/10/11 | 24 | <4 |
| W-829-22 | 4/19/11 | - | <4 |
| WELL18 | 1/12/11 | <0.5 | <4 |
| WELL18 | 1/12/11 DUP | <0.5 | <4 |
| WELL18 | 2/16/11 | <0.5 | <4 |
| WELL18 | 2/16/11 DUP | <0.5 L | <4 |
| WELL18 | 3/15/11 | 0.5 | <4 |
| WELL18 | 3/15/11 DUP | <0.5 L | <4 |
| WELL18 | 4/27/11 | <0.5 | <4 |
| WELL18 | 4/27/11 DUP | <0.5 | <4 |
| WELL18 | 5/18/11 | <0.5 | <4 |
| WELL18 | 5/18/11 DUP | <0.5 L | <4 |
| WELL18 | 6/28/11 | <0.5 | <4 |
| WELL18 | 6/28/11 DUP | <0.5 LO | <4 |
| WELL18 | 7/20/11 DUP | <0.5 | <4 |
| WELL18 | 7/26/11 REX | <0.5 | <4 |
| WELL18 | 8/17/11 | <0.5 | <4 |
| WELL18 | 8/17/11 DUP | <0.5 | <4 |
| WELL18 | 9/28/11 | <0.5 | <4 |
| WELL18 | 9/28/11 DUP | <0.5 | <4 |
| WELL20 | 1/12/11 | <0.5 | <4 |
| WELL20 | 1/12/11 DUP | <0.5 | <4 |
| WELL20 | 2/16/11 | <0.5 | <4 |
| WELL20 | 2/16/11 DUP | 0.82 L | <4 |
| WELL20 | 3/15/11 | <0.5 | <4 |
| WELL20 | 3/15/11 DUP | <0.5 L | <4 |
| WELL20 | 4/27/11 | <0.5 | <4 |
| WELL20 | 4/27/11 DUP | <0.5 | <4 |
| WELL20 | 5/18/11 | <0.5 | <4 |
| WELL20 | 5/18/11 DUP | <0.5 L | <4 |
| WELL20 | 6/28/11 | <0.5 | <4 |
| WELL20 | 6/28/11 DUP | <0.5 LO | <4 |
| WELL20 | 7/20/11 DUP | <0.5 | <4 |
| WELL20 | 7/26/11 REX | <0.5 | <4 |
| WELL20 | 8/17/11 | <0.5 | <4 |
| WELL20 | 8/17/11 DUP | <0.5 | <4 |
| WELL20 | 9/28/11 | <0.5 | <4 |
| WELL20 | 9/28/11 DUP | <0.5 | <4 |
| WELL20 | 10/27/11 | <0.5 | <4 |
| WELL20 | 10/27/11 DUP | <0.5 | <4 |
| WELL20 | 11/29/11 | <0.5 | <4 |
| WELL20 | 11/29/11 DUP | <0.5 | <4 |

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| WELL20 | 12/14/11 | <0.5 | <4 |
| WELL20 | 12/14/11 DUP | <0.5 | <4 |

OU4-HE [ug/L] 2011 data (prepared 2012-02-23 14:20:00, Oracle epprd02.llnl.gov)

Table B-4.03. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GALLO1 | 1/12/11 | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <1.2 D | <2.4 D | <1.2 D | <2.4 D |
| GALLO1 | 1/12/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 2/16/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 2/16/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 3/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 3/15/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 4/27/11 | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <1 D | <2 D | <1 D | <2 D |
| GALLO1 | 4/27/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 5/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 5/18/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 6/29/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 6/29/11 DUP | <2 | <2 | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <1 | <2 O | <1 | <2 |
| GALLO1 | 7/20/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 7/25/11 REX | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 8/16/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 8/16/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 9/22/11 | <2 | <2 O | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 9/22/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 10/19/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 10/19/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 11/29/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 11/29/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| GALLO1 | 12/19/11 | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <1.2 D | <2.4 D | <1.2 D | <2.4 D |
| GALLO1 | 12/19/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| SPRING14 | 3/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-01 | 2/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-01 | 8/24/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-02 | 2/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-02 | 8/24/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-03 | 2/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-03 | 8/24/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-04 | 2/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-04 | 8/24/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-05 | 2/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35B-05 | 8/24/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35C-01 | 3/7/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35C-02 | 3/22/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35C-04 | 2/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35C-05 | 2/17/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-35C-08 | 2/17/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-4B | 3/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6CI | 2/23/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |

Table B-4.03. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-6CS | 2/23/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6EI | 2/28/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6ER | 2/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6ES | 2/28/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6F | 2/23/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6G | 2/23/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6H | 3/7/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6H | 9/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6I | 3/7/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6J | 3/7/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6J | 9/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-6L | 2/28/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-808-01 | 3/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-808-03 | 3/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-809-01 | 3/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-809-02 | 3/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-809-03 | 3/10/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 9.3 | <2 | 4.7 | <2 | 106 D | <2 |
| W-809-03 | 8/29/11 | 7.4 | <2 | <2 | <2 | <2 | <2 | <2 | 13 | <2 | 17 | <2 | 163 D | <2 |
| W-809-04 | 3/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-810-01 | 3/10/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-814-01 | 3/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-814-01 | 3/9/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-814-2138 | 3/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-02 | 2/7/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 5.5 | <2 | 54 | <2 |
| W-815-02 | 7/11/11 | R | <2 O | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 9.4 O | <2 O | 58 O | <2 |
| W-815-04 | 2/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | IR | <2 | 9.2 IJ | <2 |
| W-815-04 | 7/11/11 | R | <2 O | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 6.2 O | <2 O | 46 O | <2 |
| W-815-05 | 3/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-06 | 3/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | 2.5 | <2 |
| W-815-06 | 3/9/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | 7.2 | <2 |
| W-815-07 | 3/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-08 | 3/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-2110 | 3/7/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-2110 | 9/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-2111 | 3/7/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-2111 | 9/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-2217 | 2/23/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-2608 | 3/16/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-2608 | 9/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-815-2621 | 2/8/11 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <0.75 | <1.5 | <0.75 | <1.5 |
| W-815-2621 | 9/8/11 | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <1 D | <2 D | <1 D | <2 D |
| W-817-01 | 2/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 10 | <2 | 43 | <2 |
| W-817-01 | 5/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 17 | <2 | 47 | <2 |
| W-817-01 | 7/13/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 21 | <2 | 47 | <2 |

Table B-4.03. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-817-01 | 10/3/11 | <2 | <2 | <2 O | <2 | <2 | <2 | <2 | <2 | <2 | <1 S | <2 | <1 S | <2 O |
| W-817-03 | 2/7/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | 8.5 | <2 |
| W-817-03 | 7/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | 9.3 | <2 |
| W-817-03A | 3/16/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-817-04 | 3/16/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | 8.2 | <2 |
| W-817-04 | 3/16/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | 8.8 | <2 |
| W-817-05 | 3/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-817-07 | 3/16/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-817-2318 | 4/5/11 | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <1 D | <2 D | <1 D | <2 D |
| W-817-2318 | 7/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-817-2609 | 3/16/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-817-2609 | 9/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-818-01 | 3/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-818-03 | 3/22/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-818-04 | 3/3/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-818-06 | 3/3/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-818-06 | 3/3/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-818-08 | 3/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-818-08 | 8/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-818-09 | 3/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | 2 | <2 |
| W-818-09 | 8/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-818-11 | 3/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 2.4 | <2 | <1 | <2 | 23 | <2 |
| W-818-11 | 3/9/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | 17 | <2 |
| W-819-02 | 3/3/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-823-01 | 3/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-823-02 | 3/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-823-02 | 3/15/11 | - | - | <2.2 D | <2.2 D | - | - | - | - | - | - | <2.2 D | - | - |
| W-823-13 | 3/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-827-02 | 3/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-827-02 | 3/15/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-827-05 | 3/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-829-06 | 3/22/11 | <2 O | <2 O | <2 O | <2 | <2 O | <2 | <2 | <2 | <2 | <1 O | <2 O | <1 O | <2 O |
| W-829-15 | 4/19/11 | - | - | <5 D | <5 D | - | - | - | - | - | <1 | <5 D | <1 | <5 |
| W-829-15 | 4/19/11 DUP | - | - | <5 D | <5 D | - | - | - | - | - | <1 | <5 D | <1 | <5 |
| W-829-1938 | 1/20/11 | - | - | <5 D | <5 D | - | - | - | - | - | <1 | <5 DL | <1 | <5 |
| W-829-1938 | 1/20/11 DUP | - | - | <5 | <5 | - | - | - | - | - | <1 | <5 L | <1 | <5 |
| W-829-1938 | 4/21/11 | - | - | <5 D | <5 D | - | - | - | - | - | <1 | <5 D | <1 | <5 |
| W-829-1938 | 7/27/11 | - | - | <5 | <5 | - | - | - | - | - | <1.3 D | <5 | <1.3 D | <6.6 D |
| W-829-1938 | 7/27/11 DUP | - | - | <5 | <5 | - | - | - | - | - | <1 | <5 | <1 | <5 |
| W-829-1938 | 11/7/11 | - | - | <5 | <5 | - | - | - | - | - | <0.74 | <5 | <0.74 | <3.7 |
| W-829-1938 | 11/7/11 DUP | - | - | <5 | <5 | - | - | - | - | - | <1 | <5 | <1 | <5 |
| W-829-1940 | 3/10/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-829-22 | 4/19/11 | - | - | <5 D | <5 D | - | - | - | - | - | <1 | <5 D | <1 | <5 |
| WELL18 | 1/12/11 | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <1.3 D | <2.6 D | <1.3 D | <2.6 D |

Table B-4.03. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WELL18 | 1/12/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 2/16/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 2/16/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 3/15/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 3/15/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 4/27/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 4/27/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 5/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 5/18/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 6/28/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 6/28/11 DUP | <2 | <2 | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <1 | <2 O | <1 | <2 |
| WELL18 | 7/26/11 REX | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 8/17/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 8/17/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL18 | 9/28/11 | <2 | <2 | <2 O | <2 | <2 O | <2 | <2 | <2 | <2 | <1 O | <2 | <1 | <2 O |
| WELL18 | 9/28/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 1/12/11 | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <1.2 D | <2.5 D | <1.2 D | <2.5 D |
| WELL20 | 1/12/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 2/16/11 | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <1 D | <2 D | <1 D | <2 D |
| WELL20 | 2/16/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 3/15/11 | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <1.1 D | <2.2 D | <1.1 D | <2.2 D |
| WELL20 | 3/15/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 4/27/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 4/27/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 5/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 5/18/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 6/28/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 6/28/11 DUP | <2 | <2 | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <1 | <2 O | <1 | <2 |
| WELL20 | 7/26/11 REX | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <2.2 D | <1.1 D | <2.2 D | <1.1 D | <2.2 D |
| WELL20 | 8/17/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 8/17/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 9/28/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 9/28/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 10/27/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 O | <2 | <1 | <2 O |
| WELL20 | 10/27/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 11/29/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 11/29/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 12/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| WELL20 | 12/14/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |

OU4-EM8015 [ug/L] 2011 data (prepared 2012-02-23 04:55:30, Oracle epprd02.llnl.gov)

Table B-4.04. High Explosives Process Area Operable Unit diesel range organic compounds in ground water.

| Location | Date | Diesel Fuel (µg/L) | Oil (µg/L) |
|---|---|---|---|
| W-823-01 | 3/8/11 | <50 | <200 |
| W-823-02 | 3/8/11 | <50 | <200 |
| W-823-03 | 3/8/11 | <50 | <200 |

OU4-TOC [mg/L] 2011 data (prepared 2012-02-23 04:55:49, Oracle epprd02.llnl.gov)

Table B-4.05. High Explosives Process Area Operable Unit total organic carbon in ground water.

| Location | Date | Total Organic Carbon (TOC) (mg/L) |
|---|---|---|
| W-818-08 | 10/3/11 | 0.8 |
| W-818-09 | 10/3/11 | 1.2 |

OU4-AS [pCi/L] 2011 data (prepared 2012-02-23 04:55:22, Oracle epprd02.llnl.gov)

Table B-4.06. High Explosives Process Area Operable Unit alpha spectrocopy in ground water.

| Location | Date | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|
| W-818-08 | 10/3/11 | 14.3 ± 2.03 | 0.664 ± 0.138 | 12.6 ± 1.78 |
| W-818-09 | 10/3/11 | 12.8 ± 1.81 | 0.558 ± 0.120 | 11.0 ± 1.56 |

OU4-GENMIN [mg/L; Units; umhos/cm] 2011 data (prepared 2012-02-23 04:55:33, Oracle epprd02.llnl.gov)

Table B-4.07. High Explosives Process Area Operable Unit general minerals in ground water.

| Constituents of concern | W-815-03 | W-815-2621 | W-817-02 | W-817-2109 | W-818-08 | W-818-09 |
|---|---|---|---|---|---|---|
| | 10/13/11 | 2/8/11 | 6/28/11 | 6/28/11 | 10/3/11 | 10/3/11 |
| Total Alkalinity (as CaCO3) (mg/L) | 210 | 200 | 240 | 240 | 270 | 280 |
| Aluminum (mg/L) | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Bicarbonate Alk (as CaCO3) (mg/L) | 210 D | 180 D | 240 D | 240 D | 270 D | 280 D |
| Calcium (mg/L) | 25 | 8.3 | 22 | 22 | 20 | 23 |
| Carbonate Alk (as CaCO3) (mg/L) | <8.2 DO | 21 D | <8.2 D | <8.2 D | <8.2 D | <8.2 D |
| Chloride (mg/L) | 150 | 210 | 270 | 270 | 190 | 190 D |
| Copper (mg/L) | <0.05 | <0.05 | 0.057 | 0.059 | <0.05 | <0.05 |
| Fluoride (mg/L) | 0.91 | 0.84 | 0.86 | 0.86 | 0.81 | 0.82 D |
| Hydroxide Alk (as CaCO3) (mg/L) | <8.2 D | <8.2 D | <8.2 D | <8.2 D | <8.2 D | <8.2 D |
| Iron (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Magnesium (mg/L) | 16 | 1.7 | 11 | 11 | 11 | 12 |
| Manganese (mg/L) | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Nickel (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrate (as N) (mg/L) | 17 | 2.4 | 21 D | 22 D | 19 | 17 D |
| Nitrate (as NO3) (mg/L) | 76 | 11 H | 93 | 96 | 84 H | 77 H |
| Nitrite (as N) (mg/L) | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| pH (Units) | 8.13 H | 8.55 | 7.96 | 7.92 | 7.99 H | 8.06 H |
| Ortho-Phosphate (mg/L) | 0.078 | 0.16 | 0.054 | 0.062 | 0.083 HLO | 0.078 LO |
| Total Phosphorus (as P) (mg/L) | <0.05 H | 0.13 H | <0.05 | <0.05 | <0.05 H | 0.093 H |
| Potassium (mg/L) | 6.9 | 6.2 | 8.9 | 9.3 | 11 | 10 |
| Sodium (mg/L) | 200 L | 310 | 340 | 340 | 270 | 260 |
| Total dissolved solids (TDS) (mg/L) | 770 DH | 940 D | 1,200 D | 1,200 D | 960 DH | 940 DH |
| Specific Conductance (µmhos/cm) | 1,240 H | 1,410 | 1,770 | 1,800 | 1,410 H | 1,360 H |
| Sulfate (mg/L) | 110 | 200 | 220 | 220 | 120 | 98 D |
| Surfactants (mg/L) | <1 D | <0.5 | <1 D | <0.5 | <0.5 | <0.5 |
| Total Hardness (as CaCO3) (mg/L) | 130 | 28 | 99 | 100 | 95 | 110 |
| Zinc (mg/L) | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

OU5-VOC [ug/L] 2011 data (prepared 2012-02-23 04:58:16, Oracle epprd02.llnl.gov)

Table B-5.01. Building 850 area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K1-01C | 1/26/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-01C | 5/11/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-01C | 5/11/11 DUP | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-01C | 8/18/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-01C | 11/21/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-01C | 11/21/11 DUP | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-02B | 1/11/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.53 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-02B | 1/11/11 DUP | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-02B | 4/26/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 E | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-02B | 7/19/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-02B | 7/19/11 DUP | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-02B | 11/15/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-04 | 1/5/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-04 | 4/28/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-04 | 7/11/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-04 | 10/25/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-05 | 1/11/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 15 | <0.5 |
| K1-05 | 4/26/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 14 | <0.5 |
| K1-05 | 7/11/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 16 | <0.5 |
| K1-05 | 10/25/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 19 | <0.5 |
| K1-07 | 1/19/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-07 | 5/10/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-07 | 7/13/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K1-07 | 10/25/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 E | <0.5 |
| K1-08 | 1/20/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 21 | <0.5 |
| K1-08 | 5/9/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 27 | <0.5 |
| K1-08 | 8/17/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 32 | <0.5 |
| K1-08 | 10/25/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 23 | <0.5 |
| K1-09 | 1/24/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 49 | <0.5 |
| K1-09 | 4/28/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 43 | <0.5 |
| K1-09 | 8/15/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 53 | <0.5 |
| K1-09 | 11/1/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 E | 160 D | <0.5 |
| W-865-02 | 1/12/11 | E601 | <0.5 | 1.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1 | 65 D | <0.5 |
| W-865-02 | 7/14/11 | E601 | <0.5 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 | 59 D | <0.5 |
| W-865-1802 | 1/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-865-1802 | 7/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-865-2005 | 1/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 5.7 | <0.5 |
| W-865-2005 | 1/18/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 5.8 | <0.5 |
| W-865-2005 | 7/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 5.9 | <0.5 |
| W-865-2005 | 7/25/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 5.4 | <0.5 |
| W-865-2121 | 1/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 L | 15 | <0.5 |
| W-865-2121 | 7/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 14 | <0.5 |

Table B-5.01. Building 850 area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-865-2133 | 1/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-865-2133 | 7/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-865-2224 | 5/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT1-02 | 4/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT1-02 | 10/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT1-2209 | 4/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT1-2209 | 10/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT1-2326 | 1/25/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT1-2326 | 5/12/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT1-2326 | 8/18/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT1-2326 | 11/14/11 | E8260 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT1-2620 | 2/10/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

Table B-5.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| K1-01C | 1/26/11 | E8260 | 0 of 36 |
| K1-01C | 5/11/11 | E8260 | 0 of 36 |
| K1-01C | 5/11/11 DUP | E8260 | 0 of 36 |
| K1-01C | 8/18/11 | E8260 | 0 of 36 |
| K1-01C | 11/21/11 | E8260 | 0 of 36 |
| K1-01C | 11/21/11 DUP | E8260 | 0 of 36 |
| K1-02B | 1/11/11 | E8260 | 0 of 36 |
| K1-02B | 1/11/11 DUP | E8260 | 0 of 36 |
| K1-02B | 4/26/11 | E8260 | 0 of 36 |
| K1-02B | 7/19/11 | E8260 | 0 of 36 |
| K1-02B | 7/19/11 DUP | E8260 | 0 of 36 |
| K1-02B | 11/15/11 | E8260 | 0 of 36 |
| K1-04 | 1/5/11 | E8260 | 0 of 36 |
| K1-04 | 4/28/11 | E8260 | 0 of 36 |
| K1-04 | 7/11/11 | E8260 | 0 of 36 |
| K1-04 | 10/25/11 | E8260 | 0 of 36 |
| K1-05 | 1/11/11 | E8260 | 0 of 36 |
| K1-05 | 4/26/11 | E8260 | 0 of 36 |
| K1-05 | 7/11/11 | E8260 | 0 of 36 |
| K1-05 | 10/25/11 | E8260 | 0 of 36 |
| K1-07 | 1/19/11 | E8260 | 0 of 36 |
| K1-07 | 5/10/11 | E8260 | 0 of 36 |
| K1-07 | 7/13/11 | E8260 | 0 of 36 |
| K1-07 | 10/25/11 | E8260 | 0 of 36 |
| K1-08 | 1/20/11 | E8260 | 0 of 36 |
| K1-08 | 5/9/11 | E8260 | 0 of 36 |

Table B-5.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| K1-08 | 8/17/11 | E8260 | 0 of 36 |
| K1-08 | 10/25/11 | E8260 | 0 of 36 |
| K1-09 | 1/24/11 | E8260 | 0 of 36 |
| K1-09 | 4/28/11 | E8260 | 0 of 36 |
| K1-09 | 8/15/11 | E8260 | 0 of 36 |
| K1-09 | 11/1/11 | E8260 | 0 of 36 |
| W-865-02 | 1/12/11 | E601 | 0 of 18 |
| W-865-02 | 7/14/11 | E601 | 0 of 18 |
| W-865-1802 | 1/13/11 | E601 | 0 of 18 |
| W-865-1802 | 7/14/11 | E601 | 0 of 18 |
| W-865-2005 | 1/18/11 | E601 | 0 of 18 |
| W-865-2005 | 1/18/11 DUP | E601 | 0 of 18 |
| W-865-2005 | 7/25/11 | E601 | 0 of 18 |
| W-865-2005 | 7/25/11 DUP | E601 | 0 of 18 |
| W-865-2121 | 1/13/11 | E601 | 0 of 18 |
| W-865-2121 | 7/18/11 | E601 | 0 of 18 |
| W-865-2133 | 1/24/11 | E601 | 0 of 18 |
| W-865-2133 | 7/14/11 | E601 | 0 of 18 |
| W-865-2224 | 5/16/11 | E601 | 0 of 18 |
| W-PIT1-02 | 4/13/11 | E601 | 0 of 18 |
| W-PIT1-02 | 10/17/11 | E601 | 0 of 18 |
| W-PIT1-2209 | 4/14/11 | E601 | 0 of 18 |
| W-PIT1-2209 | 10/26/11 | E601 | 0 of 18 |
| W-PIT1-2326 | 1/25/11 | E8260 | 0 of 36 |
| W-PIT1-2326 | 5/12/11 | E8260 | 0 of 36 |
| W-PIT1-2326 | 8/18/11 | E8260 | 0 of 36 |
| W-PIT1-2326 | 11/14/11 | E8260 | 0 of 36 |
| W-PIT1-2620 | 2/10/11 | E624 | 0 of 30 |

OU5-E300.0 [mg/L; ug/L] 2011 data (prepared 2012-02-23 04:57:31, Oracle epprd02.llnl.gov)

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| K1-01C | 1/26/11 | 35 | <4 E |
| K1-01C | 5/11/11 | 34 | <4 E |
| K1-01C | 5/11/11 DUP | 33 | <4 E |
| K1-01C | 8/18/11 | 34 | <4 E |
| K1-01C | 11/21/11 | 35 | <4 E |
| K1-01C | 11/21/11 DUP | 33 | <4 E |
| K1-02B | 1/11/11 | 31 | 6.6 |
| K1-02B | 1/11/11 DUP | 31 | 7.2 |
| K1-02B | 4/26/11 | 33 | 6.2 |
| K1-02B | 7/19/11 | 31 | 6.4 |
| K1-02B | 7/19/11 DUP | 31 | 6.2 |
| K1-02B | 11/15/11 | 33 | 6 |
| K1-04 | 1/5/11 | 30 | <4 E |
| K1-04 | 4/28/11 | 30 F | <4 E |
| K1-04 | 7/11/11 | 29 O | <4 E |
| K1-04 | 10/25/11 | 30 | <4 E |
| K1-05 | 1/11/11 | 33 | <4 E |
| K1-05 | 4/26/11 | 35 | <4 E |
| K1-05 | 7/11/11 | 34 O | <4 |
| K1-05 | 10/25/11 | 35 | <4 E |
| K1-06 | 1/24/11 | - | 5.6 |
| K1-06 | 4/26/11 | 35 | 6.2 |
| K1-06 | 7/11/11 | - | 5.4 |
| K1-06 | 10/18/11 | - | 5.2 |
| K1-07 | 1/19/11 | 31 | <4 |
| K1-07 | 5/10/11 | 29 O | <4 |
| K1-07 | 7/13/11 | 29 F | <4 O |
| K1-07 | 10/25/11 | 30 | <4 E |
| K1-08 | 1/20/11 | 34 | <4 O |
| K1-08 | 5/9/11 | 35 | <4 |
| K1-08 | 8/17/11 | 35 | <4 E |
| K1-08 | 10/25/11 | 33 | <4 |
| K1-09 | 1/24/11 | 33 | <4 E |
| K1-09 | 4/28/11 | 34 | <4 E |
| K1-09 | 8/15/11 | 35 | <4 |
| K1-09 | 11/1/11 | 33 | <4 E |
| K2-03 | 5/12/11 | <0.5 | <4 |
| K2-03 | 11/7/11 | - | <4 |
| K2-04D | 4/11/11 | - | 4.4 |
| K2-04D | 11/17/11 | - | <4 |
| K2-04S | 4/11/11 | 37 | 6.9 |
| K2-04S | 4/11/11 DUP | 36 | 6.3 |
| K2-04S | 10/20/11 | - | 8.2 |
| K2-04S | 10/20/11 DUP | - | 8 |

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| NC2-05 | 5/17/11 | 28 D | <4 |
| NC2-05 | 11/10/11 | - | <4 |
| NC2-05A | 5/17/11 | 34 D | 7.4 |
| NC2-05A | 11/10/11 | - | 7.1 |
| NC2-06 | 5/18/11 | 32 DL | 6.6 |
| NC2-06 | 11/10/11 | - | 6.8 |
| NC2-06A | 5/18/11 | <0.5 L | <4 |
| NC2-06A | 11/10/11 | - | <4 |
| NC2-09 | 5/23/11 | <0.5 | <4 |
| NC2-10 | 6/2/11 | 36 DL | <4 |
| NC2-11D | 4/14/11 | 27 | <4 E |
| NC2-11D | 11/9/11 | - | <4 E |
| NC2-11S | 5/5/11 | 33 L | 5.1 |
| NC2-11S | 11/14/11 | - | 4.5 |
| NC2-12D | 4/20/11 | 22 D | 5.1 |
| NC2-12D | 11/17/11 | - | 4.7 |
| NC2-12I | 5/23/11 | 30 D | 6.5 |
| NC2-12I | 11/14/11 | - | 6.9 |
| NC2-12S | 5/23/11 | 51 D | 4.6 |
| NC2-12S | 11/14/11 | - | <4 |
| NC2-13 | 5/5/11 | 33 L | <4 |
| NC2-13 | 11/8/11 | - | <4 |
| NC2-13 | 11/8/11 DUP | - | <4 |
| NC2-14S | 1/13/11 | - | <4 |
| NC2-14S | 1/13/11 DUP | - | <4 |
| NC2-14S | 5/11/11 | 29 DL | - |
| NC2-14S | 5/11/11 DUP | 29 DL | - |
| NC2-14S | 7/13/11 | - | 4.3 |
| NC2-14S | 7/13/11 DUP | - | 4.8 |
| NC2-15 | 5/17/11 | 33 | 4.5 |
| NC2-15 | 11/7/11 | - | 4.2 |
| NC2-16 | 1/13/11 | - | <4 |
| NC2-16 | 5/11/11 | 1.4 L | - |
| NC2-16 | 7/13/11 | - | <4 |
| NC2-18 | 5/17/11 | 31 D | 9.1 |
| NC2-18 | 5/17/11 DUP | 32 D | 9.4 |
| NC2-18 | 11/7/11 | - | 8 |
| NC2-18 | 11/7/11 DUP | - | 8.4 |
| NC2-19 | 5/5/11 | 65 DL | <4 |
| NC2-19 | 11/8/11 | - | <4 |
| NC2-20 | 5/2/11 | - | <4 |
| NC2-21 | 5/2/11 | 29 L | <4 |
| NC7-10 | 1/11/11 | - | 16.9 |
| NC7-10 | 5/9/11 | 42 DL | - |
| NC7-10 | 7/11/11 | - | 16.9 |
| NC7-11 | 5/9/11 | 56 DL | 9.8 |

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| NC7-11 | 10/17/11 | - | 12.7 |
| NC7-15 | 4/26/11 | - | <4 |
| NC7-19 | 5/4/11 | 25 D | <4 |
| NC7-19 | 10/11/11 | - | <4 |
| NC7-27 | 4/6/11 | 45 D | 10 |
| NC7-27 | 10/17/11 | - | 11 |
| NC7-28 | 1/11/11 | - | 71.3 |
| NC7-28 | 4/6/11 | 57 D | 70.8 |
| NC7-28 | 7/13/11 | - | 61.2 |
| NC7-28 | 10/11/11 | - | <4 |
| NC7-28 | 10/11/11 DUP | - | <4 |
| NC7-28 | 11/16/11 | - | <4 |
| NC7-28 | 12/15/11 | - | <4 |
| NC7-29 | 5/10/11 | 130 DL | 29.9 |
| NC7-29 | 10/19/11 | - | 14.3 |
| NC7-43 | 5/4/11 | 27 D | 9.4 |
| NC7-43 | 10/18/11 | - | <4 |
| NC7-44 | 5/10/11 | 48 DL | <4 |
| NC7-44 | 10/18/11 | - | 4.1 |
| NC7-46 | 5/10/11 | <0.5 L | <4 |
| NC7-54 | 5/9/11 | 32 DL | 13.8 |
| NC7-56 | 5/11/11 | - | 8.6 |
| NC7-56 | 10/31/11 | - | 10.6 |
| NC7-58 | 5/10/11 | 30 DL | 7.2 |
| NC7-58 | 10/31/11 | - | 8.2 |
| NC7-59 | 5/11/11 | - | 9 |
| NC7-59 | 10/31/11 | - | 8.5 |
| NC7-60 | 1/10/11 | - | <4 |
| NC7-60 | 4/6/11 | <0.5 | - |
| NC7-60 | 7/11/11 | - | <4 |
| NC7-61 | 1/11/11 | - | 48 D |
| NC7-61 | 1/11/11 DUP | - | 48 D |
| NC7-61 | 4/6/11 | 52 | 42 D |
| NC7-61 | 7/14/11 | - | 45 D |
| NC7-61 | 7/14/11 DUP | - | <4 S |
| NC7-61 | 11/8/11 | - | 35 D |
| NC7-61 | 11/8/11 DUP | - | 36 D |
| NC7-62 | 5/11/11 | 27 DL | 9.3 |
| NC7-62 | 10/31/11 | - | 9.1 |
| NC7-69 | 5/11/11 | <0.5 L | <4 |
| NC7-69 | 5/11/11 DUP | <0.5 L | <4 |
| NC7-69 | 10/20/11 | - | <4 |
| NC7-70 | 5/9/11 | 33 DL | 45.6 |
| NC7-70 | 10/18/11 | - | 39.5 |
| NC7-71 | 4/6/11 | 0.95 | <4 |
| NC7-71 | 12/22/11 | - | <4 |

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| NC7-73 | 5/11/11 | - | 8.9 |
| NC7-73 | 10/31/11 | - | 8.5 |
| W-850-05 | 5/9/11 | <0.5 L | <4 |
| W-850-05 | 10/18/11 | - | <4 |
| W-850-2145 | 5/17/11 | 29 D | 7.6 |
| W-850-2145 | 11/7/11 | - | 8.7 |
| W-850-2312 | 5/17/11 | - | <4 |
| W-850-2312 | 11/7/11 | - | <4 |
| W-850-2313 | 5/9/11 | - | 15 |
| W-850-2313 | 10/17/11 | - | 18 |
| W-850-2314 | 4/6/11 | <0.5 | <4 |
| W-850-2314 | 10/4/11 | - | <4 |
| W-850-2315 | 5/10/11 | 86 | 11 |
| W-850-2315 | 10/19/11 | - | 13 |
| W-850-2316 | 5/17/11 | - | <4 |
| W-850-2316 | 11/7/11 | - | <4 |
| W-850-2416 | 4/6/11 | <0.5 | <4 |
| W-850-2416 | 10/11/11 | - | <4 |
| W-850-2416 | 11/16/11 | - | <4 |
| W-850-2416 | 11/16/11 DUP | - | <4 |
| W-850-2416 | 12/15/11 | - | <4 |
| W-850-2417 | 4/6/11 | 52 | 74 D |
| W-850-2417 | 10/11/11 | - | <4 |
| W-850-2417 | 11/16/11 | - | <4 |
| W-850-2417 | 12/15/11 | - | 8.6 |
| W-850-2417 | 12/15/11 DUP | - | 13.6 |
| W-865-02 | 1/12/11 | 38 | <4 |
| W-865-02 | 7/14/11 | 33 D | - |
| W-865-1802 | 5/12/11 | 27 | <4 |
| W-865-1803 | 5/12/11 | - | <4 |
| W-865-1803 | 11/3/11 | - | <4 |
| W-865-1803 | 11/3/11 DUP | - | <4 |
| W-865-2005 | 1/18/11 | 31 D | <4 |
| W-865-2005 | 1/18/11 DUP | 32 D | <4 |
| W-865-2005 | 4/14/11 | - | <4 |
| W-865-2005 | 4/14/11 DUP | - | <4 |
| W-865-2005 | 7/25/11 | 31 D | <4 |
| W-865-2005 | 7/25/11 DUP | 28 D | <4 |
| W-865-2005 | 11/10/11 | - | <4 |
| W-865-2005 | 11/10/11 DUP | - | <4 |
| W-865-2121 | 1/13/11 | 44 D | <4 |
| W-865-2121 | 7/18/11 | 44 D | - |
| W-865-2133 | 1/24/11 | 2.5 | <4 |
| W-865-2133 | 5/16/11 | - | <4 |
| W-865-2133 | 7/14/11 | 2.3 | <4 |
| W-865-2133 | 11/3/11 | - | <4 |

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-865-2224 | 7/14/11 | - | <4 |
| W-865-2224 | 11/3/11 | 0.93 | <4 |
| W-PIT1-02 | 1/18/11 | - | 5.8 |
| W-PIT1-02 | 4/13/11 | 46 D | 5.6 |
| W-PIT1-02 | 7/25/11 | - | 5.8 |
| W-PIT1-02 | 10/17/11 | - | 5.6 |
| W-PIT1-2204 | 5/25/11 | 54 | <4 |
| W-PIT1-2204 | 11/8/11 | - | <4 |
| W-PIT1-2209 | 1/24/11 | - | <4 E |
| W-PIT1-2209 | 4/14/11 | 41 | <4 E |
| W-PIT1-2209 | 7/14/11 | - | 5.3 |
| W-PIT1-2209 | 10/26/11 | 44 | <4 E |
| W-PIT1-2225 | 1/20/11 | - | <4 |
| W-PIT1-2225 | 6/2/11 | <0.5 | <4 |
| W-PIT1-2225 | 7/19/11 | - | <4 |
| W-PIT1-2225 | 11/9/11 | <0.5 | <4 |
| W-PIT1-2326 | 1/25/11 | 33 | 5.5 |
| W-PIT1-2326 | 5/12/11 | 33 | 6.6 |
| W-PIT1-2326 | 8/18/11 | 34 | 5.7 |
| W-PIT1-2326 | 11/14/11 | 32 | 5.4 |
| W-PIT1-2620 | 2/10/11 | - | 5.2 |
| W-PIT1-2620 | 7/25/11 | - | 4.2 |
| W-PIT1-2620 | 10/17/11 | - | 4.4 |
| W-PIT7-16 | 4/26/11 | <0.5 | <4 |
| W-PIT7-16 | 10/11/11 | - | <4 |

OU5-DWMETALS [mg/L] 2011 data (prepared 2012-02-23 04:57:27, Oracle epprd02.llnl.gov)

Table B-5.03. Building 850 area in Operable Unit 5 metals in ground water.

| Location | Date | Arsenic (mg/L) | Barium (mg/L) | Cadmium (mg/L) | Chromium (mg/L) | Lead (mg/L) | Mercury (mg/L) | Selenium (mg/L) | Silver (mg/L) |
|---|---|---|---|---|---|---|---|---|---|
| NC7-28 | 10/11/11 | 0.038 | 0.31 | <0.001 | 0.0044 | <0.005 | <0.0002 | <0.002 | <0.001 |
| NC7-61 | 11/8/11 | 0.019 | 0.093 | <0.001 | <0.001 | <0.005 | <0.0002 | 0.002 | <0.001 |
| NC7-61 | 11/8/11 DUP | 0.019 | 0.11 | <0.001 | <0.001 | <0.005 | <0.0002 | <0.002 | <0.001 |
| NC7-71 | 12/22/11 | 0.0067 | 0.05 | <0.0005 | 0.002 | <0.005 | <0.0002 | <0.002 | <0.001 |
| W-850-2416 | 10/11/11 | 0.0022 | 0.031 | <0.001 | <0.001 | <0.005 | <0.0002 | <0.002 | <0.001 |
| W-850-2417 | 10/11/11 | 0.053 D | 0.17 D | <0.002 D | 0.084 D | <0.01 D | <0.0002 | <0.004 D | <0.002 D |
| W-865-02 | 1/12/11 | 0.0088 | <0.02 | <0.0005 | <0.001 | <0.005 | <0.0002 | <0.002 | <0.001 |
| W-865-2005 | 1/18/11 | 0.012 | 0.03 | <0.0005 | <0.001 | <0.005 | <0.0002 | <0.002 | <0.001 |
| W-865-2005 | 1/18/11 DUP | 0.012 | 0.03 | 0.0007 | <0.001 | <0.005 | <0.0002 | <0.002 | <0.001 |
| W-865-2121 | 1/13/11 | 0.0078 | <0.02 | <0.0005 | <0.001 | <0.005 | <0.0002 | 0.0024 | <0.001 |
| W-865-2133 | 1/24/11 | 0.018 | <0.02 | <0.0005 | 0.001 | <0.005 | <0.0002 | <0.002 | <0.001 |
| W-PIT1-02 | 4/13/11 | <0.0005 | 0.07 | <0.0001 | 0.01 | <0.0002 | <0.0002 | 0.0034 | <0.0001 |
| W-PIT1-2620 | 2/10/11 | <0.05 | <0.025 | <0.001 | <0.001 | <0.005 | <0.0002 | <0.05 | <0.001 |

OU5-E8082A [ug/L] 2011 data (prepared 2012-02-23 04:57:36, Oracle epprd02.llnl.gov)

Table B-5.04. Building 850 area in Operable Unit 5 polychlorinated biphenyl (PCB) compounds in ground water.

| Location | Date | PCB 1016 (µg/L) | PCB 1221 (µg/L) | PCB 1232 (µg/L) | PCB 1242 (µg/L) | PCB 1248 (µg/L) | PCB 1254 (µg/L) | PCB 1260 (µg/L) |
|---|---|---|---|---|---|---|---|---|
| NC7-61 | 4/6/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-70 | 5/9/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

OU5-MS [pCi/L; ratio] 2011 data (prepared 2012-02-23 04:57:57, Oracle epprd02.llnl.gov)

Table B-5.05. Building 850 area in Operable Unit 5 uranium isotopes by mass spectrometry in ground water.

| Location | Date | Uranium (pCi/L) | Uranium 234 by mass (pCi/L) | Uranium 235 by mass (pCi/L) | Uranium 236 by mass (pCi/L) | Uranium 238 by mass (pCi/L) | Uranium 235/238 (ratio) |
|---|---|---|---|---|---|---|---|
| K1-01C | 6/28/11 | 3.70 ± 0.0800 | 2.50 ± 0.0800 | 0.0530 ± 0.000560 | <0.00022 | 1.10 ± 0.00530 | 0.00717 ± 0.0000690 |
| K1-02B | 6/28/11 | 3.90 ± 0.0470 | 2.50 ± 0.0450 | 0.0610 ± 0.000740 | <0.00026 | 1.30 ± 0.0130 | 0.00722 ± 0.0000510 |
| K1-04 | 6/28/11 | 2.00 ± 0.0710 | 1.30 ± 0.0710 | 0.0310 ± 0.000310 | <0.00015 | 0.670 ± 0.00530 | 0.00723 ± 0.0000450 |
| K1-05 | 6/28/11 | 3.10 ± 0.0510 | 2.10 ± 0.0500 | 0.0440 ± 0.000740 | <0.00019 | 0.960 ± 0.00870 | 0.00718 ± 0.000100 |
| K1-07 | 5/10/11 | 2.90 ± 0.0330 | 1.90 ± 0.0320 | 0.0420 ± 0.000460 | <0.0002 | 0.900 ± 0.00600 | 0.00718 ± 0.0000640 |
| NC2-06A | 5/18/11 | 0.130 ± 0.00230 | <0.2 | 0.00510 ± 0.000130 | <0.00013 | 0.120 ± 0.00230 | 0.00642 ± 0.000122 |
| NC2-11D | 4/14/11 | 4.60 ± 0.0700 | 2.80 ± 0.0700 | 0.0800 ± 0.000470 | <0.00033 | 1.70 ± 0.00840 | 0.00727 ± 0.0000230 |
| NC7-10 | 5/9/11 | 3.10 ± 0.0700 | 1.80 ± 0.0690 | 0.0530 ± 0.000930 | <0.0011 | 1.20 ± 0.0140 | 0.00674 ± 0.0000900 |
| NC7-28 | 1/11/11 | 9.70 ± 0.110 | 2.30 ± 0.110 | 0.110 ± 0.00130 | 0.0390 ± 0.0000900 | 7.20 ± 0.0330 | 0.00245 ± 0.0000260 |
| NC7-28 | 4/6/11 | 9.70 ± 0.100 | 2.30 ± 0.0890 | 0.120 ± 0.00110 | 0.0410 ± 0.0000230 | 7.20 ± 0.0470 | 0.00247 ± 0.0000170 |
| NC7-28 | 7/13/11 | 9.80 ± 0.280 | 2.30 ± 0.280 | 0.110 ± 0.00160 | 0.0410 ± 0.0000890 | 7.30 ± 0.0420 | 0.00246 ± 0.0000300 |
| NC7-28 | 10/11/11 | 2.00 ± 0.0160 | <0.99 | 0.0310 ± 0.000360 | 0.0110 ± 0.000320 | 1.90 ± 0.0160 | 0.00249 ± 0.0000210 |
| NC7-54 | 5/9/11 | 3.10 ± 0.100 | 1.70 ± 0.100 | 0.0560 ± 0.000450 | <0.0018 | 1.40 ± 0.00830 | 0.00642 ± 0.0000330 |
| NC7-61 | 11/8/11 | 5.20 ± 0.0980 | 2.40 ± 0.0970 | 0.0740 ± 0.000710 | 0.0110 ± 0.0000900 | 2.70 ± 0.0110 | 0.00418 ± 0.0000370 |
| NC7-61 | 11/8/11 DUP | 5.00 ± 0.230 | 2.20 ± 0.230 | 0.0740 ± 0.00120 | 0.00970 ± 0.0000790 | 2.70 ± 0.00920 | 0.00421 ± 0.0000690 |
| NC7-70 | 5/9/11 | 2.00 ± 0.0530 | 1.30 ± 0.0520 | 0.0300 ± 0.000500 | <0.00055 | 0.700 ± 0.00950 | 0.00664 ± 0.0000640 |
| NC7-71 | 12/22/11 | <0.0627 | <0.049 | 0.000790 ± 0.0000220 | <0.00017 | 0.0210 ± 0.000120 | 0.00573 ± 0.000156 |
| W-850-05 | 10/18/11 | <0.0627 | <0.084 | 0.00140 ± 0.0000310 | <0.00012 | 0.0300 ± 0.000290 | 0.00706 ± 0.000144 |
| W-850-2313 | 5/9/11 | 5.30 ± 0.0680 | 2.90 ± 0.0670 | 0.110 ± 0.000800 | <0.0005 | 2.30 ± 0.0100 | 0.00725 ± 0.0000430 |
| W-850-2416 | 4/6/11 | 0.140 ± 0.00690 | <0.062 | 0.00190 ± 0.0000310 | <0.007 | 0.0760 ± 0.000450 | 0.00399 ± 0.0000590 |
| W-850-2416 | 10/11/11 | <0.0627 | <0.06 | 0.00120 ± 0.0000350 | <0.00018 | 0.0330 ± 0.000760 | 0.00547 ± 0.000102 |
| W-850-2417 | 1/11/11 | 9.10 ± 0.190 | 2.10 ± 0.190 | 0.110 ± 0.00150 | 0.0380 ± 0.0000800 | 6.80 ± 0.0360 | 0.00245 ± 0.0000310 |
| W-850-2417 | 4/6/11 | 8.40 ± 0.0630 | 1.90 ± 0.0620 | 0.0990 ± 0.000990 | 0.0370 ± 0.0000180 | 6.30 ± 0.0150 | 0.00245 ± 0.0000240 |
| W-850-2417 | 7/13/11 | 6.00 ± 0.120 | 1.70 ± 0.120 | 0.0730 ± 0.00180 | 0.0230 ± 0.000170 | 4.20 ± 0.0270 | 0.00269 ± 0.0000640 |
| W-850-2417 | 10/11/11 | 3.50 ± 0.0160 | <2.1 | 0.0580 ± 0.000410 | <0.028 | 3.50 ± 0.0160 | 0.00257 ± 0.0000140 |
| W-PIT1-2620 | 2/10/11 | 4.30 ± 0.0290 | 2.90 ± 0.0270 | 0.0620 ± 0.000640 | <0.00026 | 1.30 ± 0.00930 | 0.00728 ± 0.0000550 |

OU5-ASKPA [pCi/L; ug/L] 2011 data (prepared 2012-02-23 14:21:43, Oracle epprd02.llnl.gov)

Table B-5.06. Building 850 area in Operable Unit 5 uranium isotopes by alpha spectrometry in ground water.

| Location | Date | Uranium (µg/L) | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|---|
| K1-01C | 1/26/11 | - | 2.64 ± 0.462 | <0.1 | 1.02 ± 0.215 |
| K1-01C | 5/11/11 | - | 2.93 ± 0.449 | <0.1 | 1.40 ± 0.236 |
| K1-01C | 5/11/11 DUP | - | 2.96 ± 0.462 | <0.1 | 1.52 ± 0.257 |
| K1-01C | 8/18/11 | - | 2.53 ± 0.518 | <0.1 | 1.06 ± 0.266 |
| K1-01C | 11/21/11 | - | 2.54 ± 0.417 | <0.1 | 1.24 ± 0.228 |
| K1-01C | 11/21/11 DUP | - | 2.39 ± 0.431 | <0.1 | 1.19 ± 0.246 |
| K1-02B | 1/11/11 | - | 2.21 ± 0.385 | <0.1 | 1.18 ± 0.230 |
| K1-02B | 1/11/11 DUP | - | 2.66 ± 0.496 | <0.1 | 1.29 ± 0.278 |
| K1-02B | 3/2/11 REX | - | 2.24 ± 0.448 | <0.1 | 1.19 ± 0.276 |
| K1-02B | 4/26/11 | - | 2.77 ± 0.546 | <0.1 | 1.50 ± 0.334 |
| K1-02B | 6/15/11 REX | - | 2.44 ± 0.372 | 0.114 ± 0.0430 | 1.47 ± 0.238 |
| K1-02B | 6/22/11 REX | - | 2.69 ± 0.617 | 0.128 ± 0.0973 | 1.70 ± 0.435 |
| K1-02B | 7/19/11 | - | 2.87 ± 0.522 | <0.1 | 1.50 ± 0.307 |
| K1-02B | 7/19/11 DUP | - | 2.68 ± 0.533 | <0.1 | 1.59 ± 0.351 |
| K1-02B | 11/15/11 | - | 2.49 ± 0.574 | <0.1 | 1.36 ± 0.363 |
| K1-04 | 1/5/11 | - | 1.07 ± 0.354 | <0.1 | 0.813 ± 0.295 |
| K1-04 | 1/26/11 REX | - | 1.17 ± 0.240 | <0.1 | 0.597 ± 0.148 |
| K1-04 | 4/28/11 | - | 1.47 ± 0.313 | <0.1 | 0.777 ± 0.196 |
| K1-04 | 6/15/11 REX | - | 1.20 ± 0.197 | <0.1 | 0.644 ± 0.120 |
| K1-04 | 6/22/11 REX | - | 1.25 ± 0.266 | <0.1 | 0.687 ± 0.172 |
| K1-04 | 7/11/11 | - | 1.24 ± 0.258 | <0.1 | 0.701 ± 0.171 |
| K1-04 | 10/25/11 | - | 1.15 ± 0.301 B | 0.125 ± 0.0895 | 0.640 ± 0.202 |
| K1-05 | 1/11/11 | - | 1.97 ± 0.361 | <0.1 | 0.991 ± 0.210 |
| K1-05 | 4/26/11 | - | 2.04 ± 0.396 | <0.1 | 1.01 ± 0.230 |
| K1-05 | 7/11/11 | - | 1.79 ± 0.359 | <0.1 | 0.962 ± 0.224 |
| K1-05 | 10/25/11 | - | 1.72 ± 0.447 B | 0.137 ± 0.104 | 0.956 ± 0.296 |
| K1-06 | 4/26/11 | - | 5.88 ± 1.02 | 0.117 ± 0.0724 | 2.81 ± 0.532 |
| K1-07 | 1/19/11 | - | 2.01 ± 0.441 | <0.1 | 1.05 ± 0.272 |
| K1-07 | 5/10/11 | - | 1.77 ± 0.305 | <0.1 | 0.871 ± 0.173 |
| K1-07 | 7/13/11 | - | 1.89 ± 0.378 | <0.1 | 1.03 ± 0.237 |

Table B-5.06. Building 850 area in Operable Unit 5 uranium isotopes by alpha spectrometry in ground water.

| Location | Date | Uranium (µg/L) | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|---|
| K1-07 | 10/25/11 | - | 2.42 ± 0.675 B | <0.1 | 0.993 ± 0.360 |
| K1-08 | 1/20/11 | - | 1.98 ± 0.369 | <0.1 | 1.01 ± 0.218 |
| K1-08 | 5/9/11 | - | 2.06 ± 0.368 | <0.1 | 0.880 ± 0.189 |
| K1-08 | 8/17/11 | - | 1.97 ± 0.393 | <0.1 | 0.922 ± 0.221 |
| K1-08 | 10/25/11 | - | 1.39 ± 0.393 B | <0.1 | 0.894 ± 0.293 |
| K1-09 | 1/24/11 | - | 2.11 ± 0.380 | <0.1 | 0.987 ± 0.208 |
| K1-09 | 4/28/11 | - | 2.12 ± 0.411 | <0.1 | 0.942 ± 0.221 |
| K1-09 | 8/15/11 | - | 2.26 ± 0.451 | <0.1 | 1.05 ± 0.250 |
| K1-09 | 11/1/11 | - | 2.20 ± 0.475 | <0.1 | 1.06 ± 0.276 |
| K2-03 | 5/12/11 | - | 5.11 ± 0.756 | 0.194 ± 0.0639 | 3.14 ± 0.481 |
| K2-04D | 4/11/11 | - | 2.03 ± 0.398 | <0.1 | 1.19 ± 0.263 |
| NC2-05 | 5/17/11 | - | 7.25 ± 1.11 | 0.262 ± 0.0868 | 4.82 ± 0.755 |
| NC2-05A | 5/17/11 | - | 2.44 ± 0.390 | <0.1 | 1.53 ± 0.261 |
| NC2-06 | 5/18/11 | - | 1.76 ± 0.291 | <0.1 | 1.04 ± 0.187 |
| NC2-06A | 5/18/11 | - | 0.165 ± 0.0557 | <0.1 | 0.183 ± 0.0573 |
| NC2-09 | 5/23/11 | - | <0.1 | <0.1 | <0.1 |
| NC2-10 | 6/2/11 | - | 3.60 ± 0.887 | <0.1 | 1.83 ± 0.526 |
| NC2-11D | 4/14/11 | - | 2.80 ± 0.557 | <0.1 | 1.81 ± 0.391 |
| NC2-11S | 5/5/11 | - | 2.36 ± 0.413 | <0.1 | 1.49 ± 0.283 |
| NC2-12D | 4/20/11 | - | 1.96 ± 0.404 | <0.1 | 1.43 ± 0.316 |
| NC2-12I | 5/23/11 | - | 2.01 ± 0.500 | <0.1 | 1.33 ± 0.369 |
| NC2-12S | 5/23/11 | - | 3.02 ± 0.759 | <0.1 | 1.95 ± 0.544 |
| NC2-13 | 5/5/11 | - | 3.20 ± 0.554 | <0.1 | 1.93 ± 0.360 |
| NC2-14S | 5/11/11 | - | 0.728 ± 0.175 | <0.1 | 0.727 ± 0.174 |
| NC2-14S | 5/11/11 DUP | - | 0.897 ± 0.179 | <0.1 | 0.623 ± 0.136 |
| NC2-15 | 5/17/11 | - | 2.02 ± 0.326 | <0.1 | 1.09 ± 0.195 |
| NC2-18 | 5/17/11 | - | 2.14 ± 0.350 | <0.1 | 1.66 ± 0.283 |
| NC2-18 | 5/17/11 DUP | - | 1.71 ± 0.287 | <0.1 | 1.49 ± 0.255 |
| NC2-18 | 11/7/11 | - | 1.92 ± 0.481 | <0.1 | 1.49 ± 0.400 |
| NC2-18 | 11/7/11 DUP | - | 1.72 ± 0.350 | 0.115 ± 0.0580 | 1.62 ± 0.330 |
| NC2-20 | 5/2/11 | - | 3.06 ± 0.568 | <0.1 | 1.94 ± 0.390 |
| NC7-10 | 5/9/11 | - | 1.57 ± 0.298 | <0.1 | 1.13 ± 0.229 |

Table B-5.06. Building 850 area in Operable Unit 5 uranium isotopes by alpha spectrometry in ground water.

| Location | Date | Uranium (µg/L) | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|---|
| NC7-11 | 5/9/11 | - | 1.70 ± 0.302 | 0.110 ± 0.0520 | 1.31 ± 0.243 |
| NC7-15 | 4/26/11 | - | 1.72 ± 0.331 | <0.1 | 1.61 ± 0.313 |
| NC7-27 | 4/6/11 | - | 2.07 ± 0.409 | <0.1 | 1.57 ± 0.327 |
| NC7-28 | 4/6/11 | 22.4 ± 2.00 | 2.17 ± 0.421 | 0.172 ± 0.0837 | 7.01 ± 1.18 |
| NC7-28 | 10/11/11 | 6.25 ± 0.689 | - | - | - |
| NC7-28 | 11/16/11 | 1.61 ± 0.398 | - | - | - |
| NC7-28 | 12/15/11 | 1.77 ± 0.205 | - | - | - |
| NC7-29 | 5/10/11 | - | 9.50 ± 1.41 | 0.418 ± 0.110 | 8.15 ± 1.22 |
| NC7-43 | 5/4/11 | - | 1.16 ± 0.263 | <0.1 | 1.73 ± 0.356 |
| NC7-44 | 5/10/11 | - | 1.07 ± 0.202 | <0.1 | 0.583 ± 0.128 |
| NC7-46 | 5/10/11 | - | <0.1 | <0.1 | <0.1 |
| NC7-56 | 5/11/11 | - | 1.85 ± 0.345 | <0.1 | 1.56 ± 0.299 |
| NC7-59 | 5/11/11 | - | 1.78 ± 0.319 | <0.1 | 1.62 ± 0.295 |
| NC7-61 | 4/6/11 | 8.27 ± 0.736 | 2.44 ± 0.531 | <0.1 | 3.47 ± 0.709 |
| NC7-69 | 5/11/11 | - | <0.1 | <0.1 | <0.1 |
| NC7-69 | 5/11/11 DUP | - | <0.1 | <0.1 | <0.1 |
| NC7-70 | 5/9/11 | - | 1.29 ± 0.240 | <0.1 | 0.612 ± 0.138 |
| NC7-71 | 4/6/11 | <0.1 | <0.1 | <0.1 | <0.1 |
| NC7-73 | 5/11/11 | - | 2.17 ± 0.381 | <0.1 | 1.72 ± 0.312 |
| W-850-05 | 5/9/11 | - | 0.112 ± 0.0536 | <0.1 | 0.133 ± 0.0566 |
| W-850-2313 | 5/9/11 | - | 2.63 ± 0.460 | 0.116 ± 0.0596 | 2.29 ± 0.410 |
| W-850-2314 | 4/6/11 | - | <0.1 | <0.1 | <0.1 |
| W-850-2315 | 5/10/11 | - | 10.9 ± 1.74 | 0.356 ± 0.124 | 8.74 ± 1.41 |
| W-850-2316 | 5/17/11 | - | 9.31 ± 1.36 | 0.317 ± 0.0890 | 6.68 ± 0.992 |
| W-850-2416 | 4/6/11 | 0.117 ± 0.0144 | 0.105 ± 0.0587 | <0.1 | <0.1 |
| W-850-2416 | 10/11/11 | 0.127 ± 0.0153 | - | - | - |
| W-850-2416 | 11/16/11 | 0.175 ± 0.0198 | - | - | - |
| W-850-2416 | 12/15/11 | 0.144 ± 0.0178 | - | - | - |
| W-850-2417 | 4/6/11 | 18.1 ± 1.61 | 2.03 ± 0.398 | 0.118 ± 0.0697 | 6.62 ± 1.11 |
| W-850-2417 | 10/11/11 | 12.6 ± 1.38 | - | - | - |
| W-850-2417 | 11/16/11 | 1.88 ± 0.196 | - | - | - |
| W-850-2417 | 12/15/11 | 0.889 ± 0.100 | - | - | - |

Table B-5.06. Building 850 area in Operable Unit 5 uranium isotopes by alpha spectrometry in ground water.

| Location | Date | Uranium (µg/L) | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|---|
| W-865-1802 | 5/12/11 | - | 1.25 ± 0.199 | <0.1 | 0.621 ± 0.111 |
| W-865-2133 | 1/24/11 | - | 2.70 ± 0.482 | 0.158 ± 0.0753 | 1.76 ± 0.338 |
| W-865-2133 | 7/14/11 | - | 2.47 ± 0.485 | <0.1 | 1.60 ± 0.344 |
| W-865-2224 | 5/16/11 | - | 0.358 ± 0.0879 | <0.1 | 0.322 ± 0.0817 |
| W-865-2224 | 11/3/11 | - | 0.243 ± 0.133 | <0.1 | 0.276 ± 0.136 |
| W-PIT1-2204 | 5/25/11 | - | 2.75 ± 0.680 | 0.125 ± 0.112 | 2.47 ± 0.625 |
| W-PIT1-2209 | 4/14/11 | - | 1.63 ± 0.358 | <0.1 | 0.813 ± 0.217 |
| W-PIT1-2209 | 10/26/11 | - | 2.11 ± 0.504 | <0.1 | 0.841 ± 0.263 |
| W-PIT1-2225 | 6/2/11 | - | <0.1 | <0.1 | <0.1 |
| W-PIT1-2225 | 11/9/11 | - | <0.1 | <0.1 | <0.1 |
| W-PIT1-2326 | 1/25/11 | - | 2.00 ± 0.367 | <0.1 | 1.14 ± 0.234 |
| W-PIT1-2326 | 5/12/11 | - | 2.03 ± 0.304 | <0.1 | 1.10 ± 0.178 |
| W-PIT1-2326 | 8/18/11 | - | 2.16 ± 0.456 | <0.1 | 1.04 ± 0.262 |
| W-PIT1-2326 | 11/14/11 | - | 1.83 ± 0.409 | <0.1 | 0.836 ± 0.233 |
| W-PIT7-16 | 4/26/11 | - | <0.1 | <0.1 | <0.1 |

OU5-E906 [pCi/L] 2011 data (prepared 2012-02-23 14:22:01, Oracle epprd02.llnl.gov)

Table B-5.07. Building 850 area in Operable Unit 5 tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| K1-01C | 1/26/11 | 772 ± 190 |
| K1-01C | 5/11/11 | 732 ± 180 |
| K1-01C | 5/11/11 DUP | 881 ± 209 |
| K1-01C | 8/18/11 | 845 ± 201 |
| K1-01C | 11/21/11 | 858 ± 205 |
| K1-01C | 11/21/11 DUP | 769 ± 189 |
| K1-02B | 1/11/11 | 3760 ± 764 L |
| K1-02B | 1/11/11 DUP | 3540 ± 720 L |
| K1-02B | 4/26/11 | 3510 ± 714 |
| K1-02B | 7/19/11 | 3440 ± 694 |
| K1-02B | 7/19/11 DUP | 3650 ± 734 |
| K1-02B | 11/15/11 | 3390 ± 701 |
| K1-04 | 1/5/11 | 475 ± 134 |
| K1-04 | 4/28/11 | 390 ± 117 |
| K1-04 | 7/11/11 | 458 ± 131 L |
| K1-04 | 10/25/11 | 428 ± 128 |
| K1-05 | 1/11/11 | 164 ± 77.4 F |
| K1-05 | 4/26/11 | 157 ± 82.7 |
| K1-05 | 7/11/11 | 172 ± 83.8 L |
| K1-05 | 10/25/11 | 252 ± 98.1 |
| K1-06 | 1/24/11 | 2750 ± 566 |
| K1-06 | 4/26/11 | 2650 ± 549 |
| K1-06 | 7/11/11 | 2570 ± 534 L |
| K1-06 | 10/18/11 | 3110 ± 654 |
| K1-07 | 1/19/11 | <100 |
| K1-07 | 5/10/11 | <100 |
| K1-07 | 7/13/11 | <100 L |
| K1-07 | 10/25/11 | <100 |
| K1-08 | 1/20/11 | 186 ± 83.3 |
| K1-08 | 5/9/11 | 209 ± 86.1 |
| K1-08 | 8/17/11 | 148 ± 66.8 |
| K1-08 | 10/25/11 | 259 ± 98.5 |
| K1-09 | 1/24/11 | 182 ± 81.3 |
| K1-09 | 4/28/11 | 235 ± 91.8 |
| K1-09 | 6/15/11 REX | 150 ± 69.8 |
| K1-09 | 6/22/11 REX | 267 ± 96.9 |
| K1-09 | 8/15/11 | 203 ± 73.9 |
| K1-09 | 11/1/11 | 168 ± 84.4 |
| K2-03 | 5/12/11 | <100 |
| K2-03 | 11/7/11 | <100 |
| K2-04D | 4/11/11 | 3780 ± 766 |
| K2-04D | 11/17/11 | 3280 ± 668 |
| K2-04S | 4/11/11 | 4940 ± 991 |
| K2-04S | 4/11/11 DUP | 5210 ± 1040 |

Table B-5.07. Building 850 area in Operable Unit 5 tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| K2-04S | 10/20/11 | 5390 ± 1080 |
| K2-04S | 10/20/11 DUP | 5390 ± 1080 |
| NC2-05 | 5/17/11 | <100 |
| NC2-05 | 11/10/11 | <100 |
| NC2-05A | 5/17/11 | 3120 ± 641 |
| NC2-05A | 11/10/11 | 3300 ± 683 |
| NC2-06 | 5/18/11 | 5250 ± 1050 |
| NC2-06 | 11/10/11 | 5130 ± 1040 |
| NC2-06A | 5/18/11 | <100 |
| NC2-06A | 11/10/11 | <100 |
| NC2-09 | 5/23/11 | <100 |
| NC2-09 | 11/10/11 | <100 |
| NC2-10 | 6/2/11 | 401 ± 124 |
| NC2-10 | 11/14/11 | 369 ± 134 |
| NC2-11D | 4/14/11 | 2930 ± 603 |
| NC2-11D | 11/9/11 | 2850 ± 596 |
| NC2-11S | 5/5/11 | 3910 ± 791 |
| NC2-11S | 11/14/11 | 4370 ± 890 |
| NC2-12D | 4/20/11 | 4810 ± 964 |
| NC2-12D | 11/17/11 | 5030 ± 1010 |
| NC2-12I | 5/23/11 | 4900 ± 977 |
| NC2-12I | 11/14/11 | 4870 ± 984 |
| NC2-12S | 5/23/11 | 3550 ± 717 |
| NC2-12S | 11/14/11 | <100 |
| NC2-12S | 11/14/11 REA | 2410 ± 501 |
| NC2-13 | 5/5/11 | 2180 ± 459 |
| NC2-13 | 11/8/11 | 2170 ± 468 |
| NC2-13 | 11/8/11 DUP | 2050 ± 320 |
| NC2-14S | 5/11/11 | 1360 ± 300 |
| NC2-14S | 5/11/11 DUP | 1510 ± 329 |
| NC2-14S | 10/20/11 | 2370 ± 497 |
| NC2-15 | 5/17/11 | 3790 ± 769 |
| NC2-15 | 11/7/11 | 3690 ± 759 |
| NC2-16 | 5/11/11 | 861 ± 207 |
| NC2-16 | 10/20/11 | 549 ± 150 |
| NC2-18 | 5/17/11 | 10200 ± 2010 |
| NC2-18 | 5/17/11 DUP | 9840 ± 1940 |
| NC2-18 | 11/7/11 | 10200 ± 2010 |
| NC2-18 | 11/7/11 DUP | 9700 ± 1500 |
| NC2-19 | 5/5/11 | <100 |
| NC2-19 | 11/8/11 | <100 |
| NC2-20 | 5/2/11 | <100 |
| NC2-21 | 5/2/11 | <100 |
| NC7-10 | 5/9/11 | 12000 ± 2350 |
| NC7-10 | 10/17/11 | 13900 ± 2730 |
| NC7-11 | 5/9/11 | 6030 ± 1200 |

Table B-5.07. Building 850 area in Operable Unit 5 tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| NC7-11 | 10/17/11 | 9370 ± 1860 |
| NC7-15 | 4/26/11 | 482 ± 138 |
| NC7-15 | 10/11/11 | 327 ± 119 L |
| NC7-19 | 5/4/11 | 2470 ± 514 |
| NC7-19 | 10/11/11 | 2160 ± 457 L |
| NC7-27 | 4/6/11 | 7990 ± 1580 |
| NC7-27 | 10/17/11 | 9320 ± 1850 |
| NC7-28 | 4/6/11 | 21900 ± 4260 |
| NC7-28 | 10/11/11 | 20500 ± 4000 L |
| NC7-28 | 11/16/11 | 23100 ± 4500 |
| NC7-28 | 12/15/11 | 21100 ± 4100 |
| NC7-29 | 5/10/11 | <100 |
| NC7-29 | 10/19/11 | <100 |
| NC7-43 | 5/4/11 | 12500 ± 2460 |
| NC7-43 | 10/18/11 | 7530 ± 1510 |
| NC7-44 | 5/10/11 | <100 |
| NC7-44 | 10/18/11 | <100 |
| NC7-46 | 5/10/11 | <100 |
| NC7-54 | 5/9/11 | 11700 ± 2300 |
| NC7-56 | 5/11/11 | 6320 ± 1260 |
| NC7-56 | 10/31/11 | 8060 ± 1590 |
| NC7-58 | 5/10/11 | 5180 ± 1040 |
| NC7-58 | 10/31/11 | 6650 ± 1320 |
| NC7-59 | 5/11/11 | 6050 ± 1200 |
| NC7-59 | 10/31/11 | 7140 ± 1420 |
| NC7-60 | 4/6/11 | 1090 ± 250 |
| NC7-60 | 10/4/11 | 867 ± 205 |
| NC7-61 | 4/6/11 | 21900 ± 4270 |
| NC7-61 | 11/8/11 | 22000 ± 4290 F |
| NC7-61 | 11/8/11 DUP | 21000 ± 4110 F |
| NC7-62 | 5/11/11 | 7450 ± 1480 |
| NC7-62 | 10/31/11 | 7320 ± 1450 |
| NC7-69 | 5/11/11 | <100 |
| NC7-69 | 5/11/11 DUP | <100 |
| NC7-69 | 10/20/11 | <100 |
| NC7-70 | 5/9/11 | 53300 ± 10400 |
| NC7-70 | 10/18/11 | 46100 ± 8970 |
| NC7-71 | 4/6/11 | 2230 ± 468 |
| NC7-71 | 12/22/11 | 2690 ± 549 |
| NC7-72 | 5/11/11 | 7410 ± 1470 |
| NC7-72 | 10/31/11 | 7070 ± 1400 |
| NC7-73 | 5/11/11 | 6890 ± 1370 |
| NC7-73 | 10/31/11 | 7000 ± 1390 |
| W-850-05 | 5/9/11 | 18200 ± 3560 |
| W-850-05 | 10/18/11 | 19400 ± 3800 |
| W-850-2145 | 5/17/11 | 8300 ± 1640 |

Table B-5.07. Building 850 area in Operable Unit 5 tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| W-850-2145 | 11/7/11 | 9280 ± 1840 |
| W-850-2312 | 5/17/11 | 1720 ± 371 |
| W-850-2312 | 11/7/11 | 1500 ± 337 |
| W-850-2313 | 5/9/11 | 15100 ± 2960 |
| W-850-2313 | 10/17/11 | 16200 ± 3180 |
| W-850-2314 | 4/6/11 | 1040 ± 240 |
| W-850-2314 | 10/4/11 | 1160 ± 262 |
| W-850-2315 | 5/10/11 | <100 |
| W-850-2315 | 10/19/11 | <100 |
| W-850-2316 | 5/17/11 | 9590 ± 1890 |
| W-850-2316 | 11/7/11 | 9420 ± 1860 |
| W-850-2416 | 4/6/11 | <100 |
| W-850-2416 | 10/11/11 | <100 L |
| W-850-2416 | 11/16/11 | <100 |
| W-850-2416 | 12/15/11 | <100 |
| W-850-2417 | 4/6/11 | 22800 ± 4450 |
| W-850-2417 | 10/11/11 | 22100 ± 4300 L |
| W-850-2417 | 11/16/11 | 22600 ± 4410 |
| W-850-2417 | 12/15/11 | 21300 ± 4130 |
| W-865-02 | 1/12/11 | <100 L |
| W-865-02 | 7/14/11 | <100 |
| W-865-1802 | 5/12/11 | 381 ± 119 |
| W-865-1802 | 11/3/11 | 300 ± 118 |
| W-865-1803 | 5/12/11 | 2620 ± 546 |
| W-865-1803 | 11/3/11 | 2390 ± 508 |
| W-865-1803 | 11/3/11 DUP | 2530 ± 533 |
| W-865-2005 | 1/18/11 | <100 |
| W-865-2005 | 1/18/11 DUP | <100 |
| W-865-2005 | 4/14/11 | <100 |
| W-865-2005 | 4/14/11 DUP | <100 |
| W-865-2005 | 7/26/11 | <100 |
| W-865-2005 | 7/26/11 DUP | <100 |
| W-865-2005 | 11/10/11 | <100 |
| W-865-2005 | 11/10/11 DUP | <100 |
| W-865-2121 | 5/16/11 | <100 |
| W-865-2121 | 11/3/11 | <100 |
| W-865-2133 | 1/24/11 | <100 |
| W-865-2133 | 5/16/11 | <100 |
| W-865-2133 | 7/14/11 | <100 |
| W-865-2133 | 11/3/11 | <100 |
| W-865-2224 | 1/24/11 | <100 |
| W-865-2224 | 5/16/11 | <100 |
| W-865-2224 | 7/14/11 | <100 |
| W-865-2224 | 11/3/11 | <100 |
| W-PIT1-02 | 1/18/11 | 1210 ± 271 |
| W-PIT1-02 | 4/13/11 | 1260 ± 283 |

Table B-5.07. Building 850 area in Operable Unit 5 tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| W-PIT1-02 | 7/26/11 | 1420 ± 306 |
| W-PIT1-02 | 10/17/11 | 1560 ± 357 |
| W-PIT1-2204 | 5/25/11 | <100 |
| W-PIT1-2204 | 11/8/11 | <100 |
| W-PIT1-2209 | 1/24/11 | <100 |
| W-PIT1-2209 | 4/14/11 | <100 |
| W-PIT1-2209 | 7/14/11 | 1420 ± 305 |
| W-PIT1-2209 | 7/14/11 REA | 1330 ± 275 |
| W-PIT1-2209 | 8/30/11 | <100 |
| W-PIT1-2209 | 8/30/11 DUP | <100 |
| W-PIT1-2209 | 10/26/11 | <100 |
| W-PIT1-2225 | 1/20/11 | <100 |
| W-PIT1-2225 | 6/2/11 | <100 |
| W-PIT1-2225 | 7/19/11 | <100 |
| W-PIT1-2225 | 11/9/11 | 2750 ± 580 |
| W-PIT1-2225 | 11/9/11 REA | <100 |
| W-PIT1-2326 | 1/25/11 | 2730 ± 564 |
| W-PIT1-2326 | 5/12/11 | 2850 ± 589 |
| W-PIT1-2326 | 8/18/11 | 2600 ± 537 |
| W-PIT1-2326 | 11/14/11 | 2920 ± 609 |
| W-PIT1-2620 | 2/10/11 | 1200 ± 270 |
| W-PIT1-2620 | 7/26/11 | 897 ± 207 |
| W-PIT1-2620 | 10/17/11 | 1050 ± 260 |
| W-PIT7-16 | 4/26/11 | <100 |
| W-PIT7-16 | 10/11/11 | <100 L |

OU5-HE [ug/L] 2011 data (prepared 2012-02-23 12:31:32, Oracle epprd02.llnl.gov)

Table B-5.08. Building 850 area in Operable Unit 5 high explosive compounds in ground water water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-Dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-Dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NC7-10 | 5/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-10 | 10/17/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 3.7 | <2 | <1 | <2 |
| NC7-11 | 5/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-11 | 10/17/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 1.8 | <2 | <1 | <2 |
| NC7-15 | 4/26/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-15 | 10/11/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-19 | 5/4/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-19 | 10/11/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-27 | 4/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-27 | 10/17/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-28 | 4/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | 15 | <2 | 5 | <2 |
| NC7-28 | 10/11/11 | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | 7.7 D | <2.5 D | <1.3 DO | <2.5 D |
| NC7-43 | 5/4/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-43 | 10/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-44 | 5/10/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-44 | 10/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-56 | 5/11/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-56 | 10/31/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-60 | 4/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-60 | 10/4/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-61 | 4/6/11 | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <1 D | <2 D | <1 D | <2 D |
| NC7-61 | 11/8/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 O | <2 O | <1 | <2 |
| NC7-61 | 11/8/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 O | <2 O | <1 | <2 |
| NC7-69 | 5/11/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-69 | 5/11/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-69 | 10/20/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-70 | 5/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-70 | 10/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-71 | 4/6/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-71 | 12/22/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-72 | 5/11/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-72 | 10/31/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-73 | 5/11/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-73 | 10/31/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-850-05 | 5/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-850-05 | 10/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-850-2313 | 5/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-850-2313 | 10/17/11 | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <1.2 DO | <2.4 D | <1.2 D | <2.4 D |
| W-850-2314 | 4/6/11 | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <1.2 D | <2.5 D | <1.2 D | <2.5 D |
| W-850-2314 | 10/4/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 O | <2 | <1 | <2 |
| W-850-2416 | 4/6/11 | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <1.3 D | <2.6 D | <1.3 D | <2.6 D |
| W-850-2416 | 10/11/11 | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <1.2 D | <2.5 D | <1.2 DO | <2.5 D |

Table B-5.08. Building 850 area in Operable Unit 5 high explosive compounds in ground water water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-Dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-Dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-850-2417 | 4/6/11 | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <1.3 D | <2.6 D | 6.5 D | <2.6 D |
| W-850-2417 | 10/11/11 | <2 DIJ | <2 DIJ | <2 DIJ | <2 DIJ | <2 DIJ | <2 DIJ | <2 DIJ | <2 DIJ | <2 DIJ | <1 DIJ | <2 DIJ | <1 DIJO | <2 DIJ |
| W-PIT1-2620 | 2/10/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-PIT7-16 | 4/26/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-PIT7-16 | 10/11/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |

OU5-TBOS [ug/L] 2011 data (prepared 2012-02-23 04:58:00, Oracle epprd02.llnl.gov)

Table B-5.09. Building 850 area in Operable Unit 5 tetrabutyl orthosilicate/tetrakis (2-ethylbutyl) silane (TBOS/TKEBS) in ground water.

| Location | Date | $C_{24}H_{52}O_4Si$ (µg/L) |
|---|---|---|
| W-PIT1-2620 | 2/10/11 | <10 D |

OU5-GENMIN [mg/L; Units; umhos/cm] 2011 data (prepared 2012-02-23 14:22:07, Oracle epprd02.llnl.gov)

Table B-5.10. Building 850 area in Operable Unit 5 general minerals in ground water.

| Constituents of concern | K1-01C | K1-02B | K1-02B | K1-04 | K1-05 | K1-07 | K1-08 | K1-09 | NC7-28 | NC7-28 | NC7-28 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1/26/11 | 1/11/11 | 1/11/11 DUP | 1/5/11 | 1/11/11 | 1/19/11 | 1/20/11 | 1/24/11 | 4/6/11 | 10/11/11 | 11/2/11 |
| Total Alkalinity (as CaCO3) (mg/L) | - | - | - | - | - | - | - | - | 183 | 330 | - |
| Aluminum (mg/L) | - | - | - | - | - | - | - | - | <0.05 | <0.2 | - |
| Arsenic (mg/L) | - | - | - | - | - | - | - | - | 0.022 H | - | - |
| Bicarbonate Alk (as CaCO3) (mg/L) | - | - | - | - | - | - | - | - | 183 | 330 | - |
| Calcium (mg/L) | - | - | - | - | - | - | - | - | 45 | 86 | - |
| Carbonate Alk (as CaCO3) (mg/L) | - | - | - | - | - | - | - | - | <10 | <4.1 | - |
| Chloride (mg/L) | - | - | - | - | - | - | - | - | 46 DL | 55 | - |
| Chromium (mg/L) | - | - | - | - | - | - | - | - | <0.01 H | - | - |
| Copper (mg/L) | - | - | - | - | - | - | - | - | <0.01 | <0.05 | - |
| Fluoride (mg/L) | - | - | - | - | - | - | - | - | 0.43 | 33 DH | - |
| Hydroxide Alk (as CaCO3) (mg/L) | - | - | - | - | - | - | - | - | <10 | <4.1 | - |
| Iron (mg/L) | - | - | - | - | - | - | - | - | <0.1 | 2.9 | - |
| Magnesium (mg/L) | - | - | - | - | - | - | - | - | 21 | 40 | - |
| Manganese (mg/L) | - | - | - | - | - | - | - | - | <0.03 | 6.1 | - |
| Nickel (mg/L) | - | - | - | - | - | - | - | - | <0.1 | <0.1 | - |
| Nitrate (as N) (mg/L) | - | - | - | - | - | - | - | - | 13 DL | <0.5 | - |
| Nitrate (as NO3) (mg/L) | - | - | - | - | - | - | - | - | 56 DL | <0.44 H | - |
| Nitrite (as N) (mg/L) | - | - | - | - | - | - | - | - | <0.1 | <0.5 | - |
| pH (Units) | - | - | - | - | - | - | - | - | 7.7 | 6.55 H | - |
| Ortho-Phosphate (mg/L) | - | - | - | - | - | - | - | - | <0.1 | 0.16 | - |
| Total Phosphorus (as P) (mg/L) | - | - | - | - | - | - | - | - | - | 0.15 H | - |
| Total Phosphorus (as PO4) (mg/L) | - | - | - | - | - | - | - | - | <0.1 H | - | - |
| Potassium (mg/L) | - | - | - | - | - | - | - | - | 5.1 | 4.6 | - |
| Selenium (mg/L) | - | - | - | - | - | - | - | - | <0.01 H | - | - |
| Sodium (mg/L) | - | - | - | - | - | - | - | - | 56 | 67 | - |
| Total dissolved solids (TDS) (mg/L) | - | - | - | - | - | - | - | - | 450 H | 900 DH | - |
| Specific Conductance (µmhos/cm) | - | - | - | - | - | - | - | - | 660 H | 940 H | - |
| Sulfate (mg/L) | - | - | - | - | - | - | - | - | 37 DL | <1 | - |
| Surfactants (mg/L) | - | - | - | - | - | - | - | - | <0.5 | <0.5 | - |
| Total Hardness (as CaCO3) (mg/L) | - | - | - | - | - | - | - | - | 200 | 380 | - |
| Total Organic Carbon (TOC) (mg/L) | <1 EB | <1 E | <1 E | 0.88 BO | <1 E | <1 EB | <1 E | <1 EB | - | 820 D | 1,300 D |
| Zinc (mg/L) | - | - | - | - | - | - | - | - | <0.01 | <0.05 | - |

Table B-5.10. Building 850 area in Operable Unit 5 general minerals in ground water.

| Constituents of concern | NC7-61 | NC7-61 | NC7-61 | NC7-71 | NC7-71 | W-850-2416 | W-850-2416 | W-850-2417 | W-850-2417 | W-850-2417 | W-PIT1-2620 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4/6/11 | 11/8/11 | 11/8/11 DUP | 4/6/11 | 12/22/11 | 4/6/11 | 10/11/11 | 4/6/11 | 10/11/11 | 11/2/11 | 2/10/11 |
| Total Alkalinity (as CaCO3) (mg/L) | 210 | 210 | 210 | 157 | 169 | 160 | 160 | 170 | 240 | - | 170 |
| Aluminum (mg/L) | <0.2 | <0.2 | <0.2 | <0.05 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | - | <0.2 |
| Arsenic (mg/L) | - | - | - | 0.005 H | - | - | - | - | - | - | - |
| Bicarbonate Alk (as CaCO3) (mg/L) | 210 | 210 | 210 | 142 | 169 | 160 | 160 | 170 | 240 | - | 170 |
| Calcium (mg/L) | 54 | 52 | 52 | 11 | 30 | 45 | 46 | 44 | 72 | - | 55 |
| Carbonate Alk (as CaCO3) (mg/L) | <4.1 | <4.1 | <4.1 | 15 | <10 | <4.1 | <4.1 | <4.1 | <4.1 | - | <4.1 |
| Chloride (mg/L) | 48 | 50 | 49 | 41 DL | 39 D | 60 | 64 | 44 | 58 | - | 69 |
| Chromium (mg/L) | - | - | - | <0.01 H | - | - | - | - | - | - | - |
| Copper (mg/L) | <0.05 | <0.05 | <0.05 | <0.01 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 |
| Fluoride (mg/L) | 0.44 | 0.46 | 0.46 | 0.3 | 0.26 | 0.29 | 0.32 | 0.53 | 36 DH | - | 0.68 |
| Hydroxide Alk (as CaCO3) (mg/L) | <4.1 | <4.1 | <4.1 | <10 | <10 | <4.1 | <4.1 | <4.1 | <4.1 | - | <4.1 |
| Iron (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.55 | - | <0.1 |
| Magnesium (mg/L) | 26 | 25 | 25 | 12 | 17 | 19 | 19 | 21 | 32 | - | 26 |
| Manganese (mg/L) | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | 1.3 | - | <0.03 |
| Nickel (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | <0.1 |
| Nitrate (as N) (mg/L) | 11 | 12 | 12 | 0.23 L | 0.19 | <0.5 | <0.5 | 12 | <0.5 | - | 11 |
| Nitrate (as NO3) (mg/L) | 50 H | 53 H | 53 H | 1 L | 0.85 | 0.59 H | <0.44 H | 51 H | <0.44 H | - | 49 H |
| Nitrite (as N) (mg/L) | <0.5 | <0.5 | <0.5 | <0.1 | <0.1 | <0.5 | <0.5 | <0.5 | <0.5 | - | <0.5 |
| pH (Units) | 7.71 H | 7.51 | 7.54 | 8.9 | 8.1 H | 7.98 H | 7.84 H | 7.56 H | 6.56 H | - | 7.8 H |
| Ortho-Phosphate (mg/L) | 0.21 | 0.21 | 0.22 | <0.1 | <0.1 | 0.13 | 0.15 | 0.19 | <0.05 | - | 0.13 |
| Total Phosphorus (as P) (mg/L) | 0.089 H | 0.093 H | 0.095 H | - | - | <0.05 H | 0.052 H | 0.081 H | 0.17 H | - | <0.05 H |
| Total Phosphorus (as PO4) (mg/L) | - | - | - | <0.1 H | <0.1 H | - | - | - | - | - | - |
| Potassium (mg/L) | 3.7 | 3.6 | 3.6 | 38 | 21 L | 8.1 | 7.8 | 3.8 | 4.5 | - | 6 |
| Selenium (mg/L) | - | - | - | <0.01 H | - | - | - | - | - | - | - |
| Sodium (mg/L) | 68 | 63 L | 63 L | 76 | 61 | 65 | 61 | 61 | 60 | - | 55 |
| Total dissolved solids (TDS) (mg/L) | 510 DH | 540 DH | 570 DH | 380 H | 370 H | 410 DH | 430 DH | 450 DH | 760 DH | - | 510 D |
| Specific Conductance (µmhos/cm) | 733 H | 732 | 734 | 620 H | 630 H | 666 H | 664 H | 629 H | 780 H | - | 700 H |
| Sulfate (mg/L) | 51 | 46 | 46 | 84 DL | 72 D | 82 | 81 | 37 | 23 | - | 65 |
| Surfactants (mg/L) | <1 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | - | <0.5 |
| Total Hardness (as CaCO3) (mg/L) | 240 | 230 | 230 | 75 | 140 | 190 | 190 | 200 | 310 | - | 250 |
| Total Organic Carbon (TOC) (mg/L) | - | 1.4 | 1.3 | - | 1.2 | - | 1.4 | - | 8,500 D | 2,900 D | - |
| Zinc (mg/L) | <0.05 | <0.05 | <0.05 | <0.01 | <0.05 L | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 |

OU5A-VOC [ug/L] 2011 data (prepared 2012-02-23 04:58:45, Oracle epprd02.llnl.gov)

Table B-5.11. Pit 2 Landfill volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NC2-08 | 5/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT2-1934 | 5/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT2-1935 | 5/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT2-1935 | 5/25/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-5.11 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| NC2-08 | 5/23/11 | E601 | 0 of 18 |
| W-PIT2-1934 | 5/25/11 | E601 | 0 of 18 |
| W-PIT2-1935 | 5/25/11 | E601 | 0 of 18 |
| W-PIT2-1935 | 5/25/11 DUP | E601 | 0 of 18 |

OU5A-ASMS [pCi/L; ratio] 2011 data (prepared 2012-02-23 04:58:32, Oracle epprd02.llnl.gov)

Table B-5.12. Pit 2 Landfill uranium isotopes by mass spectrometry and alpha spectrometry in ground water.

| Location | Date | Uranium (pCi/L) | Uranium 234 and Uranium 233 (pCi/L) | Uranium 234 by mass (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 235 by mass (pCi/L) | Uranium 236 by mass (pCi/L) | Uranium 238 (pCi/L) | Uranium 238 by mass (pCi/L) | Uranium 235/238 (ratio) |
|---|---|---|---|---|---|---|---|---|---|---|
| NC2-08 | 5/23/11 | 4.10 ± 0.100 | 2.26 ± 0.539 | 2.50 ± 0.100 | <0.1 | 0.0740 ± 0.000970 | <0.00042 | 1.28 ± 0.354 | 1.60 ± 0.0120 | 0.00726 ± 0.0000780 |
| W-PIT2-1934 | 5/25/11 | 4.50 ± 0.110 | 2.65 ± 0.685 | 2.70 ± 0.110 | 0.125 ± 0.112 | 0.0700 ± 0.000700 | <0.003 | 1.83 ± 0.519 | 1.70 ± 0.0170 | 0.00622 ± 0.0000180 |
| W-PIT2-1935 | 5/25/11 | 1.80 ± 0.0460 | 0.216 ± 0.121 | 1.10 ± 0.0460 | <0.1 | 0.0290 ± 0.000280 | <0.00013 | <0.1 | 0.630 ± 0.00430 | 0.00718 ± 0.0000500 |
| W-PIT2-1935 | 5/25/11 DUP | - | 1.00 ± 0.220 B | - | <0.1 | - | - | 0.700 ± 0.160 | - | - |
| W-PIT2-2226 | 6/2/11 | - | 0.153 ± 0.0934 | - | <0.1 | - | - | <0.1 | - | - |
| W-PIT2-2226 | 11/2/11 | - | <0.1 | - | <0.1 | - | - | <0.1 | - | - |
| W-PIT2-2301 | 5/23/11 | 1.30 ± 0.0630 | 0.579 ± 0.232 | 0.690 ± 0.0630 | <0.1 | 0.0250 ± 0.000300 | <0.00036 | 0.402 ± 0.184 | 0.560 ± 0.00390 | 0.00688 ± 0.0000680 |
| W-PIT2-2302 | 5/23/11 | 0.160 ± 0.00890 | 0.167 ± 0.111 | 0.0740 ± 0.00880 | <0.1 | 0.00340 ± 0.0000860 | <0.00015 | <0.1 | 0.0810 ± 0.00100 | 0.00647 ± 0.000143 |

OU5A-E300.0 [mg/L; ug/L] 2011 data (prepared 2012-02-23 04:58:34, Oracle epprd02.llnl.gov)

Table B-5.13. Pit 2 Landfill nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| NC2-08 | 5/23/11 | 29 D | <4 |
| NC2-08 | 11/7/11 | - | 4 |
| W-PIT2-1934 | 5/25/11 | 7.4 L | <4 |
| W-PIT2-1934 | 11/8/11 | - | <4 |
| W-PIT2-1935 | 5/25/11 | 38 | <4 |
| W-PIT2-1935 | 5/25/11 DUP | 5.9 L | <4 |
| W-PIT2-1935 | 11/8/11 | - | <4 |
| W-PIT2-2226 | 1/20/11 | - | <4 |
| W-PIT2-2226 | 6/2/11 | <0.5 L | <4 |
| W-PIT2-2226 | 7/18/11 | - | <4 |
| W-PIT2-2226 | 11/2/11 | <0.5 L | <4 |
| W-PIT2-2301 | 5/23/11 | 26 | <4 |
| W-PIT2-2302 | 5/23/11 | 22 | <4 |

OU5A-HE [ug/L] 2011 data (prepared 2012-02-23 04:58:40, Oracle epprd02.llnl.gov)

Table B-5.14. Pit 2 Landfill high explosive compounds in ground water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-Dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-Dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NC2-08 | 5/23/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-PIT2-1934 | 5/25/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-PIT2-1935 | 5/25/11 | <2 IJ | <2 IJO | <2 IJO | <2 IJ | <2 IJ | <2 IJ | <2 IJ | <2 IJ | <2 IJ | <1 IJO | <2 IJO | <1 IJ | <2 IJO |
| W-PIT2-1935 | 5/25/11 DUP | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |

OU5A-E906 [pCi/L] 2011 data (prepared 2012-02-23 04:58:38, Oracle epprd02.llnl.gov)

Table B-5.15. Pit 2 Landfill tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| NC2-08 | 5/23/11 | 4430 ± 885 |
| NC2-08 | 11/7/11 | 4460 ± 906 |
| W-PIT2-1934 | 5/25/11 | 1210 ± 267 |
| W-PIT2-1934 | 11/8/11 | 1200 ± 283 |
| W-PIT2-1935 | 5/25/11 | 1830 ± 386 |
| W-PIT2-1935 | 5/25/11 DUP | 2340 ± 370 |
| W-PIT2-1935 | 11/8/11 | 2010 ± 437 |
| W-PIT2-2226 | 1/20/11 | <100 |
| W-PIT2-2226 | 6/2/11 | <100 |
| W-PIT2-2226 | 7/18/11 | <100 |
| W-PIT2-2226 | 11/2/11 | <100 |
| W-PIT2-2301 | 5/23/11 | <100 |
| W-PIT2-2302 | 5/23/11 | <100 |

OU5A-E340.2 [mg/L] 2011 data (prepared 2012-02-23 04:58:36, Oracle epprd02.llnl.gov)

Table B-5.16. Pit 2 Landfill fluoride in ground water.

| Location | Date | Fluoride (mg/L) |
|---|---|---|
| NC2-08 | 5/23/11 | <0.05 |
| W-PIT2-1934 | 5/25/11 | 0.06 |
| W-PIT2-1935 | 5/25/11 | 0.3 |
| W-PIT2-1935 | 5/25/11 DUP | <0.05 |

OU5A-METALS [mg/L; ug/L] 2011 data (prepared 2012-02-23 04:58:43, Oracle epprd02.llnl.gov)

Table B-5.17. Pit 2 Landfill metals in ground water.

| Constituents of concern | NC2-08 | W-PIT2-1934 | W-PIT2-1935 | W-PIT2-1935 |
|---|---|---|---|---|
| | 5/23/11 | 5/25/11 | 5/25/11 | 5/25/11 DUP |
| Antimony (mg/L) | <0.0005 | <0.0005 | <0.06 | <0.0005 |
| Arsenic (mg/L) | 0.01 | 0.01 | 0.011 | 0.009 |
| Barium (mg/L) | 0.02 | 0.02 | 0.052 | 0.1 |
| Beryllium (mg/L) | <0.0001 | <0.0001 | <0.002 | <0.0001 |
| Cadmium (mg/L) | <0.0001 | <0.0001 | <0.005 | <0.0001 |
| Chromium (mg/L) | 0.0008 | <0.0005 | <0.01 | 0.007 |
| Cobalt (mg/L) | <0.0005 | <0.0005 | <0.02 | <0.0005 |
| Copper (mg/L) | <0.0005 | <0.0005 | <0.01 | 0.0007 |
| Lead (mg/L) | <0.0002 | <0.0002 | <0.003 | <0.0002 |
| Lithium (mg/L) | 0.036 | - | 0.033 | - |
| Lithium (µg/L) | - | 17 | - | 26 |
| Mercury (mg/L) | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Molybdenum (mg/L) | 0.003 | 0.003 | <0.02 | 0.002 |
| Nickel (mg/L) | <0.0005 | <0.0005 | <0.02 | <0.0005 |
| Selenium (mg/L) | 0.001 | 0.002 | <0.005 | 0.002 |
| Silver (mg/L) | <0.0001 | <0.0001 | <0.005 | <0.0001 |
| Thallium (mg/L) | <0.0001 | <0.0001 | <0.005 | <0.0001 |
| Vanadium (mg/L) | 0.06 | 0.06 | 0.055 | 0.05 |
| Zinc (mg/L) | <0.01 | <0.01 | <0.05 | <0.01 |

OU5B-VOC [ug/L] 2011 data (prepared 2012-02-23 10:10:20, Oracle epprd02.llnl.gov)

Table B-5.18. Pit 7 Complex area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K7-01 | 5/4/11 | E601 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K7-03 | 4/27/11 | E601 | 0.91 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K7-06 | 4/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K7-09 | 4/12/11 | E601 | <0.5 L | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K7-10 | 4/12/11 | E601 | <0.5 L | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-12 | 4/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-16 | 4/11/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-17 | 4/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-18 | 4/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-20 | 5/4/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-21 | 4/11/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-25 | 6/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-25 | 10/10/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-26 | 4/12/11 | E601 | <0.5 L | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-34 | 4/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-36 | 4/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-36 | 4/18/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-40 | 4/11/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-47 | 5/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-48 | 4/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-51 | 4/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-51 | 4/27/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-52 | 4/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-63 | 4/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-63 | 10/10/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-64 | 4/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-64 | 10/10/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-65 | 4/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-67 | 4/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-67 | 4/12/11 DUP | E601 | <0.5 L | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| NC7-75 | 4/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-865-01 | 1/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-865-01 | 7/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-865-1804 | 1/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-865-1804 | 7/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-03 | 4/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-03 | 4/26/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-03 | 10/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-03 | 10/18/11 DUP | E601 | 0.51 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-10 | 4/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-12 | 4/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-13 | 4/5/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-5.18. Pit 7 Complex area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-PIT7-13 | 4/5/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-1918 | 4/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-1918 | 10/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-2305 | 4/6/11 | E601 | 0.52 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-2305 | 4/6/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-2305 | 10/10/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-2306 | 10/10/11 | E601 | 6.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 2.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-2307 | 4/6/11 | E601 | 6.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 2.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-2307 | 10/10/11 | E601 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-2309 | 4/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-PIT7-2703 | 10/19/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-PIT7-2704 | 8/9/11 | E624 | 1.6 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-PIT7-2705 | 11/2/11 | E624 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

Table B-5.18 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | Chloro-ethane (µg/L) |
|---|---|---|---|---|
| K7-01 | 5/4/11 | E601 | 0 of 18 | - |
| K7-03 | 4/27/11 | E601 | 0 of 18 | - |
| K7-06 | 4/18/11 | E601 | 0 of 18 | - |
| K7-09 | 4/12/11 | E601 | 0 of 18 | - |
| K7-10 | 4/12/11 | E601 | 0 of 18 | - |
| NC7-12 | 4/27/11 | E601 | 0 of 18 | - |
| NC7-16 | 4/11/11 | E601 | 0 of 18 | - |
| NC7-17 | 4/18/11 | E601 | 0 of 18 | - |
| NC7-18 | 4/26/11 | E601 | 0 of 18 | - |
| NC7-20 | 5/4/11 | E601 | 0 of 18 | - |
| NC7-21 | 4/11/11 | E601 | 0 of 18 | - |
| NC7-25 | 6/14/11 | E601 | 0 of 18 | - |
| NC7-25 | 10/10/11 | E601 | 0 of 18 | - |
| NC7-26 | 4/12/11 | E601 | 0 of 18 | - |
| NC7-34 | 4/18/11 | E601 | 0 of 18 | - |
| NC7-36 | 4/18/11 | E601 | 0 of 18 | - |
| NC7-36 | 4/18/11 DUP | E601 | 0 of 18 | - |
| NC7-40 | 4/11/11 | E601 | 0 of 18 | - |
| NC7-47 | 5/12/11 | E601 | 0 of 18 | - |
| NC7-48 | 4/14/11 | E601 | 0 of 18 | - |
| NC7-51 | 4/27/11 | E601 | 0 of 18 | - |
| NC7-51 | 4/27/11 DUP | E601 | 0 of 18 | - |
| NC7-52 | 4/6/11 | E601 | 0 of 18 | - |
| NC7-63 | 4/6/11 | E601 | 0 of 18 | - |

Table B-5.18 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | Chloro-ethane (µg/L) |
|---|---|---|---|---|
| NC7-63 | 10/10/11 | E601 | 0 of 18 | - |
| NC7-64 | 4/6/11 | E601 | 0 of 18 | - |
| NC7-64 | 10/10/11 | E601 | 0 of 18 | - |
| NC7-65 | 4/5/11 | E601 | 0 of 18 | - |
| NC7-67 | 4/12/11 | E601 | 0 of 18 | - |
| NC7-67 | 4/12/11 DUP | E601 | 0 of 18 | - |
| NC7-75 | 4/7/11 | E601 | 0 of 18 | - |
| W-865-01 | 1/12/11 | E601 | 0 of 18 | - |
| W-865-01 | 7/13/11 | E601 | 0 of 18 | - |
| W-865-1804 | 1/24/11 | E601 | 0 of 18 | - |
| W-865-1804 | 7/13/11 | E601 | 0 of 18 | - |
| W-PIT7-03 | 4/26/11 | E601 | 0 of 18 | - |
| W-PIT7-03 | 4/26/11 DUP | E601 | 0 of 18 | - |
| W-PIT7-03 | 10/18/11 | E601 | 0 of 18 | - |
| W-PIT7-03 | 10/18/11 DUP | E601 | 0 of 18 | - |
| W-PIT7-10 | 4/26/11 | E601 | 0 of 18 | - |
| W-PIT7-12 | 4/5/11 | E601 | 0 of 18 | - |
| W-PIT7-13 | 4/5/11 | E601 | 0 of 18 | - |
| W-PIT7-13 | 4/5/11 DUP | E601 | 0 of 18 | - |
| W-PIT7-1918 | 4/13/11 | E601 | 0 of 18 | - |
| W-PIT7-1918 | 10/18/11 | E601 | 0 of 18 | - |
| W-PIT7-2305 | 4/6/11 | E601 | 0 of 18 | - |
| W-PIT7-2305 | 4/6/11 DUP | E601 | 0 of 18 | - |
| W-PIT7-2305 | 10/10/11 | E601 | 0 of 18 | - |
| W-PIT7-2306 | 10/10/11 | E601 | 0 of 18 | - |
| W-PIT7-2307 | 4/6/11 | E601 | 1 of 18 | 0.95 |
| W-PIT7-2307 | 10/10/11 | E601 | 0 of 18 | - |
| W-PIT7-2309 | 4/26/11 | E601 | 0 of 18 | - |
| W-PIT7-2703 | 10/19/11 | E624 | 0 of 30 | - |
| W-PIT7-2704 | 8/9/11 | E624 | 0 of 30 | - |
| W-PIT7-2705 | 11/2/11 | E624 | 0 of 30 | - |

OU5B-NITPERCOP [mg/L] 2011 data (prepared 2012-02-23 04:59:16, Oracle epprd02.llnl.gov)

Table B-5.19. Pit 7 Complex area in Operable Unit 5 nitrate and perchlorate, and orthoposhate in ground water.

| Location | Date | Nitrate as NO3 (mg/L) | Perchlorate (mg/L) | Orthophosphate (mg/L) |
|---|---|---|---|---|
| K7-01 | 5/4/11 | 40 | 11 | - |
| K7-03 | 4/27/11 | 31 | 5.6 | - |
| K7-06 | 4/18/11 | 15 | <4 | - |
| K7-06 | 10/12/11 | - | <4 | - |
| K7-09 | 4/12/11 | <0.5 | <4 | - |
| K7-09 | 10/10/11 | - | <4 | - |
| K7-10 | 4/12/11 | 1.1 | <4 | - |
| NC7-12 | 4/27/11 | - | <4 | - |
| NC7-16 | 4/11/11 | 22 D | <4 | - |
| NC7-17 | 4/18/11 | 34 D | - | - |
| NC7-18 | 4/26/11 | 33 D | <4 | - |
| NC7-20 | 5/4/11 | 23 D | <4 | - |
| NC7-21 | 4/11/11 | 36 D | 7 | - |
| NC7-24 | 6/23/11 | 59 | <4 | - |
| NC7-25 | 6/14/11 | 37 | 9.2 | - |
| NC7-25 | 10/10/11 | - | 10 | - |
| NC7-26 | 4/12/11 | <0.5 | <4 | - |
| NC7-26 | 10/10/11 | - | <4 | - |
| NC7-26 | 10/10/11 DUP | - | <4 | - |
| NC7-34 | 4/18/11 | 23 D | 9.4 | - |
| NC7-36 | 4/18/11 | 56 D | <4 | - |
| NC7-36 | 4/18/11 DUP | 63 | <4 | - |
| NC7-40 | 4/11/11 | 32 D | 9.2 | - |
| NC7-47 | 5/12/11 | 65 | <4 | - |
| NC7-48 | 4/14/11 | 17 | <4 | - |
| NC7-51 | 4/27/11 | 34 D | 12.9 | - |
| NC7-51 | 4/27/11 DUP | 42 | 12 | - |
| NC7-52 | 4/6/11 | 26 D | 5.4 | - |
| NC7-53 | 4/14/11 | 17 D | <4 | - |
| NC7-63 | 3/7/11 | 57 | - | - |
| NC7-63 | 4/6/11 | 90 D | 5.3 | - |
| NC7-63 | 10/10/11 | - | 11 | - |
| NC7-64 | 3/7/11 | 44 | - | - |
| NC7-64 | 4/6/11 | 46 | 9.2 | - |
| NC7-64 | 10/10/11 | - | 8.6 | - |
| NC7-65 | 4/5/11 | <0.5 L | <4 | - |
| NC7-67 | 4/12/11 | 0.7 | <4 | - |
| NC7-67 | 4/12/11 DUP | 1.4 | <4 | - |
| NC7-68 | 4/11/11 | 15 D | 10.6 | - |
| NC7-75 | 4/7/11 | <0.5 | <4 | - |
| NC7-75 | 10/5/11 | - | <4 | - |
| NC7-76 | 4/26/11 | 22 D | <4 | - |

Table B-5.19. Pit 7 Complex area in Operable Unit 5 nitrate and perchlorate, and orthoposhate in ground water.

| Location | Date | Nitrate as NO3 (mg/L) | Perchlorate (mg/L) | Orthophosphate (mg/L) |
|---|---|---|---|---|
| W-865-01 | 1/12/11 | 2.9 | <4 | - |
| W-865-03 | 1/12/11 | 36 D | <4 | - |
| W-865-1804 | 1/24/11 | - | <4 | - |
| W-865-1804 | 7/13/11 | - | <4 | - |
| W-PIT7-02 | 4/11/11 | 1.9 | <4 | - |
| W-PIT7-03 | 4/26/11 | 29 D | 7 | - |
| W-PIT7-03 | 4/26/11 DUP | 33 | 7 | - |
| W-PIT7-10 | 4/26/11 | 24 D | <4 | - |
| W-PIT7-12 | 4/5/11 | 40 DL | <4 | - |
| W-PIT7-12 | 10/4/11 | - | <4 | - |
| W-PIT7-13 | 4/5/11 | 57 DL | <4 | - |
| W-PIT7-13 | 4/5/11 DUP | 59 | 4.1 | - |
| W-PIT7-14 | 4/6/11 | - | <4 | - |
| W-PIT7-15 | 5/12/11 | 8.6 | <4 | - |
| W-PIT7-1861 | 4/14/11 | 22 D | <4 | - |
| W-PIT7-1903 | 4/13/11 | - | - | 0.26 |
| W-PIT7-1904 | 4/13/11 | - | - | 0.26 |
| W-PIT7-1905 | 4/13/11 | - | - | 0.26 |
| W-PIT7-1907 | 4/13/11 | - | - | 2 D |
| W-PIT7-1915 | 4/13/11 | - | - | 2.9 D |
| W-PIT7-1916 | 4/13/11 | - | - | 0.26 |
| W-PIT7-1917 | 4/13/11 | - | - | 0.27 |
| W-PIT7-1918 | 4/13/11 | 29 | 9.2 | 0.84 |
| W-PIT7-1918 | 10/18/11 | - | 9.6 | - |
| W-PIT7-1919 | 4/13/11 | - | - | 0.24 |
| W-PIT7-2141 | 4/6/11 | 33 D | 6.9 | - |
| W-PIT7-2141 | 10/4/11 | - | 6.1 | - |
| W-PIT7-2305 | 3/7/11 | 38 | - | - |
| W-PIT7-2305 | 4/6/11 | 40 | 13 | - |
| W-PIT7-2305 | 4/6/11 DUP | 41 | 13 | - |
| W-PIT7-2305 | 10/10/11 | - | 14 | - |
| W-PIT7-2306 | 10/10/11 | - | 19 | - |
| W-PIT7-2307 | 3/7/11 | 32 | - | - |
| W-PIT7-2307 | 4/6/11 | 26 | 11 | - |
| W-PIT7-2307 | 10/10/11 | - | 11 | - |
| W-PIT7-2309 | 4/26/11 | 30 | 8.5 | - |
| W-PIT7-2703 | 10/19/11 | - | 12 | - |
| W-PIT7-2704 | 8/9/11 | - | <4 | - |
| W-PIT7-2705 | 11/2/11 | - | 11 | - |

OU5B-METALS [mg/L] 2011 data (prepared 2012-02-23 04:59:09, Oracle epprd02.llnl.gov)

Table B-5.20. Pit 7 Complex area in Operable Unit 5 metals and silica in ground water.

| Constituents of concern | K7-01 | K7-03 | K7-06 | K7-09 | K7-10 | NC7-17 | NC7-26 | NC7-47 | NC7-48 | W-865-01 | W-PIT7-2703 | W-PIT7-2704 | W-PIT7-2705 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5/4/11 | 4/27/11 | 4/18/11 | 4/12/11 | 4/12/11 | 4/18/11 | 4/12/11 | 5/12/11 | 4/14/11 | 1/12/11 | 10/19/11 | 8/9/11 | 11/2/11 |
| Antimony (mg/L) | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | <0.0005 | <0.06 | <0.06 | - | - | - | - |
| Arsenic (mg/L) | 0.007 | 0.001 | 0.02 | 0.0008 | <0.0005 | - | 0.002 | 0.012 | <0.005 | 0.0037 | 0.0088 | 0.02 | 0.011 |
| Barium (mg/L) | 0.18 | 0.07 | 0.09 | 0.01 L | 0.24 DL | - | 0.02 L | 0.059 | 0.12 | 0.07 | 0.11 | 0.053 | 0.076 |
| Beryllium (mg/L) | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | - | <0.0001 | <0.002 | <0.002 | - | - | - | - |
| Cadmium (mg/L) | <0.0001 | <0.0001 | 0.0005 | <0.0001 | <0.0001 | - | <0.0001 | <0.005 | <0.005 | <0.0005 | <0.001 | <0.001 | <0.001 |
| Chromium (mg/L) | <0.0005 | 0.0006 | <0.0005 | <0.0005 | 0.005 | - | <0.0005 | <0.01 | <0.01 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cobalt (mg/L) | <0.0005 | 0.0005 | <0.0005 | <0.0005 | <0.0005 | - | <0.0005 | <0.02 | <0.02 | - | - | - | - |
| Copper (mg/L) | 0.008 | 0.02 | <0.0005 | <0.0005 | <0.0005 | - | <0.0005 | <0.01 | <0.01 | - | - | - | - |
| Lead (mg/L) | 0.0005 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | - | <0.0002 | <0.003 | <0.003 | <0.005 | <0.005 | <0.005 | <0.005 |
| Lithium (mg/L) | 0.029 | 0.035 | 0.037 | 0.094 | 0.062 | - | 0.029 | 0.029 | 0.079 | - | - | - | - |
| Mercury (mg/L) | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | - | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Molybdenum (mg/L) | 0.003 | 0.004 | 0.003 | 0.003 | 0.002 | - | 0.007 | <0.02 | <0.02 | - | - | - | - |
| Nickel (mg/L) | 0.002 | 0.03 | <0.0005 | <0.0005 | <0.0005 | - | 0.0006 | <0.02 | <0.02 | - | - | - | - |
| Selenium (mg/L) | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 | - | <0.001 | <0.005 | <0.005 | <0.002 | 0.0028 | <0.002 | <0.002 |
| Silica (as SiO2) (mg/L) | - | - | - | - | - | 79.8 | - | - | - | - | 57 | 76 | 70 |
| Silver (mg/L) | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | - | <0.0001 | <0.005 | <0.005 | <0.001 | <0.001 | <0.001 | <0.001 |
| Thallium (mg/L) | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | - | <0.0001 | <0.005 | <0.005 | - | - | - | - |
| Vanadium (mg/L) | 0.01 | <0.002 | 0.04 | <0.002 | <0.002 | - | <0.002 | 0.061 | 0.015 | - | - | - | - |
| Zinc (mg/L) | <0.01 | 0.01 | <0.01 | <0.01 | <0.01 | - | <0.01 | <0.05 | <0.05 | - | - | - | - |

OU5B-E8082A [ug/L] 2011 data (prepared 2012-02-23 04:58:53, Oracle epprd02.llnl.gov)

Table B-5.21. Pit 7 Complex area in Operable Unit 5 polychlorinated biphenyl (PCBs) compounds in ground water.

| Location | Date | PCB 1016 (µg/L) | PCB 1221 (µg/L) | PCB 1232 (µg/L) | PCB 1242 (µg/L) | PCB 1248 (µg/L) | PCB 1254 (µg/L) | PCB 1260 (µg/L) |
|---|---|---|---|---|---|---|---|---|
| K7-01 | 5/4/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K7-03 | 4/27/11 | <0.56 DJ | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D |
| K7-06 | 4/18/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K7-09 | 4/12/11 | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D |
| K7-10 | 4/12/11 | <0.5 D | <0.5 D | <0.5 D | <0.5 D | <0.5 D | <0.5 D | <0.5 D |
| NC7-26 | 4/12/11 | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D |
| NC7-47 | 5/12/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O |
| NC7-48 | 4/14/11 | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D | <0.56 D |

OU5B-FLUO [mg/L] 2011 data (prepared 2012-02-23 04:59:00, Oracle epprd02.llnl.gov)

Table B-5.22. Pit 7 Complex area in Operable Unit 5 fluoride in ground water.

| Location | Date | Fluoride (mg/L) | Fluoride (mg/L) | Fluoride (mg/L) |
|---|---|---|---|---|
| | | E300.0 | E340.2 | GENMIN |
| K7-01 | 1/11/11 | 0.57 H | 0.36 | - |
| K7-01 | 5/4/11 | 0.48 | - | - |
| K7-03 | 4/27/11 | 0.39 | - | - |
| K7-06 | 4/18/11 | - | 0.33 | - |
| K7-09 | 4/12/11 | 0.14 | - | - |
| K7-10 | 4/12/11 | - | <0.05 | - |
| NC7-17 | 4/18/11 | - | - | 0.56 |
| NC7-26 | 4/12/11 | - | 0.19 | - |
| NC7-47 | 5/12/11 | 0.6 | - | - |
| NC7-48 | 4/14/11 | 0.18 | - | - |
| W-PIT7-2703 | 10/19/11 | - | - | 0.67 |
| W-PIT7-2704 | 8/9/11 | - | - | 0.47 |
| W-PIT7-2705 | 11/2/11 | - | - | 0.39 |

OU5B-MS [pCi/L; ratio] 2011 data (prepared 2012-02-23 04:59:13, Oracle epprd02.llnl.gov)

Table B-5.23. Pit 7 Complex area in Operable Unit 5 uranium isotopes by mass spectrometry in ground water.

| Location | Date | Uranium (pCi/L) | Uranium 234 by mass (pCi/L) | Uranium 235 by mass (pCi/L) | Uranium 236 by mass (pCi/L) | Uranium 238 by mass (pCi/L) | Uranium 235/238 (ratio) |
|---|---|---|---|---|---|---|---|
| K7-01 | 5/4/11 | 18.0 ± 0.380 | 8.90 ± 0.380 | 0.390 ± 0.00380 | <0.002 | 8.30 ± 0.0380 | 0.00725 ± 0.0000630 |
| K7-03 | 4/27/11 | 5.20 ± 0.0480 | 2.70 ± 0.0460 | 0.110 ± 0.000650 | <0.00047 | 2.40 ± 0.0120 | 0.00728 ± 0.0000220 |
| NC7-12 | 4/27/11 | 3.90 ± 0.0490 | 1.90 ± 0.0490 | 0.0790 ± 0.000340 | <0.007 | 2.00 ± 0.00320 | 0.00620 ± 0.0000240 |
| NC7-16 | 1/11/11 | 14.0 ± 0.200 | 5.30 ± 0.190 | 0.240 ± 0.00180 | 0.0230 ± 0.0000630 | 8.20 ± 0.0480 | 0.00462 ± 0.0000200 |
| NC7-16 | 4/11/11 | 10.0 ± 0.0360 | 3.50 ± 0.0310 | 0.180 ± 0.000590 | 0.0220 ± 0.0000580 | 6.40 ± 0.0180 | 0.00435 ± 0.00000700 |
| NC7-16 | 7/11/11 | 11.0 ± 0.280 | 4.20 ± 0.280 | 0.190 ± 0.00240 | <0.023 | 6.10 ± 0.0110 | 0.00487 ± 0.0000610 |
| NC7-16 | 10/10/11 | 6.30 ± 0.0390 | <7.1 | 0.200 ± 0.00250 | <0.036 | 6.10 ± 0.0390 | 0.00508 ± 0.0000560 |
| NC7-24 | 6/9/11 | 6.20 ± 0.250 | 3.60 ± 0.250 | 0.120 ± 0.00190 | <0.00079 | 2.50 ± 0.0300 | 0.00724 ± 0.0000840 |
| NC7-25 | 10/10/11 | 15.0 ± 0.140 | <24 | 0.690 ± 0.00790 | <0.014 | 15.0 ± 0.140 | 0.00732 ± 0.0000490 |
| NC7-26 | 4/12/11 | 0.250 ± 0.0110 | 0.140 ± 0.0110 | 0.00470 ± 0.0000270 | <0.000044 | 0.0990 ± 0.000560 | 0.00730 ± 0.00000900 |
| NC7-40 | 1/10/11 | 86.0 ± 1.60 | 23.0 ± 1.60 | 1.20 ± 0.00860 | 0.280 ± 0.000230 | 61.0 ± 0.360 | 0.00311 ± 0.0000120 |
| NC7-40 | 4/11/11 | 79.0 ± 1.40 | 21.0 ± 1.30 | 1.20 ± 0.0110 | 0.270 ± 0.000340 | 56.0 ± 0.310 | 0.00319 ± 0.0000250 |
| NC7-40 | 7/11/11 | 76.0 ± 1.70 | 23.0 ± 1.60 | 1.10 ± 0.0200 | 0.240 ± 0.00310 | 51.0 ± 0.450 | 0.00332 ± 0.0000550 |
| NC7-40 | 10/6/11 | 63.0 ± 1.40 | 17.0 ± 1.40 | 0.940 ± 0.0160 | 0.190 ± 0.00180 | 45.0 ± 0.240 | 0.00327 ± 0.0000550 |
| NC7-48 | 4/14/11 | 9.40 ± 0.0530 | 2.20 ± 0.0380 | 0.130 ± 0.00100 | 0.0320 ± 0.0000780 | 7.00 ± 0.0360 | 0.00281 ± 0.0000170 |
| NC7-51 | 1/10/11 | 81.0 ± 1.60 | 35.0 ± 1.60 | 1.50 ± 0.00700 | 0.120 ± 0.000270 | 45.0 ± 0.140 | 0.00513 ± 0.0000180 |
| NC7-51 | 4/27/11 | 81.0 ± 0.680 | 31.0 ± 0.660 | 1.40 ± 0.0110 | 0.160 ± 0.000240 | 48.0 ± 0.140 | 0.00461 ± 0.0000330 |
| NC7-51 | 7/11/11 | 79.0 ± 2.40 | 31.0 ± 2.40 | 1.40 ± 0.0130 | 0.150 ± 0.00120 | 47.0 ± 0.400 | 0.00474 ± 0.0000180 |
| NC7-51 | 10/6/11 | 52.0 ± 0.420 | <40 | 1.50 ± 0.0220 | 0.170 ± 0.00560 | 50.0 ± 0.420 | 0.00450 ± 0.0000560 |
| NC7-63 | 10/10/11 | 96.0 ± 0.950 | <66 | 2.20 ± 0.0350 | 0.520 ± 0.0150 | 93.0 ± 0.950 | 0.00365 ± 0.0000440 |
| NC7-64 | 10/10/11 | 93.0 ± 2.80 | 43.0 ± 2.80 | 1.80 ± 0.0140 | <0.14 | 49.0 ± 0.220 | 0.00563 ± 0.0000350 |
| NC7-65 | 4/5/11 | 1.20 ± 0.0170 | 0.670 ± 0.0170 | 0.0250 ± 0.000110 | <0.0001 | 0.520 ± 0.00150 | 0.00731 ± 0.0000260 |
| W-PIT7-14 | 4/6/11 | <0.06273 | <0.004 | <0.000048 | <0.000033 | 0.00130 ± 0.00000680 | <0.005682 |
| W-PIT7-15 | 5/12/11 | <0.06273 | <0.067 | <0.0012 | <0.00012 | 0.0240 ± 0.000490 | <0.0079 |
| W-PIT7-1918 | 1/10/11 | 46.0 ± 0.680 | 15.0 ± 0.670 | 0.740 ± 0.00630 | 0.120 ± 0.000500 | 30.0 ± 0.140 | 0.00383 ± 0.0000270 |
| W-PIT7-1918 | 4/13/11 | 70.0 ± 0.990 | 19.0 ± 0.970 | 1.00 ± 0.00690 | 0.230 ± 0.000360 | 50.0 ± 0.220 | 0.00317 ± 0.0000160 |
| W-PIT7-1918 | 10/18/11 | 53.0 ± 1.80 | 16.0 ± 1.80 | 0.820 ± 0.0110 | 0.150 ± 0.000390 | 36.0 ± 0.280 | 0.00357 ± 0.0000390 |
| W-PIT7-2141 | 4/6/11 | 5.80 ± 0.110 | 3.50 ± 0.110 | 0.100 ± 0.000990 | <0.00042 | 2.20 ± 0.0170 | 0.00731 ± 0.0000430 |
| W-PIT7-2305 | 10/10/11 | 15.0 ± 0.540 | 8.10 ± 0.540 | 0.320 ± 0.00310 | <0.01 | 7.00 ± 0.0460 | 0.00710 ± 0.0000500 |
| W-PIT7-2306 | 10/10/11 | 4.50 ± 0.0590 | 2.50 ± 0.0580 | 0.0860 ± 0.000460 | <0.007 | 2.00 ± 0.00810 | 0.00679 ± 0.0000240 |
| W-PIT7-2307 | 10/10/11 | 16.0 ± 0.420 | 7.30 ± 0.420 | 0.300 ± 0.00250 | 0.0170 ± 0.000550 | 8.30 ± 0.0450 | 0.00552 ± 0.0000370 |
| W-PIT7-2309 | 4/26/11 | 1.80 ± 0.0190 | 0.910 ± 0.0190 | 0.0370 ± 0.000330 | <0.00015 | 0.800 ± 0.00320 | 0.00727 ± 0.0000560 |
| W-PIT7-2703 | 10/19/11 | 66.0 ± 1.80 | 35.0 ± 1.80 | 1.30 ± 0.0120 | <0.023 | 30.0 ± 0.250 | 0.00684 ± 0.0000280 |
| W-PIT7-2704 | 5/17/11 | 3.30 ± 0.0690 | 1.50 ± 0.0670 | 0.0550 ± 0.000590 | <0.007 | 1.70 ± 0.0130 | 0.00502 ± 0.0000380 |
| W-PIT7-2704 | 8/9/11 | 2.50 ± 0.0640 | 1.10 ± 0.0630 | 0.0420 ± 0.000670 | <0.007 | 1.30 ± 0.00930 | 0.00515 ± 0.0000730 |
| W-PIT7-2705 | 11/2/11 | 46.0 ± 0.730 | 16.0 ± 0.720 | 0.700 ± 0.00520 | 0.130 ± 0.000970 | 30.0 ± 0.120 | 0.00364 ± 0.0000230 |

OU5B-ASKPA [pCi/L; ug/L] 2011 data (prepared 2012-02-23 04:58:49, Oracle epprd02.llnl.gov)

Table B-5.24. Pit 7 Complex area in Operable Unit 5 uranium isotopes by alpha spectrometry and Kinetic Phosphorescence Analyzer (KPA) in ground water.

| Location | Date | Uranium (µg/L) | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|---|
| K7-01 | 5/4/11 | - | 8.10 ± 1.42 | 0.362 ± 0.145 | 7.06 ± 1.25 |
| K7-03 | 4/27/11 | - | 2.99 ± 0.591 | 0.160 ± 0.0956 | 2.94 ± 0.584 |
| K7-06 | 4/18/11 | - | 0.568 ± 0.167 | <0.1 | 0.359 ± 0.125 |
| K7-09 | 4/12/11 | - | <0.1 | <0.1 | <0.1 |
| K7-10 | 4/12/11 | - | <0.1 | <0.1 | <0.1 |
| NC7-12 | 4/27/11 | - | 2.16 ± 0.439 | 0.115 ± 0.0792 | 2.05 ± 0.420 |
| NC7-16 | 4/11/11 | - | 3.23 ± 0.611 | 0.233 ± 0.106 | 5.16 ± 0.921 |
| NC7-17 | 4/18/11 | - | 0.844 ± 0.217 | <0.1 | 0.680 ± 0.187 |
| NC7-18 | 4/26/11 | - | 0.663 ± 0.178 | <0.1 | 0.460 ± 0.141 |
| NC7-20 | 5/4/11 | - | 3.11 ± 0.589 | 0.140 ± 0.0837 | 3.01 ± 0.573 |
| NC7-21 | 4/11/11 | - | 8.08 ± 1.35 | 0.442 ± 0.147 | 8.50 ± 1.41 |
| NC7-25 | 6/14/11 | 42.6 ± 4.77 | 18.4 ± 2.64 | 0.992 ± 0.195 | 16.1 ± 2.32 |
| NC7-26 | 4/12/11 | - | 0.207 ± 0.0921 | <0.1 | 0.197 ± 0.0861 |
| NC7-34 | 4/18/11 | - | 2.83 ± 0.517 | 0.134 ± 0.0710 | 3.67 ± 0.648 |
| NC7-36 | 4/18/11 | - | 0.842 ± 0.204 | <0.1 | 0.765 ± 0.191 |
| NC7-36 | 4/18/11 DUP | - | 1.01 ± 0.220 B | <0.1 | 0.790 ± 0.180 |
| NC7-40 | 4/11/11 | - | 23.4 ± 4.49 | 1.51 ± 0.446 | 62.1 ± 11.6 |
| NC7-47 | 5/12/11 | - | 1.21 ± 0.219 | <0.1 | 0.662 ± 0.138 |
| NC7-48 | 4/14/11 | - | 2.07 ± 0.497 | 0.139 ± 0.108 | 6.83 ± 1.35 |
| NC7-49A | 4/14/11 | - | 1.95 ± 0.427 | <0.1 | 1.42 ± 0.336 |
| NC7-51 | 4/27/11 | - | 28.7 ± 5.42 | 2.17 ± 0.575 | 49.9 ± 9.32 |
| NC7-51 | 4/27/11 DUP | - | 29.4 ± 5.10 B | 1.91 ± 0.400 | 51.4 ± 8.80 |
| NC7-52 | 4/6/11 | - | 0.780 ± 0.182 | <0.1 | 0.711 ± 0.171 |
| NC7-53 | 4/14/11 | - | 0.574 ± 0.182 | <0.1 | 0.606 ± 0.188 |
| NC7-63 | 2/15/11 | 287 ± 27.5 | - | - | - |
| NC7-63 | 4/6/11 | 417 ± 44.5 | 46.7 ± 7.35 BL | 3.26 ± 0.748 BL | 122 ± 18.7 BL |
| NC7-63 | 10/10/11 | 341 ± 37.4 | - | - | - |
| NC7-64 | 2/15/11 | 135 ± 12.4 | - | - | - |
| NC7-64 | 4/6/11 | 126 ± 14.3 | 38.0 ± 7.85 BL | 2.44 ± 0.708 BL | 45.2 ± 9.29 BL |
| NC7-64 | 8/24/11 | 137 ± 15.7 | - | - | - |
| NC7-64 | 10/10/11 | 175 ± 19.3 | - | - | - |
| NC7-65 | 4/5/11 | - | 0.733 ± 0.191 | <0.1 | 0.595 ± 0.167 |
| NC7-67 | 4/12/11 | - | <0.1 | <0.1 | <0.1 |
| NC7-67 | 4/12/11 DUP | - | 0.173 ± 0.0680 | <0.1 | 0.189 ± 0.0720 |
| NC7-68 | 4/11/11 | - | 1.18 ± 0.249 | <0.1 | 1.13 ± 0.241 |
| NC7-75 | 4/7/11 | - | 0.103 ± 0.0602 | <0.1 | <0.1 |
| NC7-76 | 4/26/11 | - | 1.50 ± 0.311 | <0.1 | 1.39 ± 0.292 |
| W-PIT7-02 | 4/11/11 | - | 0.274 ± 0.0931 | <0.1 | 0.220 ± 0.0803 |
| W-PIT7-03 | 4/26/11 | - | 11.5 ± 1.94 | 0.477 ± 0.163 | 10.6 ± 1.81 |
| W-PIT7-03 | 4/26/11 DUP | - | 12.9 ± 2.20 B | 0.550 ± 0.150 | 10.8 ± 1.90 |
| W-PIT7-10 | 4/26/11 | - | 1.11 ± 0.267 | 0.116 ± 0.0753 | 0.987 ± 0.243 |

Table B-5.24. Pit 7 Complex area in Operable Unit 5 uranium isotopes by alpha spectrometry and Kinetic Phosphorescence Analyzer (KPA) in ground water.

| Location | Date | Uranium (µg/L) | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|---|
| W-PIT7-12 | 4/5/11 | - | 1.73 ± 0.369 | <0.1 | 1.06 ± 0.254 |
| W-PIT7-13 | 4/5/11 | - | 4.38 ± 0.788 | 0.191 ± 0.0930 | 2.96 ± 0.562 |
| W-PIT7-13 | 4/5/11 DUP | - | 4.31 ± 0.790 | 0.280 ± 0.110 | 3.18 ± 0.610 B |
| W-PIT7-14 | 4/6/11 | - | <0.1 | <0.1 | <0.1 |
| W-PIT7-1861 | 4/14/11 | - | 0.261 ± 0.0999 | <0.1 | 0.166 ± 0.0778 |
| W-PIT7-1903 | 4/13/11 | - | 21.2 ± 4.48 | 1.35 ± 0.468 | 66.0 ± 13.5 |
| W-PIT7-1904 | 4/13/11 | - | 22.1 ± 4.12 | 1.46 ± 0.419 | 48.1 ± 8.80 |
| W-PIT7-1905 | 4/13/11 | - | 11.2 ± 2.18 | 0.765 ± 0.278 | 34.7 ± 6.43 |
| W-PIT7-1907 | 4/13/11 | - | <0.1 | <0.1 | <0.1 |
| W-PIT7-1915 | 4/13/11 | - | <0.1 | <0.1 | <0.1 |
| W-PIT7-1916 | 4/13/11 | - | 20.1 ± 4.05 | 1.13 ± 0.393 | 44.8 ± 8.80 |
| W-PIT7-1917 | 4/13/11 | - | 18.5 ± 3.53 | 1.24 ± 0.382 | 46.6 ± 8.64 |
| W-PIT7-1918 | 4/13/11 | - | 17.3 ± 3.66 | 1.32 ± 0.460 | 42.7 ± 8.73 |
| W-PIT7-1918 | 10/18/11 | - | 17.0 ± 3.19 | 1.51 ± 0.473 | 40.9 ± 7.36 |
| W-PIT7-1919 | 4/13/11 | - | 24.4 ± 5.04 | 1.72 ± 0.544 | 59.6 ± 12.0 |
| W-PIT7-2305 | 1/4/11 | 17.5 ± 1.83 | - | - | - |
| W-PIT7-2305 | 4/6/11 | 23.8 ± 2.12 | 8.08 ± 1.50 BL | 0.439 ± 0.177 BL | 9.01 ± 1.65 BL |
| W-PIT7-2305 | 4/6/11 DUP | - | 7.93 ± 1.35 BL | 0.339 ± 0.129 BL | 7.97 ± 1.36 BL |
| W-PIT7-2305 | 7/13/11 | 17.6 ± 1.62 | - | - | - |
| W-PIT7-2305 | 10/10/11 | 23.6 ± 2.91 | - | - | - |
| W-PIT7-2306 | 8/24/11 | 3.87 ± 0.444 | - | - | - |
| W-PIT7-2306 | 10/10/11 | 5.08 ± 0.614 | - | - | - |
| W-PIT7-2307 | 1/4/11 | 16.4 ± 1.71 | - | - | - |
| W-PIT7-2307 | 4/6/11 | 13.5 ± 1.20 | 6.41 ± 1.28 BL | 0.277 ± 0.150 BL | 5.16 ± 1.05 BL |
| W-PIT7-2307 | 8/24/11 | 16.1 ± 1.84 | - | - | - |
| W-PIT7-2307 | 10/10/11 | 48.1 ± 5.28 | - | - | - |
| W-PIT7-2309 | 4/26/11 | - | 0.849 ± 0.207 | <0.1 | 0.829 ± 0.204 |
| W-PIT7-2703 | 10/19/11 | 104 ± 12.5 | - | - | - |
| W-PIT7-2704 | 8/9/11 | 4.24 ± 0.450 | - | - | - |
| W-PIT7-2705 | 11/2/11 | 84.2 ± 9.61 | - | - | - |

OU5B-E906 [pCi/L] 2011 data (prepared 2012-02-23 04:58:58, Oracle epprd02.llnl.gov)

Table B-5.25. Pit 7 Complex area in Operable Unit 5 tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| K7-01 | 5/4/11 | 38600 ± 7500 |
| K7-01 | 10/19/11 | 34300 ± 6690 |
| K7-03 | 4/27/11 | 71000 ± 13800 |
| K7-03 | 10/5/11 | 69700 ± 13500 |
| K7-06 | 4/18/11 | <100 |
| K7-06 | 10/12/11 | <100 |
| K7-09 | 4/12/11 | <100 |
| K7-09 | 10/10/11 | <100 |
| K7-10 | 4/12/11 | <100 |
| K7-10 | 10/10/11 | <100 |
| NC7-12 | 4/27/11 | 2370 ± 495 |
| NC7-12 | 10/11/11 | 2140 ± 452 L |
| NC7-16 | 1/11/11 | 34200 ± 6640 L |
| NC7-16 | 4/11/11 | 28900 ± 5620 L |
| NC7-16 | 7/11/11 | 33400 ± 6490 |
| NC7-16 | 10/10/11 | 35900 ± 6990 |
| NC7-17 | 4/18/11 | <100 |
| NC7-17 | 10/12/11 | <100 |
| NC7-18 | 4/26/11 | <100 |
| NC7-18 | 10/10/11 | <100 |
| NC7-20 | 5/4/11 | 9990 ± 1970 |
| NC7-20 | 10/11/11 | 9270 ± 1830 L |
| NC7-21 | 4/11/11 | 48200 ± 9370 L |
| NC7-21 | 10/10/11 | 34900 ± 6800 |
| NC7-24 | 6/8/11 | 1450 ± 318 |
| NC7-25 | 6/14/11 | 214000 ± 41600 |
| NC7-25 | 10/10/11 | 198000 ± 38500 |
| NC7-26 | 4/12/11 | 1800 ± 385 |
| NC7-26 | 10/10/11 | 1730 ± 384 |
| NC7-26 | 10/10/11 DUP | 1840 ± 290 |
| NC7-34 | 4/18/11 | 793 ± 193 |
| NC7-34 | 10/12/11 | 1020 ± 237 |
| NC7-36 | 4/18/11 | 152 ± 80.2 |
| NC7-36 | 4/18/11 DUP | <100 |
| NC7-36 | 10/12/11 | <100 |
| NC7-37 | 10/5/11 | 33800 ± 6580 |
| NC7-37 | 10/5/11 DUP | 38800 ± 5900 |
| NC7-40 | 1/10/11 | 67800 ± 13200 L |
| NC7-40 | 4/11/11 | 70400 ± 13700 L |
| NC7-40 | 7/11/11 | 62000 ± 12100 |
| NC7-40 | 10/6/11 | 54400 ± 10600 |
| NC7-47 | 5/12/11 | <100 |
| NC7-48 | 4/14/11 | <100 |
| NC7-48 | 10/12/11 | <100 |

Table B-5.25. Pit 7 Complex area in Operable Unit 5 tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| NC7-49A | 4/14/11 | <100 |
| NC7-49A | 10/12/11 | <100 |
| NC7-51 | 1/10/11 | 147000 ± 28500 |
| NC7-51 | 4/27/11 | 160000 ± 31100 |
| NC7-51 | 4/27/11 DUP | 215000 ± 33000 |
| NC7-51 | 7/11/11 | 231000 ± 44800 |
| NC7-51 | 7/11/11 DUP | 234000 ± 36000 L |
| NC7-51 | 10/6/11 | 186000 ± 36100 |
| NC7-52 | 1/10/11 | 29700 ± 5770 L |
| NC7-52 | 7/11/11 | 34600 ± 6730 F |
| NC7-53 | 4/14/11 | <100 |
| NC7-63 | 4/6/11 | 575000 ± 112000 BL |
| NC7-63 | 10/10/11 | 221000 ± 42900 |
| NC7-64 | 4/6/11 | 122000 ± 23800 BL |
| NC7-64 | 10/10/11 | 125000 ± 24300 |
| NC7-65 | 4/5/11 | 282 ± 110 L |
| NC7-65 | 10/4/11 | 264 ± 94.7 |
| NC7-67 | 4/12/11 | 2080 ± 440 |
| NC7-67 | 4/12/11 DUP | 2060 ± 320 |
| NC7-67 | 10/6/11 | 2020 ± 429 |
| NC7-68 | 4/11/11 | 1310 ± 297 L |
| NC7-68 | 10/6/11 | 1540 ± 338 |
| NC7-75 | 4/7/11 | <100 |
| NC7-75 | 10/5/11 | 117 ± 69.1 |
| NC7-76 | 4/26/11 | 2100 ± 443 |
| NC7-76 | 10/11/11 | 1650 ± 361 L |
| W-865-01 | 1/12/11 | <100 L |
| W-865-01 | 7/13/11 | <100 |
| W-865-03 | 1/12/11 | <100 L |
| W-865-1804 | 1/24/11 | 1470 ± 321 |
| W-865-1804 | 7/13/11 | 1500 ± 320 |
| W-PIT7-02 | 1/10/11 | <100 L |
| W-PIT7-02 | 7/11/11 | <100 |
| W-PIT7-03 | 1/10/11 | 95800 ± 18600 L |
| W-PIT7-03 | 1/10/11 DUP | 100000 ± 19400 L |
| W-PIT7-10 | 4/26/11 | <100 |
| W-PIT7-10 | 10/10/11 | <100 |
| W-PIT7-12 | 4/5/11 | 2180 ± 461 L |
| W-PIT7-12 | 10/4/11 | 2000 ± 423 |
| W-PIT7-13 | 4/5/11 | 33600 ± 6530 L |
| W-PIT7-13 | 4/5/11 DUP | 38100 ± 5800 |
| W-PIT7-13 | 10/4/11 | 33600 ± 6540 |
| W-PIT7-14 | 4/6/11 | <100 |
| W-PIT7-15 | 5/12/11 | <100 |
| W-PIT7-15 | 11/3/11 | <100 |
| W-PIT7-1861 | 4/14/11 | <100 |

Table B-5.25. Pit 7 Complex area in Operable Unit 5 tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| W-PIT7-1918 | 4/13/11 | 53500 ± 10400 |
| W-PIT7-1918 | 11/1/11 | 52100 ± 10100 |
| W-PIT7-2141 | 4/6/11 | 13900 ± 2720 |
| W-PIT7-2141 | 10/4/11 | 14400 ± 2820 |
| W-PIT7-2305 | 4/6/11 | 51300 ± 9970 BL |
| W-PIT7-2305 | 4/6/11 DUP | 50100 ± 9750 BL |
| W-PIT7-2305 | 10/10/11 | 42600 ± 8280 |
| W-PIT7-2306 | 10/10/11 | 2650 ± 551 |
| W-PIT7-2307 | 4/6/11 | 41200 ± 8010 BL |
| W-PIT7-2307 | 10/10/11 | 44000 ± 8550 |
| W-PIT7-2309 | 4/26/11 | 47800 ± 9300 |
| W-PIT7-2309 | 10/5/11 | 52400 ± 10200 |
| W-PIT7-2703 | 10/19/11 | 70500 ± 13700 L |
| W-PIT7-2704 | 8/9/11 | 751 ± 166 |
| W-PIT7-2705 | 11/2/11 | 38400 ± 7530 L |

OU5B-HE [ug/L] 2011 data (prepared 2012-02-23 04:59:06, Oracle epprd02.llnl.gov)

Table B-5.26. Pit 7 Complex area in Operable Unit 5 high explosive compounds in ground water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-Dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-Dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K7-01 | 5/4/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| K7-03 | 4/27/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| K7-06 | 4/18/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| K7-09 | 4/12/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| K7-10 | 4/12/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-26 | 4/12/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-47 | 5/12/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| NC7-48 | 4/14/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-PIT7-2703 | 10/19/11 | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <1.2 D | <2.4 D | <1.2 D | <2.4 D |
| W-PIT7-2704 | 8/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-PIT7-2705 | 11/2/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |

OU5B-GENMIN [mg/L; Units; umhos/cm] 2011 data (prepared 2012-02-23 04:59:03, Oracle epprd02.llnl.gov)

Table B-5.27. Pit 7 Complex area in Operable Unit 5 general minerals in ground water.

| Constituents of concern | NC7-17 | W-PIT7-2703 | W-PIT7-2704 | W-PIT7-2705 |
|---|---|---|---|---|
| | 4/18/11 | 10/19/11 | 8/9/11 | 11/2/11 |
| Total Alkalinity (as CaCO3) (mg/L) | 181 | 420 | 180 | 330 |
| Aluminum (mg/L) | 0.14 | <0.2 | <0.2 | <0.2 |
| Bicarbonate Alk (as CaCO3) (mg/L) | 181 | 420 D | 180 | 330 |
| Calcium (mg/L) | 46 | 90 | 48 | 76 |
| Carbonate Alk (as CaCO3) (mg/L) | <10 | <8.2 D | <4.1 | <4.1 |
| Chloride (mg/L) | 49 DL | 73 | 35 | 38 |
| Copper (mg/L) | <0.01 | <0.05 | <0.05 | <0.05 |
| Fluoride (mg/L) | 0.56 | 0.67 | 0.47 | 0.39 |
| Hydroxide Alk (as CaCO3) (mg/L) | <10 | <8.2 D | <4.1 | <4.1 |
| Iron (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 |
| Magnesium (mg/L) | 21 | 41 | 22 | 36 |
| Manganese (mg/L) | <0.03 | <0.03 | <0.03 | <0.03 |
| Nickel (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrate (as N) (mg/L) | 8.9 | 6.6 | 5.5 | 6.4 |
| Nitrate (as NO3) (mg/L) | 39 | 29 | 24 | 28 H |
| Nitrite (as N) (mg/L) | <0.1 | <0.5 | <0.5 | <0.5 |
| pH (Units) | 7.6 H | 7.81 H | 7.87 | 7.72 |
| Ortho-Phosphate (mg/L) | 0.25 | <0.05 | 0.39 | 0.87 |
| Total Phosphorus (as P) (mg/L) | - | 0.18 H | 0.11 H | 0.21 H |
| Total Phosphorus (as PO4) (mg/L) | 0.24 H | - | - | - |
| Potassium (mg/L) | 2.5 | 5.4 | 1.4 | 3 |
| Sodium (mg/L) | 46 | 94 | 38 | 60 |
| Total dissolved solids (TDS) (mg/L) | 440 H | 670 DH | 450 D | 620 DH |
| Specific Conductance (µmhos/cm) | 620 | 1,110 H | 569 | 894 |
| Sulfate (mg/L) | 31 DL | 42 | 46 | 68 |
| Surfactants (mg/L) | <0.5 | <0.5 | <0.5 | <1 D |
| Total Hardness (as CaCO3) (mg/L) | 200 | 390 | 210 | 340 |
| Zinc (mg/L) | <0.01 | <0.05 | <0.05 | <0.05 |

OU5B-E900 [pCi/L] 2011 data (prepared 2012-02-23 04:58:55, Oracle epprd02.llnl.gov)

Table B-5.28. Pit 7 Complex area in Operable Unit 5 gross alpha and gross beta in ground water.

| Location | Date | Gross alpha (pCi/L) | Gross beta (pCi/L) |
|---|---|---|---|
| W-PIT7-2703 | 10/19/11 | 59.8 ± 12.3 | 14.5 ± 3.13 |
| W-PIT7-2704 | 8/9/11 | <2 | <3 |
| W-PIT7-2705 | 11/2/11 | 56.5 ± 12.7 | 11.6 ± 2.53 |

OU6-VOC [ug/L] 2011 data (prepared 2012-02-23 04:59:41, Oracle epprd02.llnl.gov)

Table B-6.01. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-854-01 | 5/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-01 | 10/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-02 | 1/4/11 | E601 | 110 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-02 | 4/4/11 | E601 | 110 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-02 | 7/11/11 | E601 | 120 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-02 | 10/5/11 | E601 | 120 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-03 | 2/14/11 | E601 | 9.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-03 | 4/4/11 | E601 | 15 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-03 | 4/4/11 DUP | E601 | 18 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-03 | 5/9/11 | E601 | 15 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-03 | 7/11/11 | E601 | 22 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-03 | 10/5/11 | E601 | 21 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-04 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-04 | 10/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-05 | 10/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-06 | 6/1/11 | E601 | 1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-06 | 6/1/11 DUP | E601 | 0.82 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-06 | 10/25/11 | E601 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-07 | 6/1/11 | E601 | 35 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-07 | 6/1/11 DUP | E601 | 36 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-07 | 10/25/11 | E601 | 45 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-08 | 5/31/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-08 | 10/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-09 | 5/31/11 | E601 | 7.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-09 | 10/24/11 | E601 | 6.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-10 | 5/31/11 | E601 | 8.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-10 | 10/24/11 | E601 | 8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-10 | 10/24/11 DUP | E601 | 8.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-13 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-13 | 10/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-14 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-14 | 10/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 O | <0.5 | <0.5 |
| W-854-14 | 10/26/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-15 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-15 | 10/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-17 | 2/1/11 | E601 | 4.2 | <0.5 | 10 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-17 | 5/31/11 | E601 | 4.8 | <0.5 | 7.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-17 | 10/27/11 | E601 | 4.8 | <0.5 | 4.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-17 | 10/27/11 DUP | E601 | 4.1 | <0.5 | 3.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-18A | 1/4/11 | E601 | 14 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-18A | 4/4/11 | E601 | 30 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-18A | 7/11/11 | E601 | 30 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-6.01. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-854-18A | 10/5/11 | E601 | 32 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1701 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1701 | 10/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1707 | 6/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1707 | 10/27/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1731 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1731 | 10/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1822 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1822 | 10/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1823 | 6/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1823 | 10/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1902 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-1902 | 10/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2115 | 6/1/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2115 | 10/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2139 | 2/8/11 | E601 | 31 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2139 | 4/4/11 | E601 | 35 | <0.5 | 0.69 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2139 | 4/4/11 DUP | E601 | 36 | <0.5 | 0.72 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2139 | 7/11/11 | E601 | 36 | <0.5 | 0.69 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2139 | 10/5/11 | E601 | 38 | <0.5 | 0.73 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2218 | 1/4/11 | E601 | 15 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2218 | 4/4/11 | E601 | 18 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2218 | 4/4/11 DUP | E601 | 18 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2218 | 7/11/11 | E601 | 26 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-2218 | 10/5/11 | E601 | 28 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-45 | 6/6/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-854-45 | 10/26/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| SPRING10 | 6/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| SPRING10 | 10/27/11 | E601 | 0.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| SPRING11 | 6/13/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| SPRING11 | 10/27/11 | E601 | 2.2 | <0.5 | <0.5 | 0.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-6.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | 1,2-Dichloro-propane (µg/L) | Bromo-dichloro-methane (µg/L) | Bromo-methane (µg/L) |
|---|---|---|---|---|---|---|---|
| W-854-01 | 5/31/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-01 | 10/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-02 | 1/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-02 | 4/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-02 | 7/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-02 | 10/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-03 | 2/14/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-03 | 4/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-03 | 4/4/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-854-03 | 5/9/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-03 | 7/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-03 | 10/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-04 | 6/1/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-04 | 10/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-05 | 10/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-06 | 6/1/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-06 | 6/1/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-854-06 | 10/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-07 | 6/1/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-07 | 6/1/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-854-07 | 10/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-08 | 5/31/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-08 | 10/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-09 | 5/31/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-09 | 10/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-10 | 5/31/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-10 | 10/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-10 | 10/24/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-854-13 | 6/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-13 | 10/26/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-14 | 6/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-14 | 10/26/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-14 | 10/26/11 DUP | E601 | 3 of 18 | - | 0.6 | 1 | 2.5 |
| W-854-15 | 6/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-15 | 10/24/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-17 | 2/1/11 | E601 | 1 of 18 | 10 | - | - | - |
| W-854-17 | 5/31/11 | E601 | 1 of 18 | 7.6 | - | - | - |
| W-854-17 | 10/27/11 | E601 | 1 of 18 | 4.2 | - | - | - |
| W-854-17 | 10/27/11 DUP | E601 | 1 of 18 | 3.6 | - | - | - |
| W-854-18A | 1/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-18A | 4/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-18A | 7/11/11 | E601 | 0 of 18 | - | - | - | - |

Table B-6.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | 1,2-Dichloro-propane (µg/L) | Bromo-dichloro-methane (µg/L) | Bromo-methane (µg/L) |
|---|---|---|---|---|---|---|---|
| W-854-18A | 10/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1701 | 6/1/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1701 | 10/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1707 | 6/13/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1707 | 10/27/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1731 | 6/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1731 | 10/26/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1822 | 6/1/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1822 | 10/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1823 | 6/7/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1823 | 10/26/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1902 | 6/1/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-1902 | 10/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2115 | 6/1/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2115 | 10/25/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2139 | 2/8/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2139 | 4/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2139 | 4/4/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-854-2139 | 7/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2139 | 10/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2218 | 1/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2218 | 4/4/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2218 | 4/4/11 DUP | E601 | 0 of 18 | - | - | - | - |
| W-854-2218 | 7/11/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-2218 | 10/5/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-45 | 6/6/11 | E601 | 0 of 18 | - | - | - | - |
| W-854-45 | 10/26/11 | E601 | 0 of 18 | - | - | - | - |
| SPRING10 | 6/13/11 | E601 | 0 of 18 | - | - | - | - |
| SPRING10 | 10/27/11 | E601 | 0 of 18 | - | - | - | - |
| SPRING11 | 6/13/11 | E601 | 0 of 18 | - | - | - | - |
| SPRING11 | 10/27/11 | E601 | 0 of 18 | - | - | - | - |

OU6-E300.0 [mg/L; ug/L] 2011 data (prepared 2012-02-23 04:59:31, Oracle epprd02.llnl.gov)

Table B-6.02. Building 854 Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-854-01 | 5/31/11 | <0.5 | <4 |
| W-854-01 | 10/24/11 | - | <4 |
| W-854-02 | 1/4/11 | - | 6.2 |
| W-854-02 | 4/4/11 | 50 | 6.4 |
| W-854-02 | 7/11/11 | - | 5.8 |
| W-854-02 | 10/5/11 | - | 6.6 |
| W-854-03 | 2/14/11 | 42 | 11 |
| W-854-03 | 4/4/11 | 39 | 12 |
| W-854-03 | 4/4/11 DUP | 32 DL | 9.9 |
| W-854-03 | 5/9/11 | 41 | 12 |
| W-854-03 | 6/6/11 | 39 | - |
| W-854-03 | 7/11/11 | 39 | 9.7 |
| W-854-03 | 8/1/11 | 41 | - |
| W-854-03 | 9/7/11 | 40 | - |
| W-854-03 | 10/5/11 | 42 | 11 |
| W-854-03 | 11/7/11 | 42 | - |
| W-854-03 | 12/6/11 | 39 | - |
| W-854-04 | 6/1/11 | <0.5 L | <4 |
| W-854-04 | 10/25/11 | - | <4 |
| W-854-05 | 10/24/11 | - | <4 |
| W-854-06 | 6/1/11 | <0.5 L | <4 |
| W-854-06 | 6/1/11 DUP | <0.5 | <4 |
| W-854-06 | 10/25/11 | - | <4 |
| W-854-07 | 6/1/11 | 30 DL | 5.6 |
| W-854-07 | 6/1/11 DUP | 26 DL | 5.1 |
| W-854-07 | 10/25/11 | - | 4.1 |
| W-854-08 | 5/31/11 | 37 D | <4 |
| W-854-08 | 10/24/11 | - | 4.6 |
| W-854-09 | 5/31/11 | 36 D | <4 |
| W-854-09 | 10/24/11 | - | <4 |
| W-854-10 | 5/31/11 | 12 | <4 |
| W-854-10 | 10/24/11 | - | <4 |
| W-854-10 | 10/24/11 DUP | - | <4 |
| W-854-13 | 6/6/11 | <0.5 L | <4 |
| W-854-13 | 10/26/11 | - | <4 |
| W-854-14 | 6/6/11 | 180 DL | <4 |
| W-854-14 | 10/26/11 | - | <4 |
| W-854-14 | 10/26/11 DUP | - | <4 |
| W-854-15 | 6/6/11 | 4.6 L | <4 |
| W-854-15 | 10/24/11 | - | <4 |
| W-854-17 | 2/1/11 | - | <4 |
| W-854-17 | 5/31/11 | 1.2 | <4 |
| W-854-17 | 10/27/11 | - | <4 |
| W-854-17 | 10/27/11 DUP | - | <4 |

Table B-6.02. Building 854 Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-854-18A | 1/4/11 | - | <4 |
| W-854-18A | 4/4/11 | 32 | <4 |
| W-854-18A | 7/11/11 | - | <4 |
| W-854-18A | 10/5/11 | - | <4 |
| W-854-1701 | 6/1/11 | <0.5 L | <4 |
| W-854-1701 | 10/25/11 | - | <4 |
| W-854-1707 | 6/13/11 | 4.5 | <4 |
| W-854-1707 | 10/27/11 | - | <4 |
| W-854-1731 | 6/6/11 | <0.5 L | <4 |
| W-854-1731 | 10/26/11 | - | <4 |
| W-854-1822 | 6/1/11 | 0.82 L | <4 |
| W-854-1822 | 10/25/11 | - | <4 |
| W-854-1823 | 6/7/11 | 22 D | 15.9 |
| W-854-1823 | 10/26/11 | - | 16.4 |
| W-854-1902 | 6/1/11 | 3.8 L | <4 |
| W-854-1902 | 10/25/11 | - | <4 |
| W-854-2115 | 6/1/11 | 1.5 L | <4 |
| W-854-2115 | 10/25/11 | - | <4 |
| W-854-2139 | 2/8/11 | 22 | 6.6 |
| W-854-2139 | 4/4/11 | 22 | 5.6 |
| W-854-2139 | 4/4/11 DUP | 21 | 4.8 |
| W-854-2139 | 7/11/11 | 21 | 5.1 |
| W-854-2139 | 10/5/11 | 22 | 4.5 |
| W-854-2218 | 1/4/11 | - | <4 |
| W-854-2218 | 4/4/11 | 43 | <4 |
| W-854-2218 | 7/11/11 | - | <4 |
| W-854-2218 | 10/5/11 | - | <4 |
| W-854-45 | 6/6/11 | 44 DL | 13.3 |
| W-854-45 | 10/26/11 | - | 15.2 |
| SPRING10 | 6/13/11 | 14 D | <4 |
| SPRING10 | 10/27/11 | - | <4 |
| SPRING11 | 6/13/11 | <0.5 | <4 |
| SPRING11 | 10/27/11 | - | <4 |

OU7-VOC [ug/L] 2011 data (prepared 2012-02-23 05:00:34, Oracle epprd02.llnl.gov)

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-830-04A | 3/2/11 | E601 | 7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-04A | 3/2/11 DUP | E601 | 7.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-04A | 8/18/11 | E601 | 6.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-04A | 8/18/11 DUP | E601 | 7.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-05 | 3/3/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-05 | 8/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-09 | 2/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-09 | 8/11/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-10 | 3/2/11 | E601 | 26 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-10 | 8/17/11 | E601 | 24 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-10 | 8/17/11 DUP | E601 | 24 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-11 | 3/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-11 | 8/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-12 | 2/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-13 | 8/17/11 | E601 | 5.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-14 | 3/7/11 | E601 | 1 | <0.5 | 0.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-14 | 8/17/11 | E601 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-15 | 3/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-15 | 6/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-15 | 8/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-15 | 11/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-16 | 3/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-16 | 8/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-17 | 3/8/11 | E601 | 0.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-17 | 8/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-18 | 3/2/11 | E601 | 15 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-18 | 8/18/11 | E601 | 15 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-19 | 2/22/11 | E601 | 3,500 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-19 | 4/6/11 | E601 | 3,600 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-19 | 4/6/11 DUP | E601 | 3,300 D | 4.9 | 0.6 | <0.5 | <0.5 | 1.1 | <0.5 | 1.4 | <0.5 | <0.5 | 1 | <0.5 | <0.5 | <0.5 |
| W-830-19 | 8/1/11 | E601 | 3,200 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-19 | 10/6/11 | E601 | 3,800 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-20 | 3/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-20 | 8/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-21 | 3/2/11 | E601 | 22 | <0.5 | 5.6 | 16 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-21 | 3/2/11 DUP | E601 | 21 | <0.5 | 5.4 | 16 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-21 | 8/15/11 | E601 | 32 | <0.5 | 2.6 | 7.9 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-22 | 2/23/11 | E601 | 9.7 | <0.5 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-22 | 8/11/11 | E601 | 17 | <0.5 | 2.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-27 | 2/28/11 | E601 | 749 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D |
| W-830-27 | 2/28/11 DUP | E601 | 830 D | 0.56 | <0.5 | <0.5 | <0.5 | 0.62 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-27 | 8/15/11 | E601 | 494 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D |

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-830-28 | 2/28/11 | E601 | 24 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-28 | 8/15/11 | E601 | 21 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-29 | 2/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-29 | 8/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-30 | 2/24/11 | E601 | 12 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-30 | 2/24/11 DUP | E601 | 12 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-30 | 8/10/11 | E601 | 15 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-34 | 2/24/11 | E601 | 137 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-34 | 8/10/11 | E601 | 79 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-49 | 2/22/11 | E601 | 2,600 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-830-49 | 4/6/11 | E601 | 2,400 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-49 | 4/6/11 DUP | E601 | 1,350 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D | <250 D |
| W-830-49 | 8/1/11 | E601 | 1,700 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-49 | 10/6/11 | E601 | 1,700 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-830-50 | 3/2/11 | E601 | 14 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-50 | 8/16/11 | E601 | 13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-51 | 1/4/11 | E601 | 30 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-51 | 4/7/11 | E601 | 26 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-51 | 7/19/11 | E601 | 26 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-51 | 10/5/11 | E601 | 25 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-52 | 1/4/11 | E601 | 29 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-52 | 7/19/11 | E601 | 26 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-53 | 1/4/11 | E601 | 31 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-53 | 7/19/11 | E601 | 26 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-53 | 10/5/11 | E601 | 23 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-54 | 3/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-54 | 8/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-55 | 3/7/11 | E601 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-55 | 8/22/11 | E601 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-55 | 8/22/11 DUP | E601 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-56 | 3/3/11 | E601 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-56 | 8/16/11 | E601 | 1.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-57 | 2/22/11 | E601 | 16 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-57 | 4/6/11 | E601 | 18 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-57 | 8/1/11 | E601 | 17 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-58 | 2/28/11 | E601 | 901 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-830-58 | 8/15/11 | E601 | 705 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-830-59 | 2/22/11 | E601 | 2,100 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-59 | 4/6/11 | E601 | 2,100 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-59 | 8/1/11 | E601 | 1,800 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-59 | 10/6/11 | E601 | 2,000 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-830-60 | 8/1/11 | E601 | 25 | <0.5 | 0.52 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-60 | 10/6/11 | E601 | 26 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1730 | 3/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-830-1730 | 6/7/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1730 | 8/16/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1730 | 11/28/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1807 | 2/22/11 | E601 | 300 D | 3.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.56 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1807 | 4/6/11 | E601 | 100 D | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1807 | 4/6/11 DUP | E601 | 109 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| W-830-1807 | 8/23/11 | E601 | 72 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1807 | 10/6/11 | E601 | 74 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1829 | 3/22/11 | E601 | 60 DS | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-1829 | 8/11/11 | E601 | 2,200 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D | <5 D |
| W-830-1830 | 2/23/11 | E601 | 2,340 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D |
| W-830-1830 | 8/11/11 | E601 | 1,960 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D |
| W-830-1831 | 3/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1831 | 8/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1832 | 3/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-1832 | 8/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2213 | 8/15/11 | E601 | 390 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2214 | 2/22/11 | E601 | 840 D | 0.79 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2214 | 4/6/11 | E601 | 950 D | 0.95 | 1 | <0.5 | <0.5 | 0.54 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2214 | 8/1/11 | E601 | 950 D | <1 D | 1.8 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D | <1 D |
| W-830-2214 | 11/1/11 | E601 | 840 D | 0.97 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2215 | 2/22/11 | E601 | 22 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2215 | 4/6/11 | E601 | 25 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2215 | 8/1/11 | E601 | 23 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2215 | 10/6/11 | E601 | 22 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2216 | 1/4/11 | E601 | 6.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2216 | 4/7/11 | E601 | 6.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2216 | 4/7/11 DUP | E601 | 6.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2216 | 7/19/11 | E601 | 6.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2216 | 10/5/11 | E601 | 6.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2311 | 9/14/11 | E601 | 27 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2701 | 3/28/11 | E624 | 11 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-830-2701 | 6/8/11 | E624 | 11 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-830-2701 | 8/18/11 | E601 | 8.4 | <0.5 | 0.64 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-830-2701 | 11/29/11 | E601 | 4.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-831-01 | 2/17/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-01 | 3/14/11 | E601 | 100 D | <0.5 | 3.9 | <0.5 | <0.5 | 0.78 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-01 | 4/11/11 | E601 | 240 DL | <0.5 | 5.7 | <0.5 | <0.5 | 0.75 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-01 | 4/11/11 DUP | E601 | 230 DL | <0.5 | 5.6 | <0.5 | <0.5 | 0.73 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-01 | 7/18/11 | E601 | 140 D | <0.5 | 4.6 | <0.5 | <0.5 | 0.71 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-01 | 10/10/11 | E601 | 170 D | <0.5 | 4.7 | <0.5 | <0.5 | 0.73 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-06 | 3/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-06 | 8/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-06 | 8/9/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-832-09 | 2/24/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-09 | 8/11/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-10 | 3/14/11 | E601 | 66 | <0.5 | 2.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.92 | <0.5 | <0.5 |
| W-832-10 | 4/11/11 | E601 | 120 DL | <0.5 | 3.9 | <0.5 | <0.5 | 0.55 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.87 | <0.5 | <0.5 |
| W-832-11 | 3/14/11 | E601 | 80 | <0.5 | 2.9 | <0.5 | <0.5 | 0.72 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.78 | <0.5 | <0.5 |
| W-832-11 | 4/11/11 | E601 | 130 DL | <0.5 | 4.2 | <0.5 | <0.5 | 0.87 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.99 | <0.5 | <0.5 |
| W-832-12 | 3/14/11 | E601 | 29 | <0.5 | 0.75 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-12 | 4/11/11 | E601 | 42 L | <0.5 | 0.97 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-12 | 4/11/11 DUP | E601 | 44 L | <0.5 | 1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-12 | 7/18/11 | E601 | 38 | <0.5 | 0.93 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-12 | 10/10/11 | E601 | 50 | <0.5 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-13 | 3/22/11 | E601 | 4.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-13 | 8/15/11 | E601 | 59 | <0.5 | 0.69 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-14 | 3/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-14 | 8/15/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-15 | 3/14/11 | E601 | 23 | <0.5 | 0.65 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-15 | 4/11/11 | E601 | 37 L | <0.5 | 0.77 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-15 | 7/18/11 | E601 | 25 | <0.5 | 0.72 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-15 | 10/10/11 | E601 | 48 | <0.5 | 0.99 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-16 | 3/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-17 | 3/22/11 | E601 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-17 | 8/15/11 | E601 | 0.56 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-18 | 3/22/11 | E601 | 130 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-19 | 2/17/11 | E601 | 1.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-19 | 8/9/11 | E601 | 5.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-19 | 8/9/11 DUP | E601 | 5.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-20 | 3/22/11 | E601 | 110 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-23 | 2/17/11 | E601 | 100 D | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-23 | 8/9/11 | E601 | 82 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-832-24 | 2/17/11 | E601 | 47 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-24 | 2/17/11 DUP | E601 | 47 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-24 | 8/10/11 | E601 | 42 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-25 | 3/14/11 | E624 | 42 | <1 | 1.1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| W-832-25 | 4/11/11 | E601 | 70 L | <0.5 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-25 | 4/11/11 DUP | E601 | 68 L | <0.5 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-1927 | 2/28/11 | E601 | 37 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-1927 | 8/18/11 | E601 | 31 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-2112 | 3/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-2112 | 6/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-2112 | 8/22/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-2112 | 11/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-2112 | 11/29/11 DUP | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-SC3 | 3/3/11 | E601 | 7.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-832-SC3 | 8/17/11 | E601 | 6.5 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-832-SC4 | 3/3/11 | E601 | 3.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-870-02 | 3/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-870-02 | 8/23/11 | E601 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| SVI-830-031 | 2/24/11 | E601 | 164 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D |
| SVI-830-031 | 8/10/11 | E601 | 121 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D | <50 D |
| SVI-830-032 | 2/24/11 | E601 | 511 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D |
| SVI-830-032 | 8/10/11 | E601 | 365 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D | <12 D |
| SVI-830-033 | 2/24/11 | E601 | 58 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| SVI-830-033 | 8/10/11 | E601 | 33 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| SVI-830-035 | 2/24/11 | E601 | 881 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| SVI-830-035 | 8/10/11 | E601 | 1,080 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D | <25 D |
| SPRING3 | 3/3/11 | E601 | 1.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-01 | 3/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-01 | 6/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-01 | 8/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-01 | 11/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-02 | 3/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-02 | 6/8/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-02 | 11/29/11 | E601 | <0.5 | 0.61 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-03 | 3/9/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-03 | 8/23/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-880-03 | 11/29/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-7.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-830-04A | 3/2/11 | E601 | 0 of 18 | - | - | - |
| W-830-04A | 3/2/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-04A | 8/18/11 | E601 | 0 of 18 | - | - | - |
| W-830-04A | 8/18/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-05 | 3/3/11 | E601 | 0 of 18 | - | - | - |
| W-830-05 | 8/16/11 | E601 | 0 of 18 | - | - | - |
| W-830-09 | 2/23/11 | E601 | 0 of 18 | - | - | - |
| W-830-09 | 8/11/11 | E601 | 0 of 18 | - | - | - |
| W-830-10 | 3/2/11 | E601 | 0 of 18 | - | - | - |
| W-830-10 | 8/17/11 | E601 | 0 of 18 | - | - | - |
| W-830-10 | 8/17/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-11 | 3/2/11 | E601 | 0 of 18 | - | - | - |
| W-830-11 | 8/16/11 | E601 | 0 of 18 | - | - | - |
| W-830-12 | 2/23/11 | E601 | 0 of 18 | - | - | - |

Table B-7.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-830-13 | 8/17/11 | E601 | 0 of 18 | - | - | - |
| W-830-14 | 3/7/11 | E601 | 0 of 18 | - | - | - |
| W-830-14 | 8/17/11 | E601 | 0 of 18 | - | - | - |
| W-830-15 | 3/7/11 | E601 | 0 of 18 | - | - | - |
| W-830-15 | 6/7/11 | E601 | 0 of 18 | - | - | - |
| W-830-15 | 8/16/11 | E601 | 0 of 18 | - | - | - |
| W-830-15 | 11/28/11 | E601 | 0 of 18 | - | - | - |
| W-830-16 | 3/8/11 | E601 | 0 of 18 | - | - | - |
| W-830-16 | 8/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-17 | 3/8/11 | E601 | 0 of 18 | - | - | - |
| W-830-17 | 8/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-18 | 3/2/11 | E601 | 0 of 18 | - | - | - |
| W-830-18 | 8/18/11 | E601 | 0 of 18 | - | - | - |
| W-830-19 | 2/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-19 | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-19 | 4/6/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-19 | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-830-19 | 10/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-20 | 3/2/11 | E601 | 0 of 18 | - | - | - |
| W-830-20 | 8/16/11 | E601 | 0 of 18 | - | - | - |
| W-830-21 | 3/2/11 | E601 | 1 of 18 | 22 | - | - |
| W-830-21 | 3/2/11 DUP | E601 | 1 of 18 | 21 | - | - |
| W-830-21 | 8/15/11 | E601 | 1 of 18 | 11 | - | - |
| W-830-22 | 2/23/11 | E601 | 1 of 18 | 1.6 | - | - |
| W-830-22 | 8/11/11 | E601 | 1 of 18 | 2.4 | - | - |
| W-830-27 | 2/28/11 | E601 | 0 of 18 | - | - | - |
| W-830-27 | 2/28/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-27 | 8/15/11 | E601 | 0 of 18 | - | - | - |
| W-830-28 | 2/28/11 | E601 | 0 of 18 | - | - | - |
| W-830-28 | 8/15/11 | E601 | 0 of 18 | - | - | - |
| W-830-29 | 2/23/11 | E601 | 0 of 18 | - | - | - |
| W-830-29 | 8/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-30 | 2/24/11 | E601 | 0 of 18 | - | - | - |
| W-830-30 | 2/24/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-30 | 8/10/11 | E601 | 0 of 18 | - | - | - |
| W-830-34 | 2/24/11 | E601 | 0 of 18 | - | - | - |
| W-830-34 | 8/10/11 | E601 | 0 of 18 | - | - | - |
| W-830-49 | 2/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-49 | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-49 | 4/6/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-49 | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-830-49 | 10/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-50 | 3/2/11 | E601 | 0 of 18 | - | - | - |

Table B-7.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-830-50 | 8/16/11 | E601 | 0 of 18 | - | - | - |
| W-830-51 | 1/4/11 | E601 | 0 of 18 | - | - | - |
| W-830-51 | 4/7/11 | E601 | 0 of 18 | - | - | - |
| W-830-51 | 7/19/11 | E601 | 0 of 18 | - | - | - |
| W-830-51 | 10/5/11 | E601 | 0 of 18 | - | - | - |
| W-830-52 | 1/4/11 | E601 | 0 of 18 | - | - | - |
| W-830-52 | 7/19/11 | E601 | 0 of 18 | - | - | - |
| W-830-53 | 1/4/11 | E601 | 0 of 18 | - | - | - |
| W-830-53 | 7/19/11 | E601 | 0 of 18 | - | - | - |
| W-830-53 | 10/5/11 | E601 | 0 of 18 | - | - | - |
| W-830-54 | 3/7/11 | E601 | 0 of 18 | - | - | - |
| W-830-54 | 8/18/11 | E601 | 0 of 18 | - | - | - |
| W-830-55 | 3/7/11 | E601 | 0 of 18 | - | - | - |
| W-830-55 | 8/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-55 | 8/22/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-56 | 3/3/11 | E601 | 0 of 18 | - | - | - |
| W-830-56 | 8/16/11 | E601 | 0 of 18 | - | - | - |
| W-830-57 | 2/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-57 | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-57 | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-830-58 | 2/28/11 | E601 | 0 of 18 | - | - | - |
| W-830-58 | 8/15/11 | E601 | 0 of 18 | - | - | - |
| W-830-59 | 2/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-59 | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-59 | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-830-59 | 10/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-60 | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-830-60 | 10/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-1730 | 3/7/11 | E601 | 0 of 18 | - | - | - |
| W-830-1730 | 6/7/11 | E601 | 0 of 18 | - | - | - |
| W-830-1730 | 8/16/11 | E601 | 0 of 18 | - | - | - |
| W-830-1730 | 11/28/11 | E601 | 0 of 18 | - | - | - |
| W-830-1807 | 2/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-1807 | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-1807 | 4/6/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-1807 | 8/23/11 | E601 | 0 of 18 | - | - | - |
| W-830-1807 | 10/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-1829 | 3/22/11 | E601 | 1 of 18 | - | - | 44 DS |
| W-830-1829 | 8/11/11 | E601 | 0 of 18 | - | - | - |
| W-830-1830 | 2/23/11 | E601 | 0 of 18 | - | - | - |
| W-830-1830 | 8/11/11 | E601 | 0 of 18 | - | - | - |
| W-830-1831 | 3/8/11 | E601 | 0 of 18 | - | - | - |
| W-830-1831 | 8/22/11 | E601 | 0 of 18 | - | - | - |

Table B-7.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-830-1832 | 3/8/11 | E601 | 0 of 18 | - | - | - |
| W-830-1832 | 8/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-2213 | 8/15/11 | E601 | 0 of 18 | - | - | - |
| W-830-2214 | 2/22/11 | E601 | 1 of 18 | 1.8 | - | - |
| W-830-2214 | 4/6/11 | E601 | 1 of 18 | 1 | - | - |
| W-830-2214 | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-830-2214 | 11/1/11 | E601 | 1 of 18 | 1.8 | - | - |
| W-830-2215 | 2/22/11 | E601 | 0 of 18 | - | - | - |
| W-830-2215 | 4/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-2215 | 8/1/11 | E601 | 0 of 18 | - | - | - |
| W-830-2215 | 10/6/11 | E601 | 0 of 18 | - | - | - |
| W-830-2216 | 1/4/11 | E601 | 0 of 18 | - | - | - |
| W-830-2216 | 4/7/11 | E601 | 0 of 18 | - | - | - |
| W-830-2216 | 4/7/11 DUP | E601 | 0 of 18 | - | - | - |
| W-830-2216 | 7/19/11 | E601 | 0 of 18 | - | - | - |
| W-830-2216 | 10/5/11 | E601 | 0 of 18 | - | - | - |
| W-830-2311 | 9/14/11 | E601 | 0 of 18 | - | - | - |
| W-830-2701 | 3/28/11 | E624 | 0 of 30 | - | - | - |
| W-830-2701 | 6/8/11 | E624 | 0 of 30 | - | - | - |
| W-830-2701 | 8/18/11 | E601 | 0 of 18 | - | - | - |
| W-830-2701 | 11/29/11 | E601 | 0 of 18 | - | - | - |
| W-831-01 | 2/17/11 | E601 | 0 of 18 | - | - | - |
| W-832-01 | 3/14/11 | E601 | 1 of 18 | 3.9 | - | - |
| W-832-01 | 4/11/11 | E601 | 1 of 18 | 5.7 | - | - |
| W-832-01 | 4/11/11 DUP | E601 | 1 of 18 | 5.6 | - | - |
| W-832-01 | 7/18/11 | E601 | 1 of 18 | 4.6 | - | - |
| W-832-01 | 10/10/11 | E601 | 1 of 18 | 4.7 | - | - |
| W-832-06 | 3/8/11 | E601 | 0 of 18 | - | - | - |
| W-832-06 | 8/9/11 | E601 | 0 of 18 | - | - | - |
| W-832-06 | 8/9/11 DUP | E601 | 0 of 18 | - | - | - |
| W-832-09 | 2/24/11 | E601 | 0 of 18 | - | - | - |
| W-832-09 | 8/11/11 | E601 | 0 of 18 | - | - | - |
| W-832-10 | 3/14/11 | E601 | 1 of 18 | 2.2 | - | - |
| W-832-10 | 4/11/11 | E601 | 1 of 18 | 3.9 | - | - |
| W-832-11 | 3/14/11 | E601 | 3 of 18 | 2.9 | 4.3 | 1.8 |
| W-832-11 | 4/11/11 | E601 | 1 of 18 | 4.2 | - | - |
| W-832-12 | 3/14/11 | E601 | 0 of 18 | - | - | - |
| W-832-12 | 4/11/11 | E601 | 0 of 18 | - | - | - |
| W-832-12 | 4/11/11 DUP | E601 | 1 of 18 | 1 | - | - |
| W-832-12 | 7/18/11 | E601 | 0 of 18 | - | - | - |
| W-832-12 | 10/10/11 | E601 | 1 of 18 | 1.2 | - | - |
| W-832-13 | 3/22/11 | E601 | 0 of 18 | - | - | - |
| W-832-13 | 8/15/11 | E601 | 0 of 18 | - | - | - |

Table B-7.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-832-14 | 3/22/11 | E601 | 0 of 18 | - | - | - |
| W-832-14 | 8/15/11 | E601 | 0 of 18 | - | - | - |
| W-832-15 | 3/14/11 | E601 | 0 of 18 | - | - | - |
| W-832-15 | 4/11/11 | E601 | 0 of 18 | - | - | - |
| W-832-15 | 7/18/11 | E601 | 0 of 18 | - | - | - |
| W-832-15 | 10/10/11 | E601 | 0 of 18 | - | - | - |
| W-832-16 | 3/22/11 | E601 | 0 of 18 | - | - | - |
| W-832-17 | 3/22/11 | E601 | 0 of 18 | - | - | - |
| W-832-17 | 8/15/11 | E601 | 0 of 18 | - | - | - |
| W-832-18 | 3/22/11 | E601 | 0 of 18 | - | - | - |
| W-832-19 | 2/17/11 | E601 | 0 of 18 | - | - | - |
| W-832-19 | 8/9/11 | E601 | 0 of 18 | - | - | - |
| W-832-19 | 8/9/11 DUP | E601 | 0 of 18 | - | - | - |
| W-832-20 | 3/22/11 | E601 | 0 of 18 | - | - | - |
| W-832-23 | 2/17/11 | E601 | 0 of 18 | - | - | - |
| W-832-23 | 8/9/11 | E601 | 0 of 18 | - | - | - |
| W-832-24 | 2/17/11 | E601 | 0 of 18 | - | - | - |
| W-832-24 | 2/17/11 DUP | E601 | 0 of 18 | - | - | - |
| W-832-24 | 8/10/11 | E601 | 0 of 18 | - | - | - |
| W-832-25 | 3/14/11 | E624 | 1 of 30 | 1.1 | - | - |
| W-832-25 | 4/11/11 | E601 | 1 of 18 | 1.6 | - | - |
| W-832-25 | 4/11/11 DUP | E601 | 1 of 18 | 1.6 | - | - |
| W-832-1927 | 2/28/11 | E601 | 0 of 18 | - | - | - |
| W-832-1927 | 8/18/11 | E601 | 0 of 18 | - | - | - |
| W-832-2112 | 3/9/11 | E601 | 0 of 18 | - | - | - |
| W-832-2112 | 6/8/11 | E601 | 0 of 18 | - | - | - |
| W-832-2112 | 8/22/11 | E601 | 0 of 18 | - | - | - |
| W-832-2112 | 11/29/11 | E601 | 0 of 18 | - | - | - |
| W-832-2112 | 11/29/11 DUP | E601 | 0 of 18 | - | - | - |
| W-832-SC3 | 3/3/11 | E601 | 0 of 18 | - | - | - |
| W-832-SC3 | 8/17/11 | E601 | 0 of 18 | - | - | - |
| W-832-SC4 | 3/3/11 | E601 | 0 of 18 | - | - | - |
| W-870-02 | 3/9/11 | E601 | 0 of 18 | - | - | - |
| W-870-02 | 8/23/11 | E601 | 0 of 18 | - | - | - |
| SVI-830-031 | 2/24/11 | E601 | 0 of 18 | - | - | - |
| SVI-830-031 | 8/10/11 | E601 | 0 of 18 | - | - | - |
| SVI-830-032 | 2/24/11 | E601 | 0 of 18 | - | - | - |
| SVI-830-032 | 8/10/11 | E601 | 0 of 18 | - | - | - |
| SVI-830-033 | 2/24/11 | E601 | 0 of 18 | - | - | - |
| SVI-830-033 | 8/10/11 | E601 | 0 of 18 | - | - | - |
| SVI-830-035 | 2/24/11 | E601 | 0 of 18 | - | - | - |
| SVI-830-035 | 8/10/11 | E601 | 0 of 18 | - | - | - |
| SPRING3 | 3/3/11 | E601 | 0 of 18 | - | - | - |

Table B-7.01 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency | 1,2-Dichloro-ethene (total) (µg/L) | Chloro-ethane (µg/L) | Methylene chloride (µg/L) |
|---|---|---|---|---|---|---|
| W-880-01 | 3/9/11 | E601 | 0 of 18 | - | - | - |
| W-880-01 | 6/8/11 | E601 | 0 of 18 | - | - | - |
| W-880-01 | 8/23/11 | E601 | 0 of 18 | - | - | - |
| W-880-01 | 11/29/11 | E601 | 0 of 18 | - | - | - |
| W-880-02 | 3/9/11 | E601 | 0 of 18 | - | - | - |
| W-880-02 | 6/8/11 | E601 | 0 of 18 | - | - | - |
| W-880-02 | 11/29/11 | E601 | 0 of 18 | - | - | - |
| W-880-03 | 3/9/11 | E601 | 0 of 18 | - | - | - |
| W-880-03 | 8/23/11 | E601 | 0 of 18 | - | - | - |
| W-880-03 | 11/29/11 | E601 | 0 of 18 | - | - | - |

OU7-E300.0 [mg/L; ug/L] 2011 data (prepared 2012-02-23 04:59:49, Oracle epprd02.llnl.gov)

Table B-7.02. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-830-04A | 3/2/11 | 77 | <4 |
| W-830-04A | 3/2/11 DUP | 77 | <4 |
| W-830-05 | 3/3/11 | 62 D | 4.5 |
| W-830-09 | 2/23/11 | <0.5 L | <4 |
| W-830-10 | 3/2/11 | 53 D | 4.9 |
| W-830-11 | 3/2/11 | 9.6 | <4 |
| W-830-12 | 2/23/11 | <0.5 L | <4 |
| W-830-15 | 3/7/11 | 0.88 | <4 |
| W-830-15 | 8/16/11 | 1.3 | <4 |
| W-830-16 | 3/8/11 | <0.5 | <4 |
| W-830-17 | 3/8/11 | 73 D | 4.7 |
| W-830-19 | 2/22/11 | 150 D | 4.3 |
| W-830-19 | 8/1/11 | - | 5 |
| W-830-21 | 3/2/11 | 1.3 | <4 |
| W-830-21 | 3/2/11 DUP | 1.7 | <4 |
| W-830-22 | 2/23/11 | 3 | <4 |
| W-830-27 | 2/28/11 | 64 D | 7.1 |
| W-830-27 | 2/28/11 DUP | 76 D | 5.8 |
| W-830-28 | 2/28/11 | 2.5 | <4 |
| W-830-29 | 2/23/11 | <0.5 L | <4 |
| W-830-30 | 2/24/11 | 60 DL | <4 |
| W-830-30 | 2/24/11 DUP | 92 DL | <4 |
| W-830-34 | 2/24/11 | 110 DL | 4.6 |
| W-830-49 | 2/22/11 | 160 D | 4.8 |
| W-830-49 | 8/1/11 | - | 4.5 |
| W-830-50 | 3/2/11 | 9 D | <4 |
| W-830-51 | 1/4/11 | 72 | 4.3 |
| W-830-51 | 7/19/11 | - | 4.5 |
| W-830-52 | 1/4/11 | 69 | <4 |
| W-830-52 | 7/19/11 | - | 4.2 |
| W-830-53 | 1/4/11 | 70 | 4.2 |
| W-830-53 | 7/19/11 | - | 4 |
| W-830-54 | 3/7/11 | 0.94 | <4 |
| W-830-55 | 3/7/11 | 20 D | - |
| W-830-56 | 3/3/11 | 23 D | <4 |
| W-830-57 | 2/22/11 | 12 D | <4 |
| W-830-58 | 2/28/11 | 88 D | 8.6 |
| W-830-59 | 2/22/11 | 120 D | 5.9 |
| W-830-59 | 8/1/11 | - | 5.4 |
| W-830-1730 | 3/7/11 | 1.9 | <4 |
| W-830-1730 | 8/16/11 | 1.8 | <4 |
| W-830-1807 | 2/22/11 | 110 D | <4 |
| W-830-1807 | 8/23/11 | - | <4 |
| W-830-1829 | 3/22/11 | 130 DS | - |

Table B-7.02. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-830-1829 | 3/22/11 DUP | - | 4.3 |
| W-830-1830 | 2/23/11 | 86 DL | 7.6 |
| W-830-1831 | 3/8/11 | 0.86 | <4 |
| W-830-1832 | 3/8/11 | <0.5 | <4 |
| W-830-2214 | 2/22/11 | 64 D | 5.6 |
| W-830-2214 | 8/1/11 | - | 5.4 |
| W-830-2215 | 2/22/11 | 7.6 | <4 |
| W-830-2216 | 1/4/11 | 50 | <4 |
| W-830-2216 | 7/19/11 | - | <4 |
| W-830-2701 | 3/28/11 | - | <4 |
| W-830-2701 | 8/18/11 | 12 | <4 |
| W-831-01 | 2/17/11 | <0.5 | <4 |
| W-832-01 | 3/14/11 | 86 D | 6.9 |
| W-832-01 | 7/18/11 | - | 6.5 |
| W-832-06 | 3/8/11 | 7 | <4 |
| W-832-09 | 2/24/11 | <0.5 L | <4 |
| W-832-10 | 3/14/11 | 80 D | 8 |
| W-832-11 | 3/14/11 | 78 D | 6.2 |
| W-832-12 | 3/14/11 | 93 D | 4.5 |
| W-832-12 | 7/18/11 | - | 4.3 |
| W-832-13 | 3/22/11 | 120 D | <4 |
| W-832-14 | 3/22/11 | 18 | <4 |
| W-832-15 | 3/14/11 | 110 D | 6.9 |
| W-832-15 | 7/18/11 | 91 D | 5.1 |
| W-832-16 | 3/22/11 | 32 | <4 |
| W-832-17 | 3/22/11 | 20 | <4 |
| W-832-18 | 3/22/11 | 49 D | 14 |
| W-832-19 | 2/17/11 | 25 D | <4 |
| W-832-20 | 3/22/11 | 30 | <4 |
| W-832-23 | 2/17/11 | 51 D | 9.6 |
| W-832-24 | 2/17/11 | 31 D | <4 |
| W-832-24 | 2/17/11 DUP | 47 D | <4 |
| W-832-25 | 3/14/11 | 92 D | 8.1 |
| W-832-1927 | 2/28/11 | 36 D | 5.3 |
| W-832-2112 | 3/9/11 | <0.5 | <4 |
| W-832-2112 | 8/22/11 | <0.5 | <4 |
| W-832-SC3 | 3/3/11 | 21 D | <4 |
| W-832-SC4 | 3/3/11 | 55 D | - |
| W-870-02 | 3/9/11 | 2.8 | - |
| SVI-830-031 | 2/24/11 | 100 DL | 4.8 |
| SVI-830-032 | 2/24/11 | 97 DL | 4.5 |
| SVI-830-033 | 2/24/11 | 110 DL | <4 |
| SVI-830-035 | 2/24/11 | 100 DL | 4.7 |
| SPRING3 | 3/3/11 | 23 D | <4 |
| W-880-01 | 3/9/11 | 1.7 | <4 |
| W-880-01 | 8/23/11 | <0.5 | <4 |

Table B-7.02. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-880-02 | 3/9/11 | 2.4 D | <4 |
| W-880-03 | 3/9/11 | <0.5 | <4 |
| W-880-03 | 8/23/11 | <1 D | <4 |

OU7-HE [ug/L] 2011 data (prepared 2012-02-23 04:59:59, Oracle epprd02.llnl.gov)

Table B-7.03. Building 832 Canyon Operable Unit high explosive compounds in ground water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-Dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-Dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-830-2216 | 7/19/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-830-2701 | 3/28/11 | <1.5 O | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <0.75 | <1.5 | <0.75 | <1.5 |
| W-880-01 | 3/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-880-01 | 8/23/11 | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <2.6 D | <1.3 D | <2.6 D | <1.3 D | <2.6 D |
| W-880-02 | 3/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-880-02 | 8/23/11 | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <2 D | <1 D | <2 D | <1 D | <2 D |
| W-880-03 | 3/9/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| W-880-03 | 8/23/11 | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <2.4 D | <1.2 D | <2.4 D | <1.2 D | <2.4 D |

OU7-METALS [mg/L] 2011 data (prepared 2012-02-23 05:00:02, Oracle epprd02.llnl.gov)

Table B-7.04. Building 832 Canyon Operable Unit metals in ground water.

| Location | Date | Arsenic (mg/L) | Barium (mg/L) | Cadmium (mg/L) | Chromium (mg/L) | Lead (mg/L) | Mercury (mg/L) | Selenium (mg/L) | Silica (as SiO2) (mg/L) | Silver (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| W-830-2701 | 3/28/11 | <0.05 | <0.025 | <0.001 | <0.001 | <0.005 | <0.0002 | <0.05 | 44 | <0.001 |

OU7-E900 [pCi/L] 2011 data (prepared 2012-02-23 04:59:52, Oracle epprd02.llnl.gov)

Table B-7.05. Building 832 Canyon Operable Unit gross alpha and beta in ground water.

| Location | Date | Gross alpha (pCi/L) | Gross beta (pCi/L) |
|---|---|---|---|
| W-830-2701 | 3/28/11 | 3.43 ± 1.79 | 10.2 ± 2.59 |

OU7-E906 [pCi/L] 2011 data (prepared 2012-02-23 04:59:54, Oracle epprd02.llnl.gov)

Table B-7.06. Building 832 Canyon Operable Unit tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| W-830-2701 | 3/28/11 | <100 |

OU7-GENMIN [mg/L; Units; umhos/cm] 2011 data (prepared 2012-02-23 04:59:57, Oracle epprd02.llnl.gov)

Table B-7.07. Building 832 Canyon Operable Unit general minerals in ground water.

| Constituents of concern | W-830-2701 | W-880-01 | W-880-02 | W-880-03 |
|---|---|---|---|---|
| | 3/28/11 | 8/23/11 | 8/23/11 | 8/23/11 |
| Total Alkalinity (as CaCO3) (mg/L) | 150 | 180 | - | 170 |
| Aluminum (mg/L) | <0.2 | <0.2 | - | <0.2 |
| Bicarbonate Alk (as CaCO3) (mg/L) | 150 D | 170 D | - | 150 D |
| Calcium (mg/L) | 67 | 10 | - | 7.8 |
| Carbonate Alk (as CaCO3) (mg/L) | <8.2 D | 11 D | - | 18 D |
| Chloride (mg/L) | 300 | 220 D | - | 250 D |
| Copper (mg/L) | <0.05 | <0.05 | - | <0.05 |
| Fluoride (mg/L) | 0.44 | 0.85 D | - | 0.83 D |
| Hydroxide Alk (as CaCO3) (mg/L) | <8.2 D | <8.2 D | - | <8.2 D |
| Iron (mg/L) | <0.1 | <0.1 | - | <0.1 |
| Magnesium (mg/L) | 34 | 2.8 | - | 0.98 |
| Manganese (mg/L) | 0.069 | <0.03 | - | <0.03 |
| Nickel (mg/L) | <0.1 | <0.1 | - | <0.1 |
| Nitrate (as N) (mg/L) | 1.8 | <1 D | - | <1 D |
| Nitrate (as NO3) (mg/L) | 7.9 H | 0.57 H | - | <0.44 H |
| Nitrite (as N) (mg/L) | <0.5 | <0.5 | - | <0.5 |
| pH (Units) | 7.84 | 8.38 | - | 8.49 |
| Ortho-Phosphate (mg/L) | <0.05 | 0.078 | - | 0.099 |
| Total Phosphorus (as P) (mg/L) | <0.05 H | <0.05 H | - | <0.05 H |
| Potassium (mg/L) | 18 | 9.6 | - | 7.1 |
| Sodium (mg/L) | 270 L | 310 | - | 370 |
| Total dissolved solids (TDS) (mg/L) | 1,200 D | 970 DH | - | 1,300 DH |
| Specific Conductance (µmhos/cm) | 1,890 | 1,480 | - | 1,840 |
| Sulfate (mg/L) | 360 | 200 D | - | 350 D |
| Surfactants (mg/L) | <0.5 | <0.5 | - | <0.5 |
| Total Hardness (as CaCO3) (mg/L) | 310 | 38 | - | 23 |
| Total Organic Carbon (TOC) (mg/L) | - | 15 D | 2.3 | 0.67 |
| Zinc (mg/L) | <0.05 | <0.05 | - | <0.05 |

OU7-MSKPA [ug/L; pCi/L; ratio] 2011 data (prepared 2012-02-23 05:00:04, Oracle epprd02.llnl.gov)

Table B-7.08. Building 832 Canyon Operable Unit uranium isotopes by mass spectrometry in ground water.

| Location | Date | Uranium (µg/L) | Uranium (pCi/L) | Uranium 234 by mass (pCi/L) | Uranium 235 by mass (pCi/L) | Uranium 236 by mass (pCi/L) | Uranium 238 by mass (pCi/L) | Uranium 235/238 (ratio) |
|---|---|---|---|---|---|---|---|---|
| W-830-2701 | 3/28/11 | 4.82 ± 0.523 | 5.00 ± 0.110 | 2.80 ± 0.100 | 0.0990 ± 0.000840 | <0.00041 | 2.10 ± 0.0130 | 0.00732 ± 0.0000410 |

OU7-TBOS [ug/L] 2011 data (prepared 2012-02-23 05:00:06, Oracle epprd02.llnl.gov)

Table B-7.09. Building 832 Canyon Operable Unit tetrabutyl orthosilicate/tetrakis (2-ethylbutyl) silane (TBOS/TKEBS) in ground water.

| Location | Date | C24H52O4Si (µg/L) |
|---|---|---|
| W-830-2701 | 3/28/11 | <10 |

OU8A-MS [pCi/L; ratio] 2011 data (prepared 2012-02-23 05:00:49, Oracle epprd02.llnl.gov)

Table B-8.01. Building 851 Firing Table uranium isotopes by mass spectrometry in ground water.

| Location | Date | Uranium (pCi/L) | Uranium 234 by mass (pCi/L) | Uranium 235 by mass (pCi/L) | Uranium 236 by mass (pCi/L) | Uranium 238 by mass (pCi/L) | Uranium 235/238 (ratio) |
|---|---|---|---|---|---|---|---|
| W-851-05 | 5/18/11 | <0.0627 | <0.072 | <0.00048 | <0.00021 | 0.00850 ± 0.000240 | <0.008776 |
| W-851-06 | 5/18/11 | 0.160 ± 0.0140 | 0.120 ± 0.0140 | 0.00150 ± 0.0000430 | <0.00019 | 0.0400 ± 0.000720 | 0.00600 ± 0.000127 |
| W-851-07 | 5/18/11 | <0.0627 | <0.13 | <0.0018 | <0.00028 | 0.0360 ± 0.000230 | <0.007907 |
| W-851-08 | 5/18/11 | 0.420 ± 0.00190 | <0.68 | 0.0180 ± 0.000280 | <0.00093 | 0.400 ± 0.00190 | 0.00694 ± 0.000104 |

OU8A-AS [pCi/L] 2011 data (prepared 2012-02-23 05:00:47, Oracle epprd02.llnl.gov)

Table B-8.02. Building 851 Firing Table uranium isotopes by alpha spectrometry in ground water.

| Location | Date | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|
| W-851-05 | 5/18/11 | <0.1 | <0.1 | <0.1 |
| W-851-05 | 11/1/11 | <0.1 | <0.1 | <0.1 |
| W-851-06 | 5/18/11 | <0.1 | <0.1 | <0.1 |
| W-851-06 | 11/1/11 | <0.1 | <0.1 | <0.1 |
| W-851-07 | 5/18/11 | 0.114 ± 0.0421 | <0.1 | <0.1 |
| W-851-07 | 11/1/11 | 0.119 ± 0.0730 | <0.1 | <0.1 |
| W-851-08 | 5/18/11 | 0.266 ± 0.0745 | <0.1 | 0.213 ± 0.0630 |
| W-851-08 | 11/1/11 | 0.537 ± 0.164 | <0.1 | 0.425 ± 0.142 |

OU8A-VOC [ug/L]    2011 data    (prepared 2012-02-23 05:00:51, Oracle epprd02.llnl.gov)

Table B-8.03. Building 851 Firing Table volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-851-05 | 5/18/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-8.03 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| W-851-05 | 5/18/11 | E601 | 0 of 18 |

OU8B-E906 [pCi/L] 2011 data (prepared 2012-02-23 05:01:00, Oracle epprd02.llnl.gov)

Table B-8.04. Building 845 Firing Table and Pit 9 Landfill tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| K9-01 | 5/25/11 | <100 |
| K9-02 | 6/14/11 | <100 |
| K9-03 | 6/14/11 | <100 |

OU8B-METALS [mg/L; ug/L] 2011 data (prepared 2012-02-23 05:01:04, Oracle epprd02.llnl.gov)

Table B-8.05. Building 845 Firing Table and Pit 9 Landfill metals in ground water.

| Constituents of concern | K9-01 | K9-02 | K9-03 |
|---|---|---|---|
| | 5/25/11 | 6/14/11 | 6/14/11 |
| Antimony (mg/L) | <0.0005 | <0.0005 | <0.0005 |
| Arsenic (mg/L) | 0.002 | 0.02 | 0.003 |
| Barium (mg/L) | 0.01 | 0.02 | 0.01 |
| Beryllium (mg/L) | <0.0001 | <0.0001 | <0.0001 |
| Cadmium (mg/L) | <0.0001 | <0.0001 | <0.0001 |
| Chromium (mg/L) | <0.0005 | <0.0005 | <0.0005 |
| Cobalt (mg/L) | <0.0005 | <0.0005 | <0.0005 |
| Copper (mg/L) | <0.0005 | <0.0005 | <0.0005 |
| Lead (mg/L) | <0.0002 | <0.0002 | <0.0002 |
| Lithium (µg/L) | 71 | 76 | 81 |
| Mercury (mg/L) | <0.0002 | <0.0002 | <0.0002 |
| Molybdenum (mg/L) | 0.03 | 0.05 | 0.03 |
| Nickel (mg/L) | <0.0005 | 0.0008 | <0.0005 |
| Selenium (mg/L) | <0.001 | <0.001 | <0.001 |
| Silver (mg/L) | <0.0001 | <0.0001 | <0.0001 |
| Thallium (mg/L) | <0.0001 | <0.0001 | <0.0001 |
| Vanadium (mg/L) | <0.002 | <0.002 | <0.002 |
| Zinc (mg/L) | <0.01 | <0.01 | <0.01 |

OU8B-VOC [ug/L]    2011 data    (prepared 2012-02-23 05:01:09, Oracle epprd02.llnl.gov)

Table B-8.06.  Building 845 Firing Table and Pit 9 Landfill volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K9-01 | 5/25/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K9-02 | 6/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K9-03 | 6/14/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-8.06 (Con't).  Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| K9-01 | 5/25/11 | E601 | 0 of 18 |
| K9-02 | 6/14/11 | E601 | 0 of 18 |
| K9-03 | 6/14/11 | E601 | 0 of 18 |

OU8B-HE [ug/L] 2011 data (prepared 2012-02-23 05:01:02, Oracle epprd02.llnl.gov)

Table B-8.07. Building 845 Firing Table and Pit 9 Landfill high explosive compounds in ground water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-Dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-Dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K9-01 | 5/25/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| K9-02 | 6/23/11 | <2 | <2 | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <1 | <2 O | <1 | <2 |
| K9-03 | 6/23/11 | <2 | <2 | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <2 O | <1 | <2 O | <1 | <2 |

OU8B-E300.0 [mg/L; ug/L]    2011 data     (prepared 2012-02-23 05:00:56, Oracle epprd02.llnl.gov)

Table B-8.08.  Building 845 Firing Table and Pit 9 Landfill nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| K9-01 | 5/25/11 | <0.5 | <4 |
| K9-02 | 6/14/11 | <0.5 L | <4 |
| K9-03 | 6/14/11 | <0.5 L | <4 |

OU8B-E340.2 [mg/L] 2011 data (prepared 2012-02-23 05:00:58, Oracle epprd02.llnl.gov)

Table B-8.09. Building 845 Firing Table and Pit 9 Landfill fluoride in ground water.

| Location | Date | Fluoride (mg/L) |
|---|---|---|
| K9-01 | 5/25/11 | 0.16 |
| K9-02 | 6/14/11 | 0.22 |
| K9-03 | 6/14/11 | 0.17 |

OU8B-MS [pCi/L; ratio] 2011 data (prepared 2012-02-23 05:01:06, Oracle epprd02.llnl.gov)

Table B-8.10. Building 845 Firing Table and Pit 9 Landfill uranium isotopes by mass spectrometry in ground water.

| Location | Date | Uranium (pCi/L) | Uranium 234 by mass (pCi/L) | Uranium 235 by mass (pCi/L) | Uranium 236 by mass (pCi/L) | Uranium 238 by mass (pCi/L) | Uranium 235/238 (ratio) |
|---|---|---|---|---|---|---|---|
| K9-01 | 5/25/11 | <0.06273 | <0.083 | 0.00110 ± 0.0000310 | <0.00015 | 0.0240 ± 0.000420 | 0.00716 ± 0.000155 |
| K9-02 | 6/14/11 | 0.230 ± 0.0200 | 0.180 ± 0.0200 | 0.00220 ± 0.0000200 | <0.00018 | 0.0480 ± 0.000370 | 0.00721 ± 0.0000310 |
| K9-03 | 6/14/11 | 0.420 ± 0.0170 | 0.310 ± 0.0170 | 0.00480 ± 0.000160 | <0.00012 | 0.100 ± 0.00200 | 0.00720 ± 0.000187 |

OU8B-AS [pCi/L] 2011 data (prepared 2012-02-23 05:00:54, Oracle epprd02.llnl.gov)

Table B-8.11. Building 845 Firing Table and Pit 9 Landfill uranium isotopes by alpha spectrometry in ground water.

| Location | Date | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|
| K9-01 | 5/25/11 | <0.1 | <0.1 | <0.1 |
| K9-02 | 6/14/11 | 0.261 ± 0.0642 | <0.1 | <0.1 |
| K9-03 | 6/14/11 | 0.281 ± 0.0662 | <0.1 | <0.1 |

OU8C-VOC [ug/L] 2011 data (prepared 2012-02-23 05:01:14, Oracle epprd02.llnl.gov)

Table B-8.12. Building 833 volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W-833-30 | 2/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-833-30 | 9/12/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-833-33 | 2/2/11 | E601 | 150 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D | <2.5 D |
| W-840-01 | 2/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-8.12 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| W-833-30 | 2/2/11 | E601 | 0 of 18 |
| W-833-30 | 9/12/11 | E601 | 0 of 18 |
| W-833-33 | 2/2/11 | E601 | 0 of 18 |
| W-840-01 | 2/2/11 | E601 | 0 of 18 |

Table B-8.13.  Building 833 nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| W-840-01 | 2/2/11 | <0.5 H | <4 |

OU8D-E906 [pCi/L] 2011 data (prepared 2012-02-23 05:01:23, Oracle epprd02.llnl.gov)

Table B-8.14. Building 801 Firing Table and Pit 8 Landfill tritium in ground water.

| Location | Date | Tritium (pCi/L) |
|---|---|---|
| K8-01 | 5/19/11 | 104 ± 75.3 |
| K8-01 | 5/19/11 DUP | 144 ± 60.0 |
| K8-01 | 11/2/11 | 155 ± 94.1 |
| K8-01 | 11/2/11 DUP | <100 |
| K8-02B | 1/20/11 | <100 |
| K8-02B | 5/19/11 | <100 |
| K8-02B | 7/19/11 | <100 |
| K8-03B | 5/19/11 | <100 |
| K8-03B | 11/2/11 | <100 |
| K8-04 | 5/19/11 | <100 |
| K8-04 | 11/2/11 | <100 |

OU8D-METALS [ug/L; mg/L] 2011 data (prepared 2012-02-23 05:01:27, Oracle epprd02.llnl.gov)

Table B-8.15. Building 801 Firing Table and Pit 8 Landfill metals in ground water.

| Constituents of concern | K8-02B | K8-04 |
|---|---|---|
| | 5/19/11 | 5/19/11 |
| Antimony (mg/L) | <0.0005 | <0.0005 |
| Arsenic (mg/L) | 0.02 | 0.02 |
| Barium (mg/L) | 0.007 | 0.006 |
| Beryllium (mg/L) | <0.0001 | <0.0001 |
| Cadmium (mg/L) | <0.0001 | 0.0003 |
| Chromium (mg/L) | 0.001 | 0.009 |
| Cobalt (mg/L) | <0.0005 | <0.0005 |
| Copper (mg/L) | 0.07 | <0.0005 |
| Lead (mg/L) | <0.0002 | <0.0002 |
| Lithium (µg/L) | 33 | 37 |
| Mercury (mg/L) | <0.0002 | <0.0002 |
| Molybdenum (mg/L) | 0.005 | 0.006 |
| Nickel (mg/L) | 0.008 | <0.0005 |
| Selenium (mg/L) | 0.004 | 0.01 |
| Silver (mg/L) | <0.0001 | <0.0001 |
| Thallium (mg/L) | <0.0001 | <0.0001 |
| Vanadium (mg/L) | 0.05 | 0.09 |
| Zinc (mg/L) | 0.08 | <0.01 |

OU8D-VOC [ug/L] 2011 data (prepared 2012-02-23 05:01:32, Oracle epprd02.llnl.gov)

Table B-8.16. Building 801 Firing Table and Pit 8 Landfill volatile organic compounds (VOCs) in ground water.

| Location | Date | Method | TCE (µg/L) | PCE (µg/L) | cis-1,2-DCE (µg/L) | trans-1,2-DCE (µg/L) | Carbon tetrachloride (µg/L) | Chloroform (µg/L) | 1,1-DCA (µg/L) | 1,2-DCA (µg/L) | 1,1-DCE (µg/L) | 1,1,1-TCA (µg/L) | 1,1,2-TCA (µg/L) | Freon 11 (µg/L) | Freon 113 (µg/L) | Vinyl chloride (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K8-01 | 5/19/11 | E601 | 3.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K8-01 | 5/19/11 DUP | E601 | 3.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K8-01 | 11/2/11 | E601 | 3.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K8-01 | 11/2/11 DUP | E601 | 3.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K8-02B | 5/19/11 | E601 | 1.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K8-03B | 5/19/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K8-03B | 11/2/11 | E601 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| K8-04 | 5/19/11 | E601 | 1.3 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

Table B-8.16 (Con't). Analyte detected but not reported in main table.

| Location | Date | Method | Detection frequency |
|---|---|---|---|
| K8-01 | 5/19/11 | E601 | 0 of 18 |
| K8-01 | 5/19/11 DUP | E601 | 0 of 18 |
| K8-01 | 11/2/11 | E601 | 0 of 18 |
| K8-01 | 11/2/11 DUP | E601 | 0 of 18 |
| K8-02B | 5/19/11 | E601 | 0 of 18 |
| K8-03B | 5/19/11 | E601 | 0 of 18 |
| K8-03B | 11/2/11 | E601 | 0 of 18 |
| K8-04 | 5/19/11 | E601 | 0 of 18 |

OU8D-HE [ug/L] 2011 data (prepared 2012-02-23 05:01:25, Oracle epprd02.llnl.gov)

Table B-8.17. Building 801 Firing Table and Pit 8 Landfill high explosive compounds in ground water.

| Location | Date | 1,3,5-Trinitro-benzene (µg/L) | 1,3-Dinitro-benzene (µg/L) | 2,4-Dinitro-toluene (µg/L) | 2,6-Dinitro-toluene (µg/L) | 2-Amino-4,6-Dinitrotoluene (µg/L) | 2-Nitro-toluene (µg/L) | 3-Nitro-toluene (µg/L) | 4-Amino-2,6-Dinitrotoluene (µg/L) | 4-Nitro-toluene (µg/L) | HMX (µg/L) | Nitrobenzene (µg/L) | RDX (µg/L) | TNT (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K8-02B | 5/19/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |
| K8-04 | 5/19/11 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <1 | <2 | <1 | <2 |

OU8D-E300.0 [mg/L; ug/L]    2011 data     (prepared 2012-02-23 05:01:19, Oracle epprd02.llnl.gov)

Table B-8.18. Building 801 Firing Table and Pit 8 Landfill nitrate and perchlorate in ground water.

| Location | Date | Nitrate (as NO3) (mg/L) | Perchlorate (µg/L) |
|---|---|---|---|
| K8-01 | 5/19/11 | 39 DL | <4 |
| K8-01 | 5/19/11 DUP | 47 | <4 |
| K8-01 | 11/2/11 | - | <4 |
| K8-01 | 11/2/11 DUP | - | <4 |
| K8-02B | 1/20/11 | - | <4 |
| K8-02B | 5/19/11 | 35 DL | <4 |
| K8-02B | 7/19/11 | - | <4 |
| K8-03B | 5/19/11 | 14 L | <4 |
| K8-03B | 11/2/11 | - | <4 |
| K8-04 | 5/19/11 | 57 DL | <4 |
| K8-04 | 11/2/11 | - | <4 |

OU8D-E340.2 [mg/L] 2011 data (prepared 2012-02-23 05:01:21, Oracle epprd02.llnl.gov)

Table B-8.19. Building 801 Firing Table and Pit 8 Landfill fluoride in ground water.

| Location | Date | Fluoride (mg/L) |
|---|---|---|
| K8-02B | 5/19/11 | 0.17 |
| K8-04 | 5/19/11 | 0.35 |

OU8D-MS [pCi/L; ratio] 2011 data (prepared 2012-02-23 05:01:30, Oracle epprd02.llnl.gov)

Table B-8.20. Building 801 Firing Table and Pit 8 Landfill uranium isotopes by mass spectrometry in ground water.

| Location | Date | Uranium (pCi/L) | Uranium 234 by mass (pCi/L) | Uranium 235 by mass (pCi/L) | Uranium 236 by mass (pCi/L) | Uranium 238 by mass (pCi/L) | Uranium 235/238 (ratio) |
|---|---|---|---|---|---|---|---|
| K8-02B | 5/19/11 | 11.0 ± 0.220 | 6.80 ± 0.220 | 0.190 ± 0.00200 | <0.001 | 4.00 ± 0.0250 | 0.00729 ± 0.0000650 |
| K8-04 | 5/19/11 | 12.0 ± 0.340 | 7.30 ± 0.330 | 0.220 ± 0.00300 | <0.001 | 4.70 ± 0.0520 | 0.00725 ± 0.0000570 |

OU8D-AS [pCi/L] 2011 data (prepared 2012-02-23 05:01:17, Oracle epprd02.llnl.gov)

Table B-8.21. Building 801 Firing Table and Pit 8 Landfill uranium isotopes by alpha spectrometry in ground water.

| Location | Date | Uranium 234 and Uranium 233 (pCi/L) | Uranium 235 and Uranium 236 (pCi/L) | Uranium 238 (pCi/L) |
|---|---|---|---|---|
| K8-01 | 5/19/11 | 5.22 ± 1.13 | 0.329 ± 0.178 | 3.24 ± 0.755 |
| K8-01 | 5/19/11 DUP | 5.90 ± 1.00 B | 0.210 ± 0.0780 | 3.65 ± 0.670 |
| K8-02B | 5/19/11 | 5.99 ± 1.28 | 0.220 ± 0.142 | 3.72 ± 0.856 |
| K8-03B | 5/19/11 | 5.06 ± 1.24 | 0.322 ± 0.205 | 3.38 ± 0.888 |
| K8-04 | 5/19/11 | 6.43 ± 1.37 | 0.212 ± 0.144 | 4.08 ± 0.926 |

# Appendix C

# Ground Water Elevations Measured During 2011

# Appendix C

# Ground Water Elevations Measured During 2011

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| CDF1 | 01/25/11 | 11.71 | 490.91 | |
| CDF1 | 06/02/11 | 8.31 | 494.31 | |
| CDF1 | 09/07/11 | 6.80 | 495.82 | |
| CDF1 | 12/14/11 | 11.25 | 491.37 | |
| CON1 | 01/25/11 | 9.10 | 491.98 | |
| CON1 | 06/02/11 | 8.01 | 493.07 | |
| CON1 | 09/07/11 | 6.87 | 494.21 | |
| CON1 | 12/14/11 | 17.40 | 483.68 | |
| CON2 | 01/25/11 | 14.51 | 490.78 | |
| CON2 | 06/02/11 | 7.95 | 497.34 | |
| CON2 | 09/07/11 | 10.68 | 494.61 | |
| CON2 | 12/14/11 | 14.47 | 490.82 | |
| W-24P-03 | 01/25/11 | 1.80 | 425.94 | |
| W-24P-03 | 06/02/11 | - | NA | NM/UC |
| W-24P-03 | 12/22/11 | - | NA | NM/UC |
| W-25D-01 | 01/25/11 | 17.34 | 448.15 | |
| W-25D-01 | 06/02/11 | - | NA | NM |
| W-25D-01 | 09/28/11 | - | NA | NM/UC ROAD BLOCKED BY HIGH BRUSH |
| W-25D-01 | 12/22/11 | - | NA | NM/UC |
| W-25D-02 | 01/25/11 | 10.05 | 448.14 | |
| W-25D-02 | 06/02/11 | - | NA | NM |
| W-25D-02 | 09/28/11 | - | NA | NM/UC ROAD BLOCKED BY HIGH BRUSH |
| W-25D-02 | 12/22/11 | - | NA | NM/UC |
| W-25M-01 | 01/25/11 | 20.50 | 459.06 | |
| W-25M-01 | 06/02/11 | 16.27 | 463.29 | |
| W-25M-01 | 09/28/11 | - | NA | NM/UC ROAD BLOCKED BY HIGH BRUSH |
| W-25M-01 | 12/22/11 | 20.29 | 459.27 | |
| W-25M-02 | 01/25/11 | 9.54 | 475.70 | |
| W-25M-02 | 06/02/11 | 5.74 | 479.50 | |
| W-25M-02 | 09/07/11 | 7.34 | 477.90 | |
| W-25M-02 | 12/22/11 | 9.25 | 475.99 | |
| W-25M-03 | 01/25/11 | 10.14 | 477.29 | |
| W-25M-03 | 06/02/11 | - | NA | NM/UC HIGH WEEDS |
| W-25M-03 | 12/22/11 | - | NA | NM |
| W-25N-01 | 01/20/11 | 16.94 | 490.18 | |
| W-25N-01 | 05/04/11 | 10.09 | 497.03 | |
| W-25N-01 | 09/07/11 | 14.26 | 492.86 | |
| W-25N-01 | 12/12/11 | 16.62 | 490.50 | |
| W-25N-04 | 01/20/11 | 40.64 | 487.25 | |
| W-25N-04 | 05/04/11 | 40.01 | 487.88 | |
| W-25N-04 | 09/07/11 | 39.96 | 487.93 | |
| W-25N-04 | 12/12/11 | 40.12 | 487.77 | |
| W-25N-05 | 01/25/11 | 11.94 | 485.23 | |
| W-25N-05 | 05/04/11 | 6.19 | 490.98 | |

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-25N-05 | 09/07/11 | 10.25 | 486.92 | |
| W-25N-05 | 12/12/11 | 11.68 | 485.49 | |
| W-25N-06 | 01/20/11 | 14.53 | 482.29 | |
| W-25N-06 | 05/04/11 | 8.91 | 487.91 | |
| W-25N-06 | 09/07/11 | 12.46 | 484.36 | |
| W-25N-06 | 12/12/11 | 14.27 | 482.55 | |
| W-25N-07 | 01/25/11 | 15.00 | 490.40 | |
| W-25N-07 | 05/04/11 | 8.29 | 497.11 | |
| W-25N-07 | 09/07/11 | 11.98 | 493.42 | |
| W-25N-07 | 12/12/11 | 14.60 | 490.80 | |
| W-25N-08 | 01/20/11 | 22.31 | 488.51 | |
| W-25N-08 | 05/04/11 | 16.74 | 494.08 | |
| W-25N-08 | 09/07/11 | 20.40 | 490.42 | |
| W-25N-08 | 12/12/11 | 22.06 | 488.76 | |
| W-25N-09 | 01/20/11 | 18.40 | 492.06 | |
| W-25N-09 | 05/04/11 | 13.64 | 496.82 | |
| W-25N-09 | 09/07/11 | 17.61 | 492.85 | |
| W-25N-09 | 12/12/11 | 17.85 | 492.61 | |
| W-25N-10 | 01/25/11 | 13.83 | 491.73 | |
| W-25N-10 | 06/02/11 | 9.66 | 495.90 | |
| W-25N-10 | 09/07/11 | 12.05 | 493.51 | |
| W-25N-10 | 12/12/11 | 14.59 | 490.97 | |
| W-25N-11 | 01/25/11 | 13.53 | 491.61 | |
| W-25N-11 | 06/02/11 | 9.26 | 495.88 | |
| W-25N-11 | 09/07/11 | 13.58 | 491.56 | |
| W-25N-11 | 12/12/11 | 14.31 | 490.83 | |
| W-25N-12 | 01/25/11 | 14.35 | 491.17 | |
| W-25N-12 | 06/02/11 | 9.80 | 495.72 | |
| W-25N-12 | 09/07/11 | 12.44 | 493.08 | |
| W-25N-12 | 12/12/11 | 14.10 | 491.42 | |
| W-25N-13 | 01/25/11 | 15.79 | 489.59 | |
| W-25N-13 | 06/02/11 | 9.54 | 495.84 | |
| W-25N-13 | 09/07/11 | 13.06 | 492.32 | |
| W-25N-13 | 12/12/11 | 14.19 | 491.19 | |
| W-25N-15 | 01/25/11 | 12.96 | 488.41 | |
| W-25N-15 | 05/04/11 | 6.98 | 494.39 | |
| W-25N-15 | 09/07/11 | 11.39 | 489.98 | |
| W-25N-15 | 12/22/11 | 12.75 | 488.62 | |
| W-25N-18 | 01/25/11 | 14.00 | 487.82 | |
| W-25N-18 | 05/04/11 | 8.24 | 493.58 | |
| W-25N-18 | 09/07/11 | 12.45 | 489.37 | |
| W-25N-18 | 12/22/11 | 13.77 | 488.05 | |
| W-25N-20 | 01/20/11 | 14.54 | 490.40 | |
| W-25N-20 | 05/04/11 | 7.71 | 497.23 | |

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-25N-20 | 09/07/11 | 12.03 | 492.91 | |
| W-25N-20 | 12/12/11 | 14.26 | 490.68 | |
| W-25N-21 | 01/20/11 | 21.15 | 492.03 | |
| W-25N-21 | 05/04/11 | 16.40 | 496.78 | |
| W-25N-21 | 09/07/11 | 20.39 | 492.79 | |
| W-25N-21 | 12/12/11 | 20.60 | 492.58 | |
| W-25N-22 | 01/20/11 | 10.32 | 502.74 | |
| W-25N-22 | 05/04/11 | 17.81 | 495.25 | |
| W-25N-22 | 09/07/11 | 21.24 | 491.82 | |
| W-25N-22 | 12/12/11 | 23.08 | 489.98 | |
| W-25N-23 | 01/20/11 | 21.18 | 489.21 | |
| W-25N-23 | 05/04/11 | 15.11 | 495.28 | |
| W-25N-23 | 09/07/11 | 18.87 | 491.52 | |
| W-25N-23 | 12/12/11 | 20.87 | 489.52 | |
| W-25N-24 | 02/01/11 | 16.63 | 489.99 | |
| W-25N-24 | 05/04/11 | 10.14 | 496.48 | |
| W-25N-24 | 09/07/11 | 14.37 | 492.25 | |
| W-25N-24 | 12/12/11 | 16.44 | 490.18 | |
| W-25N-25 | 01/25/11 | 12.08 | 488.99 | |
| W-25N-25 | 06/02/11 | 5.90 | 495.17 | |
| W-25N-25 | 09/07/11 | 6.40 | 494.67 | |
| W-25N-25 | 12/22/11 | 7.87 | 493.20 | |
| W-25N-26 | 01/25/11 | 11.27 | 488.10 | |
| W-25N-26 | 06/02/11 | 5.65 | 493.72 | |
| W-25N-26 | 09/07/11 | 9.70 | 489.67 | |
| W-25N-26 | 12/22/11 | 11.03 | 488.34 | |
| W-25N-28 | 01/25/11 | 12.09 | 485.06 | |
| W-25N-28 | 05/04/11 | 6.92 | 490.23 | |
| W-25N-28 | 09/07/11 | 10.30 | 486.85 | |
| W-25N-28 | 12/22/11 | 11.75 | 485.40 | |
| W-26R-01 | 01/20/11 | 19.13 | 490.58 | |
| W-26R-01 | 05/04/11 | 11.99 | 497.72 | |
| W-26R-01 | 09/07/11 | 6.50 | 503.21 | |
| W-26R-01 | 12/12/11 | 28.78 | 480.93 | |
| W-26R-02 | 01/20/11 | 35.86 | 492.34 | |
| W-26R-02 | 05/04/11 | 31.36 | 496.84 | |
| W-26R-02 | 09/07/11 | 35.16 | 493.04 | |
| W-26R-02 | 12/12/11 | 35.19 | 493.01 | |
| W-26R-03 | 02/01/11 | 15.86 | 490.36 | |
| W-26R-03 | 05/04/11 | 8.83 | 497.39 | |
| W-26R-03 | 09/07/11 | 13.08 | 493.14 | |
| W-26R-03 | 12/12/11 | 15.36 | 490.86 | |
| W-26R-04 | 01/20/11 | 18.23 | 490.73 | |
| W-26R-04 | 05/04/11 | 11.05 | 497.91 | |

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-26R-04 | 09/07/11 | 15.57 | 493.39 | |
| W-26R-05 | 01/20/11 | 21.51 | 491.60 | |
| W-26R-05 | 06/02/11 | 16.35 | 496.76 | |
| W-26R-05 | 09/07/11 | 20.11 | 493.00 | |
| W-26R-05 | 12/12/11 | 22.24 | 490.87 | |
| W-26R-06 | 01/20/11 | 24.45 | 490.39 | |
| W-26R-06 | 05/04/11 | 17.15 | 497.69 | |
| W-26R-06 | 09/07/11 | 21.79 | 493.05 | |
| W-26R-06 | 12/12/11 | 24.11 | 490.73 | |
| W-26R-07 | 01/20/11 | 28.42 | 492.17 | |
| W-26R-07 | 05/04/11 | 23.68 | 496.91 | |
| W-26R-07 | 09/07/11 | 27.60 | 492.99 | |
| W-26R-07 | 12/12/11 | 27.90 | 492.69 | |
| W-26R-08 | 01/20/11 | 30.55 | 492.56 | |
| W-26R-08 | 05/04/11 | 26.09 | 497.02 | |
| W-26R-08 | 09/07/11 | 30.02 | 493.09 | |
| W-26R-08 | 12/12/11 | 29.82 | 493.29 | |
| W-26R-11 | 01/20/11 | 16.41 | 490.80 | |
| W-26R-11 | 05/04/11 | 9.16 | 498.05 | |
| W-26R-11 | 09/07/11 | 13.95 | 493.26 | |
| W-26R-11 | 12/12/11 | 16.08 | 491.13 | |
| W-35A-01 | 01/25/11 | 15.86 | 492.55 | |
| W-35A-01 | 06/02/11 | 3.59 | 504.82 | |
| W-35A-01 | 09/29/11 | 12.89 | 495.52 | |
| W-35A-01 | 12/12/11 | 14.70 | 493.71 | |
| W-35A-02 | 01/25/11 | 14.14 | 495.56 | |
| W-35A-02 | 06/02/11 | 4.79 | 504.91 | |
| W-35A-02 | 09/29/11 | 11.68 | 498.02 | |
| W-35A-02 | 12/12/11 | 14.01 | 495.69 | |
| W-35A-03 | 01/25/11 | 14.02 | 492.82 | |
| W-35A-03 | 06/02/11 | 5.84 | 501.00 | |
| W-35A-03 | 09/29/11 | 11.81 | 495.03 | |
| W-35A-03 | 12/12/11 | 13.63 | 493.21 | |
| W-35A-04 | 01/25/11 | 3.08 | 500.99 | |
| W-35A-04 | 06/02/11 | 5.14 | 498.93 | |
| W-35A-04 | 09/29/11 | 10.55 | 493.52 | |
| W-35A-05 | 01/25/11 | 14.91 | 493.06 | |
| W-35A-05 | 06/02/11 | 6.66 | 501.31 | |
| W-35A-05 | 09/29/11 | 12.85 | 495.12 | |
| W-35A-05 | 12/12/11 | 14.74 | 493.23 | |
| W-35A-06 | 01/25/11 | 12.83 | 491.49 | |
| W-35A-06 | 06/02/11 | 5.27 | 499.05 | |
| W-35A-06 | 09/29/11 | 10.69 | 493.63 | |
| W-35A-06 | 12/12/11 | 12.51 | 491.81 | |

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-35A-07 | 01/25/11 | 2.41 | 510.91 | |
| W-35A-07 | 06/02/11 | - | NA | NM/FA FLOWING OVER WELL PIPE |
| W-35A-07 | 09/29/11 | 9.00 | 504.32 | |
| W-35A-07 | 12/12/11 | 9.67 | 503.65 | |
| W-35A-08 | 01/25/11 | 17.07 | 500.89 | |
| W-35A-08 | 06/02/11 | 8.60 | 509.36 | |
| W-35A-08 | 09/22/11 | 15.67 | 502.29 | |
| W-35A-08 | 12/12/11 | 17.28 | 500.68 | |
| W-35A-09 | 01/25/11 | 17.64 | 498.01 | |
| W-35A-09 | 06/02/11 | 7.73 | 507.92 | |
| W-35A-09 | 09/29/11 | 15.20 | 500.45 | |
| W-35A-09 | 12/12/11 | 17.57 | 498.08 | |
| W-35A-10 | 01/25/11 | 14.03 | 498.13 | |
| W-35A-10 | 06/02/11 | 5.58 | 506.58 | |
| W-35A-10 | 09/29/11 | 11.98 | 500.18 | |
| W-35A-10 | 12/12/11 | 14.51 | 497.65 | |
| W-35A-11 | 01/25/11 | 2.45 | 502.90 | |
| W-35A-11 | 06/02/11 | - | NA | NM/FA FLOWING WELL |
| W-35A-11 | 09/29/11 | 2.10 | 503.25 | |
| W-35A-11 | 12/12/11 | 2.69 | 502.66 | |
| W-35A-12 | 01/25/11 | 7.32 | 498.50 | |
| W-35A-12 | 06/02/11 | 2.11 | 503.71 | |
| W-35A-12 | 09/29/11 | 8.56 | 497.26 | |
| W-35A-12 | 12/12/11 | 2.71 | 503.11 | |
| W-35A-13 | 01/25/11 | 11.10 | 492.24 | |
| W-35A-13 | 06/02/11 | 4.04 | 499.30 | |
| W-35A-13 | 09/29/11 | 9.22 | 494.12 | |
| W-35A-13 | 12/12/11 | 10.70 | 492.64 | |
| W-35A-14 | 01/25/11 | 14.52 | 498.01 | |
| W-35A-14 | 06/02/11 | 5.44 | 507.09 | |
| W-35A-14 | 09/22/11 | 11.79 | 500.74 | |
| W-35A-14 | 12/12/11 | 14.60 | 497.93 | |
| W-7A | 02/01/11 | 14.03 | 510.85 | |
| W-7A | 05/19/11 | 11.94 | 512.94 | |
| W-7A | 09/20/11 | 20.65 | 504.23 | DOUBLE CHECKED |
| W-7A | 12/13/11 | 21.32 | 503.56 | |
| W-7B | 01/20/11 | 2.00 | 509.44 | |
| W-7B | 05/04/11 | 11.65 | 499.79 | |
| W-7B | 09/07/11 | 16.43 | 495.01 | |
| W-7B | 12/12/11 | 18.93 | 492.51 | |
| W-7C | 01/20/11 | 13.27 | 504.60 | |
| W-7C | 05/04/11 | 9.51 | 508.36 | |
| W-7C | 09/07/11 | 16.31 | 501.56 | |
| W-7C | 12/12/11 | 17.46 | 500.41 | |

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-7D | 01/20/11 | 14.58 | 492.54 | |
| W-7D | 05/04/11 | 10.07 | 497.05 | |
| W-7D | 09/07/11 | 14.05 | 493.07 | |
| W-7D | 12/12/11 | 13.84 | 493.28 | |
| W-7DS | 01/20/11 | 15.31 | 491.29 | |
| W-7DS | 05/04/11 | 8.50 | 498.10 | |
| W-7DS | 09/07/11 | 12.95 | 493.65 | |
| W-7DS | 12/12/11 | 15.39 | 491.21 | |
| W-7E | 01/20/11 | 17.30 | 491.98 | |
| W-7E | 05/04/11 | 9.69 | 499.59 | |
| W-7E | 09/07/11 | 14.48 | 494.80 | |
| W-7E | 12/12/11 | 17.05 | 492.23 | |
| W-7ES | 01/20/11 | 17.27 | 492.44 | |
| W-7ES | 05/04/11 | 9.02 | 500.69 | |
| W-7ES | 09/07/11 | 14.26 | 495.45 | |
| W-7ES | 12/12/11 | 16.96 | 492.75 | |
| W-7F | 01/24/11 | 27.46 | 499.62 | |
| W-7F | 05/17/11 | 42.59 | 484.49 | |
| W-7F | 09/20/11 | 43.31 | 483.77 | |
| W-7F | 12/13/11 | 34.01 | 493.07 | |
| W-7G | 01/24/11 | 12.73 | 500.19 | |
| W-7G | 05/17/11 | 8.76 | 504.16 | |
| W-7G | 09/20/11 | 10.80 | 502.12 | |
| W-7G | 12/13/11 | 11.70 | 501.22 | |
| W-7H | 01/24/11 | 17.51 | 493.93 | |
| W-7H | 05/17/11 | 10.47 | 500.97 | |
| W-7H | 09/20/11 | 15.70 | 495.74 | |
| W-7H | 12/13/11 | 17.55 | 493.89 | |
| W-7I | 01/24/11 | 29.61 | NA | |
| W-7I | 05/17/11 | 48.45 | 480.84 | |
| W-7I | 09/20/11 | 44.38 | 484.91 | |
| W-7I | 12/13/11 | - | NA | NM |
| W-7J | 01/24/11 | 28.37 | 499.52 | |
| W-7J | 05/17/11 | 42.08 | 485.81 | |
| W-7J | 09/20/11 | 44.47 | 483.42 | |
| W-7J | 12/13/11 | 34.35 | 493.54 | |
| W-7K | 01/20/11 | 9.64 | 500.29 | |
| W-7K | 05/04/11 | 5.70 | 504.23 | |
| W-7K | 09/07/11 | 7.28 | 502.65 | |
| W-7K | 12/12/11 | 8.19 | 501.74 | |
| W-7L | 01/20/11 | 12.30 | 500.46 | |
| W-7L | 05/04/11 | 8.52 | 504.24 | |
| W-7L | 09/07/11 | 10.00 | 502.76 | |
| W-7L | 12/12/11 | 11.03 | 501.73 | |

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-7M | 01/20/11 | 11.92 | 495.83 | |
| W-7M | 05/04/11 | 6.38 | 501.37 | |
| W-7M | 09/07/11 | 9.90 | 497.85 | |
| W-7M | 12/12/11 | 11.40 | 496.35 | |
| W-7N | 01/20/11 | 16.00 | 492.18 | |
| W-7N | 05/04/11 | 8.33 | 499.85 | |
| W-7N | 09/07/11 | 13.14 | 495.04 | |
| W-7N | 12/12/11 | 15.70 | 492.48 | |
| W-7O | 01/24/11 | 24.01 | 491.78 | |
| W-7O | 05/17/11 | 16.00 | 499.79 | |
| W-7O | 09/20/11 | 22.00 | 493.79 | |
| W-7O | 12/13/11 | 23.25 | 492.54 | |
| W-7P | 01/20/11 | 17.96 | 491.96 | |
| W-7P | 05/04/11 | 10.29 | 499.63 | |
| W-7P | 09/07/11 | 15.05 | 494.87 | |
| W-7P | 12/12/11 | - | NA | NM NO PORT |
| W-7PS | 01/20/11 | 16.85 | 491.93 | |
| W-7PS | 05/04/11 | 9.09 | 499.69 | |
| W-7PS | 09/07/11 | 14.00 | 494.78 | |
| W-7PS | 12/12/11 | 16.56 | 492.22 | |
| W-7Q | 01/24/11 | 23.00 | 494.62 | |
| W-7Q | 05/17/11 | 14.69 | 502.93 | |
| W-7Q | 09/20/11 | 21.24 | 496.38 | |
| W-7Q | 12/12/11 | 23.51 | 494.11 | |
| W-7R | 01/20/11 | 17.96 | 492.44 | |
| W-7R | 05/04/11 | 9.96 | 500.44 | |
| W-7R | 09/07/11 | 15.05 | 495.35 | |
| W-7R | 12/12/11 | - | NA | NM/RA NEEDS PORT |
| W-7S | 01/20/11 | 17.41 | 492.47 | |
| W-7S | 05/04/11 | 9.21 | 500.67 | |
| W-7S | 09/07/11 | 14.38 | 495.50 | |
| W-7S | 12/12/11 | 17.14 | 492.74 | |
| W-7T | 01/20/11 | 17.24 | 492.53 | |
| W-7T | 05/04/11 | 9.08 | 500.69 | |
| W-7T | 09/07/11 | 14.24 | 495.53 | |
| W-7T | 12/12/11 | 16.97 | 492.80 | |
| W-843-01 | 01/25/11 | 113.50 | 510.26 | |
| W-843-01 | 05/17/11 | 111.35 | 512.41 | |
| W-843-01 | 09/20/11 | 112.14 | 511.62 | |
| W-843-01 | 12/13/11 | 111.85 | 511.91 | |
| W-843-02 | 01/25/11 | 102.91 | 519.68 | |
| W-843-02 | 05/17/11 | 101.77 | 520.82 | |
| W-843-02 | 09/20/11 | 106.99 | 515.60 | |
| W-843-02 | 12/13/11 | 107.44 | 515.15 | |

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-872-01 | 01/24/11 | 28.89 | 501.75 | |
| W-872-01 | 05/18/11 | 29.73 | 500.91 | |
| W-872-01 | 09/22/11 | - | NA | DRY |
| W-872-01 | 12/14/11 | 31.09 | 499.55 | |
| W-872-02 | 01/24/11 | 31.18 | 501.81 | |
| W-872-02 | 05/18/11 | 28.27 | 504.72 | |
| W-872-02 | 09/22/11 | - | NA | DRY |
| W-872-02 | 12/14/11 | 33.00 | 499.99 | |
| W-873-01 | 01/24/11 | 20.26 | 513.67 | |
| W-873-01 | 05/18/11 | 18.29 | 515.64 | |
| W-873-01 | 09/22/11 | 20.31 | 513.62 | |
| W-873-01 | 12/13/11 | 19.00 | 514.93 | |
| W-873-02 | 01/24/11 | 30.17 | 502.68 | |
| W-873-02 | 05/18/11 | 25.77 | 507.08 | |
| W-873-02 | 09/22/11 | 29.54 | 503.31 | |
| W-873-02 | 12/13/11 | 33.00 | 499.85 | |
| W-873-03 | 01/24/11 | 28.63 | 505.16 | |
| W-873-03 | 05/18/11 | 23.79 | 510.00 | |
| W-873-03 | 09/22/11 | 27.99 | 505.80 | |
| W-873-03 | 12/13/11 | 29.70 | 504.09 | |
| W-873-04 | 01/24/11 | 19.39 | 512.02 | |
| W-873-04 | 05/18/11 | - | NA | NM/RA TRUCK PARKED ON BOX |
| W-873-04 | 09/22/11 | 19.15 | 512.26 | |
| W-873-04 | 12/13/11 | 19.54 | 511.87 | |
| W-873-06 | 01/24/11 | 30.00 | 503.06 | |
| W-873-06 | 05/18/11 | 25.48 | 507.58 | |
| W-873-06 | 09/22/11 | 29.11 | 503.95 | |
| W-873-06 | 12/13/11 | 31.12 | 501.94 | |
| W-873-07 | 01/24/11 | 30.25 | 502.65 | |
| W-873-07 | 05/18/11 | 45.61 | 487.29 | |
| W-873-07 | 09/22/11 | 35.33 | 497.57 | |
| W-873-07 | 12/13/11 | 31.46 | 501.44 | |
| W-875-01 | 01/24/11 | 20.54 | 511.86 | |
| W-875-01 | 05/18/11 | 20.90 | 511.50 | |
| W-875-01 | 09/22/11 | 21.15 | 511.25 | |
| W-875-01 | 12/13/11 | 21.25 | 511.15 | |
| W-875-02 | 01/24/11 | 21.22 | 510.14 | |
| W-875-02 | 05/18/11 | 21.23 | 510.13 | |
| W-875-02 | 09/22/11 | - | NA | NM/RA TRUCK PARKED ON BOX |
| W-875-02 | 12/13/11 | 22.20 | 509.16 | |
| W-875-03 | 01/24/11 | 28.12 | 500.52 | |
| W-875-03 | 05/18/11 | 26.04 | 502.60 | |
| W-875-03 | 09/22/11 | 31.33 | 497.31 | |
| W-875-03 | 12/13/11 | 27.37 | 501.27 | |

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-875-04 | 01/24/11 | 20.54 | 511.69 | |
| W-875-04 | 05/18/11 | 20.71 | 511.52 | |
| W-875-04 | 09/22/11 | 21.33 | 510.90 | |
| W-875-04 | 12/13/11 | 21.47 | 510.76 | |
| W-875-05 | 01/24/11 | 23.10 | 513.60 | |
| W-875-05 | 05/18/11 | 23.07 | 513.63 | |
| W-875-05 | 09/22/11 | 23.24 | 513.46 | |
| W-875-05 | 12/13/11 | 23.28 | 513.42 | |
| W-875-06 | 01/24/11 | 30.00 | 499.42 | |
| W-875-06 | 05/18/11 | 26.51 | 502.91 | |
| W-875-06 | 09/22/11 | 24.61 | 504.81 | |
| W-875-06 | 12/13/11 | 25.23 | 504.19 | |
| W-875-07 | 01/24/11 | 32.01 | 496.43 | |
| W-875-07 | 05/17/11 | 34.75 | 493.69 | |
| W-875-07 | 09/20/11 | 35.00 | 493.44 | |
| W-875-07 | 12/13/11 | 34.88 | 493.56 | |
| W-875-08 | 01/24/11 | 29.44 | NA | |
| W-875-08 | 05/17/11 | 41.52 | 488.24 | |
| W-875-08 | 09/20/11 | - | NA | DRY |
| W-875-08 | 12/13/11 | 36.05 | 493.71 | |
| W-875-09 | 01/24/11 | 29.45 | NA | |
| W-875-09 | 05/17/11 | 42.36 | 487.35 | |
| W-875-09 | 09/20/11 | - | NA | DRY |
| W-875-09 | 12/13/11 | 36.09 | 493.62 | |
| W-875-10 | 01/24/11 | 29.83 | NA | |
| W-875-10 | 05/17/11 | 41.79 | 488.40 | |
| W-875-10 | 09/20/11 | - | NA | DRY |
| W-875-10 | 12/13/11 | 36.36 | 493.83 | |
| W-875-11 | 01/24/11 | 29.85 | NA | |
| W-875-11 | 05/17/11 | 41.37 | 488.36 | |
| W-875-11 | 09/20/11 | - | NA | DRY |
| W-875-11 | 12/13/11 | 36.32 | 493.41 | |
| W-875-15 | 01/24/11 | 27.11 | NA | |
| W-875-15 | 05/17/11 | - | NA | DRY |
| W-875-15 | 09/20/11 | - | NA | DRY |
| W-875-15 | 12/13/11 | 36.00 | 493.91 | |
| W-876-01 | 01/24/11 | 23.47 | 514.51 | |
| W-876-01 | 05/18/11 | 23.27 | 514.71 | |
| W-876-01 | 09/22/11 | 24.13 | 513.85 | |
| W-876-01 | 12/13/11 | 24.40 | 513.58 | |
| W-879-01 | 01/24/11 | 38.74 | 513.12 | |
| W-879-01 | 05/18/11 | 36.15 | 515.71 | |
| W-879-01 | 09/22/11 | 46.34 | 505.52 | DOUBLE CHECKED |
| W-879-01 | 12/13/11 | 46.56 | 505.30 | |

Table C-1. General Services Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-889-01 | 01/24/11 | 39.97 | 513.66 | |
| W-889-01 | 05/18/11 | 38.64 | 514.99 | |
| W-889-01 | 09/22/11 | 39.20 | 514.43 | |
| W-889-01 | 12/13/11 | 39.20 | 514.43 | |
| W-CGSA-1732 | 02/01/11 | 19.08 | 503.77 | |
| W-CGSA-1732 | 05/17/11 | 19.15 | 503.70 | |
| W-CGSA-1732 | 09/20/11 | 19.20 | 503.65 | |
| W-CGSA-1732 | 12/13/11 | 19.22 | 503.63 | |
| W-CGSA-1733 | 01/20/11 | 19.40 | 492.59 | |
| W-CGSA-1733 | 05/04/11 | 11.15 | 500.84 | |
| W-CGSA-1733 | 09/07/11 | 16.34 | 495.65 | |
| W-CGSA-1733 | 12/13/11 | 19.06 | 492.93 | |
| W-CGSA-1735 | 01/20/11 | 14.84 | 494.53 | |
| W-CGSA-1735 | 05/04/11 | 10.55 | 498.82 | |
| W-CGSA-1735 | 09/07/11 | - | NA | DRY |
| W-CGSA-1735 | 12/12/11 | 14.78 | 494.59 | |
| W-CGSA-1736 | 01/20/11 | 18.33 | 491.04 | |
| W-CGSA-1736 | 05/04/11 | 15.74 | 493.63 | |
| W-CGSA-1736 | 09/07/11 | 15.48 | 493.89 | |
| W-CGSA-1736 | 12/12/11 | 18.00 | 491.37 | |
| W-CGSA-1737 | 01/20/11 | 15.54 | 492.07 | |
| W-CGSA-1737 | 05/04/11 | 7.69 | 499.92 | |
| W-CGSA-1737 | 09/07/11 | 12.66 | 494.95 | |
| W-CGSA-1737 | 12/12/11 | 15.23 | 492.38 | |
| W-CGSA-1739 | 01/20/11 | 18.38 | 494.09 | |
| W-CGSA-1739 | 05/04/11 | 11.68 | 500.79 | |
| W-CGSA-1739 | 09/07/11 | 16.76 | 495.71 | |
| W-CGSA-1739 | 12/12/11 | 19.08 | 493.39 | |
| W-CGSA-2708 | 12/12/11 | 44.60 | NA | |

Table C-2. Building 834 Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-834-1709 | 02/08/11 | 20.79 | 995.79 | |
| W-834-1709 | 05/11/11 | 20.25 | 996.33 | |
| W-834-1709 | 09/13/11 | - | NA | NM NEEDS PORT/NO ACCESS |
| W-834-1711 | 02/08/11 | 37.52 | 979.42 | |
| W-834-1711 | 05/11/11 | 36.79 | 980.15 | |
| W-834-1711 | 09/13/11 | - | NA | NM NEEDS WL PORT/NO ACCESS |
| W-834-1712 | 02/08/11 | - | NA | DRY |
| W-834-1712 | 05/11/11 | - | NA | DRY |
| W-834-1712 | 09/13/11 | - | NA | DRY |
| W-834-1824 | 02/08/11 | - | NA | NM LOCK STUCK NO CUTTER |
| W-834-1824 | 05/11/11 | 39.05 | 921.73 | |
| W-834-1824 | 09/13/11 | 37.90 | 922.88 | |
| W-834-1824 | 12/06/11 | 37.43 | 923.35 | |
| W-834-1825 | 02/08/11 | 39.08 | 918.59 | |
| W-834-1825 | 05/11/11 | - | NA | DRY |
| W-834-1825 | 09/13/11 | 38.24 | 919.43 | |
| W-834-1825 | 12/06/11 | 38.55 | 919.12 | |
| W-834-1833 | 02/08/11 | 40.02 | 916.09 | |
| W-834-1833 | 05/11/11 | 38.39 | 917.72 | |
| W-834-1833 | 09/13/11 | 38.73 | 917.38 | |
| W-834-1833 | 12/06/11 | 38.86 | 917.25 | |
| W-834-2001 | 02/08/11 | - | NA | NM DIESEL WELL NO DEDICATED PROBE |
| W-834-2001 | 05/11/11 | - | NA | NM DIESEL WELL |
| W-834-2001 | 09/13/11 | 23.80 | 990.49 | |
| W-834-2001 | 12/06/11 | - | NA | NM DIESEL WELL NO DEDICATED PROBE |
| W-834-2113 | 02/08/11 | 37.20 | 961.81 | |
| W-834-2113 | 05/11/11 | 36.74 | 962.27 | |
| W-834-2113 | 09/13/11 | 36.44 | 962.57 | |
| W-834-2113 | 12/06/11 | 36.70 | 962.31 | |
| W-834-2117 | 02/08/11 | 41.00 | 932.89 | |
| W-834-2117 | 05/11/11 | 39.98 | 933.91 | |
| W-834-2117 | 09/13/11 | 38.67 | 935.22 | |
| W-834-2117 | 12/06/11 | 38.70 | 935.19 | |
| W-834-2118 | 02/08/11 | 30.29 | 909.00 | |
| W-834-2118 | 05/11/11 | 28.77 | 910.52 | |
| W-834-2118 | 09/13/11 | 28.97 | 910.32 | |
| W-834-2118 | 12/06/11 | 29.10 | 910.19 | |
| W-834-2119 | 02/08/11 | 55.55 | 899.66 | |
| W-834-2119 | 05/11/11 | 54.43 | 900.78 | |
| W-834-2119 | 09/13/11 | 54.58 | 900.63 | |
| W-834-2119 | 12/06/11 | 54.78 | 900.43 | |
| W-834-A1 | 02/08/11 | 29.75 | 985.34 | |
| W-834-A1 | 05/11/11 | 27.68 | 987.41 | |
| W-834-A1 | 09/13/11 | 28.32 | 986.77 | |

Table C-2. Building 834 Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-834-A1 | 12/06/11 | 29.36 | 985.73 | |
| W-834-A2 | 02/08/11 | 22.93 | 992.55 | |
| W-834-A2 | 05/11/11 | 18.19 | 997.29 | |
| W-834-A2 | 09/13/11 | - | NA | DRY |
| W-834-A2 | 12/06/11 | - | NA | DRY |
| W-834-B2 | 02/08/11 | - | NA | DRY |
| W-834-B2 | 05/11/11 | 16.37 | 1002.02 | |
| W-834-B2 | 09/13/11 | 16.51 | 1001.88 | |
| W-834-B2 | 12/06/11 | - | NA | DRY |
| W-834-B3 | 02/08/11 | 9.22 | 1008.93 | |
| W-834-B3 | 05/11/11 | 11.50 | 1006.65 | |
| W-834-B3 | 09/13/11 | 11.36 | 1006.79 | |
| W-834-B3 | 12/06/11 | 11.00 | 1006.88 | |
| W-834-B4 | 02/08/11 | 13.72 | 1001.85 | |
| W-834-B4 | 05/11/11 | 12.10 | 1003.47 | |
| W-834-B4 | 09/13/11 | 14.79 | 1000.78 | |
| W-834-B4 | 12/06/11 | - | NA | DRY |
| W-834-C2 | 02/08/11 | 18.36 | 1001.44 | |
| W-834-C2 | 05/11/11 | 16.98 | 1002.82 | |
| W-834-C2 | 09/13/11 | 18.60 | 1001.20 | |
| W-834-C2 | 12/06/11 | 18.47 | 1001.33 | |
| W-834-C4 | 02/08/11 | 8.22 | 1011.04 | |
| W-834-C4 | 05/11/11 | 7.03 | 1012.23 | |
| W-834-C4 | 09/13/11 | 10.38 | 1008.88 | |
| W-834-C4 | 12/06/11 | 11.43 | 1007.83 | |
| W-834-C5 | 02/08/11 | 11.20 | 1004.47 | |
| W-834-C5 | 05/11/11 | 9.36 | 1006.31 | |
| W-834-C5 | 09/13/11 | 12.60 | 1003.07 | |
| W-834-C5 | 12/06/11 | - | NA | DRY |
| W-834-D10 | 02/08/11 | 33.40 | 983.01 | |
| W-834-D10 | 05/11/11 | 32.83 | 983.58 | |
| W-834-D10 | 09/13/11 | 32.54 | 983.87 | |
| W-834-D10 | 12/06/11 | 32.42 | 983.99 | |
| W-834-D11 | 02/08/11 | 23.33 | 994.21 | |
| W-834-D11 | 05/11/11 | 22.92 | 994.62 | |
| W-834-D11 | 09/13/11 | 24.14 | 993.40 | |
| W-834-D11 | 12/06/11 | 23.98 | 993.56 | |
| W-834-D12 | 02/08/11 | 26.94 | 989.35 | |
| W-834-D12 | 05/11/11 | 29.48 | 986.81 | |
| W-834-D12 | 09/13/11 | 20.66 | 995.63 | DOUBLE CHECKED |
| W-834-D12 | 12/06/11 | 20.60 | 995.69 | |
| W-834-D13 | 02/08/11 | 26.70 | 991.29 | |
| W-834-D13 | 05/11/11 | 28.82 | 989.17 | |
| W-834-D13 | 09/13/11 | 28.88 | 989.11 | |

Table C-2. Building 834 Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-834-D13 | 12/06/11 | 28.34 | 989.65 | |
| W-834-D14 | 02/08/11 | 26.85 | 991.52 | |
| W-834-D14 | 05/11/11 | 28.10 | 990.27 | |
| W-834-D14 | 09/13/11 | 29.58 | 988.79 | |
| W-834-D14 | 12/06/11 | 28.75 | 989.62 | |
| W-834-D15 | 02/08/11 | 22.05 | 996.11 | |
| W-834-D15 | 05/11/11 | 21.48 | 996.68 | |
| W-834-D15 | 09/13/11 | 24.08 | 994.08 | |
| W-834-D15 | 12/06/11 | 24.16 | 994.00 | |
| W-834-D16 | 02/08/11 | - | NA | DRY |
| W-834-D16 | 05/11/11 | - | NA | DRY |
| W-834-D16 | 09/13/11 | - | NA | DRY |
| W-834-D16 | 12/06/11 | - | NA | DRY |
| W-834-D17 | 02/08/11 | - | NA | DRY |
| W-834-D17 | 05/11/11 | 32.40 | 984.82 | |
| W-834-D17 | 09/13/11 | 33.56 | 983.66 | |
| W-834-D17 | 12/06/11 | 33.56 | 983.66 | |
| W-834-D18 | 02/08/11 | 26.03 | 992.43 | |
| W-834-D18 | 05/11/11 | 23.00 | 995.46 | |
| W-834-D18 | 09/13/11 | 24.13 | 994.33 | |
| W-834-D18 | 12/06/11 | 25.74 | 992.72 | |
| W-834-D2 | 02/08/11 | - | NA | DRY |
| W-834-D2 | 05/11/11 | - | NA | DRY |
| W-834-D2 | 09/13/11 | - | NA | DRY |
| W-834-D2 | 12/06/11 | - | NA | DRY |
| W-834-D3 | 02/08/11 | 24.77 | 993.78 | |
| W-834-D3 | 05/11/11 | 23.72 | 994.83 | |
| W-834-D3 | 09/13/11 | 25.35 | 993.20 | |
| W-834-D3 | 12/06/11 | 26.55 | 992.00 | |
| W-834-D4 | 02/08/11 | 25.57 | 992.79 | |
| W-834-D4 | 05/11/11 | 36.00 | 982.36 | |
| W-834-D4 | 09/13/11 | 35.89 | 982.47 | |
| W-834-D4 | 12/06/11 | 29.20 | 989.16 | |
| W-834-D5 | 02/08/11 | 26.43 | 992.04 | |
| W-834-D5 | 05/11/11 | 26.94 | 991.53 | |
| W-834-D5 | 09/13/11 | 29.15 | 989.32 | |
| W-834-D5 | 12/06/11 | 29.32 | 989.15 | |
| W-834-D6 | 02/08/11 | 27.50 | 990.78 | |
| W-834-D6 | 05/11/11 | 34.08 | 984.20 | |
| W-834-D6 | 09/13/11 | - | NA | DRY |
| W-834-D6 | 12/06/11 | 29.47 | 988.81 | |
| W-834-D7 | 02/08/11 | 29.95 | 983.97 | |
| W-834-D7 | 05/11/11 | 32.56 | 981.36 | |
| W-834-D7 | 09/13/11 | 32.52 | 981.40 | |

Table C-2. Building 834 Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-834-D7 | 12/06/11 | 28.00 | 985.92 | |
| W-834-G3 | 02/08/11 | - | NA | DRY |
| W-834-G3 | 05/11/11 | - | NA | DRY |
| W-834-G3 | 09/13/11 | - | NA | DRY |
| W-834-G3 | 12/06/11 | - | NA | DRY |
| W-834-H2 | 02/08/11 | 30.90 | 993.05 | |
| W-834-H2 | 05/11/11 | 30.75 | 993.20 | |
| W-834-H2 | 09/13/11 | - | NA | NM/RA |
| W-834-H2 | 12/06/11 | 30.91 | 993.04 | |
| W-834-J1 | 02/08/11 | 29.35 | 990.48 | |
| W-834-J1 | 05/11/11 | - | NA | NM/RA BUILDING LOCKED |
| W-834-J1 | 09/13/11 | - | NA | NM/RA NO ACCESS |
| W-834-J1 | 12/06/11 | - | NA | NM/RA |
| W-834-J2 | 02/08/11 | 30.35 | 989.60 | |
| W-834-J2 | 05/11/11 | - | NA | NM NO ACCESS |
| W-834-J2 | 09/13/11 | - | NA | NM/RA DOR PADLOCKED |
| W-834-J2 | 12/06/11 | - | NA | NM/RA |
| W-834-J3 | 02/08/11 | - | NA | DRY |
| W-834-J3 | 05/11/11 | - | NA | NM/RA NO ACCESS |
| W-834-J3 | 09/13/11 | - | NA | NM/RA DOOR PADLOCKED |
| W-834-J3 | 12/06/11 | 73.34 | 965.09 | |
| W-834-K1A | 02/08/11 | - | NA | DRY |
| W-834-M1 | 02/08/11 | - | NA | NM/UC RATTLESNAKE |
| W-834-M1 | 05/11/11 | 60.68 | 963.83 | |
| W-834-M1 | 09/13/11 | 60.43 | 964.08 | |
| W-834-M1 | 12/06/11 | 60.22 | 964.29 | |
| W-834-M2 | 02/08/11 | - | NA | DRY |
| W-834-M2 | 05/11/11 | - | NA | DRY |
| W-834-M2 | 09/13/11 | - | NA | DRY |
| W-834-M2 | 12/06/11 | - | NA | DRY |
| W-834-S1 | 02/08/11 | 32.99 | 969.09 | |
| W-834-S1 | 05/11/11 | - | NA | NM HOSE IS BRITTLE NEEDS WL PORT |
| W-834-S1 | 09/13/11 | - | NA | NM NEEDS WL PORT |
| W-834-S1 | 12/06/11 | - | NA | NM/RA NO WL PORT |
| W-834-S10 | 02/08/11 | - | NA | DRY |
| W-834-S10 | 05/11/11 | - | NA | DRY |
| W-834-S10 | 09/13/11 | - | NA | DRY |
| W-834-S10 | 12/06/11 | - | NA | DRY |
| W-834-S12A | 02/08/11 | 49.50 | 955.23 | |
| W-834-S12A | 05/11/11 | - | NA | NM HOSE IS BRITTLE NEEDS WL PORT |
| W-834-S12A | 09/13/11 | - | NA | NM NEEDS WL PORT |
| W-834-S12A | 12/06/11 | - | NA | NM/RA NO WL PORT |
| W-834-S13 | 02/08/11 | 46.75 | 956.99 | |
| W-834-S13 | 05/11/11 | - | NA | NM HOSE IS BRITTLE NEEDS WL PORT |

Table C-2. Building 834 Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-834-S13 | 09/13/11 | - | NA | NM NEEDS WL PORT |
| W-834-S13 | 12/06/11 | - | NA | NM/RA NO WL PORT |
| W-834-S4 | 02/08/11 | 78.45 | 948.22 | |
| W-834-S4 | 05/11/11 | 78.34 | 948.33 | |
| W-834-S4 | 09/13/11 | 77.87 | 948.80 | |
| W-834-S4 | 12/06/11 | 77.54 | 949.13 | |
| W-834-S5 | 02/08/11 | - | NA | DRY |
| W-834-S5 | 05/11/11 | - | NA | DRY |
| W-834-S5 | 09/13/11 | - | NA | DRY |
| W-834-S5 | 12/06/11 | - | NA | DRY |
| W-834-S6 | 02/08/11 | 38.65 | 890.77 | |
| W-834-S6 | 05/11/11 | 38.65 | 890.77 | |
| W-834-S6 | 09/13/11 | - | NA | DRY |
| W-834-S6 | 12/06/11 | - | NA | DRY |
| W-834-S7 | 02/08/11 | - | NA | DRY |
| W-834-S7 | 05/11/11 | - | NA | DRY |
| W-834-S7 | 09/13/11 | - | NA | DRY |
| W-834-S7 | 12/06/11 | - | NA | DRY |
| W-834-S8 | 02/08/11 | 58.30 | 944.42 | |
| W-834-S8 | 05/11/11 | 57.00 | 945.72 | |
| W-834-S8 | 09/13/11 | 56.35 | 946.37 | |
| W-834-S8 | 12/06/11 | 56.80 | 945.92 | |
| W-834-S9 | 02/08/11 | 54.99 | 945.02 | |
| W-834-S9 | 05/11/11 | 53.84 | 946.17 | |
| W-834-S9 | 09/13/11 | 53.16 | 946.85 | |
| W-834-S9 | 12/06/11 | 53.97 | 946.04 | |
| W-834-T1 | 02/08/11 | 316.42 | 642.50 | |
| W-834-T1 | 05/11/11 | 316.50 | 642.42 | |
| W-834-T1 | 09/13/11 | 316.15 | 642.77 | |
| W-834-T1 | 12/06/11 | 316.20 | 642.72 | |
| W-834-T11 | 02/08/11 | - | NA | DRY |
| W-834-T11 | 05/11/11 | - | NA | DRY |
| W-834-T11 | 09/13/11 | - | NA | DRY |
| W-834-T11 | 12/06/11 | - | NA | DRY |
| W-834-T2 | 02/08/11 | 41.20 | 918.56 | |
| W-834-T2 | 05/11/11 | 39.84 | 919.92 | |
| W-834-T2 | 09/13/11 | 39.83 | 919.93 | |
| W-834-T2 | 12/06/11 | 39.77 | 919.99 | |
| W-834-T2A | 02/08/11 | 39.42 | 919.52 | |
| W-834-T2A | 05/11/11 | 37.76 | 921.18 | |
| W-834-T2A | 09/13/11 | 37.95 | 920.99 | |
| W-834-T2A | 12/06/11 | 38.13 | 920.81 | |
| W-834-T2B | 02/08/11 | - | NA | DRY |
| W-834-T2B | 05/11/11 | - | NA | DRY |

Table C-2. Building 834 Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-834-T2B | 09/13/11 | - | NA | DRY |
| W-834-T2B | 12/06/11 | - | NA | DRY |
| W-834-T2C | 02/08/11 | - | NA | DRY |
| W-834-T2C | 05/11/11 | - | NA | DRY |
| W-834-T2C | 09/13/11 | - | NA | DRY |
| W-834-T2C | 12/06/11 | - | NA | DRY |
| W-834-T2D | 02/08/11 | 37.11 | 917.28 | |
| W-834-T2D | 05/11/11 | 35.75 | 918.64 | |
| W-834-T2D | 09/13/11 | 35.77 | 918.62 | |
| W-834-T2D | 12/06/11 | 35.81 | 918.58 | |
| W-834-T3 | 02/08/11 | 324.65 | 607.89 | |
| W-834-T3 | 05/11/11 | 325.10 | 607.44 | |
| W-834-T3 | 09/13/11 | 324.60 | 607.94 | |
| W-834-T3 | 12/06/11 | 324.95 | 607.59 | |
| W-834-T5 | 02/08/11 | 77.20 | 853.77 | |
| W-834-T5 | 05/11/11 | 77.16 | 853.81 | |
| W-834-T5 | 09/13/11 | 77.01 | 853.96 | |
| W-834-T5 | 12/06/11 | 76.79 | 854.18 | |
| W-834-T7A | 02/08/11 | - | NA | DRY |
| W-834-T7A | 05/11/11 | - | NA | DRY |
| W-834-T7A | 09/13/11 | - | NA | DRY |
| W-834-T7A | 12/06/11 | - | NA | DRY |
| W-834-T8A | 02/08/11 | - | NA | DRY |
| W-834-T8A | 05/11/11 | - | NA | DRY |
| W-834-T8A | 09/13/11 | - | NA | DRY |
| W-834-T8A | 12/06/11 | - | NA | DRY |
| W-834-T9 | 02/08/11 | - | NA | DRY |
| W-834-T9 | 05/11/11 | - | NA | DRY |
| W-834-T9 | 09/13/11 | - | NA | DRY |
| W-834-T9 | 12/06/11 | - | NA | DRY |
| W-834-U1 | 02/08/11 | - | NA | NM DIESEL WELL NO DEDICATED PROBE |
| W-834-U1 | 05/11/11 | - | NA | NM DIESEL WELL NO DEDICATED PROBE |
| W-834-U1 | 09/13/11 | - | NA | NM NO ACCESS TO WELL |
| W-834-U1 | 12/06/11 | - | NA | NM DIESEL |

Table C-3. Pit 6 Landfill Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| BC6-10 | 01/26/11 | 30.32 | 657.23 | |
| BC6-10 | 05/02/11 | 29.66 | 657.89 | |
| BC6-10 | 09/15/11 | 29.40 | 658.15 | |
| BC6-10 | 12/22/11 | 29.58 | 657.97 | |
| BC6-13 | 01/27/11 | - | NA | DRY |
| BC6-13 | 05/02/11 | - | NA | DRY |
| BC6-13 | 09/15/11 | - | NA | DRY |
| BC6-13 | 12/22/11 | - | NA | DRY |
| CARNRW1 | 01/26/11 | 39.96 | 638.47 | |
| CARNRW1 | 05/02/11 | 64.51 | 613.92 | |
| CARNRW1 | 09/22/11 | - | NA | NM/RA PLUG REMOVED/BOLTED DOWN |
| CARNRW1 | 12/22/11 | 61.28 | 617.15 | |
| CARNRW3 | 01/26/11 | 42.21 | 660.79 | |
| CARNRW3 | 05/02/11 | 46.14 | 656.86 | |
| CARNRW3 | 09/22/11 | 53.78 | 649.22 | |
| CARNRW3 | 12/22/11 | 51.48 | 651.52 | |
| CARNRW4 | 01/26/11 | 11.73 | 640.02 | |
| CARNRW4 | 05/02/11 | 5.76 | 645.99 | |
| CARNRW4 | 09/22/11 | 11.27 | 640.48 | |
| CARNRW4 | 12/22/11 | 17.14 | 634.61 | |
| EP6-06 | 01/26/11 | 27.26 | 660.85 | |
| EP6-06 | 05/02/11 | 28.07 | 660.04 | |
| EP6-06 | 09/15/11 | 25.79 | 662.32 | |
| EP6-06 | 12/22/11 | 25.81 | 662.30 | |
| EP6-07 | 01/26/11 | 60.02 | 647.53 | |
| EP6-07 | 05/02/11 | 64.27 | 643.28 | |
| EP6-07 | 09/15/11 | 74.63 | 632.92 | |
| EP6-07 | 12/22/11 | 74.68 | 632.87 | |
| EP6-08 | 01/26/11 | - | NA | DRY |
| EP6-08 | 05/02/11 | - | NA | DRY |
| EP6-08 | 09/15/11 | - | NA | DRY |
| EP6-08 | 12/22/11 | - | NA | DRY |
| EP6-09 | 01/27/11 | 30.43 | 663.85 | |
| EP6-09 | 05/02/11 | 27.45 | 666.83 | |
| EP6-09 | 09/15/11 | 30.05 | 664.23 | |
| EP6-09 | 12/22/11 | 30.16 | 664.12 | |
| K6-01 | 01/27/11 | 27.63 | 663.83 | |
| K6-01 | 05/02/11 | 27.44 | 664.02 | |
| K6-01 | 09/15/11 | 27.23 | 664.23 | |
| K6-01 | 12/22/11 | 27.32 | 664.14 | |
| K6-01S | 01/27/11 | 28.70 | 663.82 | |
| K6-01S | 05/02/11 | 27.52 | 665.00 | |
| K6-01S | 09/15/11 | 28.31 | 664.21 | |
| K6-01S | 12/22/11 | 28.46 | 664.06 | |

Table C-3. Pit 6 Landfill Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| K6-03 | 01/26/11 | 79.23 | 647.32 | |
| K6-03 | 05/02/11 | 83.29 | 643.26 | |
| K6-03 | 09/15/11 | - | NA | NM |
| K6-03 | 12/22/11 | - | NA | DRY |
| K6-04 | 01/26/11 | 60.10 | 648.07 | |
| K6-04 | 05/02/11 | 62.60 | 645.57 | |
| K6-04 | 09/15/11 | - | NA | NM REEL STUCK ON WELL CHECK |
| K6-04 | 12/22/11 | - | NA | NM/RA REEL STUCK LAST QTR |
| K6-14 | 01/27/11 | 20.45 | 660.42 | |
| K6-14 | 05/02/11 | 20.15 | 660.72 | |
| K6-14 | 09/15/11 | 22.01 | 658.86 | |
| K6-14 | 12/22/11 | 22.15 | 658.72 | |
| K6-15 | 01/27/11 | - | NA | DRY |
| K6-15 | 05/02/11 | - | NA | DRY |
| K6-15 | 09/15/11 | - | NA | DRY |
| K6-15 | 12/22/11 | - | NA | DRY |
| K6-16 | 01/27/11 | 17.79 | 661.66 | |
| K6-16 | 05/02/11 | 17.96 | 661.49 | |
| K6-16 | 09/15/11 | 18.71 | 660.74 | |
| K6-16 | 12/22/11 | 18.80 | 660.65 | |
| K6-17 | 01/27/11 | 20.77 | 657.94 | |
| K6-17 | 05/02/11 | 18.81 | 659.90 | |
| K6-17 | 09/15/11 | 21.74 | 656.97 | |
| K6-17 | 12/22/11 | 22.08 | 656.63 | |
| K6-18 | 01/27/11 | 25.58 | 659.71 | |
| K6-18 | 05/02/11 | 25.50 | 659.79 | |
| K6-18 | 09/15/11 | 25.85 | 659.44 | |
| K6-18 | 12/22/11 | 25.80 | 659.49 | |
| K6-19 | 01/27/11 | 29.54 | 663.53 | |
| K6-19 | 05/02/11 | 29.57 | 663.50 | |
| K6-19 | 09/15/11 | 29.30 | 663.77 | |
| K6-19 | 12/22/11 | 29.31 | 663.76 | |
| K6-21 | 01/27/11 | - | NA | DRY |
| K6-21 | 05/02/11 | - | NA | DRY |
| K6-21 | 09/15/11 | - | NA | DRY |
| K6-21 | 12/22/11 | - | NA | DRY |
| K6-22 | 01/27/11 | 36.12 | 645.41 | |
| K6-22 | 05/02/11 | 35.98 | 645.55 | |
| K6-22 | 09/15/11 | 36.07 | 645.46 | |
| K6-22 | 12/22/11 | 35.53 | 646.00 | |
| K6-23 | 01/27/11 | 24.25 | 656.73 | |
| K6-23 | 05/02/11 | 23.62 | 657.36 | |
| K6-23 | 09/15/11 | 24.13 | 656.85 | |
| K6-24 | 01/27/11 | 40.83 | 646.10 | |

Table C-3. Pit 6 Landfill Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| K6-24 | 05/02/11 | 42.65 | 644.28 | |
| K6-24 | 09/15/11 | - | NA | DRY |
| K6-24 | 12/22/11 | - | NA | DRY |
| K6-25 | 01/27/11 | 18.47 | 661.28 | |
| K6-25 | 05/02/11 | 18.51 | 661.24 | |
| K6-25 | 09/15/11 | 18.92 | 660.83 | |
| K6-25 | 12/22/11 | 18.97 | 660.78 | |
| K6-26 | 01/27/11 | 40.01 | 647.32 | |
| K6-26 | 05/02/11 | 44.10 | 643.23 | |
| K6-26 | 09/15/11 | 54.75 | 632.58 | |
| K6-26 | 12/22/11 | 54.67 | 632.66 | |
| K6-27 | 01/27/11 | 41.40 | 645.79 | |
| K6-27 | 05/02/11 | 45.93 | 641.26 | |
| K6-27 | 09/15/11 | 57.38 | 629.81 | |
| K6-27 | 12/22/11 | 57.24 | 629.95 | |
| K6-32 | 01/26/11 | - | NA | DRY |
| K6-32 | 05/02/11 | - | NA | DRY |
| K6-32 | 09/15/11 | - | NA | DRY |
| K6-32 | 12/22/11 | - | NA | DRY |
| K6-33 | 01/27/11 | 41.78 | 640.46 | |
| K6-33 | 05/02/11 | 47.29 | 634.95 | |
| K6-33 | 09/15/11 | 51.68 | 630.56 | |
| K6-33 | 12/22/11 | - | NA | NM WELL PAVED OVER |
| K6-34 | 01/27/11 | 65.26 | 638.02 | |
| K6-34 | 05/02/11 | 69.19 | 634.09 | |
| K6-34 | 09/15/11 | 86.13 | 617.15 | DOUBLE CHECKED |
| K6-34 | 12/22/11 | 84.78 | 618.50 | |
| K6-35 | 01/26/11 | 45.58 | 647.38 | |
| K6-35 | 05/02/11 | 49.58 | 643.38 | |
| K6-35 | 09/15/11 | 60.66 | 632.30 | |
| K6-35 | 12/22/11 | 60.52 | 632.44 | |
| K6-36 | 01/26/11 | 38.70 | 651.68 | |
| K6-36 | 05/02/11 | 38.17 | 652.21 | |
| K6-36 | 09/15/11 | 38.70 | 651.68 | |
| K6-36 | 12/22/11 | 38.71 | 651.67 | |
| W-33C-01 | 01/26/11 | 13.00 | 639.51 | |
| W-33C-01 | 05/02/11 | 8.67 | 643.84 | |
| W-33C-01 | 09/15/11 | 16.42 | 636.09 | |
| W-33C-01 | 12/22/11 | 17.93 | 634.58 | |
| W-34-01 | 01/27/11 | 11.44 | 673.02 | |
| W-34-01 | 05/04/11 | - | NA | NM/UC BRUSH TOO HIGH |
| W-34-01 | 09/15/11 | - | NA | NM/RA UNDER MUSTER |
| W-34-02 | 01/27/11 | 38.11 | 646.75 | |
| W-34-02 | 05/04/11 | - | NA | NM/UC BRUSH TOO HIGH |

Table C-3. Pit 6 Landfill Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-34-02 | 09/15/11 | - | NA | NM/RA UNDER MUSTER |
| W-PIT6-1819 | 01/27/11 | 75.82 | 640.05 | |
| W-PIT6-1819 | 05/02/11 | 82.81 | 633.06 | |
| W-PIT6-1819 | 09/28/11 | 100.03 | 615.84 | |
| W-PIT6-1819 | 12/22/11 | 98.34 | 617.53 | |

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-35B-01 | 01/25/11 | 18.93 | 504.09 | |
| W-35B-01 | 06/02/11 | 11.50 | 511.52 | |
| W-35B-01 | 09/07/11 | 17.22 | 505.80 | |
| W-35B-01 | 12/21/11 | 19.15 | 503.87 | |
| W-35B-02 | 01/25/11 | 18.64 | 504.39 | |
| W-35B-02 | 06/02/11 | 10.71 | 512.32 | |
| W-35B-02 | 09/07/11 | 16.51 | 506.52 | |
| W-35B-02 | 12/21/11 | 18.52 | 504.51 | |
| W-35B-03 | 01/25/11 | 16.93 | 506.17 | |
| W-35B-03 | 06/02/11 | 10.56 | 512.54 | |
| W-35B-03 | 09/07/11 | 15.62 | 507.48 | |
| W-35B-03 | 12/21/11 | 17.22 | 505.88 | |
| W-35B-04 | 01/25/11 | 4.42 | 524.54 | |
| W-35B-04 | 06/02/11 | 8.80 | 520.16 | |
| W-35B-04 | 09/07/11 | - | NA | NM/FA ARTESIAN |
| W-35B-04 | 12/21/11 | - | NA | NM/FA ARTESIAN |
| W-35B-05 | 01/25/11 | 4.21 | 524.52 | |
| W-35B-05 | 06/02/11 | 8.70 | 520.03 | |
| W-35B-05 | 09/07/11 | - | NA | NM/FA ARTESIAN |
| W-35B-05 | 12/21/11 | - | NA | NM/FA ARTESIAN |
| W-35C-01 | 03/09/11 | 1.29 | 540.43 | |
| W-35C-01 | 05/31/11 | 1.29 | 540.43 | |
| W-35C-01 | 09/26/11 | 1.81 | 539.91 | |
| W-35C-01 | 12/22/11 | 1.90 | 539.82 | |
| W-35C-02 | 03/09/11 | 22.73 | 550.07 | |
| W-35C-02 | 05/26/11 | 28.53 | 544.27 | |
| W-35C-02 | 09/12/11 | 54.76 | 518.04 | |
| W-35C-02 | 12/22/11 | 25.60 | 547.20 | |
| W-35C-04 | 05/23/11 | 109.64 | 422.29 | |
| W-35C-04 | 09/22/11 | - | NA | NM/RA UNDER CONSTRUCTION |
| W-35C-04 | 12/22/11 | - | NA | NM/RA NO PORT |
| W-35C-05 | 01/31/11 | 22.18 | 508.95 | |
| W-35C-05 | 05/23/11 | 20.19 | 510.94 | |
| W-35C-05 | 09/22/11 | 18.99 | 512.14 | |
| W-35C-05 | 12/22/11 | 21.06 | 510.07 | |
| W-35C-06 | 01/31/11 | 25.17 | 506.56 | |
| W-35C-06 | 05/23/11 | 14.66 | 517.07 | |
| W-35C-06 | 09/22/11 | 23.38 | 508.35 | |
| W-35C-06 | 12/22/11 | 24.98 | 506.75 | |
| W-35C-07 | 01/31/11 | 0.32 | 531.82 | |
| W-35C-07 | 05/23/11 | - | NA | NM NO FLOW |
| W-35C-07 | 09/22/11 | - | NA | NM/RA UNDER CONSTRUCTION |
| W-35C-07 | 12/22/11 | - | NA | NM/RA NON ARTESIAN/NO PORT |
| W-35C-08 | 01/31/11 | 24.77 | 507.52 | |

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-35C-08 | 05/23/11 | 14.55 | 517.74 | |
| W-35C-08 | 09/22/11 | - | NA | NM/RA UNDER CONSTRUCTION |
| W-35C-08 | 12/22/11 | 24.56 | 507.73 | |
| W-4A | 01/31/11 | 2.76 | 527.71 | |
| W-4A | 05/23/11 | 4.34 | 526.13 | |
| W-4A | 09/26/11 | - | NA | NM WELL UNDER WATER |
| W-4AS | 01/31/11 | 6.17 | 525.48 | |
| W-4AS | 05/23/11 | 8.02 | 523.63 | |
| W-4AS | 09/26/11 | 5.15 | 526.50 | |
| W-4AS | 12/22/11 | - | NA | NM |
| W-4B | 01/31/11 | 0.91 | 529.29 | |
| W-4B | 05/24/11 | - | NA | NM NO FLOW |
| W-4B | 09/22/11 | - | NA | NM/RA NOT FLOWING/NO PORT |
| W-4B | 12/22/11 | - | NA | NM/RA NON ARTESIAN/NO PORT |
| W-4C | 01/31/11 | 1.18 | 528.60 | |
| W-4C | 05/24/11 | 1.01 | 528.77 | |
| W-4C | 09/22/11 | 4.79 | 524.99 | |
| W-4C | 12/22/11 | 2.30 | 527.48 | |
| W-6BD | 03/10/11 | 20.24 | 513.03 | |
| W-6BD | 05/24/11 | 15.24 | 518.03 | |
| W-6BD | 09/22/11 | 22.14 | 511.13 | |
| W-6BD | 12/22/11 | 22.24 | 511.03 | |
| W-6BS | 03/10/11 | 20.21 | 513.02 | |
| W-6BS | 05/24/11 | 14.71 | 518.52 | |
| W-6BS | 09/22/11 | 22.05 | 511.18 | |
| W-6BS | 12/22/11 | 22.17 | 511.06 | |
| W-6CD | 03/09/11 | 28.35 | 551.69 | |
| W-6CD | 05/26/11 | 29.33 | 550.71 | |
| W-6CD | 09/12/11 | 29.95 | 550.09 | |
| W-6CD | 12/22/11 | 29.38 | 550.66 | |
| W-6CI | 03/09/11 | 28.01 | 552.50 | |
| W-6CI | 05/26/11 | 28.40 | 552.11 | |
| W-6CI | 09/12/11 | 29.16 | 551.35 | |
| W-6CI | 12/22/11 | 29.00 | 551.51 | |
| W-6CS | 03/09/11 | 24.71 | 554.97 | |
| W-6CS | 05/26/11 | 28.05 | 551.63 | |
| W-6CS | 09/12/11 | 29.76 | 549.92 | |
| W-6CS | 12/22/11 | 26.79 | 552.89 | |
| W-6EI | 01/31/11 | 0.49 | 530.83 | |
| W-6EI | 05/24/11 | - | NA | NM NOT FLOWING NEEDS PORT |
| W-6EI | 09/22/11 | - | NA | NM/FA FLOWING ARTESIAN |
| W-6EI | 12/22/11 | 0.63 | 530.69 | |
| W-6ER | 01/31/11 | - | NA | NM |
| W-6ER | 05/24/11 | - | NA | NM |

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-6ER | 09/22/11 | - | NA | NM/RA WELL COVERED |
| W-6ER | 12/22/11 | - | NA | NM/RA |
| W-6ES | 01/31/11 | 25.09 | 506.40 | |
| W-6ES | 05/24/11 | 15.71 | 515.78 | |
| W-6ES | 09/22/11 | 23.28 | 508.21 | |
| W-6ES | 12/22/11 | 24.86 | 506.63 | |
| W-6F | 03/09/11 | 57.74 | 561.12 | |
| W-6F | 05/26/11 | 58.20 | 560.66 | |
| W-6F | 09/12/11 | 59.64 | 559.22 | |
| W-6F | 12/22/11 | 59.22 | 559.64 | |
| W-6G | 03/09/11 | 58.11 | 561.81 | |
| W-6G | 05/26/11 | 58.61 | 561.31 | |
| W-6G | 09/12/11 | 60.11 | 559.81 | |
| W-6G | 12/22/11 | 59.60 | 560.32 | |
| W-6H | 03/09/11 | 5.81 | 555.53 | |
| W-6H | 05/13/11 | 5.90 | 555.44 | |
| W-6H | 09/26/11 | 9.00 | 552.34 | |
| W-6H | 12/22/11 | 6.22 | 555.12 | |
| W-6I | 03/09/11 | 23.12 | 538.17 | |
| W-6I | 05/13/11 | 26.46 | 534.83 | |
| W-6I | 09/26/11 | 28.07 | 533.22 | |
| W-6I | 12/22/11 | 26.56 | 534.73 | |
| W-6J | 03/09/11 | 6.21 | 555.15 | |
| W-6J | 05/13/11 | 6.34 | 555.02 | |
| W-6J | 09/26/11 | 9.29 | 552.07 | |
| W-6J | 12/22/11 | 6.60 | 554.76 | |
| W-6K | 01/31/11 | -2.20 | NA | |
| W-6K | 05/24/11 | 0.80 | 533.04 | |
| W-6K | 09/22/11 | - | NA | NM/FA ARTESIAN/ BEE HIVE |
| W-6K | 12/22/11 | -2.70 | NA | |
| W-6L | 01/31/11 | -2.76 | NA | |
| W-6L | 05/24/11 | 0.10 | 533.81 | |
| W-6L | 09/22/11 | - | NA | NM/FA ARTESIAN |
| W-6L | 12/22/11 | -3.60 | 537.51 | FLOWING ARTESIAN |
| W-806-07 | 09/12/11 | - | NA | NM/RA NO ACCESS |
| W-808-01 | 02/08/11 | 48.92 | 853.09 | |
| W-808-01 | 05/09/11 | 46.91 | 855.10 | |
| W-808-01 | 09/12/11 | 46.36 | 855.65 | |
| W-808-01 | 12/06/11 | 46.45 | 855.56 | |
| W-808-02 | 02/08/11 | - | NA | DRY |
| W-808-02 | 05/09/11 | - | NA | DRY |
| W-808-02 | 09/12/11 | - | NA | DRY |
| W-808-02 | 12/06/11 | - | NA | DRY |
| W-808-03 | 02/08/11 | 297.53 | 605.36 | |

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-808-03 | 05/09/11 | 297.60 | 605.29 | |
| W-808-03 | 09/12/11 | 297.96 | 604.93 | |
| W-808-03 | 12/06/11 | 298.03 | 604.86 | |
| W-809-01 | 02/08/11 | 68.09 | 722.14 | |
| W-809-01 | 05/09/11 | 65.28 | 724.95 | |
| W-809-01 | 09/12/11 | 64.16 | 726.07 | |
| W-809-01 | 12/06/11 | 65.45 | 724.78 | |
| W-809-02 | 02/08/11 | 141.36 | 650.17 | |
| W-809-02 | 05/09/11 | 141.48 | 650.05 | |
| W-809-02 | 09/12/11 | 141.68 | 649.85 | |
| W-809-02 | 12/06/11 | 141.69 | 649.84 | |
| W-809-03 | 02/08/11 | 103.74 | 642.33 | |
| W-809-03 | 05/09/11 | 102.92 | 643.15 | |
| W-809-03 | 09/12/11 | 101.13 | 644.94 | |
| W-809-03 | 12/06/11 | 100.10 | 645.97 | |
| W-809-04 | 05/09/11 | 71.29 | 704.76 | |
| W-809-04 | 09/12/11 | - | NA | DRY |
| W-809-04 | 12/06/11 | 76.49 | 699.56 | |
| W-810-01 | 02/08/11 | 242.50 | 598.53 | |
| W-810-01 | 05/09/11 | 242.50 | 598.53 | |
| W-810-01 | 09/12/11 | 242.47 | 598.56 | |
| W-810-01 | 12/07/11 | 242.51 | 598.52 | |
| W-814-01 | 03/08/11 | 110.27 | 698.56 | |
| W-814-01 | 05/26/11 | 110.00 | 698.83 | |
| W-814-01 | 09/12/11 | 109.96 | 698.87 | |
| W-814-01 | 12/07/11 | 109.86 | 698.97 | |
| W-814-02 | 03/08/11 | 163.00 | 630.68 | |
| W-814-02 | 05/26/11 | 158.81 | 634.87 | |
| W-814-02 | 09/12/11 | 156.75 | 636.93 | |
| W-814-02 | 12/07/11 | 156.78 | 636.90 | |
| W-814-03 | 03/08/11 | - | NA | DRY |
| W-814-03 | 05/24/11 | - | NA | DRY |
| W-814-03 | 09/12/11 | - | NA | DRY |
| W-814-03 | 12/07/11 | - | NA | DRY |
| W-814-04 | 03/08/11 | 235.32 | 579.10 | |
| W-814-04 | 05/24/11 | 235.20 | 579.22 | |
| W-814-04 | 09/12/11 | 235.45 | 576.43 | |
| W-814-04 | 12/07/11 | 235.72 | 576.16 | |
| W-814-2134 | 03/08/11 | 140.79 | 654.10 | |
| W-814-2134 | 05/24/11 | - | NA | NM |
| W-814-2134 | 09/12/11 | - | NA | NM/RA |
| W-814-2138 | 03/08/11 | 98.18 | 696.73 | |
| W-814-2138 | 05/26/11 | 96.71 | 698.20 | |
| W-814-2138 | 09/12/11 | 96.51 | 698.40 | |

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-815-01 | 02/08/11 | - | NA | DRY |
| W-815-01 | 05/09/11 | 48.60 | 673.51 | |
| W-815-01 | 09/12/11 | - | NA | DRY |
| W-815-01 | 12/06/11 | - | NA | DRY |
| W-815-02 | 02/08/11 | 102.33 | 619.28 | |
| W-815-02 | 05/09/11 | 100.42 | 621.19 | |
| W-815-02 | 09/12/11 | 100.36 | 621.22 | |
| W-815-02 | 12/06/11 | 100.05 | 621.53 | |
| W-815-03 | 02/08/11 | - | NA | DRY |
| W-815-03 | 05/09/11 | 40.84 | 681.62 | |
| W-815-03 | 09/12/11 | 43.88 | 678.27 | |
| W-815-03 | 12/06/11 | 43.20 | 678.95 | |
| W-815-04 | 02/08/11 | 85.10 | 637.55 | |
| W-815-04 | 05/09/11 | - | NA | NM/RA BABY BIRDS IN WELL |
| W-815-04 | 09/12/11 | 91.00 | 631.65 | |
| W-815-04 | 12/06/11 | 89.15 | 633.50 | |
| W-815-05 | 02/08/11 | 33.55 | 678.66 | |
| W-815-05 | 05/09/11 | - | NA | NM/UC WELL UNDERCUT |
| W-815-05 | 09/12/11 | - | NA | NM/UC WELL UNDERCUT |
| W-815-05 | 12/06/11 | - | NA | NM/UC WELL UNDER CUT |
| W-815-06 | 03/08/11 | 132.30 | 623.48 | |
| W-815-06 | 05/26/11 | 131.05 | 624.73 | |
| W-815-06 | 09/12/11 | 129.14 | 626.64 | |
| W-815-06 | 12/06/11 | 132.50 | 623.28 | |
| W-815-07 | 03/08/11 | 140.37 | 622.12 | |
| W-815-07 | 05/26/11 | 139.17 | 623.32 | |
| W-815-07 | 09/12/11 | 137.40 | 625.09 | |
| W-815-08 | 02/08/11 | 131.36 | 592.43 | |
| W-815-08 | 05/09/11 | 129.86 | 593.93 | |
| W-815-08 | 09/12/11 | 131.55 | 592.24 | |
| W-815-1918 | 02/08/11 | 98.75 | 646.86 | |
| W-815-1918 | 05/09/11 | 93.33 | 652.28 | |
| W-815-1918 | 09/12/11 | 91.72 | 653.89 | |
| W-815-1918 | 12/06/11 | 90.20 | 655.41 | |
| W-815-1928 | 02/08/11 | 28.75 | 717.30 | |
| W-815-1928 | 05/09/11 | 21.61 | 724.44 | |
| W-815-1928 | 09/12/11 | - | NA | DRY |
| W-815-1928 | 12/06/11 | 24.10 | 721.95 | |
| W-815-2110 | 03/09/11 | -2.31 | 548.80 | FLOWING ARTESIAN |
| W-815-2110 | 05/31/11 | -1.92 | 548.41 | FLOWING ARTESIAN |
| W-815-2110 | 09/26/11 | 0.45 | 546.04 | |
| W-815-2110 | 12/22/11 | -2.20 | 548.69 | FLOWING ARTESIAN |
| W-815-2111 | 03/09/11 | -2.27 | 548.26 | FLOWING ARTESIAN |
| W-815-2111 | 05/31/11 | 2.27 | 543.72 | |

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-815-2111 | 09/26/11 | 0.35 | 545.64 | |
| W-815-2111 | 12/22/11 | -2.28 | NA | |
| W-815-2217 | 03/09/11 | 28.16 | 551.76 | |
| W-815-2217 | 05/26/11 | 29.10 | 550.82 | |
| W-815-2217 | 09/12/11 | 29.76 | 550.16 | |
| W-815-2217 | 12/22/11 | 29.19 | 550.73 | |
| W-815-2608 | 05/31/11 | - | NA | NM/RA SEALED SHUT |
| W-815-2608 | 09/26/11 | - | NA | NM/RA SEALED SHUT |
| W-815-2608 | 12/22/11 | - | NA | NM/RA SEALED SHUT |
| W-815-2621 | 05/26/11 | - | NA | NM/RA WELL CAPPED/BOLTED DOWN |
| W-815-2621 | 09/22/11 | - | NA | NM/RA WELL CAPPED/BOLTED DOWN |
| W-817-01 | 02/08/11 | 138.90 | 634.91 | |
| W-817-01 | 05/09/11 | 138.49 | 635.32 | |
| W-817-01 | 09/12/11 | 138.93 | 634.88 | |
| W-817-01 | 12/06/11 | 137.22 | 636.59 | |
| W-817-02 | 02/08/11 | - | NA | NM/RA |
| W-817-02 | 05/09/11 | - | NA | NM/RA |
| W-817-02 | 12/06/11 | - | NA | NM/RA |
| W-817-03 | 02/08/11 | 101.50 | 570.10 | |
| W-817-03 | 05/09/11 | 100.85 | 570.75 | |
| W-817-03 | 09/12/11 | 103.21 | 568.39 | |
| W-817-03 | 12/06/11 | 103.50 | 568.10 | |
| W-817-03A | 02/08/11 | 6.61 | 671.39 | |
| W-817-03A | 05/09/11 | 7.81 | 670.19 | |
| W-817-03A | 09/12/11 | 11.42 | 666.58 | |
| W-817-03A | 12/06/11 | 11.30 | 666.70 | |
| W-817-04 | 02/08/11 | 76.20 | 606.84 | |
| W-817-04 | 05/09/11 | 76.29 | 606.75 | |
| W-817-04 | 09/12/11 | 75.93 | 607.11 | |
| W-817-04 | 12/06/11 | 75.20 | 607.84 | |
| W-817-05 | 02/08/11 | 129.42 | 634.91 | |
| W-817-05 | 05/09/11 | 129.37 | 634.96 | |
| W-817-05 | 09/12/11 | 129.40 | 634.93 | |
| W-817-05 | 12/06/11 | 129.80 | 634.53 | |
| W-817-06A | 02/08/11 | 111.40 | 656.76 | |
| W-817-06A | 05/09/11 | 101.60 | 666.56 | |
| W-817-06A | 09/12/11 | 88.54 | 679.62 | |
| W-817-06A | 12/06/11 | 106.55 | 661.61 | |
| W-817-07 | 02/08/11 | 95.46 | 572.49 | |
| W-817-07 | 05/09/11 | 94.87 | 573.08 | |
| W-817-07 | 09/12/11 | 96.72 | 571.23 | |
| W-817-07 | 12/06/11 | 96.70 | 571.25 | |
| W-817-2109 | 02/08/11 | - | NA | NM/RA |
| W-817-2109 | 05/09/11 | - | NA | NM/RA |

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-817-2109 | 12/06/11 | - | NA | NM/RA |
| W-817-2318 | 02/08/11 | 4.45 | 671.57 | |
| W-817-2318 | 05/09/11 | 5.77 | 670.25 | |
| W-817-2318 | 09/12/11 | 12.92 | 663.10 | |
| W-817-2318 | 12/06/11 | 12.85 | 663.17 | |
| W-817-2609 | 09/12/11 | 92.00 | NA | SURVEY NEEDED |
| W-817-2609 | 12/06/11 | 92.37 | NA | SURVEY NEEDED |
| W-818-01 | 03/08/11 | 96.23 | 584.34 | |
| W-818-01 | 05/26/11 | 96.40 | 584.17 | |
| W-818-01 | 09/12/11 | 96.14 | 584.43 | |
| W-818-01 | 11/29/11 | 96.08 | 584.49 | |
| W-818-03 | 02/03/11 | 55.49 | 543.38 | |
| W-818-03 | 05/24/11 | 55.99 | 542.88 | |
| W-818-03 | 11/29/11 | 55.76 | 543.11 | |
| W-818-04 | 01/31/11 | 63.86 | 550.20 | |
| W-818-04 | 05/24/11 | 63.84 | 550.22 | |
| W-818-04 | 09/20/11 | 64.51 | 549.55 | |
| W-818-04 | 11/29/11 | 64.37 | 549.69 | |
| W-818-06 | 01/31/11 | 67.82 | 545.70 | |
| W-818-06 | 05/24/11 | 68.94 | 544.58 | |
| W-818-06 | 09/20/11 | 63.99 | 549.53 | |
| W-818-06 | 11/29/11 | 68.88 | 544.64 | |
| W-818-07 | 01/31/11 | 69.96 | 544.25 | |
| W-818-07 | 05/24/11 | 69.06 | 545.15 | |
| W-818-07 | 09/20/11 | 68.27 | 545.94 | |
| W-818-07 | 11/29/11 | 69.01 | 545.20 | |
| W-818-08 | 03/08/11 | - | NA | DRY/ME |
| W-818-08 | 05/26/11 | 112.58 | 536.48 | |
| W-818-08 | 09/12/11 | 114.28 | 534.78 | |
| W-818-08 | 11/29/11 | 114.29 | 534.77 | |
| W-818-09 | 03/08/11 | - | NA | DRY |
| W-818-09 | 05/26/11 | 106.35 | 535.55 | |
| W-818-09 | 09/12/11 | 118.12 | 523.78 | |
| W-818-09 | 11/29/11 | 118.22 | 523.68 | |
| W-818-11 | 03/08/11 | 151.11 | 598.56 | |
| W-818-11 | 05/26/11 | - | NA | NM |
| W-818-11 | 09/12/11 | 150.36 | 599.31 | |
| W-818-11 | 11/29/11 | 150.39 | 599.28 | |
| W-819-02 | 03/08/11 | 234.36 | 587.46 | |
| W-819-02 | 05/24/11 | 232.45 | 589.37 | |
| W-819-02 | 09/12/11 | 234.70 | 587.12 | |
| W-819-02 | 12/14/11 | 234.82 | 587.00 | |
| W-823-01 | 03/09/11 | 16.89 | 574.36 | |
| W-823-01 | 05/13/11 | 17.97 | 573.28 | |

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-823-01 | 09/26/11 | 19.25 | 572.00 | |
| W-823-01 | 12/22/11 | 17.25 | 574.00 | |
| W-823-02 | 03/09/11 | 16.05 | 574.33 | |
| W-823-02 | 05/13/11 | 17.09 | 573.29 | |
| W-823-02 | 09/26/11 | 18.38 | 572.00 | |
| W-823-02 | 12/22/11 | 16.38 | 574.00 | |
| W-823-03 | 03/09/11 | 15.84 | 574.18 | |
| W-823-03 | 05/13/11 | 16.21 | 573.81 | |
| W-823-03 | 09/26/11 | 17.56 | 572.46 | |
| W-823-03 | 12/22/11 | 16.20 | 573.82 | |
| W-823-13 | 03/09/11 | 49.41 | 572.83 | |
| W-823-13 | 05/13/11 | 49.50 | 572.74 | |
| W-827-01 | 03/10/11 | - | NA | DRY |
| W-827-01 | 05/16/11 | - | NA | DRY |
| W-827-01 | 09/28/11 | - | NA | DRY |
| W-827-01 | 12/14/11 | - | NA | DRY |
| W-827-02 | 03/10/11 | - | NA | DRY |
| W-827-02 | 05/16/11 | - | NA | DRY |
| W-827-02 | 09/28/11 | 52.85 | 870.00 | |
| W-827-02 | 12/14/11 | 55.73 | 867.12 | |
| W-827-03 | 03/10/11 | 197.15 | 727.25 | |
| W-827-03 | 05/16/11 | 198.02 | 726.38 | |
| W-827-03 | 09/28/11 | 197.30 | 727.10 | |
| W-827-03 | 12/14/11 | 197.30 | 727.10 | |
| W-827-04 | 03/10/11 | 308.67 | 724.96 | |
| W-827-04 | 05/16/11 | 307.98 | 725.65 | |
| W-827-04 | 09/28/11 | 308.81 | 724.82 | |
| W-827-04 | 12/14/11 | 308.84 | 724.79 | |
| W-827-05 | 03/10/11 | 382.38 | 651.20 | |
| W-827-05 | 05/16/11 | 382.16 | 651.42 | |
| W-827-05 | 09/28/11 | 328.87 | 704.71 | DOUBLE CHECKED |
| W-827-05 | 12/14/11 | - | NA | NM TUBE BLOCKED |
| W-829-06 | 03/10/11 | - | NA | NM NEW PUMP NO ACCESS |
| W-829-06 | 05/16/11 | 43.81 | 1028.18 | |
| W-829-06 | 09/28/11 | 97.28 | 974.71 | DOUBLE CHECKED |
| W-829-06 | 12/14/11 | 97.27 | 974.72 | |
| W-829-08 | 03/10/11 | 99.34 | 975.11 | |
| W-829-08 | 05/16/11 | 99.13 | 975.32 | |
| W-829-08 | 09/28/11 | 99.21 | 975.24 | |
| W-829-08 | 12/14/11 | 99.32 | 975.13 | |
| W-829-15 | 03/10/11 | 337.30 | 696.70 | |
| W-829-15 | 05/16/11 | 336.48 | 697.52 | |
| W-829-15 | 09/28/11 | 337.13 | 696.87 | |
| W-829-15 | 12/14/11 | 337.15 | 696.85 | |

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-829-1938 | 03/10/11 | 375.31 | 704.69 | |
| W-829-1938 | 05/16/11 | 373.21 | 706.79 | |
| W-829-1938 | 09/28/11 | 373.37 | 706.63 | |
| W-829-1938 | 12/14/11 | 373.36 | 706.64 | |
| W-829-1940 | 03/10/11 | 108.91 | 975.26 | |
| W-829-1940 | 05/16/11 | 108.42 | 975.75 | |
| W-829-1940 | 09/28/11 | 108.56 | 975.61 | |
| W-829-1940 | 12/14/11 | 108.55 | 975.62 | |
| W-829-22 | 03/10/11 | 399.84 | 653.23 | |
| W-829-22 | 05/16/11 | 396.98 | 656.09 | |
| W-829-22 | 09/28/11 | 399.83 | 653.24 | |
| W-829-22 | 12/14/11 | 399.80 | 653.27 | |
| WELL20 | 01/26/11 | - | NA | NM/RA |
| WELL20 | 05/02/11 | - | NA | NM/RA |
| WELL20 | 09/26/11 | - | NA | NM/RA |
| WELL20 | 11/22/11 | - | NA | NM/RA |

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| K1-01C | 02/28/11 | 108.51 | 973.43 | |
| K1-01C | 04/19/11 | 108.29 | 973.65 | |
| K1-01C | 08/16/11 | 107.64 | 974.30 | |
| K1-01C | 11/07/11 | 107.94 | 974.00 | |
| K1-02B | 02/28/11 | - | NA | DRY |
| K1-02B | 04/19/11 | - | NA | DRY |
| K1-02B | 08/16/11 | 136.03 | 971.20 | |
| K1-02B | 11/07/11 | 136.24 | 970.99 | |
| K1-04 | 02/28/11 | 157.69 | 964.98 | |
| K1-04 | 04/19/11 | 157.56 | 965.11 | |
| K1-04 | 08/16/11 | 157.00 | 965.67 | |
| K1-04 | 11/07/11 | 157.23 | 965.44 | |
| K1-05 | 02/28/11 | 172.54 | 958.32 | |
| K1-05 | 04/19/11 | 172.38 | 958.48 | |
| K1-05 | 08/16/11 | 172.02 | 958.84 | |
| K1-05 | 11/07/11 | 172.19 | 958.67 | |
| K1-06 | 02/28/11 | 116.56 | 972.98 | |
| K1-06 | 04/19/11 | 116.42 | 973.12 | |
| K1-06 | 08/16/11 | 115.97 | 973.57 | |
| K1-06 | 11/07/11 | 116.22 | 973.32 | |
| K1-07 | 02/28/11 | 142.49 | 967.14 | |
| K1-07 | 04/19/11 | 142.28 | 967.35 | |
| K1-07 | 08/16/11 | 141.71 | 967.92 | |
| K1-07 | 11/07/11 | 141.95 | 967.68 | |
| K1-08 | 02/28/11 | 156.57 | 966.17 | |
| K1-08 | 04/19/11 | 156.30 | 966.44 | |
| K1-08 | 08/16/11 | 155.64 | 967.10 | |
| K1-08 | 11/07/11 | 155.80 | 966.94 | |
| K1-09 | 02/28/11 | 162.91 | 963.77 | |
| K1-09 | 04/19/11 | 163.59 | 963.09 | |
| K1-09 | 08/16/11 | 161.93 | 964.75 | |
| K1-09 | 11/07/11 | 162.06 | 964.62 | |
| K2-03 | 02/14/11 | 53.28 | 1013.36 | |
| K2-03 | 04/21/11 | 52.89 | 1013.75 | |
| K2-03 | 08/16/11 | 52.07 | 1014.57 | |
| K2-03 | 11/03/11 | 52.42 | 1014.22 | |
| K2-04D | 02/17/11 | 26.32 | 1066.20 | |
| K2-04D | 04/18/11 | 22.09 | 1070.43 | |
| K2-04D | 08/15/11 | 24.14 | 1068.38 | |
| K2-04D | 10/23/11 | 26.00 | 1066.52 | |
| K2-04S | 02/17/11 | 25.35 | 1066.60 | |
| K2-04S | 04/18/11 | 22.70 | 1069.25 | |
| K2-04S | 08/15/11 | 22.73 | 1069.22 | |
| K2-04S | 10/25/11 | 22.93 | 1069.02 | |

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| NC2-05 | 03/03/11 | 54.23 | 980.68 | |
| NC2-05 | 04/20/11 | 53.63 | 981.28 | |
| NC2-05 | 08/16/11 | 53.16 | 981.75 | |
| NC2-05 | 11/10/11 | 53.56 | 981.35 | |
| NC2-05A | 03/03/11 | 54.58 | 980.85 | |
| NC2-05A | 04/20/11 | 53.22 | 982.21 | |
| NC2-05A | 08/16/11 | 53.53 | 981.90 | |
| NC2-05A | 11/10/11 | 53.87 | 981.56 | |
| NC2-06 | 03/03/11 | 51.81 | 981.73 | |
| NC2-06 | 04/20/11 | 51.57 | 981.97 | |
| NC2-06 | 08/16/11 | 51.75 | 981.79 | |
| NC2-06 | 11/14/11 | 51.34 | 982.20 | |
| NC2-06A | 03/03/11 | 52.56 | 981.67 | |
| NC2-06A | 04/20/11 | 52.37 | 981.86 | |
| NC2-06A | 08/16/11 | 52.48 | 981.75 | |
| NC2-06A | 11/14/11 | 52.13 | 982.10 | |
| NC2-09 | 03/03/11 | 53.98 | 981.49 | |
| NC2-09 | 04/20/11 | 53.64 | 981.83 | |
| NC2-09 | 09/23/11 | 53.18 | 982.29 | |
| NC2-09 | 11/07/11 | 53.64 | 981.83 | |
| NC2-10 | 02/28/11 | 65.98 | 974.11 | |
| NC2-10 | 04/19/11 | 65.84 | 974.25 | |
| NC2-10 | 08/16/11 | 65.88 | 974.21 | |
| NC2-10 | 11/07/11 | 66.03 | 974.06 | |
| NC2-11D | 03/03/11 | 52.85 | 975.77 | |
| NC2-11D | 04/20/11 | 52.17 | 976.45 | |
| NC2-11D | 08/23/11 | 52.70 | 975.92 | |
| NC2-11D | 11/10/11 | 53.02 | 975.60 | |
| NC2-11I | 03/03/11 | 53.02 | 975.74 | |
| NC2-11I | 04/20/11 | 52.45 | 976.31 | |
| NC2-11I | 09/23/11 | 52.89 | 975.87 | |
| NC2-11I | 11/10/11 | 53.22 | 975.54 | |
| NC2-11S | 03/03/11 | 52.79 | 975.73 | |
| NC2-11S | 04/20/11 | 52.17 | 976.35 | |
| NC2-11S | 09/23/11 | 52.66 | 975.86 | |
| NC2-11S | 11/10/11 | 53.00 | 975.52 | |
| NC2-12D | 02/28/11 | 52.09 | 976.35 | |
| NC2-12D | 04/19/11 | 51.57 | 976.87 | |
| NC2-12D | 08/16/11 | 51.85 | 976.59 | |
| NC2-12D | 11/07/11 | 52.10 | 976.34 | |
| NC2-12I | 02/28/11 | 52.37 | 976.03 | |
| NC2-12I | 04/19/11 | 51.94 | 976.46 | |
| NC2-12I | 08/16/11 | 52.22 | 976.18 | |
| NC2-12I | 11/07/11 | 52.49 | 975.91 | |

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| NC2-12S | 02/28/11 | 52.06 | 976.46 | |
| NC2-12S | 04/19/11 | 51.67 | 976.85 | |
| NC2-12S | 08/16/11 | 51.90 | 976.62 | |
| NC2-12S | 11/07/11 | 52.09 | 976.43 | |
| NC2-13 | 03/03/11 | 45.12 | 976.38 | |
| NC2-13 | 04/20/11 | 44.41 | 977.09 | |
| NC2-13 | 11/10/11 | 45.30 | 976.20 | |
| NC2-14S | 02/17/11 | 16.26 | 1057.64 | |
| NC2-14S | 04/18/11 | 14.02 | 1059.88 | |
| NC2-14S | 08/15/11 | 14.21 | 1059.69 | |
| NC2-14S | 10/27/11 | 15.57 | 1058.33 | |
| NC2-15 | 03/03/11 | 82.16 | 991.30 | |
| NC2-15 | 04/21/11 | 81.87 | 991.59 | |
| NC2-15 | 10/27/11 | 81.15 | 992.31 | |
| NC2-16 | 02/15/11 | 24.54 | 1057.92 | |
| NC2-16 | 04/18/11 | 22.55 | 1059.91 | |
| NC2-16 | 08/15/11 | 22.69 | 1059.77 | |
| NC2-16 | 10/27/11 | 23.90 | 1058.56 | |
| NC2-17 | 03/03/11 | 107.29 | 982.20 | |
| NC2-17 | 04/20/11 | 107.11 | 982.38 | |
| NC2-17 | 10/27/11 | 107.21 | 982.28 | |
| NC2-18 | 03/03/11 | 73.63 | 1057.54 | |
| NC2-18 | 04/18/11 | 71.92 | 1059.25 | |
| NC2-18 | 08/15/11 | 72.12 | 1059.05 | |
| NC2-18 | 10/27/11 | 73.32 | 1057.85 | |
| NC2-19 | 03/03/11 | 112.42 | 979.97 | |
| NC2-19 | 04/21/11 | 112.34 | 980.05 | |
| NC2-19 | 08/15/11 | 112.36 | 980.03 | |
| NC2-19 | 11/10/11 | 112.37 | 980.02 | |
| NC2-20 | 03/03/11 | - | NA | DRY |
| NC2-20 | 04/20/11 | 34.51 | 967.76 | |
| NC2-20 | 05/15/11 | 34.61 | 967.66 | |
| NC2-20 | 11/14/11 | 36.04 | 966.23 | |
| NC2-21 | 03/03/11 | 35.55 | 966.59 | |
| NC2-21 | 04/20/11 | 34.18 | 967.96 | |
| NC2-21 | 05/15/11 | 34.22 | 967.92 | |
| NC2-21 | 11/14/11 | 35.80 | 966.34 | |
| NC7-10 | 02/17/11 | 10.23 | 1216.07 | |
| NC7-10 | 04/14/11 | 8.95 | 1217.35 | |
| NC7-10 | 08/15/11 | 10.12 | 1216.18 | |
| NC7-10 | 10/27/11 | 10.61 | 1215.69 | |
| NC7-11 | 02/17/11 | 20.38 | 1224.01 | |
| NC7-11 | 04/14/11 | 19.11 | 1225.28 | |
| NC7-11 | 08/15/11 | 20.37 | 1224.02 | |

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| NC7-11 | 10/27/11 | 20.90 | 1223.49 | |
| NC7-14 | 02/17/11 | - | NA | DRY |
| NC7-14 | 04/14/11 | 27.80 | 1229.19 | |
| NC7-14 | 08/15/11 | - | NA | DRY |
| NC7-14 | 10/27/11 | - | NA | DRY |
| NC7-15 | 02/24/11 | 19.50 | 1249.91 | |
| NC7-15 | 04/14/11 | 19.10 | 1250.31 | |
| NC7-15 | 08/15/11 | 21.27 | 1248.14 | |
| NC7-15 | 10/26/11 | 21.65 | 1247.76 | |
| NC7-19 | 03/22/11 | 18.00 | 1242.68 | |
| NC7-19 | 04/14/11 | 19.00 | 1241.68 | |
| NC7-19 | 08/15/11 | 21.04 | 1239.64 | |
| NC7-19 | 10/27/11 | 21.36 | 1239.32 | |
| NC7-27 | 02/22/11 | 86.10 | 1196.30 | |
| NC7-27 | 04/14/11 | 85.39 | 1197.01 | |
| NC7-27 | 08/15/11 | 86.09 | 1196.31 | |
| NC7-27 | 10/27/11 | 86.40 | 1196.00 | |
| NC7-28 | 02/22/11 | 55.09 | 1242.14 | |
| NC7-28 | 04/12/11 | 54.54 | 1258.72 | |
| NC7-28 | 08/15/11 | 55.03 | 1258.23 | |
| NC7-28 | 10/27/11 | 55.20 | 1258.06 | |
| NC7-29 | 03/10/11 | 52.47 | 1202.27 | |
| NC7-29 | 04/21/11 | 52.23 | 1202.51 | |
| NC7-29 | 08/16/11 | 51.73 | 1203.01 | |
| NC7-29 | 10/27/11 | 51.89 | 1202.85 | |
| NC7-43 | 03/03/11 | - | NA | DRY |
| NC7-43 | 04/14/11 | 44.84 | 1242.37 | |
| NC7-43 | 08/15/11 | 46.08 | 1241.13 | |
| NC7-43 | 10/27/11 | 46.31 | 1240.90 | |
| NC7-44 | 04/14/11 | 29.21 | 1326.62 | |
| NC7-44 | 08/15/11 | 31.58 | 1324.25 | |
| NC7-44 | 10/27/11 | 31.59 | 1324.24 | |
| NC7-45 | 02/22/11 | 32.68 | 1156.01 | |
| NC7-45 | 04/14/11 | 30.59 | 1158.10 | |
| NC7-45 | 08/15/11 | 35.19 | 1153.50 | |
| NC7-45 | 10/27/11 | 35.30 | 1153.39 | |
| NC7-46 | 02/17/11 | 23.95 | 1107.48 | |
| NC7-46 | 04/18/11 | 23.42 | 1108.01 | |
| NC7-46 | 08/15/11 | 24.01 | 1107.42 | |
| NC7-46 | 10/27/11 | 24.01 | 1107.42 | |
| NC7-54 | 02/22/11 | 10.52 | 1196.73 | |
| NC7-54 | 04/14/11 | 11.10 | 1196.15 | |
| NC7-54 | 08/15/11 | - | NA | NM/UC WEEDS OVERGROWN |
| NC7-54 | 10/27/11 | 12.91 | 1194.34 | |

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| NC7-55 | 02/17/11 | - | NA | DRY |
| NC7-55 | 04/14/11 | - | NA | DRY |
| NC7-55 | 08/15/11 | - | NA | DRY |
| NC7-55 | 10/27/11 | - | NA | DRY |
| NC7-56 | 04/18/11 | 17.37 | 1114.80 | |
| NC7-56 | 08/16/11 | - | NA | DRY |
| NC7-56 | 10/27/11 | - | NA | DRY |
| NC7-57 | 02/17/11 | - | NA | DRY |
| NC7-57 | 04/18/11 | - | NA | DRY |
| NC7-57 | 08/15/11 | - | NA | DRY |
| NC7-57 | 11/01/11 | - | NA | DRY |
| NC7-58 | 02/17/11 | 22.52 | 1084.21 | |
| NC7-58 | 04/18/11 | 19.00 | 1087.73 | |
| NC7-58 | 08/15/11 | 23.27 | 1083.46 | |
| NC7-58 | 11/01/11 | 23.93 | 1082.80 | |
| NC7-59 | 02/17/11 | 12.68 | 1102.63 | |
| NC7-59 | 04/18/11 | 11.58 | 1103.73 | |
| NC7-59 | 08/15/11 | 13.01 | 1102.30 | |
| NC7-59 | 11/01/11 | 13.27 | 1102.04 | |
| NC7-60 | 02/22/11 | 159.22 | 1168.40 | |
| NC7-60 | 04/14/11 | 159.52 | 1168.10 | |
| NC7-60 | 08/15/11 | 159.05 | 1168.57 | |
| NC7-60 | 10/27/11 | 159.86 | 1167.76 | |
| NC7-61 | 02/22/11 | 48.52 | 1230.85 | |
| NC7-61 | 04/14/11 | 48.19 | 1231.18 | |
| NC7-61 | 10/27/11 | 48.46 | 1230.91 | |
| NC7-62 | 02/17/11 | 21.63 | 1103.48 | |
| NC7-62 | 04/18/11 | 20.00 | 1105.11 | |
| NC7-62 | 08/15/11 | 22.03 | 1103.08 | |
| NC7-62 | 11/01/11 | 22.34 | 1102.77 | |
| NC7-69 | 02/17/11 | 2.80 | 1249.66 | |
| NC7-69 | 04/14/11 | 2.92 | 1249.54 | |
| NC7-69 | 08/15/11 | 2.54 | 1249.92 | |
| NC7-69 | 10/27/11 | 3.02 | 1249.44 | |
| NC7-70 | 03/16/11 | 32.94 | 1274.48 | |
| NC7-70 | 04/14/11 | 32.09 | 1275.33 | |
| NC7-70 | 08/15/11 | 34.19 | 1273.23 | |
| NC7-70 | 10/25/11 | 34.46 | 1272.96 | |
| NC7-71 | 02/22/11 | 64.68 | 1235.57 | |
| NC7-71 | 04/14/11 | 64.10 | 1236.15 | |
| NC7-71 | 08/15/11 | 64.44 | 1235.81 | |
| NC7-71 | 10/27/11 | 64.89 | 1235.36 | |
| NC7-72 | 02/17/11 | 31.58 | 1124.77 | |
| NC7-72 | 04/18/11 | 29.68 | 1126.67 | |

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| NC7-72 | 08/15/11 | 32.28 | 1124.07 | |
| NC7-72 | 11/01/11 | 32.52 | 1123.83 | |
| NC7-73 | 02/17/11 | 26.96 | 1139.31 | |
| NC7-73 | 04/18/11 | 25.66 | 1140.61 | |
| NC7-73 | 08/15/11 | 27.43 | 1138.84 | |
| NC7-73 | 11/01/11 | 27.86 | 1138.41 | |
| W-850-05 | 03/03/11 | 29.53 | 1273.86 | |
| W-850-05 | 04/14/11 | 29.21 | 1274.18 | |
| W-850-05 | 08/15/11 | 30.01 | 1273.38 | |
| W-850-05 | 10/27/11 | 30.20 | 1273.19 | |
| W-850-2145 | 03/03/11 | 176.68 | 1030.29 | |
| W-850-2145 | 04/18/11 | 176.67 | 1030.30 | |
| W-850-2145 | 08/15/11 | 176.31 | 1030.66 | |
| W-850-2145 | 10/27/11 | 176.42 | 1030.55 | |
| W-850-2312 | 03/03/11 | 68.68 | 1063.28 | |
| W-850-2312 | 04/18/11 | 66.18 | 1065.78 | |
| W-850-2312 | 08/15/11 | 67.49 | 1064.47 | |
| W-850-2312 | 10/27/11 | 69.01 | 1062.95 | |
| W-850-2313 | 02/22/11 | 20.93 | 1161.80 | |
| W-850-2313 | 04/14/11 | 19.34 | 1163.39 | |
| W-850-2313 | 08/15/11 | 23.77 | 1158.96 | |
| W-850-2313 | 10/27/11 | 24.20 | 1158.53 | |
| W-850-2314 | 02/22/11 | 156.50 | 1179.27 | |
| W-850-2314 | 04/14/11 | 154.63 | 1181.14 | |
| W-850-2314 | 08/15/11 | 155.91 | 1179.86 | |
| W-850-2314 | 10/27/11 | 155.52 | 1180.25 | |
| W-850-2315 | 03/10/11 | 52.86 | 1202.47 | |
| W-850-2315 | 04/21/11 | 52.65 | 1202.68 | |
| W-850-2315 | 08/16/11 | 52.08 | 1203.25 | |
| W-850-2315 | 10/27/11 | 52.28 | 1203.05 | |
| W-850-2316 | 03/03/11 | 176.90 | 1030.22 | |
| W-850-2316 | 04/18/11 | 176.94 | 1030.18 | |
| W-850-2316 | 08/15/11 | 176.56 | 1030.56 | |
| W-850-2316 | 10/27/11 | 176.68 | 1030.44 | |
| W-850-2416 | 02/22/11 | 61.10 | 1240.80 | |
| W-850-2416 | 04/14/11 | 60.79 | 1241.11 | |
| W-850-2416 | 08/15/11 | 61.01 | 1240.89 | |
| W-850-2416 | 10/27/11 | 61.14 | 1240.76 | |
| W-850-2417 | 02/22/11 | 53.69 | 1248.37 | |
| W-850-2417 | 04/14/11 | 52.61 | 1261.16 | |
| W-850-2417 | 08/15/11 | 53.63 | 1260.14 | |
| W-850-2417 | 10/27/11 | 53.12 | 1260.65 | |
| W-865-02 | 02/14/11 | 124.65 | 987.73 | |
| W-865-02 | 04/19/11 | 124.31 | 988.07 | |

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-865-02 | 08/16/11 | 124.12 | 988.26 | |
| W-865-02 | 11/03/11 | 124.36 | 988.02 | |
| W-865-05 | 02/28/11 | - | NA | DRY |
| W-865-05 | 04/18/11 | - | NA | DRY |
| W-865-05 | 08/16/11 | - | NA | DRY |
| W-865-05 | 11/03/11 | 269.73 | 964.36 | |
| W-865-1802 | 02/14/11 | 50.61 | 1018.44 | |
| W-865-1802 | 04/21/11 | 49.86 | 1019.19 | |
| W-865-1802 | 11/03/11 | 49.72 | 1019.33 | |
| W-865-1803 | 02/15/11 | 105.34 | 1074.65 | |
| W-865-1803 | 04/19/11 | 104.36 | 1075.63 | |
| W-865-1803 | 08/16/11 | 103.49 | 1076.50 | |
| W-865-1803 | 10/27/11 | 104.98 | 1075.01 | |
| W-865-2005 | 02/22/11 | 326.74 | 948.13 | |
| W-865-2005 | 04/19/11 | 326.17 | 948.70 | |
| W-865-2005 | 08/16/11 | 326.89 | 947.98 | |
| W-865-2005 | 11/07/11 | 327.11 | 947.76 | |
| W-865-2121 | 02/22/11 | 345.37 | 943.24 | |
| W-865-2121 | 04/19/11 | 345.49 | 943.12 | |
| W-865-2121 | 08/16/11 | 345.56 | 943.05 | |
| W-865-2121 | 11/03/11 | 344.96 | 943.65 | |
| W-865-2133 | 08/16/11 | - | NA | NM |
| W-865-2224 | 08/16/11 | - | NA | NM |
| W-PIT1-01 | 02/22/11 | 149.06 | 1032.83 | |
| W-PIT1-01 | 04/20/11 | - | NA | DRY |
| W-PIT1-01 | 08/16/11 | - | NA | DRY |
| W-PIT1-01 | 11/07/11 | - | NA | DRY |
| W-PIT1-02 | 02/22/11 | 232.89 | 948.41 | |
| W-PIT1-02 | 04/20/11 | 232.85 | 948.45 | |
| W-PIT1-02 | 08/16/11 | 233.06 | 948.24 | |
| W-PIT1-02 | 11/07/11 | 233.21 | 948.09 | |
| W-PIT1-2204 | 02/28/11 | 40.95 | 1032.21 | |
| W-PIT1-2204 | 04/19/11 | 40.53 | 1032.63 | |
| W-PIT1-2204 | 08/16/11 | 40.25 | 1032.91 | |
| W-PIT1-2204 | 11/07/11 | 40.71 | 1032.45 | |
| W-PIT1-2209 | 02/28/11 | 215.58 | 950.47 | |
| W-PIT1-2209 | 04/20/11 | 216.14 | 949.91 | |
| W-PIT1-2209 | 08/16/11 | 215.51 | 950.54 | |
| W-PIT1-2209 | 11/07/11 | 215.96 | 950.09 | |
| W-PIT1-2225 | 03/09/11 | 226.15 | 966.99 | |
| W-PIT1-2225 | 04/26/11 | 226.23 | 966.91 | |
| W-PIT1-2225 | 08/16/11 | 226.73 | 966.41 | |
| W-PIT1-2225 | 11/10/11 | 227.81 | 965.33 | AFTER SAMPLE EVENT |
| W-PIT1-2326 | 05/24/11 | 180.38 | 967.41 | |

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-PIT1-2326 | 08/16/11 | 180.22 | 967.57 | |
| W-PIT1-2326 | 11/07/11 | 179.76 | 968.03 | |
| W-PIT1-2620 | 04/19/11 | 230.68 | NA | NEW WELL NOT SURVEYED |
| W-PIT1-2620 | 08/16/11 | 231.41 | NA | NEW WELL NOT SURVEYED |
| W-PIT1-2620 | 11/07/11 | 231.45 | NA | NEW WELL NOT SURVEYED |
| W-PIT7-16 | 02/24/11 | 21.46 | 1249.54 | |
| W-PIT7-16 | 04/14/11 | 21.25 | 1249.75 | |
| W-PIT7-16 | 08/15/11 | 21.37 | 1249.63 | |
| W-PIT7-16 | 10/26/11 | 21.70 | 1249.30 | |

Table C-6. Pit 2 Landfill ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| K2-01C | 03/14/11 | 65.05 | 985.85 | |
| K2-01C | 04/19/11 | 63.77 | 987.13 | |
| K2-01C | 08/16/11 | 63.81 | 987.09 | |
| K2-01C | 11/03/11 | 63.13 | 987.77 | |
| NC2-08 | 03/03/11 | - | NA | DRY |
| NC2-08 | 04/19/11 | 59.91 | 989.46 | |
| NC2-08 | 08/16/11 | 58.83 | 990.54 | |
| NC2-08 | 11/03/11 | 59.75 | 989.62 | |
| W-PIT2-1934 | 03/14/11 | 55.48 | 1005.63 | |
| W-PIT2-1934 | 04/19/11 | 55.00 | 1006.11 | |
| W-PIT2-1934 | 11/03/11 | 54.20 | 1006.91 | |
| W-PIT2-1935 | 03/14/11 | 73.67 | 982.19 | |
| W-PIT2-1935 | 04/19/11 | 73.38 | 982.48 | |
| W-PIT2-1935 | 11/03/11 | 72.29 | 983.57 | |
| W-PIT2-2226 | 03/02/11 | 327.86 | 966.26 | |
| W-PIT2-2226 | 04/26/11 | 328.01 | 966.11 | |
| W-PIT2-2226 | 08/16/11 | 328.89 | 965.23 | |
| W-PIT2-2226 | 11/14/11 | 328.89 | 965.23 | |
| W-PIT2-2301 | 03/03/11 | 17.45 | 1025.68 | |
| W-PIT2-2301 | 04/19/11 | 15.02 | 1028.11 | |
| W-PIT2-2301 | 08/16/11 | 30.74 | 1012.39 | DOUBLE CHECKED |
| W-PIT2-2301 | 11/14/11 | 30.98 | 1012.15 | |
| W-PIT2-2302 | 03/03/11 | 13.19 | 1029.31 | |
| W-PIT2-2302 | 04/19/11 | 11.00 | 1031.50 | |
| W-PIT2-2302 | 08/16/11 | 16.47 | 1026.03 | |
| W-PIT2-2302 | 11/14/11 | 16.53 | 1025.97 | |
| W-PIT2-2303 | 03/03/11 | - | NA | DRY |
| W-PIT2-2303 | 04/20/11 | 20.53 | 1019.61 | |
| W-PIT2-2303 | 08/15/11 | - | NA | DRY |
| W-PIT2-2303 | 11/14/11 | - | NA | DRY |
| W-PIT2-2304 | 03/03/11 | - | NA | DRY |
| W-PIT2-2304 | 04/20/11 | - | NA | DRY |
| W-PIT2-2304 | 08/15/11 | - | NA | DRY |
| W-PIT2-2304 | 11/14/11 | - | NA | DRY |

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| K7-01 | 02/23/11 | 27.55 | 1291.19 | |
| K7-01 | 04/12/11 | 26.40 | 1292.34 | |
| K7-01 | 08/15/11 | 25.98 | 1292.76 | |
| K7-01 | 10/25/11 | 26.85 | 1291.89 | |
| K7-03 | 02/23/11 | 29.60 | 1309.49 | |
| K7-03 | 04/12/11 | 24.68 | 1314.41 | |
| K7-03 | 08/15/11 | 25.39 | 1313.70 | |
| K7-03 | 10/25/11 | 25.84 | 1313.25 | |
| K7-06 | 08/15/11 | 26.05 | 1387.60 | |
| K7-06 | 10/23/11 | 26.15 | 1387.50 | |
| K7-07 | 02/23/11 | 31.38 | 1266.64 | |
| K7-07 | 04/12/11 | 20.30 | 1277.72 | |
| K7-07 | 08/15/11 | 21.11 | 1276.91 | |
| K7-07 | 10/26/11 | - | NA | DRY |
| K7-09 | 03/03/11 | 50.15 | 1295.15 | |
| K7-09 | 04/12/11 | 49.38 | 1295.92 | |
| K7-09 | 08/11/11 | 49.38 | 1295.92 | |
| K7-09 | 10/24/11 | 49.51 | 1295.79 | |
| K7-10 | 03/03/11 | 33.01 | 1310.30 | |
| K7-10 | 04/11/11 | 32.53 | 1310.78 | |
| K7-10 | 08/11/11 | 35.46 | 1307.85 | |
| K7-10 | 10/24/11 | 35.73 | 1307.58 | |
| NC7-12 | 02/23/11 | 20.52 | 1265.17 | |
| NC7-12 | 04/14/11 | 18.57 | 1267.12 | |
| NC7-12 | 08/15/11 | 21.99 | 1263.70 | |
| NC7-12 | 10/26/11 | 22.30 | 1263.39 | |
| NC7-16 | 03/22/11 | 25.22 | 1285.52 | |
| NC7-16 | 04/12/11 | 24.19 | 1286.55 | |
| NC7-16 | 08/11/11 | 26.99 | 1283.75 | |
| NC7-16 | 10/26/11 | 27.33 | 1283.41 | |
| NC7-17 | 03/22/11 | 27.56 | 1361.64 | |
| NC7-17 | 04/12/11 | 26.27 | 1362.93 | |
| NC7-17 | 08/11/11 | 28.83 | 1360.37 | |
| NC7-17 | 10/25/11 | 29.36 | 1359.84 | |
| NC7-18 | 03/03/11 | 16.94 | 1315.32 | |
| NC7-18 | 04/11/11 | 15.53 | 1316.73 | |
| NC7-18 | 10/24/11 | 21.92 | 1310.34 | |
| NC7-20 | 02/23/11 | 37.16 | 1258.23 | |
| NC7-20 | 04/14/11 | 35.14 | 1260.25 | |
| NC7-20 | 08/15/11 | 37.52 | 1257.87 | |
| NC7-20 | 10/26/11 | 37.88 | 1257.51 | |
| NC7-21 | 02/23/11 | 26.84 | 1277.33 | |
| NC7-21 | 04/12/11 | 25.08 | 1279.09 | |
| NC7-21 | 08/11/11 | 26.00 | 1278.17 | |

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| NC7-21 | 10/26/11 | 28.16 | 1276.01 | |
| NC7-22 | 02/23/11 | - | NA | DRY |
| NC7-22 | 04/12/11 | - | NA | DRY |
| NC7-22 | 08/11/11 | - | NA | DRY |
| NC7-22 | 10/26/11 | - | NA | DRY |
| NC7-24 | 02/15/11 | - | NA | DRY |
| NC7-24 | 04/11/11 | - | NA | DRY |
| NC7-24 | 08/08/11 | 37.26 | 1322.27 | |
| NC7-24 | 10/25/11 | - | NA | DRY |
| NC7-25 | 02/15/11 | - | NA | NM WELL DUCT TAPED CLOSED |
| NC7-25 | 04/11/11 | - | NA | NM DUCT TAPE SHUT |
| NC7-25 | 08/15/11 | 66.38 | 1300.13 | |
| NC7-25 | 10/25/11 | - | NA | NM CASING TAPED SHUT |
| NC7-26 | 02/23/11 | 71.73 | 1256.94 | |
| NC7-26 | 04/12/11 | 72.48 | 1256.19 | |
| NC7-26 | 08/11/11 | 71.57 | 1257.10 | |
| NC7-26 | 10/26/11 | 71.78 | 1256.89 | |
| NC7-34 | 03/10/11 | - | NA | DRY |
| NC7-34 | 04/12/11 | 24.08 | 1339.95 | |
| NC7-34 | 08/11/11 | 24.26 | 1339.77 | |
| NC7-34 | 10/26/11 | 26.08 | 1337.95 | |
| NC7-36 | 03/10/11 | 21.70 | 1340.24 | |
| NC7-36 | 04/12/11 | 18.63 | 1343.31 | |
| NC7-36 | 08/11/11 | 20.94 | 1341.00 | |
| NC7-36 | 10/26/11 | 21.86 | 1340.08 | |
| NC7-37 | 02/23/11 | - | NA | DRY |
| NC7-37 | 04/12/11 | - | NA | DRY |
| NC7-37 | 08/15/11 | 26.04 | 1312.68 | |
| NC7-37 | 10/25/11 | 26.12 | 1312.60 | |
| NC7-40 | 03/22/11 | 21.89 | 1297.89 | |
| NC7-40 | 04/12/11 | 20.52 | 1299.26 | |
| NC7-40 | 08/15/11 | 21.81 | 1297.97 | |
| NC7-40 | 10/25/11 | 21.83 | 1297.95 | |
| NC7-47 | 02/14/11 | 63.14 | 1205.37 | |
| NC7-47 | 04/19/11 | 63.31 | 1205.20 | |
| NC7-47 | 08/16/11 | 63.54 | 1204.97 | |
| NC7-47 | 10/24/11 | 63.53 | 1204.98 | |
| NC7-48 | 03/22/11 | 45.91 | 1346.91 | |
| NC7-48 | 04/11/11 | 44.72 | 1348.10 | |
| NC7-48 | 08/16/11 | 45.23 | 1347.59 | |
| NC7-48 | 11/01/11 | 45.29 | 1347.53 | |
| NC7-49A | 03/22/11 | 29.21 | 1364.52 | |
| NC7-49A | 04/11/11 | 28.54 | 1365.19 | |
| NC7-49A | 08/11/11 | 32.39 | 1361.34 | |

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| NC7-49A | 10/24/11 | 32.60 | 1361.13 | |
| NC7-50 | 02/14/11 | 76.80 | 1122.92 | |
| NC7-50 | 04/19/11 | 76.98 | 1122.74 | |
| NC7-50 | 08/16/11 | 76.45 | 1123.27 | |
| NC7-50 | 11/01/11 | 76.45 | 1123.27 | |
| NC7-51 | 02/23/11 | 35.41 | 1312.42 | |
| NC7-51 | 04/11/11 | 30.82 | 1317.01 | |
| NC7-51 | 08/15/11 | 30.89 | 1316.94 | |
| NC7-51 | 10/25/11 | 31.94 | 1315.89 | |
| NC7-52 | 02/23/11 | 75.13 | 1293.22 | |
| NC7-52 | 04/11/11 | 75.00 | 1293.35 | |
| NC7-52 | 08/15/11 | 74.26 | 1294.09 | |
| NC7-52 | 10/25/11 | 74.21 | 1294.14 | |
| NC7-53 | 03/10/11 | 32.14 | 1390.90 | |
| NC7-53 | 04/14/11 | 31.68 | 1391.36 | |
| NC7-53 | 08/15/11 | 32.21 | 1390.83 | |
| NC7-53 | 10/24/11 | 33.05 | 1389.99 | |
| NC7-63 | 02/23/11 | 31.74 | 1317.33 | |
| NC7-63 | 04/11/11 | 31.92 | 1317.15 | |
| NC7-63 | 08/15/11 | 29.31 | 1319.76 | |
| NC7-63 | 10/25/11 | 31.88 | 1317.19 | |
| NC7-64 | 02/23/11 | 44.00 | 1304.58 | |
| NC7-64 | 04/11/11 | 44.10 | 1304.48 | |
| NC7-64 | 08/15/11 | 27.55 | 1321.03 | DOUBLE CHECKED |
| NC7-64 | 10/25/11 | 44.10 | 1304.48 | |
| NC7-65 | 08/15/11 | 189.28 | 1262.00 | |
| NC7-65 | 10/25/11 | 189.82 | 1261.46 | |
| NC7-67 | 02/23/11 | 32.27 | 1290.65 | |
| NC7-67 | 04/12/11 | 31.94 | 1290.98 | |
| NC7-67 | 08/11/11 | 31.31 | 1291.61 | |
| NC7-67 | 10/25/11 | 31.27 | 1291.65 | |
| NC7-68 | 02/23/11 | 31.76 | 1291.14 | |
| NC7-68 | 04/12/11 | 31.22 | 1291.68 | |
| NC7-68 | 08/10/11 | 31.20 | 1291.70 | |
| NC7-68 | 10/25/11 | 31.03 | 1291.87 | |
| NC7-75 | 02/23/11 | 50.74 | 1301.48 | |
| NC7-75 | 04/11/11 | 50.46 | 1301.76 | |
| NC7-75 | 08/15/11 | 48.15 | 1304.07 | |
| NC7-75 | 10/25/11 | 48.03 | 1304.19 | |
| NC7-76 | 04/14/11 | 20.08 | 1256.80 | |
| NC7-76 | 08/15/11 | 22.40 | 1254.48 | |
| NC7-76 | 10/26/11 | 22.91 | 1253.97 | |
| W-865-01 | 02/14/11 | 34.43 | 1153.23 | |
| W-865-01 | 04/14/11 | 34.09 | 1153.57 | |

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-865-01 | 08/16/11 | 34.05 | 1153.61 | |
| W-865-01 | 11/03/11 | 33.87 | 1153.79 | |
| W-865-03 | 02/14/11 | 54.87 | 1181.11 | |
| W-865-03 | 04/18/11 | 54.60 | 1181.38 | |
| W-865-03 | 08/16/11 | 54.27 | 1181.71 | |
| W-865-03 | 11/01/11 | 52.53 | 1183.45 | |
| W-865-1804 | 02/15/11 | 103.20 | 1108.91 | |
| W-865-1804 | 04/19/11 | 103.06 | 1109.05 | |
| W-865-1804 | 08/16/11 | 102.84 | 1109.27 | |
| W-865-1804 | 11/03/11 | 103.10 | 1109.01 | |
| W-PIT3-02 | 02/23/11 | - | NA | DRY |
| W-PIT3-02 | 04/12/11 | - | NA | DRY |
| W-PIT3-02 | 08/15/11 | - | NA | DRY |
| W-PIT3-02 | 10/25/11 | - | NA | DRY |
| W-PIT5-01 | 10/24/11 | - | NA | DRY |
| W-PIT5-02 | 08/15/11 | - | NA | DRY |
| W-PIT5-02 | 10/25/11 | - | NA | DRY |
| W-PIT7-02 | 10/26/11 | 22.14 | 1295.83 | |
| W-PIT7-03 | 08/15/11 | 26.57 | 1302.95 | |
| W-PIT7-03 | 10/25/11 | 26.60 | 1302.92 | |
| W-PIT7-10 | 03/03/11 | 26.71 | 1291.72 | |
| W-PIT7-10 | 04/19/11 | 26.75 | 1291.68 | |
| W-PIT7-10 | 10/26/11 | 26.25 | 1292.18 | |
| W-PIT7-11 | 08/15/11 | - | NA | DRY |
| W-PIT7-11 | 10/25/11 | - | NA | DRY |
| W-PIT7-12 | 02/23/11 | 212.81 | 1203.74 | |
| W-PIT7-12 | 04/19/11 | 213.98 | 1202.57 | |
| W-PIT7-12 | 08/11/11 | 214.05 | 1202.50 | |
| W-PIT7-12 | 10/26/11 | 214.09 | 1202.46 | |
| W-PIT7-13 | 08/15/11 | 231.68 | 1250.86 | |
| W-PIT7-13 | 10/25/11 | 231.77 | 1250.77 | |
| W-PIT7-14 | 02/23/11 | 303.81 | 1159.43 | |
| W-PIT7-14 | 04/19/11 | 304.59 | 1158.65 | |
| W-PIT7-14 | 08/11/11 | 304.30 | 1158.94 | |
| W-PIT7-14 | 10/26/11 | 304.28 | 1158.96 | |
| W-PIT7-15 | 02/14/11 | 104.81 | 1200.99 | |
| W-PIT7-15 | 04/19/11 | 104.98 | 1200.82 | |
| W-PIT7-15 | 08/16/11 | 104.98 | 1200.82 | |
| W-PIT7-15 | 11/01/11 | 105.06 | 1200.74 | |
| W-PIT7-1715 | 03/10/11 | 48.49 | 1423.49 | |
| W-PIT7-1715 | 04/14/11 | 47.80 | 1424.18 | |
| W-PIT7-1715 | 08/15/11 | 48.11 | 1423.87 | |
| W-PIT7-1715 | 10/24/11 | 48.21 | 1423.77 | |
| W-PIT7-1716 | 03/10/11 | 41.92 | 1429.59 | |

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-PIT7-1716 | 04/14/11 | 40.49 | 1431.02 | |
| W-PIT7-1716 | 08/15/11 | 40.75 | 1430.76 | |
| W-PIT7-1716 | 10/24/11 | - | NA | DRY |
| W-PIT7-1719 | 04/14/11 | 20.15 | 1452.37 | |
| W-PIT7-1719 | 08/15/11 | 20.43 | 1452.09 | |
| W-PIT7-1719 | 10/24/11 | 21.03 | 1451.49 | |
| W-PIT7-1721 | 03/10/11 | 26.00 | 1419.10 | |
| W-PIT7-1721 | 04/14/11 | - | NA | DRY |
| W-PIT7-1721 | 08/15/11 | - | NA | DRY |
| W-PIT7-1721 | 10/24/11 | 25.76 | 1419.34 | |
| W-PIT7-1722 | 03/10/11 | - | NA | DRY |
| W-PIT7-1722 | 04/14/11 | - | NA | DRY |
| W-PIT7-1722 | 08/15/11 | - | NA | DRY |
| W-PIT7-1722 | 10/24/11 | - | NA | DRY |
| W-PIT7-1725 | 03/10/11 | 120.49 | 1299.56 | |
| W-PIT7-1725 | 04/14/11 | 120.56 | 1299.49 | |
| W-PIT7-1725 | 08/15/11 | 120.61 | 1299.44 | |
| W-PIT7-1725 | 10/24/11 | 120.46 | 1299.59 | |
| W-PIT7-1726 | 03/10/11 | - | NA | DRY |
| W-PIT7-1726 | 04/12/11 | - | NA | DRY |
| W-PIT7-1726 | 08/15/11 | - | NA | DRY |
| W-PIT7-1726 | 10/24/11 | - | NA | DRY |
| W-PIT7-1727 | 03/10/11 | - | NA | DRY |
| W-PIT7-1727 | 04/12/11 | - | NA | DRY |
| W-PIT7-1727 | 08/15/11 | - | NA | DRY |
| W-PIT7-1727 | 10/24/11 | - | NA | DRY |
| W-PIT7-1728 | 03/10/11 | - | NA | DRY |
| W-PIT7-1728 | 04/14/11 | - | NA | DRY |
| W-PIT7-1728 | 08/15/11 | - | NA | DRY |
| W-PIT7-1728 | 10/24/11 | - | NA | DRY |
| W-PIT7-1729 | 03/10/11 | - | NA | DRY |
| W-PIT7-1729 | 04/14/11 | - | NA | DRY |
| W-PIT7-1729 | 08/15/11 | - | NA | DRY |
| W-PIT7-1729 | 10/24/11 | - | NA | DRY |
| W-PIT7-1860 | 03/03/11 | 12.91 | 1433.87 | |
| W-PIT7-1860 | 04/12/11 | 12.64 | 1434.14 | |
| W-PIT7-1860 | 08/15/11 | 12.78 | 1434.00 | |
| W-PIT7-1860 | 10/24/11 | 12.81 | 1433.97 | |
| W-PIT7-1861 | 03/03/11 | 13.00 | 1433.83 | |
| W-PIT7-1861 | 04/12/11 | 12.69 | 1434.14 | |
| W-PIT7-1861 | 08/15/11 | 12.83 | 1434.00 | |
| W-PIT7-1861 | 10/24/11 | 12.85 | 1433.98 | |
| W-PIT7-1903 | 02/23/11 | 22.03 | 1296.25 | |
| W-PIT7-1903 | 04/12/11 | 19.79 | 1298.49 | |

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-PIT7-1903 | 08/11/11 | 20.30 | 1297.98 | |
| W-PIT7-1903 | 10/25/11 | 20.71 | 1297.57 | |
| W-PIT7-1904 | 02/23/11 | 22.74 | 1295.01 | |
| W-PIT7-1904 | 04/12/11 | 20.29 | 1297.46 | |
| W-PIT7-1904 | 08/11/11 | 20.90 | 1296.85 | |
| W-PIT7-1904 | 10/25/11 | 21.32 | 1296.43 | |
| W-PIT7-1905 | 02/23/11 | 22.10 | 1295.88 | |
| W-PIT7-1905 | 04/12/11 | 20.10 | 1297.88 | |
| W-PIT7-1905 | 08/11/11 | 20.34 | 1297.64 | |
| W-PIT7-1905 | 10/25/11 | 20.73 | 1297.25 | |
| W-PIT7-1907 | 02/23/11 | 21.70 | 1296.53 | |
| W-PIT7-1907 | 04/12/11 | 19.38 | 1298.85 | |
| W-PIT7-1907 | 08/11/11 | 20.00 | 1298.23 | |
| W-PIT7-1907 | 10/25/11 | 20.45 | 1297.78 | |
| W-PIT7-1915 | 02/23/11 | 21.85 | 1296.05 | |
| W-PIT7-1915 | 04/12/11 | 19.80 | 1298.10 | |
| W-PIT7-1915 | 08/11/11 | 19.98 | 1297.92 | |
| W-PIT7-1915 | 10/25/11 | 20.44 | 1297.46 | |
| W-PIT7-1916 | 02/23/11 | 22.03 | 1296.09 | |
| W-PIT7-1916 | 04/12/11 | 19.84 | 1298.28 | |
| W-PIT7-1916 | 08/11/11 | 20.41 | 1297.71 | |
| W-PIT7-1916 | 10/25/11 | 20.84 | 1297.28 | |
| W-PIT7-1917 | 02/23/11 | 22.66 | 1295.35 | |
| W-PIT7-1917 | 04/12/11 | 20.12 | 1297.89 | |
| W-PIT7-1917 | 08/11/11 | 20.64 | 1297.37 | |
| W-PIT7-1917 | 10/25/11 | 21.14 | 1296.87 | |
| W-PIT7-1918 | 02/23/11 | 22.09 | 1295.95 | |
| W-PIT7-1918 | 04/12/11 | 22.08 | 1295.96 | |
| W-PIT7-1918 | 08/11/11 | 20.46 | 1297.58 | |
| W-PIT7-1918 | 10/25/11 | 20.90 | 1297.14 | |
| W-PIT7-1919 | 02/23/11 | 22.14 | 1292.86 | |
| W-PIT7-1919 | 04/12/11 | 19.79 | 1295.21 | |
| W-PIT7-1919 | 08/11/11 | 20.42 | 1294.58 | |
| W-PIT7-1919 | 10/25/11 | 20.87 | 1294.13 | |
| W-PIT7-2141 | 02/23/11 | 300.27 | 1164.12 | |
| W-PIT7-2141 | 04/19/11 | 300.31 | 1164.08 | |
| W-PIT7-2141 | 08/11/11 | 300.41 | 1163.98 | |
| W-PIT7-2141 | 10/26/11 | 300.60 | 1163.79 | |
| W-PIT7-2305 | 02/23/11 | 36.22 | 1283.53 | |
| W-PIT7-2305 | 04/12/11 | 36.25 | 1283.50 | |
| W-PIT7-2305 | 08/11/11 | 36.19 | 1283.56 | |
| W-PIT7-2305 | 10/25/11 | 36.25 | 1283.50 | |
| W-PIT7-2306 | 02/23/11 | 47.02 | 1305.00 | |
| W-PIT7-2306 | 04/11/11 | 43.31 | 1308.71 | |

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-PIT7-2306 | 08/15/11 | 32.39 | 1319.63 | DOUBLE CHECKED |
| W-PIT7-2306 | 10/25/11 | 44.92 | 1307.10 | |
| W-PIT7-2307 | 02/23/11 | 42.75 | 1294.80 | |
| W-PIT7-2307 | 04/12/11 | 32.24 | 1305.31 | |
| W-PIT7-2307 | 08/15/11 | 25.41 | 1312.14 | |
| W-PIT7-2307 | 10/25/11 | 25.56 | 1311.99 | |
| W-PIT7-2309 | 02/23/11 | 30.90 | 1308.08 | |
| W-PIT7-2309 | 04/12/11 | 27.17 | 1311.81 | |
| W-PIT7-2309 | 08/15/11 | 27.77 | 1311.21 | |
| W-PIT7-2309 | 10/25/11 | 28.18 | 1310.80 | |
| W-PIT7-2703 | 12/19/11 | 28.50 | NA | NEW WELL NOT SURVEYED |
| W-PIT7-2704 | 12/19/11 | 32.15 | NA | NEW WELL NOT SURVEYED |
| W-PIT7-2705 | 12/19/11 | 21.85 | NA | NEW WELL NOT SURVEYED |

Table C-8. Building 854 Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-854-01 | 03/17/11 | 217.66 | 1118.49 | |
| W-854-01 | 04/13/11 | 217.78 | 1118.37 | |
| W-854-01 | 09/28/11 | 197.30 | 1138.85 | |
| W-854-01 | 12/21/11 | 197.15 | 1139.00 | |
| W-854-02 | 03/17/11 | - | NA | NM WELL SEALED |
| W-854-02 | 04/13/11 | 148.09 | 1186.18 | |
| W-854-02 | 09/28/11 | 149.70 | 1184.57 | |
| W-854-02 | 12/21/11 | 148.63 | 1185.64 | |
| W-854-03 | 03/08/11 | 118.13 | 1122.40 | |
| W-854-03 | 04/13/11 | 117.68 | 1122.85 | |
| W-854-03 | 09/21/11 | 117.34 | 1123.19 | |
| W-854-03 | 12/21/11 | 118.67 | 1121.86 | |
| W-854-04 | 03/08/11 | 294.25 | 945.84 | |
| W-854-04 | 04/13/11 | 294.15 | 945.94 | |
| W-854-04 | 09/21/11 | 293.60 | 946.49 | |
| W-854-04 | 12/21/11 | 293.56 | 946.53 | |
| W-854-05 | 03/08/11 | 89.70 | 1242.34 | |
| W-854-05 | 04/13/11 | 89.88 | 1242.16 | |
| W-854-05 | 09/28/11 | 89.80 | 1242.24 | |
| W-854-05 | 12/21/11 | 89.71 | 1242.33 | |
| W-854-06 | 03/08/11 | 118.11 | 992.34 | |
| W-854-06 | 04/13/11 | 118.45 | 992.00 | |
| W-854-06 | 09/28/11 | 118.46 | 991.99 | |
| W-854-06 | 12/21/11 | 118.16 | 992.29 | |
| W-854-07 | 03/07/11 | 117.43 | 993.43 | |
| W-854-07 | 04/13/11 | 117.81 | 993.05 | |
| W-854-07 | 09/28/11 | 117.61 | 993.25 | |
| W-854-07 | 12/21/11 | 117.39 | 993.47 | |
| W-854-08 | 03/17/11 | 119.71 | 1156.49 | |
| W-854-08 | 04/13/11 | 119.68 | 1156.52 | |
| W-854-08 | 09/28/11 | 119.58 | 1156.62 | |
| W-854-08 | 12/21/11 | 119.82 | 1156.38 | |
| W-854-09 | 09/28/11 | - | NA | NM |
| W-854-10 | 03/08/11 | 116.47 | 1209.91 | |
| W-854-10 | 04/13/11 | 116.32 | 1210.06 | |
| W-854-10 | 09/28/11 | 115.70 | 1210.68 | |
| W-854-10 | 12/21/11 | 116.20 | 1210.18 | |
| W-854-11 | 03/08/11 | - | NA | DRY |
| W-854-11 | 04/13/11 | - | NA | DRY |
| W-854-11 | 09/28/11 | - | NA | DRY |
| W-854-11 | 12/21/11 | - | NA | DRY |
| W-854-12 | 03/08/11 | - | NA | NM/RA |
| W-854-12 | 04/13/11 | - | NA | NM/RA BEHIND PERIMETER FENCE |
| W-854-12 | 09/28/11 | - | NA | NM/RA GREEN AREA |

Table C-8. Building 854 Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-854-13 | 03/08/11 | - | NA | NM/RA |
| W-854-13 | 04/13/11 | - | NA | NM/RA BEHIND PERIMETER FENCE |
| W-854-13 | 09/28/11 | - | NA | NM/RA GREEN AREA |
| W-854-14 | 03/08/11 | 61.00 | 942.70 | |
| W-854-14 | 04/13/11 | 61.06 | 942.64 | |
| W-854-14 | 09/21/11 | 60.30 | 943.40 | |
| W-854-14 | 12/21/11 | 60.00 | 943.70 | |
| W-854-15 | 03/07/11 | 76.56 | 1055.44 | |
| W-854-15 | 04/13/11 | 76.46 | 1055.54 | |
| W-854-15 | 09/21/11 | 75.85 | 1056.15 | |
| W-854-15 | 12/21/11 | 76.10 | 1055.90 | |
| W-854-17 | 03/17/11 | 143.72 | 1192.42 | |
| W-854-17 | 04/13/11 | 143.74 | 1192.40 | |
| W-854-17 | 09/28/11 | 143.56 | 1192.58 | |
| W-854-17 | 12/21/11 | 143.57 | 1192.57 | |
| W-854-1701 | 12/21/11 | 240.16 | 1010.16 | |
| W-854-1706 | 04/27/11 | 16.30 | 816.51 | |
| W-854-1706 | 09/27/11 | 16.34 | 816.47 | |
| W-854-1706 | 12/21/11 | 16.22 | 816.59 | |
| W-854-1707 | 04/27/11 | 28.83 | 803.38 | |
| W-854-1707 | 09/27/11 | 29.01 | 803.20 | |
| W-854-1707 | 12/21/11 | 29.69 | 802.52 | |
| W-854-1731 | 03/08/11 | 59.49 | 944.00 | |
| W-854-1731 | 04/13/11 | 59.30 | 944.19 | |
| W-854-1731 | 09/21/11 | 58.68 | 944.81 | |
| W-854-1731 | 12/21/11 | 58.55 | 944.94 | |
| W-854-1822 | 03/07/11 | 146.21 | 1041.25 | |
| W-854-1822 | 04/17/11 | 146.47 | 1040.99 | |
| W-854-1822 | 09/28/11 | 146.40 | 1041.06 | |
| W-854-1822 | 12/21/11 | 146.43 | 1041.03 | |
| W-854-1823 | 03/07/11 | 51.50 | 1102.76 | |
| W-854-1823 | 04/13/11 | 51.92 | 1102.34 | |
| W-854-1823 | 09/28/11 | 48.19 | 1106.07 | |
| W-854-1823 | 12/21/11 | 49.70 | 1104.56 | |
| W-854-1834 | 03/17/11 | - | NA | NM SEALED WELL |
| W-854-1834 | 04/13/11 | 121.40 | 1211.99 | |
| W-854-1834 | 09/28/11 | 121.41 | 1211.98 | |
| W-854-1834 | 12/21/11 | 121.38 | 1212.01 | |
| W-854-1835 | 03/17/11 | 122.82 | 1209.93 | |
| W-854-1835 | 04/13/11 | 122.81 | 1209.94 | |
| W-854-1835 | 09/28/11 | 122.80 | 1209.95 | |
| W-854-1835 | 12/21/11 | 122.70 | 1210.05 | |
| W-854-18A | 03/17/11 | 144.00 | 1191.90 | |
| W-854-18A | 04/13/11 | 145.22 | 1190.68 | |

Table C-8. Building 854 Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-854-18A | 09/28/11 | - | NA | NM PORT BLOCKED DOWN SPOUT |
| W-854-18A | 12/21/11 | 141.20 | 1194.70 | |
| W-854-19 | 03/07/11 | - | NA | DRY |
| W-854-19 | 04/13/11 | - | NA | DRY |
| W-854-19 | 09/28/11 | - | NA | DRY |
| W-854-19 | 12/21/11 | - | NA | DRY |
| W-854-1902 | 04/17/11 | 148.51 | 1039.77 | |
| W-854-1902 | 09/28/11 | 148.35 | 1039.93 | |
| W-854-1902 | 12/21/11 | 148.42 | 1039.86 | |
| W-854-2115 | 03/07/11 | 117.97 | 993.73 | |
| W-854-2115 | 04/13/11 | 118.75 | 992.95 | |
| W-854-2115 | 09/28/11 | 118.17 | 993.53 | |
| W-854-2115 | 12/21/11 | 118.00 | 993.70 | |
| W-854-2139 | 03/07/11 | 119.04 | 992.64 | |
| W-854-2139 | 04/13/11 | 118.44 | 993.24 | |
| W-854-2139 | 09/28/11 | - | NA | DRY PROBE STUCK SENT WELL WIZ TAG |
| W-854-2139 | 12/21/11 | - | NA | NM REEL STUCK LAST QTR |
| W-854-2218 | 03/17/11 | 145.81 | 1188.89 | |
| W-854-2218 | 04/13/11 | 145.64 | 1189.06 | |
| W-854-2218 | 09/28/11 | 146.46 | 1188.24 | |
| W-854-2218 | 12/21/11 | 145.43 | 1189.27 | |
| W-854-2611 | 09/28/11 | 161.71 | NA | |
| W-854-2611 | 12/21/11 | 161.04 | NA | |
| W-854-45 | 03/08/11 | 87.00 | 910.89 | |
| W-854-45 | 04/13/11 | 89.92 | 907.97 | |
| W-854-45 | 09/21/11 | 86.47 | 911.42 | |
| W-854-45 | 12/21/11 | 86.34 | 911.55 | |
| W-854-F2 | 12/21/11 | - | NA | DRY |

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| SVI-830-031 | 02/09/11 | 21.41 | 670.92 | |
| SVI-830-031 | 05/10/11 | 20.56 | 671.77 | |
| SVI-830-031 | 09/13/11 | 24.36 | 667.97 | |
| SVI-830-031 | 12/06/11 | 24.37 | 667.96 | |
| SVI-830-032 | 02/09/11 | 30.81 | 661.59 | |
| SVI-830-032 | 05/10/11 | 30.04 | 662.36 | |
| SVI-830-032 | 09/13/11 | 32.60 | 659.80 | |
| SVI-830-032 | 12/06/11 | 29.72 | 662.68 | |
| SVI-830-033 | 02/09/11 | 23.63 | 668.72 | |
| SVI-830-033 | 05/10/11 | 23.22 | 669.13 | |
| SVI-830-033 | 09/13/11 | 24.02 | 668.33 | |
| SVI-830-033 | 12/06/11 | 23.13 | 669.22 | |
| SVI-830-035 | 02/09/11 | 21.28 | 671.08 | |
| SVI-830-035 | 05/10/11 | 20.69 | 671.67 | |
| SVI-830-035 | 09/13/11 | 22.06 | 670.30 | |
| SVI-830-035 | 12/06/11 | 19.50 | 672.86 | |
| W-830-04A | 02/03/11 | 45.62 | 578.48 | |
| W-830-04A | 05/03/11 | 47.12 | 576.98 | |
| W-830-04A | 09/06/11 | 47.27 | 576.83 | |
| W-830-04A | 11/28/11 | 46.32 | 577.78 | |
| W-830-05 | 02/03/11 | 24.98 | 559.39 | |
| W-830-05 | 05/03/11 | 25.19 | 559.18 | |
| W-830-05 | 09/06/11 | 24.72 | 559.65 | |
| W-830-05 | 11/28/11 | 24.82 | 559.55 | |
| W-830-07 | 03/14/11 | - | NA | DRY |
| W-830-07 | 05/03/11 | - | NA | DRY |
| W-830-07 | 09/13/11 | - | NA | DRY |
| W-830-09 | 02/09/11 | 120.31 | 575.45 | |
| W-830-09 | 05/10/11 | 117.73 | 578.02 | |
| W-830-09 | 09/13/11 | 121.00 | 574.75 | |
| W-830-09 | 12/06/11 | 122.00 | 573.75 | |
| W-830-10 | 02/03/11 | 18.31 | 578.39 | |
| W-830-10 | 05/03/11 | 19.86 | 576.84 | |
| W-830-10 | 09/06/11 | 20.10 | 576.60 | |
| W-830-10 | 11/28/11 | 19.01 | 577.69 | |
| W-830-11 | 02/03/11 | 33.78 | 562.41 | |
| W-830-11 | 05/03/11 | 35.01 | 561.18 | |
| W-830-11 | 09/06/11 | 35.27 | 560.92 | |
| W-830-11 | 11/28/11 | 34.29 | 561.90 | |
| W-830-12 | 02/09/11 | 94.00 | 598.32 | |
| W-830-12 | 05/10/11 | 92.76 | 599.56 | |
| W-830-12 | 09/06/11 | 92.77 | 599.55 | |
| W-830-12 | 12/06/11 | 94.26 | 598.06 | |
| W-830-13 | 02/03/11 | 26.90 | 537.31 | |

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-830-13 | 05/03/11 | 28.15 | 536.06 | |
| W-830-13 | 09/06/11 | 30.37 | 533.84 | |
| W-830-13 | 11/28/11 | 29.29 | 534.92 | |
| W-830-14 | 02/03/11 | 20.46 | 545.04 | |
| W-830-14 | 05/03/11 | 20.36 | 545.14 | |
| W-830-14 | 09/06/11 | 20.53 | 544.97 | |
| W-830-14 | 11/28/11 | 20.67 | 544.83 | |
| W-830-15 | 02/03/11 | 5.12 | 559.97 | |
| W-830-15 | 05/03/11 | 5.10 | 559.99 | |
| W-830-15 | 09/06/11 | 8.72 | 556.37 | |
| W-830-15 | 11/28/11 | 8.70 | 556.39 | |
| W-830-16 | 02/03/11 | 94.41 | 576.47 | |
| W-830-16 | 05/03/11 | 95.23 | 575.65 | |
| W-830-16 | 09/19/11 | 97.51 | 573.37 | |
| W-830-16 | 11/28/11 | 96.55 | 574.33 | |
| W-830-17 | 02/03/11 | 109.02 | 565.67 | |
| W-830-17 | 05/03/11 | 108.67 | 566.02 | |
| W-830-17 | 09/19/11 | 108.94 | 565.75 | |
| W-830-17 | 11/28/11 | 108.84 | 565.85 | |
| W-830-1730 | 09/19/11 | - | NA | NM |
| W-830-18 | 02/03/11 | 84.19 | 570.30 | |
| W-830-18 | 05/03/11 | 79.63 | 574.86 | |
| W-830-18 | 09/06/11 | 84.52 | 569.97 | |
| W-830-18 | 11/28/11 | 85.98 | 568.51 | |
| W-830-1807 | 02/03/11 | - | NA | NM/RA |
| W-830-1807 | 05/10/11 | - | NA | NM/RA |
| W-830-1807 | 10/28/11 | - | NA | NM/RA |
| W-830-1829 | 02/03/11 | - | NA | NM/RA |
| W-830-1829 | 05/10/11 | 52.14 | 608.37 | |
| W-830-1829 | 09/13/11 | 54.25 | 606.26 | |
| W-830-1829 | 12/06/11 | 53.45 | 607.06 | |
| W-830-1830 | 02/03/11 | 54.90 | 606.10 | |
| W-830-1830 | 05/10/11 | 53.86 | 607.14 | |
| W-830-1830 | 09/13/11 | 55.05 | 605.95 | |
| W-830-1830 | 12/06/11 | 54.33 | 606.67 | |
| W-830-1831 | 02/03/11 | 166.23 | 578.48 | |
| W-830-1831 | 05/02/11 | - | NA | NM/UC DRY HIGH WEEDS |
| W-830-1831 | 09/13/11 | - | NA | NM/UC DRY HIGH WEEDS |
| W-830-1832 | 02/03/11 | 176.38 | 573.49 | |
| W-830-1832 | 05/03/11 | - | NA | NM/UC DRY HIGH WEEDS |
| W-830-1832 | 09/13/11 | - | NA | NM/UC DRY HIGH WEEDS |
| W-830-19 | 02/09/11 | 42.95 | 612.59 | |
| W-830-19 | 05/10/11 | - | NA | DRY |
| W-830-19 | 09/13/11 | 42.94 | 612.60 | |

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-830-19 | 12/06/11 | 39.10 | 616.44 | |
| W-830-20 | 02/03/11 | 24.25 | 572.71 | |
| W-830-20 | 05/03/11 | 25.96 | 571.00 | |
| W-830-20 | 09/06/11 | 25.98 | 570.98 | |
| W-830-20 | 11/28/11 | 26.00 | 570.96 | |
| W-830-21 | 02/03/11 | 68.08 | 585.86 | |
| W-830-21 | 05/03/11 | 67.63 | 586.31 | |
| W-830-21 | 09/06/11 | 68.03 | 585.91 | |
| W-830-21 | 11/28/11 | 68.77 | 585.17 | |
| W-830-22 | 02/09/11 | 50.80 | 604.22 | |
| W-830-22 | 05/10/11 | 50.03 | 604.99 | |
| W-830-22 | 09/13/11 | 50.80 | 604.22 | |
| W-830-22 | 12/06/11 | 51.15 | 603.87 | |
| W-830-2213 | 02/03/11 | 68.22 | 587.67 | |
| W-830-2213 | 05/03/11 | 66.69 | 589.20 | |
| W-830-2213 | 09/06/11 | 69.61 | 586.28 | |
| W-830-2213 | 11/28/11 | 76.84 | 579.05 | |
| W-830-2214 | 02/03/11 | 52.76 | 602.89 | |
| W-830-2214 | 05/03/11 | 66.10 | 589.55 | |
| W-830-2214 | 09/06/11 | 69.39 | 586.26 | |
| W-830-2214 | 11/28/11 | 84.44 | 571.21 | |
| W-830-2215 | 02/03/11 | 85.48 | 570.33 | |
| W-830-2215 | 05/03/11 | 78.87 | 576.94 | |
| W-830-2215 | 09/06/11 | 85.76 | 570.05 | |
| W-830-2215 | 11/28/11 | 87.38 | 568.43 | |
| W-830-2216 | 02/03/11 | 15.81 | 536.85 | |
| W-830-2216 | 05/03/11 | 19.67 | 532.99 | |
| W-830-2216 | 09/06/11 | 20.37 | 532.29 | |
| W-830-2216 | 11/28/11 | 20.43 | 532.23 | |
| W-830-2311 | 02/03/11 | 20.02 | 578.27 | |
| W-830-2311 | 05/03/11 | 20.53 | 577.76 | |
| W-830-2311 | 09/06/11 | 21.90 | 576.39 | |
| W-830-2311 | 11/28/11 | 20.78 | 577.51 | |
| W-830-25 | 02/09/11 | - | NA | NM |
| W-830-25 | 05/03/11 | 23.93 | 598.65 | |
| W-830-25 | 09/06/11 | 24.17 | 598.41 | |
| W-830-25 | 11/28/11 | - | NA | DRY |
| W-830-26 | 02/09/11 | - | NA | DRY |
| W-830-26 | 05/10/11 | - | NA | DRY |
| W-830-26 | 09/13/11 | - | NA | DRY |
| W-830-26 | 12/06/11 | 77.89 | 580.64 | |
| W-830-2610 | 01/31/11 | 17.01 | NA | SURVEY NEEDED |
| W-830-2610 | 05/23/11 | 5.62 | NA | SURVEY NEEDED |
| W-830-2610 | 09/26/11 | 6.30 | NA | SURVEY NEEDED |

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-830-2610 | 12/22/11 | 6.72 | NA | SURVEY NEEDED |
| W-830-27 | 03/14/11 | 32.56 | 591.96 | |
| W-830-27 | 05/03/11 | 28.00 | 596.52 | |
| W-830-27 | 09/06/11 | 28.51 | 596.01 | |
| W-830-27 | 11/28/11 | 35.27 | 589.25 | |
| W-830-2701 | 05/03/11 | 59.16 | NA | SURVEY NEEDED |
| W-830-2701 | 09/06/11 | 59.39 | NA | SURVEY NEEDED |
| W-830-2701 | 11/28/11 | 58.49 | NA | SURVEY NEEDED |
| W-830-28 | 03/14/11 | 53.09 | 571.77 | |
| W-830-28 | 05/03/11 | 48.33 | 576.53 | |
| W-830-28 | 09/06/11 | 48.43 | 576.43 | |
| W-830-28 | 11/28/11 | 54.35 | 570.51 | |
| W-830-29 | 02/09/11 | 85.80 | 575.23 | |
| W-830-29 | 05/10/11 | 84.89 | 576.14 | |
| W-830-29 | 09/13/11 | 90.10 | 570.93 | |
| W-830-29 | 12/06/11 | 87.25 | 573.78 | |
| W-830-30 | 02/09/11 | 17.85 | 674.66 | |
| W-830-30 | 05/10/11 | 17.81 | 674.70 | |
| W-830-30 | 09/13/11 | 18.50 | 674.01 | |
| W-830-30 | 12/06/11 | 14.90 | 677.61 | |
| W-830-34 | 02/09/11 | 18.08 | 674.27 | |
| W-830-34 | 05/10/11 | 17.62 | 674.73 | |
| W-830-34 | 09/15/11 | 17.92 | 674.43 | |
| W-830-34 | 12/06/11 | 16.96 | 675.39 | |
| W-830-49 | 02/09/11 | - | NA | NM/RA |
| W-830-49 | 05/10/11 | - | NA | NM/RA |
| W-830-49 | 09/13/11 | - | NA | NM/RA |
| W-830-49 | 12/06/11 | - | NA | NM/RA |
| W-830-50 | 02/03/11 | 30.87 | 578.27 | |
| W-830-50 | 05/03/11 | 30.89 | 578.25 | |
| W-830-50 | 09/06/11 | 32.62 | 576.52 | |
| W-830-50 | 11/28/11 | 31.58 | 577.56 | |
| W-830-51 | 02/03/11 | - | NA | FA |
| W-830-51 | 05/03/11 | - | NA | FA FLOWING |
| W-830-51 | 09/06/11 | - | NA | NM/FA FLOWING ARTESIAN |
| W-830-51 | 11/28/11 | - | NA | NM/FA FLOWING |
| W-830-52 | 02/03/11 | -1.32 | 574.70 | FLOWING ARTESIAN |
| W-830-52 | 05/03/11 | 0.13 | 573.25 | |
| W-830-52 | 09/06/11 | 0.65 | 572.73 | |
| W-830-52 | 11/28/11 | -0.75 | 574.13 | FlOWING ARTESIAN |
| W-830-53 | 02/03/11 | -2.10 | 578.17 | FlOWING ARTESIAN |
| W-830-53 | 05/03/11 | -0.31 | 576.38 | FlOWING ARTESIAN |
| W-830-53 | 09/06/11 | -0.37 | 576.44 | FlOWING ARTESIAN |
| W-830-53 | 11/28/11 | -1.55 | 577.62 | FlOWING ARTESIAN |

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-830-54 | 02/03/11 | 56.43 | 546.59 | |
| W-830-54 | 05/03/11 | 56.80 | 546.22 | |
| W-830-54 | 09/06/11 | 57.21 | 545.81 | |
| W-830-54 | 11/28/11 | 57.26 | 545.76 | |
| W-830-55 | 02/03/11 | 87.11 | 576.93 | |
| W-830-55 | 05/03/11 | 87.78 | 576.26 | |
| W-830-55 | 09/06/11 | 87.83 | 576.21 | |
| W-830-55 | 11/28/11 | 87.72 | 576.32 | |
| W-830-56 | 02/03/11 | 31.29 | 545.53 | |
| W-830-56 | 05/03/11 | 31.22 | 545.60 | |
| W-830-56 | 09/06/11 | 31.42 | 545.40 | |
| W-830-56 | 11/28/11 | 31.60 | 545.22 | |
| W-830-57 | 02/09/11 | 69.00 | 570.18 | |
| W-830-57 | 05/03/11 | 62.31 | 576.87 | |
| W-830-57 | 09/06/11 | - | NA | NM |
| W-830-57 | 11/28/11 | 68.21 | 570.97 | |
| W-830-58 | 02/09/11 | 23.92 | 608.95 | |
| W-830-58 | 05/03/11 | 23.16 | 609.71 | |
| W-830-58 | 09/06/11 | - | NA | NM |
| W-830-58 | 11/28/11 | 24.61 | 608.26 | |
| W-830-59 | 02/09/11 | 59.81 | 606.30 | |
| W-830-59 | 05/10/11 | 53.17 | 612.94 | |
| W-830-59 | 09/15/11 | 59.80 | 606.31 | |
| W-830-59 | 12/06/11 | 53.59 | 612.52 | |
| W-830-60 | 02/03/11 | 68.86 | 568.55 | |
| W-830-60 | 05/03/11 | 60.48 | 576.93 | |
| W-830-60 | 09/06/11 | 65.73 | 571.68 | |
| W-830-60 | 11/28/11 | 67.14 | 570.27 | |
| W-831-01 | 02/09/11 | 133.10 | 640.39 | |
| W-831-01 | 05/10/11 | 132.53 | 640.96 | |
| W-831-01 | 09/14/11 | 132.67 | 640.82 | |
| W-831-01 | 12/06/11 | 132.90 | 640.59 | |
| W-832-01 | 02/09/11 | 31.03 | 675.03 | |
| W-832-01 | 05/10/11 | - | NA | NM/RA |
| W-832-01 | 09/14/11 | - | NA | NM/RA |
| W-832-01 | 12/06/11 | 31.95 | 674.11 | |
| W-832-05 | 02/09/11 | 35.45 | 683.22 | |
| W-832-05 | 05/10/11 | 30.24 | 688.43 | |
| W-832-05 | 09/14/11 | 32.90 | 685.77 | |
| W-832-05 | 12/06/11 | - | NA | DRY |
| W-832-06 | 02/09/11 | 37.23 | 683.62 | |
| W-832-06 | 05/10/11 | 37.48 | 683.37 | |
| W-832-06 | 09/14/11 | 37.89 | 682.96 | |
| W-832-06 | 12/06/11 | 38.58 | 682.27 | |

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-832-09 | 02/09/11 | 73.66 | 633.56 | |
| W-832-09 | 05/10/11 | 73.30 | 633.92 | |
| W-832-09 | 09/14/11 | 73.47 | 633.75 | |
| W-832-09 | 12/06/11 | 73.60 | 633.62 | |
| W-832-10 | 02/09/11 | - | NA | NM |
| W-832-10 | 05/10/11 | - | NA | NM/UC HIGH WEEDS |
| W-832-10 | 09/14/11 | - | NA | NM/RA |
| W-832-10 | 12/06/11 | - | NA | NM/RA |
| W-832-11 | 02/09/11 | 34.80 | 663.85 | |
| W-832-11 | 05/10/11 | - | NA | NM/RA |
| W-832-11 | 09/14/11 | - | NA | NM/RA |
| W-832-11 | 12/06/11 | - | NA | NM/RA |
| W-832-12 | 02/09/11 | 19.13 | 702.35 | |
| W-832-12 | 05/10/11 | 24.27 | 697.20 | |
| W-832-12 | 09/14/11 | - | NA | DRY |
| W-832-12 | 12/06/11 | - | NA | DRY |
| W-832-13 | 02/09/11 | - | NA | DRY |
| W-832-13 | 05/10/11 | - | NA | NM/RA CB IS COVERED |
| W-832-13 | 09/14/11 | 21.00 | 701.66 | |
| W-832-13 | 12/06/11 | 21.60 | 701.06 | |
| W-832-14 | 02/09/11 | 22.75 | 698.42 | |
| W-832-14 | 05/10/11 | 23.02 | 698.15 | |
| W-832-14 | 09/14/11 | - | NA | DRY |
| W-832-14 | 12/06/11 | - | NA | DRY |
| W-832-15 | 02/09/11 | 17.95 | 703.68 | |
| W-832-15 | 05/10/11 | - | NA | DRY |
| W-832-15 | 09/14/11 | - | NA | DRY |
| W-832-15 | 12/06/11 | - | NA | DRY |
| W-832-16 | 02/09/11 | 17.72 | 703.02 | |
| W-832-16 | 05/10/11 | 17.66 | 703.08 | |
| W-832-16 | 09/14/11 | 18.00 | 702.74 | |
| W-832-16 | 12/06/11 | 17.86 | 702.88 | |
| W-832-17 | 02/09/11 | - | NA | DRY |
| W-832-17 | 05/10/11 | 16.47 | 705.53 | |
| W-832-17 | 09/14/11 | 18.41 | 703.59 | |
| W-832-17 | 12/06/11 | - | NA | DRY |
| W-832-18 | 02/09/11 | 22.35 | 698.85 | |
| W-832-18 | 05/10/11 | 23.57 | 697.63 | |
| W-832-18 | 09/14/11 | 25.27 | 695.93 | |
| W-832-18 | 12/06/11 | - | NA | DRY |
| W-832-19 | 02/09/11 | 23.18 | 696.84 | |
| W-832-19 | 05/10/11 | 22.66 | 697.36 | |
| W-832-19 | 09/14/11 | 23.68 | 696.34 | |
| W-832-19 | 12/06/11 | 23.68 | 696.34 | |

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-832-1927 | 09/14/11 | - | NA | NM |
| W-832-20 | 05/10/11 | 23.25 | 697.64 | |
| W-832-20 | 09/14/11 | - | NA | DRY |
| W-832-20 | 12/06/11 | - | NA | DRY |
| W-832-21 | 02/09/11 | - | NA | DRY |
| W-832-21 | 05/10/11 | - | NA | DRY |
| W-832-21 | 09/14/11 | - | NA | DRY |
| W-832-21 | 12/06/11 | - | NA | DRY |
| W-832-2112 | 03/08/11 | 72.01 | 582.08 | |
| W-832-2112 | 05/26/11 | 70.41 | 583.68 | |
| W-832-2112 | 09/12/11 | 73.68 | 580.41 | |
| W-832-2112 | 12/06/11 | 73.72 | 580.37 | |
| W-832-22 | 02/09/11 | 56.30 | 664.67 | |
| W-832-22 | 05/10/11 | 56.37 | 664.60 | |
| W-832-22 | 09/14/11 | 56.33 | 664.64 | |
| W-832-22 | 12/06/11 | 56.61 | 664.36 | |
| W-832-23 | 02/09/11 | 30.47 | 689.67 | |
| W-832-23 | 05/10/11 | 30.08 | 690.06 | |
| W-832-23 | 09/14/11 | 32.77 | 687.37 | |
| W-832-23 | 12/06/11 | 33.25 | 686.89 | |
| W-832-24 | 02/09/11 | 37.90 | 624.59 | |
| W-832-24 | 05/10/11 | - | NA | NM/UC SNAKE AT WELL |
| W-832-24 | 09/14/11 | - | NA | NM/UC |
| W-832-24 | 12/06/11 | 38.57 | 623.92 | |
| W-832-25 | 05/10/11 | - | NA | NM/RA |
| W-832-25 | 09/14/11 | - | NA | NM/RA |
| W-832-25 | 12/06/11 | - | NA | NM/RA |
| W-832-SC1 | 02/03/11 | 6.34 | 578.36 | |
| W-832-SC1 | 05/03/11 | - | NA | DRY |
| W-832-SC1 | 09/14/11 | - | NA | DRY |
| W-832-SC1 | 11/28/11 | 5.31 | 579.39 | |
| W-832-SC2 | 02/03/11 | - | NA | DRY |
| W-832-SC2 | 05/03/11 | - | NA | DRY |
| W-832-SC2 | 09/14/11 | - | NA | DRY |
| W-832-SC2 | 11/28/11 | - | NA | DRY |
| W-832-SC3 | 02/03/11 | - | NA | DRY |
| W-832-SC3 | 05/03/11 | - | NA | DRY |
| W-832-SC3 | 09/14/11 | - | NA | DRY |
| W-832-SC3 | 11/28/11 | - | NA | DRY |
| W-832-SC4 | 02/03/11 | 6.86 | 530.44 | |
| W-832-SC4 | 05/03/11 | - | NA | NM/UC WEEDS |
| W-832-SC4 | 09/14/11 | - | NA | DRY |
| W-832-SC4 | 11/28/11 | - | NA | DRY |
| W-870-01 | 01/31/11 | - | NA | DRY |

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-870-01 | 05/23/11 | 13.55 | 510.16 | |
| W-870-01 | 09/22/11 | - | NA | DRY |
| W-870-01 | 12/22/11 | - | NA | DRY |
| W-870-02 | 01/31/11 | 17.78 | 506.04 | |
| W-870-02 | 05/23/11 | 12.16 | 511.66 | |
| W-870-02 | 09/22/11 | - | NA | NM/RA CAR ON CHRISTY BOX |
| W-870-02 | 12/22/11 | 18.05 | 505.77 | |
| W-880-01 | 01/31/11 | 17.21 | 508.84 | |
| W-880-01 | 05/23/11 | 11.72 | 514.33 | |
| W-880-01 | 09/26/11 | 17.30 | 508.75 | |
| W-880-01 | 12/22/11 | 17.46 | 508.59 | |
| W-880-02 | 01/31/11 | 18.16 | 507.64 | |
| W-880-02 | 05/23/11 | 12.47 | 513.33 | |
| W-880-02 | 09/26/11 | 18.53 | 507.27 | |
| W-880-02 | 12/22/11 | 18.51 | 507.29 | |
| W-880-03 | 01/31/11 | - | NA | FA |
| W-880-03 | 05/23/11 | - | NA | NM/FA |
| W-880-03 | 09/26/11 | 1.10 | 524.95 | |
| W-880-03 | 12/22/11 | - | NA | NM ARTESIAN |

Table C-10. Building 851 Firing Table ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-851-05 | 09/29/11 | - | NA | NM/RA 3000 ' MUSTER |
| W-851-06 | 09/29/11 | - | NA | NM/RA 3000 ' MUSTER |
| W-851-07 | 09/29/11 | - | NA | NM/RA 3000 ' MUSTER |
| W-851-07 | 11/28/11 | 138.32 | 1133.27 | |
| W-851-08 | 09/29/11 | - | NA | NM/RA 3000 ' MUSTER |
| W-851-08 | 11/28/11 | 182.51 | 1089.81 | |

Table C-11. Building 845 Firing Table and Pit 9 Landfill ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| K9-01 | 03/03/11 | 78.68 | 996.83 | |
| K9-01 | 04/27/11 | 78.83 | 996.68 | |
| K9-01 | 09/06/11 | 78.61 | 996.90 | |
| K9-01 | 11/15/11 | 78.71 | 996.80 | |
| K9-02 | 03/03/11 | 129.06 | 1006.33 | |
| K9-02 | 04/27/11 | 129.02 | 1006.37 | |
| K9-02 | 09/06/11 | 128.86 | 1006.53 | |
| K9-02 | 11/15/11 | 129.06 | 1006.33 | |
| K9-03 | 03/03/11 | 120.03 | 997.05 | |
| K9-03 | 04/27/11 | 120.00 | 997.08 | |
| K9-03 | 09/06/11 | 119.96 | 997.12 | |
| K9-03 | 11/15/11 | 120.05 | 997.03 | |
| K9-04 | 03/03/11 | 89.51 | 994.81 | |
| K9-04 | 04/27/11 | 89.55 | 994.77 | |
| K9-04 | 09/06/11 | 89.41 | 994.91 | |
| K9-04 | 11/15/11 | 89.55 | 994.77 | |

Table C-12. Building 833 ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| W-833-03 | 02/02/11 | - | NA | DRY |
| W-833-03 | 05/31/11 | - | NA | DRY |
| W-833-03 | 09/20/11 | - | NA | DRY |
| W-833-03 | 12/13/11 | - | NA | DRY |
| W-833-12 | 02/02/11 | 20.10 | 827.12 | |
| W-833-12 | 05/31/11 | 19.79 | 827.43 | |
| W-833-12 | 09/20/11 | - | NA | DRY |
| W-833-12 | 12/13/11 | 20.42 | 826.80 | |
| W-833-18 | 02/08/11 | - | NA | DRY |
| W-833-18 | 05/31/11 | - | NA | DRY |
| W-833-18 | 09/14/11 | - | NA | DRY |
| W-833-18 | 12/13/11 | - | NA | DRY |
| W-833-22 | 02/08/11 | - | NA | DRY |
| W-833-22 | 05/31/11 | - | NA | DRY |
| W-833-22 | 09/20/11 | - | NA | DRY |
| W-833-22 | 12/13/11 | - | NA | DRY |
| W-833-28 | 02/02/11 | 41.80 | 814.12 | |
| W-833-28 | 05/31/11 | 41.96 | 813.96 | |
| W-833-28 | 09/20/11 | 41.98 | 813.94 | |
| W-833-28 | 12/13/11 | 41.74 | 814.18 | |
| W-833-30 | 02/02/11 | 276.63 | 575.03 | |
| W-833-30 | 05/31/11 | 275.03 | 576.63 | |
| W-833-30 | 09/20/11 | 277.88 | 573.78 | |
| W-833-30 | 12/13/11 | 276.84 | 574.82 | |
| W-833-33 | 02/02/11 | 26.79 | 822.01 | |
| W-833-33 | 05/31/11 | 25.19 | 823.61 | |
| W-833-33 | 09/20/11 | - | NA | DRY |
| W-833-33 | 12/13/11 | 26.25 | 822.55 | |
| W-833-34 | 12/13/11 | 34.21 | 814.71 | |
| W-833-43 | 02/02/11 | - | NA | DRY |
| W-833-43 | 05/11/11 | - | NA | DRY |
| W-833-43 | 09/14/11 | - | NA | DRY |
| W-833-43 | 12/13/11 | - | NA | DRY |
| W-840-01 | 09/27/11 | 117.96 | 579.12 | |
| W-841-01 | 02/08/11 | - | NA | DRY |
| W-841-01 | 05/11/11 | - | NA | DRY |
| W-841-01 | 09/27/11 | - | NA | DRY |
| W-841-01 | 12/13/11 | - | NA | DRY |

Table C-13. Building 801 Firing Table and Pit 8 Landfill ground water elevations.

| Well | Date | Depth to water (ft) | Water elevation (ft MSL) | Notes |
|---|---|---|---|---|
| K8-01 | 03/09/11 | 132.68 | 967.76 | |
| K8-01 | 04/26/11 | 132.68 | 967.76 | |
| K8-01 | 08/31/11 | 132.72 | 967.72 | |
| K8-01 | 11/10/11 | 132.83 | 967.61 | |
| K8-02B | 03/09/11 | 161.74 | 966.38 | |
| K8-02B | 04/26/11 | 161.81 | 966.31 | |
| K8-02B | 08/31/11 | 161.80 | 966.32 | |
| K8-02B | 11/10/11 | 161.88 | 966.24 | |
| K8-04 | 03/09/11 | 166.72 | 966.13 | |
| K8-04 | 04/26/11 | 166.77 | 966.08 | |
| K8-04 | 08/31/11 | 166.73 | 966.12 | |
| K8-04 | 11/10/11 | 166.90 | 965.95 | |
| K8-05 | 03/09/11 | - | NA | DRY |
| K8-05 | 04/26/11 | - | NA | DRY |
| K8-05 | 08/31/11 | - | NA | DRY |
| K8-05 | 11/10/11 | - | NA | DRY |

# Appendix D

# Institutional Controls Monitoring Checklist

# Appendix D

# Institutional Controls Monitoring Checklist

Table B-2. Institutional Controls Monitoring Checklist.

## Table B-2. Institutional Controls Monitoring Checklist

This checklist will be used to conduct monitoring of institutional and engineered controls that are used to prevent exposure to contamination. The checklist will be completed at least annually and the results will be reported in the annual Compliance Monitoring Reports. Corrective action implementation is discussed in Section 6.1.6.

| Institutional Control | Status[a] | Explanation/Observation of Corrective Action |
|---|---|---|
| Verify that the occupancy warning signs are visible at Building 834D. | YES | |
| Verify that the Pit 6 Landfill was inspected within the last year and deficiencies were corrected.[b] | YES | |
| Verify that signage is in place at the Pit 6 Landfill prohibiting unauthorized access and excavation. | YES | |
| Verify that the fences and warning signs at the site boundary and control entry are in proper condition.[c] | YES | |
| Verify that the Building 850 Soil Solidification Corrective Action Management Unit was inspected within the last year and deficiencies were corrected.[d] | YES | |
| Verify that the Pit 7 Complex Drainage Diversion System was inspected within the last year and deficiencies were corrected.[e] | YES | |
| Verify that the Pit 7 Complex landfills were inspected within the last year and deficiencies were corrected.[b] | YES | |
| Verify that signage is in place at the Pit 7 Complex Landfills prohibiting unauthorized access and excavation. | YES | |
| Verify that the occupancy warning signs are visible at Building 854A. | YES | |
| Verify that the occupancy warning signs are visible at Building 830. | YES | |
| Verify that the occupancy warning signs are visible at Building 833. | YES | |
| Check that the engineered controls (heating, ventilating, and air-conditioning system for Building 833) are functioning properly. | YES | |
| Verify that the Pit 2 Landfill was inspected within the last year and deficiencies were corrected.[b] | YES | |

**Table B-2. Institutional Controls Monitoring Checklist (continued).**

| Institutional Control | Status[a] | Explanation/Observation of Corrective Action |
|---|---|---|
| Verify that the Pit 8 Landfill was inspected within the last year and deficiencies were corrected.[b] | YES | |
| Verify that the Pit 9 Landfill was inspected within the last year and deficiencies were corrected.[b] | YES | |

**Notes:**

[a] Satisfactory status indicated by "Yes". Unsatisfactory status indicated by "No". Unsatisfactory status requires explanation. The Inspector shall immediately notify the Environmental Restoration Project Leader of any unsatisfactory status.

[b] The landfills are inspected and maintained by LLNL Maintenance and Utility Services. Inspections are documented and the results are provided to the Environmental Restoration Project and reported in the annual Compliance Monitoring Reports.

[c] Perimeter fences are inspected by LLNL Security annually.

[d] The Building 850 Soil Solidification mound is inspected and maintained by LLNL Maintenance and Utility Services. Inspections are documented and the results are provided to the Environmental Restoration Project and reported in the annual Compliance Monitoring Reports.

[e] The Pit 7 Drainage Diversion System is inspected and maintained by LLNL Maintenance and Utility Services. Inspections are documented and the results are provided to the Environmental Restoration Project and reported in the annual Compliance Monitoring Reports.

Inspected by:

STEPHEN P. ORLOFF [signature] Date: 11/3/11

(Print Name) (Signature)

**LAWRENCE LIVERMORE**
**NATIONAL LABORATORY**
**Lawrence Livermore National Security, LLC • Livermore, California • 94551**