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**Lawrence Livermore National Laboratory**



Lawrence Livermore National Security, LLC, Livermore, California 94551

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**2010 Annual  
Compliance Monitoring Report  
Lawrence Livermore National Laboratory  
Site 300**

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**Environmental Restoration Department**



**2010 Annual  
Compliance Monitoring Report  
Lawrence Livermore National Laboratory  
Site 300**

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## **Errata**

## **Acknowledgements**

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## 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 2010. 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., 2009). The Eastern GSA post-shutdown monitoring requirements (Holtzapfel, 2007) are also included in this report.

During the reporting period of January through December 2010, 9.7 million gallons of ground water and 80 million cubic feet of soil vapor were treated at Site 300, removing approximately 13 kilograms (kg) of volatile organic compounds (VOCs), 120 grams (g) of perchlorate, 1,400 kg of nitrate, 150 g of Research Department Explosive (RDX), 6.1 g of a mixture of tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) and 7.8 g of total uranium (Table Summ-1).

Since remediation began in 1991, approximately 386 million gallons of ground water and over 574 million cubic feet of soil vapor have been treated, removing approximately 550 kg of VOCs, 1 kg of perchlorate 9,400 kg of nitrate, 1.5 kg of RDX, 9.5 kg of TBOS/TKEBS, and 7.8 g 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
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- 2.3. Pit 6 Landfill OU 3
- 2.4. High Explosive 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-dichloroethane (1,1-DCA); 1,2-dichloroethane (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.

Isoconcentration contour maps and post-only maps for the primary contaminants of concern (COCs) were constructed using second semester 2010 data. To better match the time period when the concentration data was collected with the time period when the ground water level data was measured, the primary COC data were superimposed onto the second semester extents of saturation. Isoconcentration contour maps and post-only maps for the secondary COCs were constructed using first semester 2010 data. To create a snapshot in time, these contours were superimposed onto the first semester extents of saturation.

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, OU5, OU 6 and OU 7).

Treatment facility operations and maintenance issues that occurred during the second semester 2010 and influent and effluent analytical data collected during the second semester 2010 are included in this report. Treatment facility pH data collected during the second semester 2010 are presented in Appendix A. Ground and surface water monitoring analytical data and ground water elevation measurements for the entire calendar year 2010 are presented in Appendices B and C, respectively. No soil samples were collected during drilling operations performed during 2010, therefore there is no new analytical data for soil samples to present. New wells and boreholes installed during 2010 are presented in Table 2-1. The Building 834 T2 Area *in situ* bioremediation data is included in Appendix D. The Institutional Control Monitoring Performed in 2010 is included in Appendix E. 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 5 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 (TCE) concentrations remain below their cleanup standards after three years and eight months following shutdown of the treatment facility.

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

At the Central GSA, chlorinated solvents, mainly 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 3 to 4 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-7I, and at a 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 monitoring 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.

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

As discussed above, the Eastern GSA GWTS has been shut down since February 15, 2007. Therefore, only the Central GSA treatment system data are presented in this report. The monthly ground water and soil vapor discharge volumes and rates and operational hours are summarized in Table 2.1-1. The total volume of ground water and vapor extracted and treated and masses removed during the reporting period 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 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***

There were no operations and maintenance issues at the Eastern GSA GWTS since it was shut down on February 15, 2007 because ground water cleanup standards have been achieved (see Section 2.1).

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

- The GWTS operated intermittently during the reporting period. The GWTS was shutting down for an unknown reason. The following maintenance was performed to correct the unplanned shutdowns and to increase the general performance of the facility:
  - Level switch work was performed on July 12.
  - The entire system was offline from August 17 through August 31 for replacement of the black iron pipe discharge lines from the extraction wells to the GWTS with polyvinyl chloride (PVC) pipe. This was done to decrease the backpressure created by the rusting of the iron pipe, and the maintenance associated with filtering out the rust particles. The SVTS system was shut down to prevent upconing of ground water while the GWTS was off.
  - The GWTS was restarted on September 28 after diagnosing a problem with the level switch and the misting tower transfer tank. A new switch was installed in the misting

transfer tank, however the GWTS shut down on October 14 due to a transfer pump electrical failure.

- The GWTS motor control and solid-state relay were replaced and the GWTS was restarted on October 26. The system shut down after 30 minutes of operation. The High-High switch was changed and the system was restarted on October 27.
- The modules that control leak detection were replaced and the system was restarted on November 1.
- The misting tower transfer level switch was replaced and the GWTS was restarted on November 15. This corrected the cause of the intermittent shutdowns.
- A site-wide power outage occurred on November 30. The facilities were checked for freeze damage and restarted.
- The Central GSA SVTS was shut down on November 22 due to condensate buildup that occurs during the winter months to protect against damage caused by freezing temperatures. The SVTS remained off for the remainder of the semester due to the need for knock-out drum replacement.
- The GWTS was found shut down on December 13 due to blown transfer tank fuses. The fuses were changed and the system was restarted.
- The compressor used to operate the pneumatic pumps and flow control valve failed on December 20. With the exception of extraction well W-7O, all wells were offline for the remainder of the semester.

#### ***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 2010. 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 new monitoring requirements in the CMP/CP. The treatment facility sampling and analysis plan is presented in Table 2.1-3. No modifications were made to the plan during this reporting period.

#### ***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, with the exception of the replacement of the black iron pipe discharge lines with PVC pipe.

### **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; one required analyses was not performed due to an inoperable pump and one required analyses was not performed because personnel could not sample the well 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; four required analyses were not performed due to an inoperable pump and thirteen required analyses were not performed because there was insufficient water in the wells to collect the samples.

Ground water elevation contour maps for the Qal/ Tnbs<sub>1</sub> and Qt-Tnsc<sub>1</sub> and Qal-Tnbs<sub>1</sub> hydrostratigraphic units (HSUs) within the OU are presented on Figures 2.1-3 and 2.1-4, respectively.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, respectively.

### **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 are summarized in Table 2.1-6. The total mass removed during this reporting period and cumulative mass estimates are summarized in Table Summ-1 and Table Summ-2, respectively.

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

At the GSA OU, VOCs are the primary COCs detected in ground water. VOCs are present at very low concentrations in ground water within Quaternary alluvial deposits (Qal) that directly overlie the Tnbs<sub>1</sub> bedrock in the Eastern GSA. A total VOC isoconcentration contour map based on data collected during the second semester of 2010 for this shallow Qal-Tnbs<sub>1</sub> HSU is presented on Figure 2.1.5.

A VOC plume exists within the Qt-Tnsc<sub>1</sub> and Qal-Tnbs<sub>1</sub> HSUs in the Central GSA. A total VOC isoconcentration contour map based on data collected during second semester 2010 for these HSUs is presented on Figure 2.1.6.

##### **2.1.3.2.1. Total VOCs Concentrations and Distribution**

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 cleanup standard for TCE in all wells. Within the Qal-Tnbs<sub>1</sub> HSU, total VOC concentrations detected in samples during 2010 ranged from 5.1 µg/L (W-26R-04, June) to <0.5 µg/L but no TCE results exceeded the 5 µg/L cleanup standard. The total VOC concentration detected in well W-26R-04 was 4.6 µg/L TCE and 0.5 µg/L tetrachloroethene (PCE). Total VOCs were detected in a sample from only one Tnbs<sub>1</sub> well, W-25N-08, at a concentration of 0.5 µg/L (June). The 2010 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 shutdown in February 2007.

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

- Qt-Tnsc<sub>1</sub> HSU, a shallow water bearing zone in the western portion of the Central GSA. This HSU includes saturated Qt deposits, and the Tnbs<sub>2</sub> sandstone and Tnsc<sub>1</sub> siltstone/claystone bedrock units that subcrop beneath the Qt.
- Tnbs<sub>1</sub> HSU, a deeper regional aquifer within the western portion of the Central GSA which consists of Tnbs<sub>1</sub> sandstone bedrock.
- Qal-Tnbs<sub>1</sub> 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<sub>2</sub> and Tnsc<sub>1</sub> bedrock units are not present. Qal deposits directly overlie the shallow Tnbs<sub>1</sub> bedrock that comprises the Qal-Tnbs<sub>1</sub> HSU in this area.

A VOC plume exists within the Qt-Tnsc<sub>1</sub> and Qal-Tnbs<sub>1</sub> HSUs in the Central GSA. Within the Qt-Tnsc<sub>1</sub> and Qal-Tnbs<sub>1</sub> HSUs, total VOC concentrations during 2010 ranged from a maximum of 2,000 µg/L (W-7I, June) to <0.5 µg/L. The maximum total VOC ground water concentration continues to occur in the dry well pad area. During 2010, total VOCs were detected in offsite monitor wells W-35A-01, W-35A-09, and W-35A-10 at maximum concentrations of 65, 0.7, and 30 µg/L, respectively. Freon 11 comprises 11 µg/L of the total VOC concentration (30 µg/L) in well W-35A-10. Prior to remediation, the maximum total VOC concentration detected in Central GSA ground water was 272,000 µg/L (dry well pad area well W-875-07, 1992), compared to the 2010 maximum concentration of 2,000 µg/L (dry well pad area well W-7I). VOCs were not detected in ground water samples from wells in the deeper Tnbs<sub>1</sub> HSU. The decline in VOCs within the Qt-Tnsc<sub>1</sub> and Qal-Tnbs<sub>1</sub> HSUs and the absence of VOCs in the deeper Tnbs<sub>1</sub> HSU, demonstrates the efficacy of ongoing cleanup operations. TCE soil vapor concentrations ranged from 0.18 to 15 parts per million on a volume per volume basis (ppm<sub>v/v</sub>) during 2010. These TCE concentrations have decreased significantly from the maximum historic TCE vapor concentration of 600 ppm<sub>v/v</sub> at SVTS startup.

#### **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 ROD ground water cleanup standards and TCE concentrations to below the reporting limit (0.5 µg/L) in the majority of wells. In January of 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. As of the end of 2010, TCE has been detected only once above cleanup standards (6.9 µg/L in well W-26R-01, in May 2009). As described in the first semester 2009 CMR, this well and nearby well W-26R-04 were re-sampled in June 2009 with no TCE

detections above the cleanup standard. 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 cleanup standard for all Eastern GSA ground water samples collected during 2010.

At the Central GSA, ground water extraction continues to adequately capture the highest concentrations in ground water. During 2010, extraction well W-7R removed most of the ground water while wells W-875-07, W-875-08, and W-7O removed most of the dissolved VOC mass. Total VOC concentrations within the northern plume area (in the vicinity of W-889-01) remain stable and a ground water extraction well is scheduled for this area in 2011. Although detectable VOC concentrations still exist in offsite wells W-35A-01, W-35A-09, and W-35A-10, these wells exhibit long-term declining trends.

Significantly more VOC mass is being removed by soil vapor extraction than by ground water extraction. During 2010, 0.25 kg of VOCs was removed from ground water, whereas 1.67 kg of VOCs was removed from vapor. Based on individual well vapor flow monitoring for 2010, SVE wells W-875-10, W-875-11, and W-875-15 removed most of the vapor mass. The SVE wellfield configuration will continue to be monitored and evaluated.

#### **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 cleanup standard (45 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. A map of Building 834 OU showing the locations of monitoring 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 main part of the Building 834 Complex, referred to as 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. The area immediately to the southwest of the core area is the leachfield area and further to the south is the distal (T2) area. 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 extraction wells for both ground water and soil vapor extraction. 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 any floating diesel, 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 from 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 are summarized in Table 2.2-1. The total volume of ground water and vapor extracted and treated and masses removed during the reporting period 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 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 second semester:

- The GWTS and SVTS were shut down temporarily for interlock checks on June 22.
- The GWTS and SVTS were found off on August 23 due to an air compressor fault possibly due to heat. The GWTS and SVTS were restarted on August 24.
- The GWTS and SVTS were shut down temporarily for interlock checks on September 21.
- The SVTS was shut down on November 16 for blower maintenance and remained offline for the remainder of the reporting period.
- The GWTS was shut down on November 23 to prevent damage from freezing temperatures and remained offline for the remainder of the reporting period.



### **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 new monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.2-5. No modifications were made to the plan during this reporting period.

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

No modifications to the treatment facility or to the extraction wellfield occurred 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; eighty-nine required analyses were not performed because there was insufficient water in the wells to collect the samples.

Ground water elevation contour maps for the Tpsg perched water-bearing zone and Tps-Tnsc<sub>2</sub> HSUs within the OU are presented on Figures 2.2-2 and 2.2-3, respectively.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, respectively.

## **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 are summarized in Table 2.2-7. The total mass removed during this reporting period 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 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<sub>2</sub> perching horizon.

Total VOC concentration data are contoured for the Tpsg HSU and posted for the Tps-Tnsc<sub>2</sub> HSU based on data collected during the second semester of 2010 and are presented on Figures 2.2-4 and 2.2-5, respectively. Secondary ground water COC concentrations for the first

semester of 2010 are posted and presented on Figures 2.2-6 and 2.2-8 for the perched Tpsg HSU and on Figures 2.2-7 and 2.2-9 for the Tps-Tnsc<sub>2</sub> HSU.

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

While the overall extent of total 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 continue to be detected in the 834 core area. Active remediation has reduced total VOC ground water concentrations in the more permeable Tpsg HSU from a pre-remediation maximum of 1,060,000 µg/L (W-834-D3, 1993) to a 2010 maximum concentration of 54,000 µg/L (W-834-C5, July). The underlying Tps-Tnsc<sub>2</sub> HSU continues to exhibit the highest total VOC ground water concentrations within Building 834 OU, and throughout Site 300, at 180,000 µg/L (W-834-A1, January). Total VOCs in ground water in well W-834-A1 have remained stable since this well began monitoring the Tps-Tnsc<sub>2</sub> HSU in 2000. Another monitor well screened in the Tps-Tnsc<sub>2</sub> HSU, W-834-U1, exhibited 63,000 µg/L total VOCs in 2010 and has generally shown decreasing VOC concentrations since 2000.

TCE soil vapor concentrations from the core area SVE wells ranged from 0.01 to 9.2 ppm<sub>v/v</sub> during 2010. These TCE vapor concentrations have decreased by two orders-of-magnitude from the maximum pre-remediation core area concentration of 3,200 ppm<sub>v/v</sub> (W-834-D4, 1989). Well W-834-D4 is located approximately 10 ft from well W-834-D3, which yielded the aforementioned historic maximum ground water total VOC concentration in the Tpsg HSU.

In the leachfield area, total VOCs in the Tpsg HSU have decreased by approximately an order-of-magnitude, from a pre-remediation maximum of 179,200 µg/L (W-834-S1, 1988) to a 2010 maximum concentration of 20,000 µg/L (W-834-2113, August). Total VOCs in the underlying Tps-Tnsc<sub>2</sub> HSU in the leachfield area are significantly lower than in the core area. The 2010 maximum total VOC concentration in Tps-Tnsc<sub>2</sub> HSU ground water was 6,200 µg/L (W-834-S8, February) in the leachfield area. This HSU has exhibited decreasing or stable VOC trends since monitoring began in 1989. During 2010, TCE soil vapor concentrations from the Tpsg HSU in the leachfield area ranged from 0.32 to 8.4 ppm<sub>v/v</sub>, significantly lower than the 710 ppm<sub>v/v</sub> maximum pre-remediation concentration measured in 2004.

In the distal area, total VOC concentrations in the Tpsg HSU have decreased from a historic maximum of 86,000 µg/L (W-834-T2A, 1988) to a 2010 maximum of 11,000 µg/L (W-834-T2A, February). The underlying Tps-Tnsc<sub>2</sub> HSU is monitored by one well, W-834-2119, which contained a 2010 maximum total VOC concentration of 16,000 µg/L (August), slightly above the historic maximum for this well of 15,000 µg/L (2007). Well W-834-2119 is closely monitored given its proximity to a nearby ongoing *in situ* bioremediation experiment.

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

The maximum TBOS/TKEBS ground water concentration has decreased from a historic maximum of 7,300,000 µg/L (W-834-D3, 1995) to a 2010 maximum of 140,000 µg/L (W-834-D3, January). This compound is found exclusively in the core area. TBOS/TKEBS concentrations vary from one sampling event to the next, likely due to 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 2010. 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 under the new CMP was changed to biennial frequency, with approximately half the wells to be sampled during even numbered years and half to be sampled during odd numbered years. TBOS/TKEBS concentrations were below reporting limits in those leachfield and distal area wells sampled during 2010.

Both the concentration and extent of TBOS/TKEBS in ground water are greater in the Tpsg HSU than in the underlying Tps-Tnsc<sub>2</sub> HSU perched horizon. In July 2010, 22 µg/L of TBOS/TKEBS was measured in one Tps-Tnsc<sub>2</sub> HSU well, W-834-1711. TBOS/TKEBS continues to be below its reporting limit, in guard wells W-834-T1 and W-834-T3.

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

During 2010, nitrate concentrations in ground water exceeded the 45 mg/L cleanup standard in the Building 834 core, leachfield, and distal areas in the Tpsg HSU and in the leachfield and distal areas in the Tps-Tnsc<sub>2</sub> HSU. The one core area Tps-Tnsc<sub>2</sub> HSU well that has historically contained nitrate above 45 mg/L (W-834-1711) could not be sampled during 2010 due to insufficient water. Nitrate in Tpsg HSU ground water ranged from a maximum of 290 mg/L (W-834-M1, January) 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 SVE operation subdues intrinsic biodegradation and denitrification in some portions of the core area. In the underlying Tps-Tnsc<sub>2</sub> HSU, nitrate ranged from a maximum of 150 mg/L (W-834-S8, February) to below the 0.5 mg/L reporting limit.

Both natural and anthropogenic (e.g., septic) sources contribute to the nitrate in Building 834 OU ground water. While nitrate has decreased from a historic maximum of 749 mg/L (W-834-K1A, 2000), the continued presence of nitrate above the cleanup standard indicates an ongoing source of nitrate to ground water that is likely a combination of natural and anthropogenic sources. The primary anthropogenic source is most likely the septic system leachfield. Natural sources in the Tpsg and underlying Tps-Tnsc<sub>2</sub> may also contribute nitrate to the ground water.

In February 2010, nitrate was measured at 0.8 mg/L, well below the cleanup standard, in guard well W-834-T1, screened in the Tnbs<sub>1</sub> HSU. Historically, nitrate has been detected at low concentrations in this well (0.89 mg/L in February 2009, 0.45 mg/L in January 2004, and 3.8 mg/L in November 1997). Nitrate was not detected in this well in August 2010. Nitrate was not detected in guard well W-834-T3, also screened in the Tnbs<sub>1</sub> HSU, during 2010.

#### **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 2010, diesel was detected in ground water from well W-834-2001 at concentrations of 2,400 µg/L (February) and 39,000 µg/L (August). Diesel concentrations measured in ground water from this well vary from one sampling event to the next, likely due to varying amounts of free-phase product in the subsurface. No floating product was detected in W-834-2001 during 2010, although a diesel odor was noted.

During 2010, perchlorate was detected in ground water from well W-834-2118 at concentrations of 4.0 µg/L (February) and 5.4 µg/L (August). Perchlorate concentrations in this well have decreased from a historic maximum of 11 µg/L in 2005. During 2010, 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 W-834-S7 has historic perchlorate concentrations ranging from 8.8 to 11 µg/L; ground water from W-834-A2 has not been analyzed for perchlorate. Semi-annual ground water monitoring for perchlorate will continue for these three wells.

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

Throughout 2010, dual-phase extraction and treatment continued in the Building 834 area with minor exceptions as described in the first semester 2010 CMR and Section 2.2.1.2 above. During 2010, 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 7.73 kg of VOCs removed during 2010, 6.45 kg were removed in the vapor phase. About 37% of the vapor mass was removed from the core area and 63% from the leachfield area. However, most of the 1.28 kg of dissolved phase VOC mass that was removed came from the core area (1.08 kg).

## **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 monitoring 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; twenty-four required analyses were not performed because there was insufficient water in the wells to collect the samples.

The ground water elevation contour map for the Qt-Tnbs<sub>1</sub> HSU within the OU is presented on Figure 2.3-2.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, respectively.

### **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 Analysis of 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<sub>1</sub> HSU.

Total VOC concentration and tritium activity data are contoured for the Qt-Tnbs<sub>1</sub> HSU based on data collected during the second semester 2010 and are presented on Figures 2.3-3 and 2.3-4, respectively. Secondary ground water COC concentrations are posted for the Qt-Tnbs<sub>1</sub> HSU based on data collected during the first semester 2010 and are presented on Figures 2.3-5 and 2.3-6.

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

TCE and cis-1,2-DCE were detected within the Qt-Tnbs<sub>1</sub> HSU during 2010. Total VOC concentrations during 2010 ranged from 9.2 µg/L (EP6-09 DUP, July) to below the reporting limit (<0.5 µg/L).

TCE concentrations have decreased from the historic maximum of 250 µg/L (K6-19, 1988) to a 2010 maximum concentration of 9.2 µg/L (EP6-09 DUP, July). The maximum historic 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 remained relatively stable since then.

During 2010, cis-1,2-DCE was detected in ground water samples from a single Pit 6 Landfill OU well at a maximum concentration of 2.5 µg/L (K6-01S, January). The presence of cis-1,2-DCE, a degradation product of TCE, suggests that some natural dechlorination may be occurring.

During 2010, VOCs were not detected in samples collected from guard wells W-PIT6-1819, K6-17, K6-22, and K6-34. Bromoform, bromodichloromethane, dibromochloromethane, and chloroform were detected in samples collected from CARNRW2, a water-supply well for the Carnegie State Vehicular Recreation Area (SVRA) Park during April, May, and July 2010. The total trihalomethane (THM) concentrations for these samples were below the applicable MCL of 80 µg/L. Most likely the trihalomethanes detected in well CARNRW2 are 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 2010.

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

Tritium was detected above the 100 pCi/L background activity in samples from several wells completed in the Qt-Tnbs<sub>1</sub> HSU both north of the fault and within the fault zone. Tritium activities have decreased from the historic maximum of 3,420 pCi/L (BC6-13, 2000) to the

303 pCi/L 2010 maximum (K6-24, July). No tritium activities exceeded the State Public Health Goal (PHG) (400 pCi/L) or the cleanup standard (20,000 pCi/L).

During 2010, tritium activities were detected in ground water samples from guard well W-PIT6-1819 ranging from 100 pCi/L (April) to 167 pCi/L (July). Prior to 2010, 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 levels. It is located approximately 100 ft west of the Site 300 boundary with the Carnegie State Vehicle Recreation Area residence area and about approximately 200 ft west of the CARNRW1 and CARNRW2 water supply wells.

Tritium activities in ground water sampled from the four offsite CARNRW wells during 2010 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 2010, 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 been steadily decreased from the historic maximum concentration of 65.2 µg/L in a sample collected from well K6-19 in 1998 to below the 4 µg/L reporting limit in all wells.

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

During 2010, nitrate was detected in samples collected from wells completed within the Qt-Tnbs<sub>1</sub> HSU, within and north of the fault zone. Nitrate was detected in ground water above the 45 mg/L cleanup standard in one Pit 6 Landfill OU sample. In January 2010, groundwater from well K6-23 contained 150 mg/L of nitrate. Well K6-23 consistently yields ground water nitrate concentrations in excess of the nitrate 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 (CVRWQCB, 2008).

Nitrate was not detected above the 0.5 mg/L reporting limit in any of the monthly ground water samples collected during 2010 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 surveillance 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 EP6-08 were analyzed for uranium by mass and alpha spectrometry. The mass spectrometry sample yielded a uranium-235/uranium-238 ( $^{235}\text{U}/^{238}\text{U}$ ) 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 the first semester 2010, sufficient water to collect ground water samples for alpha spectrometric analysis of uranium was available from detection monitor wells EP6-06, EP6-09, K6-01S, and K6-19, yielding maximum total uranium activities of 0.46, 2.55, 4.42, and 2.93 pCi/L, respectively. During the second semester 2010, sufficient water was again present and wells EP6-06, EP6-09, K6-01S, and K6-19, yielded maximum total uranium activities of 0.82, 2.41, 4.66, and 3.11 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 cleanup standard, have a  $^{235}\text{U}/^{238}\text{U}$  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, all primary and secondary 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.

There has been a decline in perchlorate concentrations in Pit 6 area ground water from a maximum of 65.2  $\mu\text{g}/\text{L}$ , measured in 1998. During 2010, perchlorate was not detected in ground water above the reporting limit (4  $\mu\text{g}/\text{L}$ ) in samples from Pit 6 wells. Tritium activities in ground water continue to decrease toward background levels and remain far below the 20,000 pCi/L cleanup standard; tritium activities did not exceed the 400 pCi/L PHG. TCE concentrations in ground water remain above the 5  $\mu\text{g}/\text{L}$  cleanup standard in samples from only one well

(9.2 µg/L, EP6-09) and the concentrations and extent of total VOCs in ground water are generally declining from the historical maximum of 250 µg/L.

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

Low 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. Despite these conditions, 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 monitoring 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 columns containing SR-7 resin 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<sub>2</sub> 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 1.7 gpm. The current GWTS configuration includes a Cuno filter to remove particulates, two ion-exchange columns with SR-7 resin that are 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<sub>2</sub> 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<sub>2</sub> 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 columns with SR-7 resin that are 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<sub>2</sub> 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 1.5 to 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 columns (also connected in series) for perchlorate removal. The first of the ion exchange columns contains a new ion exchange resin produced by Purolite that is being tested to replace the SR-7. Two columns containing SR-7 resin follow the Purolite column. A third aqueous-phase GAC canister completes the treatment chain, and is placed in this position to remove any residual organic compounds from new SR-7 resin. Treated ground water containing nitrate is injected into upgradient injection wells W-817-2109 and W-817-02 that was 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<sub>2</sub> HSU.

The 829-SRC GWTS began operation in August 2005 removing VOCs, nitrate, and perchlorate from ground water. Solar power is used to extract ground water from well W-829-06 at a flow rate of approximately 1 to 4 gallons per day (gpd). The current GWTS configuration includes two ion-exchange columns containing SR-7 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 has not been utilized because, to date, the SR-7 resin has effectively removed all nitrate. Treated effluent is injected into upgradient well W-829-08. An Explanation of Significant Difference (ESD) was submitted to the regulatory agencies in 2010. The ESD explains 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 are scheduled for completion in 2011.

### **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 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 this reporting period 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 second semester:

##### 815-SRC GWTS

- The GWTS was shut down temporarily for interlock checks on October 19.
- Extraction well W-815-04 was shut down on November 23 to prevent damage from freezing temperatures. The GWTS continued to extract from well W-815-02.
- A site-wide power outage occurred on November 30.

##### 815-PRX GWTS

- Extraction well W-818-08 was shut down on April 22 due to problems with the variable speed drive. The pump in well W-818-09 failed on May 13, shutting down the treatment system. The pumps were pulled on July 23. New pumps were installed in these wells on November 11, however, the GWTS remained shut down for the remainder of the reporting period to prevent damage from freezing temperatures.

##### 815-DSB GWTS

- The GWTS shut down on September 22. The electronics engineering team corrected a pressure switch and the system was restarted on September 27.
- Interlock checks were performed on September 23.
- The extraction pump in W-6ER failed on November 30. The GWTS continued to extract from well W-35C-04. The pump was replaced December 10 and restarted on December 16.
- A site-wide power outage occurred on November 30.
- Granular activated carbon treatment media was changed out on December 1.

### 817-SRC GWTS

- The GWTS operated in manual mode, pumping twice a day during most of the reporting period.
- The GWTS was temporarily shut down while the timers and level switches were verified on June 28. The timers were adjusted on June 29.
- The GWTS was shut down on August 5 to replace a check valve. The signet flow meter was repaired on August 9 and the facility was restarted.
- The extraction well pump was changed out on August 20.
- The GWTS was shut down due to flow and hour meter problems August 31 and restarted on September 7.
- A new operating strategy was loaded on November 8.
- The GWTS was shut down on November 22 to prevent damage from freezing temperatures and remained offline for the remainder of the reporting period.

### 817-PRX GWTS

- Interlock checks were performed for on November 16.
- Extraction well W-817-2318 was shut down on November 23 to prevent damage from freezing temperatures. The system continued to extract from well W-817-03.
- A site-wide power outage occurred on November 30.

### 829-SRC GWTS

- The GWTS remained offline for the reporting period while an engineering evaluation is conducted due to continued issues with compressor failures and changes to the treatment chain.
- Injection well W-829-08 was redeveloped on September 2 to remove accumulated sediment.

#### **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, and as described above, the 829-SRC GWTS did not operate during this reporting period.

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

The HEPA OU facility sampling and analysis plan complies with the new 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 resampling of the influent to 817-SRC due to a sample mix-up at the contract analytical laboratory and not collecting compliance monitoring samples from 829-SRC GWTS because the system was shut down.

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

The 829-SRC was shut down in 2009 due to continued compressor failures. In addition, the use of a biotreatment unit (BTU) for nitrate reduction proved to be very problematic during the entire operational period of 829-SRC. In early 2010, LLNL performed an engineering evaluation to determine what system modifications were necessary to resolve the operating issues. Due to the extremely low flows and cyclic nature of discharge, it was nearly impossible to keep a viable and active bacterial population for the denitrification. Nitrate analytical data for water samples collected from the influent to and effluent from the ion-exchange resin columns at the 829-SRC demonstrated that the ion-exchange resin effectively reduced nitrate concentrations to significantly below the 45 mg/L nitrate effluent limitation. Because the BTU is located after the ion-exchange resin columns, the decrease in nitrate concentration to near or below the 0.5 to 1 mg/L practical quantitation limit was solely the result of nitrate treatment by the ion-exchange resin. As a result, it was determined that the BTU was not necessary to meet discharge limits for nitrate. As stated in Section 2.4 above, an ESD was submitted to the regulatory agencies. DOE requested and was granted permission to remove the BTU 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. The finalization of the ESD and restart of 829-SRC is scheduled for 2011. No other modifications were made to HEPA treatment facilities.

#### **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; twenty-nine required analyses were not performed because there was insufficient water in the wells to collect the samples and twenty-two required analysis was not performed due to an inoperable pump.

Ground water elevation contour maps for the Tpsg-Tps and Tnbs<sub>2</sub> HSUs within the OU are presented on Figures 2.4-2 and 2.4-7, respectively.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, respectively.

#### **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 are summarized in Tables 2.4-12 through 2.4-17. The total mass removed during this reporting period 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) are the primary COCs detected in ground water; RDX, HMX, 4-amino-2,6-dinitrotoluene (4-ADNT), perchlorate, and nitrate are secondary COCs. Most ground water contamination at the HEPA occurs primarily in the Tnbs<sub>2</sub> HSU. Some TCE, RDX, perchlorate, and nitrate have also been detected in the vicinity of Buildings 815 and 817, in the perched ground water of the Tpsg sands and gravels of the Tpsg-Tps HSU. Minor concentrations of VOCs, perchlorate and nitrate are present in Tnsc<sub>1b</sub> HSU perched ground water beneath the former Building 829 WAA, which is located in the northwest portion of HEPA. No contamination has been detected in the Upper and Lower Tnbs<sub>1</sub> HSUs in the HEPA OU.

Total VOC concentration data are contoured for the Tnbs<sub>2</sub> HSU (Figure 2.4-8) and posted for Tpsg-Tps and Tnsc<sub>1b</sub> HSUs based on data collected during the second semester 2010 on Figures 2.4-3 and 2.4-12, respectively. Isoconcentration contour maps for the secondary COCs based on data collected during the first semester 2010 are presented on: (1) Figures 2.4-4 through 2.4-6 for the Tpsg-Tps HSU, (2) Figures 2.4-9 through 2.4-11 for the Tnbs<sub>2</sub> HSU, and (3) Figure 2.4-12 for the Tnsc<sub>1b</sub> HSU in the Building 829 former burn pit area. For collocated wells, the highest concentration was used in contouring.

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

VOCs (mainly TCE) have been detected in the Tpsg sands and gravels of the Tpsg-Tps HSU near the 815-SRC, 815-PRX and 817-PRX treatment facilities. These total VOC concentrations have been decreasing over time. In 2010, the maximum total VOC concentration detected in samples from Tpsg-Tps wells was 37 µg/L in 817-PRX extraction well W-817-2318 (August). This well extracts ground water from Spring 5. Limited recharge has led to insufficient water for sampling in some wells screened in the Tps-Tpsg HSU. Total VOCs in the Tpsg-Tps well W-35C-05, located near the site boundary, have remained below the 0.5 µg/L reporting limit.

In the Tnbs<sub>2</sub> HSU, the total VOC plume is detached from its Building 815 source and the highest concentrations are found in the 815-PRX extraction wellfield. Total VOC concentrations in Tnbs<sub>2</sub> HSU ground water have decreased from a historic maximum concentration of 110 µg/L in extraction well W-818-08 (May 1992) to a 2010 maximum total VOC concentration of 62 µg/L in monitor well W-818-11 (August). In 2010, extraction well W-818-08 had a maximum VOC concentration of 42 µg/L (February & April).

Total VOCs continue to be detected in ground water samples collected from Tnbs<sub>2</sub> HSU extraction well W-830-2216, located at the southern end of Building 832 Canyon. Contamination detected in this well probably originates from sources in Building 832 Canyon 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, total VOC concentrations in this well decreased from a historic maximum of 20 µg/L in May 2007 to a 2010 maximum concentration of 7.8 µg/L (October).

During 2010, low VOC concentrations (<3 µg/L) were detected in samples from Tnbs<sub>2</sub> guard wells W-815-2110 and W-815-2111, located near the southern site boundary. VOCs were not detected in samples taken from any other onsite or offsite HEPA Tnbs<sub>2</sub> guard wells. During 2010, VOC concentrations were below the 0.5 µg/L reporting limit in 31 out of 32 routine and duplicate monthly samples collected from offsite water-supply well GALLO1. One duplicate sample had detectable TCE concentrations (0.6 µg/L, April) above the 0.5 µg/L reporting limit.

Duplicate GALLO1 samples were 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, total VOC concentrations in ground water collected from extraction well W-829-06 have decreased from a historic maximum of 1,013  $\mu\text{g/L}$  (August 1993) to a 2010 maximum total VOC concentration of 36  $\mu\text{g/L}$  (November). This well is screened in the Tnsc<sub>1b</sub> HSU (Figure 2.4-12). The maximum total VOC concentration measured in a sample collected from Tnsc<sub>1b</sub> HSU injection well W-829-08 was 6.4  $\mu\text{g/L}$  (November). 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<sub>1</sub> HSU.

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

During 2010, RDX was not detected at concentrations above the 1  $\mu\text{g/L}$  reporting limit in any ground water samples collected from the Tpsg-Tps HSU. Because this HSU is ephemeral and only periodically saturated, many of the monitor wells screened in this HSU have gone dry. The historic maximum RDX concentration detected in ground water collected from the Tpsg-Tps HSU was 350  $\mu\text{g/L}$  (March 1988) from well W-815-01; this well has been dry since 1999.

The maximum historic RDX concentration detected in Tnbs<sub>2</sub> HSU groundwater was 204  $\mu\text{g/L}$  measured in 1992 in 817-SRC extraction well W-817-01. Since that time, decreasing maximum RDX concentrations have generally been observed in Tnbs<sub>2</sub> HSU ground water near both the Building 815 and 817 source areas, with a maximum 2010 RDX concentration of 110  $\mu\text{g/L}$  (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 injected treated ground water.

As shown on Figure 2.4-9, the southwestern extent of the RDX plume has remained relatively stable and any future downgradient migration should be mitigated when the 817-PRX extraction wellfield is expanded to include the recently installed extraction well W-817-2609 (see Figure 2.4-1). Due to remediation efforts and the immobility of HE compounds, the extent of RDX contamination at the leading edge of the Tnbs<sub>2</sub> HSU plume (east of 817-PRX) has also remained relatively stable. During 2010, RDX was not detected at concentrations above the 1  $\mu\text{g/L}$  reporting limit in any samples collected from Tnbs<sub>2</sub> HSU guard wells.

In wells located near 829-SRC in the Tnsc<sub>1b</sub> HSU, RDX was not detected at concentrations above the 1  $\mu\text{g/L}$  reporting limit in any ground water samples collected during 2010.

HMX detections in the Tnbs<sub>2</sub> HSU have been observed near the 815-SRC and 817-SRC treatment facilities. HMX concentrations in Tnbs<sub>2</sub> HSU ground water have decreased from a historic maximum of 57  $\mu\text{g/L}$  in October 1995 (W-817-01) to a maximum of 21  $\mu\text{g/L}$  in 2010 (W-817-01). HMX was also detected during 2010 at lower concentrations in several ground water samples collected from 815-SRC wells, including extraction wells W-815-02 and W-815-04.

During 2010, nitrobenzene was not detected above the 2  $\mu\text{g/L}$  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  $\mu\text{g/L}$  (April 2008), and in one sample 4.1  $\mu\text{g/L}$  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 these wells have all been below the reporting limit for nitrobenzene.

During 2010, 4-amino-2,6-dinitrotoluene (4-ADNT) was not detected above its 2 µg/L reporting limit in any Tnbs<sub>2</sub> wells or in any treatment facility samples. 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 for the 815-SRC GWTS in July 2008.

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

During 2010, the maximum perchlorate concentration detected in Tpsg-Tps HSU ground water was 14 µg/L in 817-PRX extraction well W-817-2318 (February).

In the Tnbs<sub>2</sub> HSU, perchlorate concentrations have decreased from a historic maximum of 50 µg/L (February 1998) in extraction well W-817-01 to a 2010 maximum concentration of 29 µg/L (February). 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<sub>2</sub> HSU perchlorate plume has been generally declining based on concentration trends observed in 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<sub>2</sub> HSU guard wells during 2010.

During 2010, perchlorate concentrations in Tnsc<sub>1b</sub> HSU extraction well W-829-06 have decreased from a historic maximum of 29 µg/L (December 2000) to a concentration of 8.4 µg/L, detected in May 2010. Perchlorate concentrations in injection well W-829-08 have decreased from a historic maximum of 18 µg/L (December 2000) to below the reporting limit of 4 µg/L, in May 2010. Perchlorate was not detected above its reporting limit in monitor well W-829-1940.

Perchlorate was also not detected in any HEPA Qal/WBR wells during the reporting period.

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

During 2010, the maximum nitrate concentration detected in ground water from Tpsg-Tps HSU well W-6CS was 570 mg/L (March). Because there are no known septic systems or other Site 300 operations representing potential nitrate sources near this well, these elevated nitrate levels may be 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. The highest nitrate concentrations found in other wells screened in this HSU was 150 mg/L in 817-PRX extraction well W-817-2318.

During 2010, in the Tnbs<sub>2</sub> HSU, nitrate concentrations in ground water ranged from <0.1 mg/L in the vicinity of the Site 300 boundary to a maximum of 100 mg/L (W-815-04, January). Nitrate was not detected above the 45 mg/L cleanup standard in ground water from any of the Tnbs<sub>2</sub> guard wells sampled during this reporting period.

During 2010, the maximum nitrate concentration detected in a sample from the Tnsc<sub>1b</sub> HSU was 80 mg/L (May) in extraction well W-829-06. The maximum nitrate concentration detected in monitor well W-829-1940 during 2010 was 49 mg/L (March). The maximum nitrate concentration detected in injection well W-829-08 during 2010 was 7.4 mg/L (September). Nitrate was not detected above the 45 mg/L cleanup standard in Qal/WBR wells during 2010.

During 2010, nitrate concentrations measured in ground water continue to support the interpretation that nitrate is being degraded *in situ* by natural processes. Due to microbial

denitrification, nitrate concentrations continue to be below the 45 mg/L cleanup standard in all wells near the southern site boundary where the ground water is 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 with upgradient source area pumping. There are several co-mingled COC plumes (VOCs, perchlorate, high explosives compounds and nitrate) located in the Tpsg-Tps, Tnbs<sub>2</sub> (primary) and Tnsc<sub>1b</sub> HSUs.

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 around the area with the highest concentrations near 817-PRX extraction well W-817-2318. This extraction well extracts 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 continue to decline in the Tpsg-Tps HSU.

In the Tnbs<sub>2</sub> HSU, extraction wells W-818-08 and W-818-09 capture the highest VOC plume area concentrations and the extracted groundwater is treated at the 815-PRX treatment facility. Extraction wells near the 815-DSB treatment facility capture VOCs along the southern site boundary at the leading edge of the plume. During 2010, there was only one low VOC detection at offsite water-supply well GALLO1, located near the southern boundary of Site 300. In 2010, two new 815-DSB extraction wells (W-815-2608 and W-815-2621) were installed to increase the area of hydraulic capture in the Tnbs<sub>2</sub> HSU. These new extraction wells will play an important role in preventing contaminants from moving downgradient. All new wells are shown on the HEPA base map (Figure 2.4-1). The wells will be added to the sampling and analysis and ground water monitoring plans after final well development and baseline sampling are complete. The new extraction wells are expected to begin operating after construction of the pipeline to connect the wells to the treatment facility is completed in 2012.

At the 815-PRX treatment facility, the flow rates in extraction wells W-818-08 and W-818-09 were increased in 2009, to expand hydraulic capture in the highest concentration portions of the VOC plume. Both of these extraction wells were offline during part of 2010 for pump replacements. Near the 817-PRX treatment facility, one new Tnbs<sub>2</sub> HSU extraction well, W-817-2609, was installed during 2010 (Figure 2.4-1). This extraction well will help to remove VOCs and perchlorate in the southwestern areas of these plumes and is expected to be connected to the 817-PRX treatment facility in 2012 after a treatment facility engineering evaluation and upgrade is completed.

Although the extent of the primary and secondary COC plumes in the HEPA did not change significantly in 2010, the total VOC and RDX concentrations within the plumes continue to decline. These trends are due to focused remediation efforts in the source and proximal areas of this OU, and to the relative immobility of HE compounds. RDX concentrations have increased in monitor well W-809-03. This trend is probably due to the mobilization of sorbed 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<sub>2</sub> HSU have steadily decreased since monitoring for this COC began in 1998. 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 this OU. In early 2008,



extraction from well W-817-04 was terminated due to low yield. Pumping from extraction well W-817-03 continues and the treated water is injected 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.

The 829-SRC GWTS is a small facility that extracts and treats ground water from the Tnsc<sub>1b</sub> HSU. It was shut down in 2009 while power supply problems and nitrate treatment train issues were resolved. An ESD that documents the change in treatment technology for nitrate in extracted ground water at the 829-SRC facility was submitted to the regulatory agencies in 2010. The ESD explains 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 are currently scheduled for completion in 2011.

During 2010, pumping from all HEPA extraction wells has been effective in capturing COCs and preventing contaminated ground water from reaching the Site 300 southern boundary. 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 and close monitoring of VOC concentrations in the southern site boundary area will continue, especially in the vicinity of 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. However, the addition of new wells to the HEPA extraction wellfield is planned to optimize cleanup. Continuous extraction well field optimization and operation of the 815-DSB is crucial to the long-term success of remediation efforts in the HEPA OU.

## **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.

Starting in 2010, monitoring results for the Pit 7 Complex, including Pits 3, 4, 5, and 7 are now reported in the CMR reports. 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 hill-slope.
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 within the Quaternary alluvium/Weathered bedrock (Qal/WBR) (NC7-63, NC7-64, and W-PIT7-2306) and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> bedrock HSUs (NC7-25, W-PIT7-2305, and W-PIT7-2307). Well NC7-25,

screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> 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<sub>0</sub> 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 canisters containing Sybron SR-7™, a nitrate-selective resin ion-exchange resin that has a higher affinity for 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.

### **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; thirty-one required analyses were not performed because there was insufficient water in the wells to collect the samples, ten required analyses were not performed due to an inoperable pump, and three required analyses were inadvertently not added to the sampling plan.

Ground water elevation contour maps for the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs within the OU are presented on Figures 2.5-2 and 2.5-3, respectively.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, 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<sub>1</sub>/Tnbs<sub>0</sub> HSUs.

The distribution of tritium in the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs, based on data collected during the second semester 2010 is contoured on Figures 2.5-4 and 2.5-5, respectively. Concentrations of the uranium, nitrate, and perchlorate in Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> ground water, based on data collected during the first semester 2010, are presented on Figures 2.5-6 through 2.5-11. The distribution of the total VOCs in Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs, based on first semester 2010 data are presented on Figures 2.5-12 and 2.5-13, respectively. The

distributions of the high- explosives compounds HMX and RDX in Qal/WBR ground water, based on first semester 2010 data, are presented on Figures 2.5-14 and 2.5-15, respectively.

#### **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 (NC7-28) to a maximum of 58,400 pCi/L in 2010 (NC7-70). 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 cleanup standard ground water tritium activity contour in both the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> bedrock HSUs has decreased slightly compared to 2009. While tritium activities continue to decline in most portions of the Building 850 plume, tritium activities in wells in the furthest downgradient portion of the plume exhibit a slowly increasing trend. However, the overall extent of the 100 pCi/L tritium activity contour in both the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> bedrock HSUs is similar to those of 2009.

During the second semester of 2010, well W-PIT1-2620 was completed as a replacement for well W-PIT1-02. The presence of cement grout in the screened casing of well W-PIT1-02 limited its utility for collecting ground water samples. The October 2010 ground water sample from well W-PIT1-02 contained 1,320 pCi/L of tritium. The November 2010 sample from replacement well W-PIT1-2620 contained 1,510 pCi/L of tritium.

Wells W-PIT2-2301 and W-PIT2-2302, both screened in the Qal/WBR HSU and located in Elk Ravine downgradient of Landfill Pit 2, yielded tritium activities within background range (<100 pCi/L) in all samples collected in 2010 (May & November for W-PIT2-2302; May for W-PIT2-2301). 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 400 pCi/L California State PHG remains stable, and the extent of ground water with tritium in excess of background is similar to that of previous years.

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

Total uranium activities in ground water were below the 20 pCi/L cleanup standard in samples from all wells in the Building 850 area during 2010. The 2010 maximum uranium activity was 19 pCi/L measured in an April 2010 sample from well W-850-2315; this well is screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU and located south and cross-gradient of Building 850. 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. The 2010 maximum uranium activity in ground water containing some depleted uranium, as indicated by mass spectrometry, was 13 pCi/L in a sample from well NC7-28 (April); this well is screened across the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs and located directly downgradient of the Building 850 Firing Table.

Uranium analyses in 2010 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 [<sup>235</sup>U/<sup>238</sup>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 <sup>235</sup>U/<sup>238</sup>U atom ratio of less than 0.007. Historic uranium isotope data indicate that distributions of ground water within the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> 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<sub>1</sub>/Tnbs<sub>0</sub> HSU ground water from wells downgradient of the Pit 2 Landfill and from wells in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU south of the Pit 2 Landfill. The uranium isotope data for 2010 suggest that this has not changed. However, the maximum uranium activities detected in Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU ground water from wells downgradient of the Pit 2 Landfill in 2010 were 1.3 pCi/L and 7.6 pCi/L, respectively; well below the 20 pCi/L total uranium MCL.

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

Nitrate was detected at concentrations at or above the 45 mg/L cleanup standard in samples from 11 Building 850 area wells during 2010 (Figure 2.5-8 and 2.5-9). The 2010 maximum nitrate concentration detected in the Building 850 area was 140 mg/L in the April 2010 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<sub>1</sub>/Tnbs<sub>0</sub> HSU, is located south and cross-gradient of Building 850. The 2010 maximum nitrate concentration in wells located directly downgradient of the Building 850 source area was 58 mg/L in an April 2010 ground water sample collected from well NC7-61, screened across the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs.

Historic data indicate that ground water nitrate concentrations in the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs are limited in extent and relatively stable. Overall, the distribution and concentrations of nitrate in ground water are generally similar to those observed in previous years.

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

During 2010, perchlorate concentrations exceeding the 6 µg/L cleanup standard were detected in ground water samples from 28 wells east and south of Building 850 and east of Pit 1. The 2010 maximum perchlorate concentration of 79 µg/L was detected in a February 2010 sample from well W-850-2417, located directly downgradient of the Building 850 Firing Table. Wells downgradient of the Building 850 Firing Table continue to exhibit the highest perchlorate concentrations in the Building 850 area. Perchlorate concentrations in excess of the cleanup standard in Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU ground water extend continuously 2,000 and 1,200 ft, respectively from Building 850. Concentrations of perchlorate have increased slightly in the Qal/WBR downgradient of Building 850.

The 10 µg/L of perchlorate measured in a October 2010 sample from Tmss HSU well NC7-69, located 500 ft downgradient (northeast) of Building 850, was its first occurrence since sampling of the well for perchlorate began in 2001. Future sample results will indicate if the presence of perchlorate in ground water from this well is substantiated.

The overall extent of perchlorate in ground water in and downgradient of the Building 850 area did not change significantly during 2010 and will continue to be closely monitored.

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

During 2010, ground water samples from 20 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 ground water; the source appears to be the Building 850 Firing Table.

In 2010, the RDX cleanup standard (1 µg/L) was exceeded in samples from four of the 20 wells. The maximum RDX concentration of 9.3 µg/L was detected in an April 2010 sample from well W-850-2417 located directly east (downgradient) of the Building 850 Firing Table. The data indicate that RDX exceeding the cleanup standard extends about 500 ft east of Building 850, in the Qal/WBR HSU. The October 2010 sample from Tnsc<sub>0</sub> HSU well W-850-2416, located closely downgradient of the Building 850 Firing Table, yielded 2.7 µg/L of RDX. The April 2010 sample and other previous samples from this well did not yield RDX at or above the reporting limit. Continued monitoring will determine whether RDX actually occurs in the ground water adjacent to this well.

HMX was detected above the reporting limit in samples from six wells and one spring (W8SPRNG). The maximum HMX concentration of 12 µg/L, detected in an October 2010 sample from well NC7-28, is significantly below the Regional Tapwater Screening Level for HMX (1,800 µg/L). Last year, the maximum HMX concentration in Building 850 ground water was 10 µg/L (NC7-28, April 2009). HMX above the reporting limit extends about 700 ft east and southeast of the Building 850 Firing Table. HE compounds were not detected above the reporting limit in ground water samples from wells screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU downgradient of Building 850 or from wells screened in the underlying Tnsc<sub>0</sub> HSU. The data indicate that, except for the one sample collected from Tnsc<sub>0</sub> HSU well W-850-2416 during the second semester, the extent of HE compounds in ground water is limited to the Building 850 Firing Table and the Qal/WBR HSU directly downgradient. The distribution of HE compounds in ground water at Building 850 is similar to observations made in 2008 and 2009, when regular sampling and analysis for these chemicals commenced.

#### **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 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.

Total uranium activities in ground water are below the 20 pCi/L cleanup standard in samples from all wells in the Building 850 area. The overall extent of total uranium activities at Building 850 has not changed significantly. The remediation strategy for uranium at Building 850 continues to be protective given that: (1) total uranium activities in Building 850 ground water generally remain below the 20 pCi/L cleanup standard; (2) the areal extent of depleted uranium has not changed during the period of monitoring; and (3) the temporal trends in <sup>235</sup>U/<sup>238</sup>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 test is scheduled to commence at Building 850 during the first semester 2011. Studies conducted with Building 854 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 test 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. Recently installed well W-850-2417 will serve as a reagent injection well and nearby downgradient well NC7-28 and deeper well W-850-2416 will serve as performance monitor wells for this test.

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

There were no new issues that affect the performance of the cleanup remedy (MNA) 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. An *in situ* bioremediation treatability test is planned to remediate perchlorate in ground water in the Building 850 source area. Although this treatability test will specifically target perchlorate, the performance of this technology with respect to RDX remediation or stabilization will also be evaluated. A treatability test work plan was submitted to the regulatory agencies during the second semester 2010. The test will commence following regulatory approval of the treatability test work plan.

### **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 are summarized in Table 2.5-2. The total volume of ground water extracted and treated, and masses removed, during the reporting period 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 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 at the PIT7-SRC GWTS during second semester:

- The GWTS was offline temporarily from July 13 to July 14, and again from October 5 to October 12 for well recovery. This was necessary in order to be able to collect all required compliance samples from the extraction wells in a single sample event.
- Extraction wells NC7-63 and NC7-64 were protected from freezing temperatures and shut down on November 15.
- A site-wide power outage occurred on November 30.

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

The Pit 7-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 new monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.5-7. No changes were made to the plan except for effluent resampling for nitrate in July due to the laboratory missing the holding time.

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

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

## **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; sixty required analyses were not performed because there was insufficient water in the wells to collect the samples and one required analysis was inadvertently not added to the sampling plan.

Ground water elevation contour maps for the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs within the OU are presented on Figures 2.5-2 and 2.5-3, respectively.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, 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 are summarized in Table 2.5-9. The total mass removed during this reporting period 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<sub>1</sub>/Tnbs<sub>0</sub> HSUs.

The distribution of tritium in the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs, based on data collected during the second semester 2010 is contoured on Figures 2.5-4 and 2.5-5, respectively. Concentrations of the uranium, nitrate, and perchlorate in Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> ground



water, based on data collected during the first semester 2010, are presented on Figures 2.5-6 through 2.5-11. The distribution of the total VOCs in Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs, based on first semester 2010 data are presented on Figures 2.5-12 and 2.5-13, respectively.

#### **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 conducted 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. Both ground water samples collected from well NC7-48 contained less than 100 pCi/L of tritium (April and October 2010).

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 maximum tritium activity in 2010 of 255,000 pCi/L (January). Both the historic and 2010 maximum tritium activities were detected in samples from well NC7-63, located directly downgradient of Pit 3. Tritium activities in Qal/WBR ground water have generally declined, though some wells showed increases. The observed changes may be related to ground water extraction, which began in April 2010. 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 cleanup standard ground water tritium activity contour in the Qal/WBR HSU in the Pit 7 Complex area is similar to 2009.

Tritium activities in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU ground water in the Pit 7 Complex area have decreased from a historic maximum of 770,000 pCi/L in 1999 to a 2010 maximum tritium activity of 271,000 pCi/L (January). Both the historic and 2010 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<sub>1</sub>/Tnbs<sub>0</sub> HSU are similar to 2009. The highest tritium activities in Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU in Pit 7 Complex area ground water, as represented by the 20,000 pCi/L cleanup standard contour, extend about 800 ft northeast of Pit 3 and Pit 5. The extent of the 20,000 pCi/L cleanup standard ground water tritium activity contour in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU in the Pit 7 Complex area is similar to 2009.

Overall, the extent of tritium in ground water with activities above the 400 pCi/L California State PHG remains stable, and the extent of ground water with tritium in excess of background is similar to 2009.

#### **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 (NC7-40, April 1998) to a 2010 maximum activity of 120 pCi/L (NC7-63, January). Uranium activities exceeded the 20 pCi/L cleanup standard in samples from 12 wells in the Qal/WBR HSU during 2010. All 12 wells are proximal to the landfills and have historically shown <sup>235</sup>U/<sup>238</sup>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. 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.

One sample collected in January 2010 from well W-PIT7-2305 screened in both the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs, exceeded the 20 pCi/L cleanup standard (22.4 pCi/L). Two subsequent samples collected from this well in May and October 2010 contained about 15 pCi/L. The <sup>235</sup>U/<sup>238</sup>U isotopic ratios of samples collected from this well in 2010 were indicative of natural uranium.

Uranium activities in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU have decreased from a historic maximum of 51.45 pCi/L in 1998 to a 2010 maximum activity of 36.5 pCi/L (June). Both the historic and 2010 maximum tritium 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<sub>1</sub>/Tnbs<sub>0</sub> HSU well that historically and currently yields ground water containing uranium in excess of the cleanup standard. However, the historic and 2010 isotope ratio data indicate that the uranium in NC7-25 ground water is natural. Ground water samples from wells screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU have not shown a depleted uranium mass ratio, indicating that depleted uranium has not migrated downward into the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.

As is the case for the Building 850 portion of OU 5, uranium analyses in 2010 were performed primarily by alpha spectroscopy with selected samples analyzed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).

#### **2.5.5.2.3. Nitrate Concentrations and Distribution**

Nitrate was detected at concentrations at or above the 45 mg/L cleanup standard in samples from eight Pit 7 Complex area wells during 2010. These wells are located downgradient and northeast of the Pit 7 Complex area. In particular, wells screened in the Qal/WBR HSU, NC7-16, NC7-21, and NC7-34, yielded February 2010 samples with reported nitrate concentrations of 290, 210, and 150 mg/L, respectively. These results are suspect as the subsequent May 2010 samples yielded nitrate concentrations of 39, 40, and 27 mg/L, respectively. These subsequent results are equivalent to historic nitrate concentrations observed at these wells.

Other than the wells that exhibited unusual nitrate concentrations as described above, the 2010 maximum nitrate concentration detected in the Pit 7 Complex area was 68 mg/L in a May 2010 sample from well NC7-47. NC7-47 is screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU and is located about 1,500 ft downgradient/northeast of the Pit 7 Complex Landfills. The 2010 maximum nitrate concentration in Qal/WBR HSU wells in the Pit 7 Complex area was 48 mg/L in the January and April 2010 samples from wells NC7-63 and W-PIT7-2309, respectively. These wells are located directly downgradient of Pits 3 and 5, respectively.

Historic data indicate that ground water nitrate concentrations in the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs are limited in extent and relatively stable. Overall, maximum nitrate concentrations in Building 850 ground water have decreased from the historical maximum of

363 mg/L (2003). Other than the anomalous data described above, the distribution and concentrations of nitrate in ground water are generally similar to what has been observed in 2009.

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

During 2010, perchlorate was detected at concentrations exceeding the 6 µg/L cleanup standard in ground water samples from 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 (June 2009) to a 2010 maximum of 27 µg/L (January). Both the historic and 2010 maximum activities were detected in samples from well W-PIT7-2306, located directly downgradient of Pit 3. Twelve other wells completed in the Qal/WBR HSU yielded samples containing perchlorate in excess of the 6 µg/L cleanup standard and define an area that extends southeast about 1,200 ft from the middle of Pit 3.

Samples from three Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU wells, K7-03, NC7-25, and NC7-68, contained perchlorate at concentrations in excess of the 6 µg/L cleanup standard and define an area that extends about 1,000 ft southeast along the edges of Pits 3 and 5. The 2010 maximum perchlorate concentration in ground water samples from Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU wells was 11 mg/L in a January sample from well NC7-25 and an April sample from well NC7-68.

The overall extent of perchlorate in ground water in the Pit 7 Complex area did not change significantly from 2009 to 2010.

#### **2.5.5.2.5. Volatile Organic Compound Concentrations and Distribution**

During 2010, VOCs were detected in ground water samples from seven Pit 7 Complex area wells, one well is completed in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU (K7-03), two are completed in both HSUs (K7-01 and W-PIT7-2307), and the remainder are Qal/WBR wells.

The maximum 2010 total VOC concentration in a sample from a Pit 7 Complex well was 11.8 µg/L in the January sample from well W-PIT7-2307, which is screened in both the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs. This sample contained 8.3 µg/L of TCE; exceeding the TCE 5 µg/L cleanup standard, and 3.5 µg/L of 1,1-DCE; below the 1,1-DCE 6 µg/L cleanup standard. By October 2010, the TCE concentration in a sample collected from this well had decreased to the 5 µg/L cleanup standard, and the 1,1-DCE concentration had decreased to 2 µg/L.

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 2010 maximum of 8 µg/L in October (Well W-PIT7-2306). This sample contained 5.5 µg/L of TCE; exceeding the TCE 5 µg/L cleanup standard, and 2.5 µg/L of 1,1-DCE; below the 1,1-DCE 6 µg/L cleanup standard. The maximum 2010 total VOC concentration in a sample from a well screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU was 0.88 µg/L (K7-03, April).

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 2010, except for wells W-PIT7-2306 and W-PIT7-2307 which both yielded samples with TCE concentrations slightly above the 5 µg/L cleanup standard.

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

Ground water extraction and treatment began in March 2010. Therefore, the operation timeframe (10 months) and associated hydraulic and chemical data from the area are still insufficient to assess the effects of ground water extraction and treatment on COC concentration trends and the performance of the extraction wellfield. A more complete analysis of remediation optimization will be presented in the 2011 annual CMR report. Despite limitations in conclusions that can be drawn at this time, some new information is available. Capture zones have been calculated for PIT7-SRC extraction wells W-PIT7-2305 and W-PIT7-2307. In 2010, W-PIT7-2307 contributed over 78% of the volume of ground water to the treatment facility, and has pumped continuously with an average long-term discharge rate of 0.14 gpm. The total volume of extracted and treated water in 2010 at PIT7-SRC was 80,484 gallons. The well may be capable of a higher sustainable yield if erratic pump operation can be corrected. The well has a calculated capture zone diameter of about 55 ft. After assessment of water levels and COC trends, it appears that ground water pumped to date, from well W-PIT7-2307, is derived primarily from the  $Tnbs_1/Tnbs_0$  bedrock HSU. Concentrations of COCs in samples collected from this well did not change markedly between January and October 2010, except for uranium, which declined from 21 pCi/L in January 2010 to 12 pCi/L in October 2010 and TCE which declined from 8.3  $\mu\text{g/L}$  in January 2010 to 5  $\mu\text{g/L}$  in October 2010. Isotope ratios for both these samples indicated the presence of natural uranium. Well W-PIT7-2305 has also been operating continuously and contributed the second-highest volume of water to the facility (over 17%). The well has a long-term average discharge rate of 0.04 gpm and a calculated capture zone diameter of about 16 ft. Concentrations of COCs in well W-PIT7-2305 declined markedly between January and October 2010. Tritium declined from 73,900 pCi/L in January 2010 to 42,800 pCi/L in October 2010 and uranium declined from 21 pCi/L in January 2010 to 15 pCi/L in October 2010. Isotope ratios for all samples indicated natural uranium. Total VOCs were not detected in the January 2010 sample from W-PIT7-2305. However, 0.67  $\mu\text{g/L}$  of total VOCs (as TCE) were detected in the October 2010 sample. It appears that options to increase flow from the W-PIT7-2305 and the lower flow extraction wells are limited due to low sustainable yields of the HSUs and limited recharge. As a result, capture zones for NC7-63, NC7-64, and W-PIT7-2306 are currently limited to a few feet in diameter in the immediate vicinity of the wells.

To increase plume capture and the volume of water containing concentrations of COCs in excess of cleanup standards, three additional extraction wells will be installed in 2011 within the inferred centers of mass of the uranium and perchlorate in ground water. Continued data assessment in advance of well installation will provide an opportunity to better site and design the extraction wells based on observation of a full year of hydraulic, chemical, and water elevation data from the PIT7-SRC area. Attempts will be made to install them during a time of maximum saturation after the winter-spring rainy season. The wells will be drilled to the base of the Qal/WBR HSU, screened adjacent to contaminant sources in the landfills, and completed with 12-inch diameter casing. In the long term, continued pumping of extraction wells, 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 cleanup remedy (MNA) 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 declined markedly in 2010. Continued operation of PIT7-SRC and the installation of three new extraction wells in 2011 will provide opportunity for extraction of increased volumes of ground water and mass removal.

In 2010, tritium activities in treated effluent from PIT7-SRC were in the range of 50,000 to 60,000 pCi/L, which is equivalent to recent tritium activities in samples from wells completed adjacent to the infiltration trench (wells K7-01 and NC7-21). The tritium activities in these wells will be closely monitored to assess any negative impacts to the distribution of tritium in 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 hillslopes 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 an El Niño season or other period of very high rainfall. 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 prevent water level rises but to severely impact the influence of extreme storm events. During and following the 2009-2010 rainfall period, ground water levels remained well below the bottoms of the Pit 7 Complex Landfills.

Indications that the drainage diversion system is not operating as intended include all of the following criteria documented in the Pit 7 RD:

- 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.
- Maximum ground water rises into the pit waste and underlying contaminated bedrock as indicated by ground water elevation data.
- Increasing trends in tritium, uranium, VOC, 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.

Based on data collected in 2010, none of these criteria have been met.

The 14 drainage diversion system performance monitor wells are now outfitted with dedicated pressure transducers that accurately reflect ground water elevations. Collection of accurate ground water levels in these performance wells began in April 2010. These data will be evaluated at the end of the 2010-2011 rainfall season and the results reported in the 2011 annual CMR.

## 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 monitoring 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 columns containing SR-7 resin 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 permit from 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 columns containing SR-7 resin connected in series for perchlorate removal, three aqueous-phase GAC units connected in series for VOC removal, and 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 SR-7 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 are summarized in Tables 2.6-1 through 2.6-3. The total volume of ground water treated and masses removed during the reporting period 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 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 second semester:

#### 854-SRC GWTS and SVTS

- Due to low yield, extraction well W-854-17 was converted to a monitoring well on October 14.
- The SVTS strategy was changed to increase the inlet temperature interlock, minimizing system shut downs during periods of high temperatures.
- The treatment facility Real-Time Data capability was repaired.
- Extraction well W-854-18A pump failed on August 18. A new pump was installed on November 17. However, this well remained off for the remainder of the reporting period to prevent damage from freezing temperatures.
- The SVTS was shut down on November 22 for the remainder of the reporting period to prevent damage from freezing temperatures.
- A site-wide power outage occurred on November 30.

#### 854-PRX GWTS

- The flow rate was reduced to 1 gallon per minute on August 3.
- New ion-exchange resin was placed in the first column on August 9.
- The GWTS was shut down on November 17 and remained offline for the remainder of the reporting period to prevent damage from freezing temperatures.

#### 854-DIS GWTS

- The GWTS was shut down on November 22 and remained offline for the remainder of the reporting period to prevent damage from 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 remained below the 45 mg/L nitrate cleanup standards in 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 new 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 no compliance-monitoring samples were collected in December from the 854-PRX and 854-DIS GWTSs because the GWTSs were shutdown 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 or 854-DIS GWTSs, or the 854-SRC SVTS, during the reporting period. However, one of the extraction wells at the 854-SRC GWTS, W-834-17, was converted from an extraction well to a monitor well in October 2010.

### **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: fifteen required analyses were not performed because there was insufficient water in the wells to collect the samples and eight required analyses were not performed due to an inoperable pump.

A ground water elevation contour map for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU is presented on Figure 2.6-2. Ground water elevations are posted for the QIs and Tnbs<sub>1</sub> HSUs on Figure 2.6-6.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, respectively.

### **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 are summarized in Tables 2.6-8 through 2.6-10. The total mass removed during this reporting period 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 and perchlorate are the primary COCs detected in ground water; nitrate is a secondary COC. These COCs have been identified primarily in the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU. Total VOC isoconcentration data for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU based on data from samples collected during the second semester 2010 are contoured and presented on Figure 2.6-3. Perchlorate isoconcentration data and nitrate concentration data for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU are presented on Figures 2.6-4 and 2.6-5, respectively. A map showing ground water elevations, total VOCs, perchlorate, and nitrate concentrations for the combined QIs and



Tnbs<sub>1</sub> HSUs is presented on Figure 2.6-6. Hydraulic capture zones are presented on the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU ground water elevation and total VOC and perchlorate maps (Figures 2.6-2, 2.6-3, and 2.6-4). The primary COC data and capture zones shown on Figure 2.6-3 and Figure 2.6-4 are for the second semester 2010.

#### **2.6.3.2.1. Total VOC Concentrations and Distribution**

During 2010, the maximum concentration of total VOCs in Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU ground water was 100 µg/L (W-854-02, October). TCE comprises all of the total 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. The maximum cis-1,2-DCE ground water concentration detected during 2010 was 5.4 µg/L (W-854-17, March). Overall, total VOC concentrations in the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU have decreased nearly two orders of magnitude from a historic pre-remediation maximum of 2,900 µg/L (W-854-02, 1997). Two VOC plumes exist in the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> 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 total 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 total VOC plume with concentrations greater than 10 µg/L has decreased; and (3) the extent of the southern total VOC plume with concentrations greater than 5 µg/L has decreased significantly. Total VOCs were detected in shallow perched ground water in well W-854-10 (screened in the Tnbs<sub>1</sub> HSU) located in the Building 854 source area during 2008, 2009, and 2010 at maximum concentrations of 34, 17, and 41 µg/L (first semester 2010), respectively. During the second semester, the sample from this well contained 10 µg/L of total VOCs. 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 TVOC concentrations roughly correlate with declines and increases in water elevations in excess of 1 ft over a 3 month period suggesting that total VOC concentrations in this thin perched water-bearing zone are diluted by intermittent recent recharge events.

#### **2.6.3.2.2. Perchlorate Concentrations and Distribution**

The maximum perchlorate concentrations in Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU ground water are generally decreasing from the historic maximum of 27 µg/L (W-854-1823) in 2003 to a 2010 maximum of 19 µg/L. Both the historic and 2010 maximum perchlorate concentrations were detected in well W-854-1823, located downgradient of 854-PRX.

Overall, the distribution of perchlorate in ground water is similar to its extent in 2009. During 2010, perchlorate was not detected in ground water samples from any well screened in the QIs or Tnbs<sub>1</sub> HSU.

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

In 2010, the maximum nitrate concentration in Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU ground water was 53 mg/L (extraction well W-854-02, August). Additionally, during 2010, nitrate was detected above the cleanup standard in samples from well W-854-14, screened in the Tnbs<sub>1</sub> HSU (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<sub>1</sub>/Tnsc<sub>0</sub> HSU in the distal area remains low and essentially unchanged since this study was conducted.

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

The 854-SRC GWTS operated throughout 2010, except for a period from before January 1 to March 16 while awaiting pump replacement at well W-854-2218. Since the 2006 expansion of the 854-SRC GWTS wellfield, the total volume of extracted ground water and contaminant mass removed has increased significantly. During 2010, the 854-SRC removed 0.29 kg of VOC mass. In 2009, the GWTS removed 0.20 kg of VOC mass. 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. The effluent is currently discharged via misting towers, which are at or near capacity. Therefore, to increase the pumping of extraction well W-854-2218, construction of additional misting towers are necessary to accommodate the additional effluent volume.

The 854-SRC SVTS operated throughout 2010, except for a period of battery failure from late February to mid-March and after November 22 for freeze protection. The maximum historic TCE vapor concentration measured from well W-854-1834 was 4.4 ppm<sub>v/v</sub> (November 2005). The maximum 2010 TCE vapor concentration measured from well W-854-1834 was 0.46 ppm<sub>v/v</sub> (April). During 2010, the 854-SRC removed 0.80 kg of VOC vapor mass, compared to 1.1 kg, removed during 2009. 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<sub>1</sub>/Tnsc<sub>0</sub> ground water. 854-SRC was shut down on November 22 to prevent damage from freezing temperatures. Total VOC concentrations in the October vapor sample from well W-854-1834 had declined to 0.35 ppm<sub>v/v</sub>. The reporting limit is 0.1 ppm<sub>v/v</sub>. Based on the low concentrations of VOCs observed in the October sample, operation of the 854-SRC SVTS will remain suspended until May 2011 to facilitate a rebound test. At that time, sampling and analysis of VOCs in vapor will resume.

The 854-PRX GWTS did not operate during the period from before January 1 to February 9 and after November 22 for freeze protection. Because the biotreatment unit was not reducing nitrate concentrations, presumably due to the cold and/or bacteria inactivity, the GWTS was only operated briefly for several days from February 9 to May 20, to check nitrate concentrations. The system was then run for day-only operations from May 20 through May 27, at which time operations were changed to a 24-hr/7 operating schedule after verification of consistent nitrate treatment. Construction activities supporting full-time operation of 854-PRX were completed in September 2007, increasing overall extraction capacity and the extraction flow rate from well W-854-03 to 1.4 gpm. Although full-time operations have resulted in larger volumes of extracted water from well W-854-03, the stabilized pumping water level in this well remains more than 10 ft above the top of the well screen. This and prior hydraulic testing indicate well W-854-03 can sustain long-term flow rates as high as 4-5 gpm. To increase the extraction flow rate from this well, increased power capacity will be required to the well, to operate a higher

capacity pump. In turn, increasing the overall flow at this facility will exceed the capacity of the nitrate biotreatment unit and injection trench. Various options are being evaluated to allow for increased pumping from well W-854-03, and to increase the effectiveness of nitrate treatment.

The 854-DIS GWTS operated throughout 2010 except for the period from before January 1 to February 2 and after November 22 for freeze protection. The single 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**

Although there were no new issues that affect the performance of the cleanup remedy for the Building 854 OU during this reporting period, the facility and discharge capacity limitations at 854-SRC and 854-PRX continue to limit the performance of the extraction wellfields. 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 monitoring 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 columns with SR-7 resin 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 from 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. 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 columns with SR-7 resin 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 from 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 columns with SR-7 resin 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 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 the reporting period 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 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 second semester:

##### 830-SRC GWTS and SVTS

- Extraction wells W-830-57 and W-830-2214 were found not pumping on July 22. The pump in extraction well W-830-57 was replaced on August 16. The pump in extraction well W-830-2214 was replaced on August 20.
- New ion-exchange resin was placed in the first column on August 9.
- The pump in extraction well W-830-49 was replaced on August 11, and GWE was activated on August 19.
- Extraction well W-830-19 was shutdown from October 14 to October 18 to install a new check valve.
- New GAC was installed on October 26.
- Extraction wells W-830-19, W-830-59, and W-830-2214 were shut down on November 22 to prevent damage from freezing temperatures.
- A site-wide power outage occurred on November 30.
- The SVTS was shut down on December 9 for the remainder of the reporting period while engineering personnel evaluate condensate issues.
- The pump in extraction well W-830-2215 failed on December 16. The system continued to operate on wells W-830-57 and W-830-60.

##### 832-SRC GWTS and SVTS

- The Programmatic Logic Control was reloaded and the SVTS was restarted on July 27.
- The pump in extraction well W-832-11 was removed on November 2 and replaced on December 10.

- The SVTS water knock-out drum failed on November 18 causing the SVTS to be shut down for the remainder of the reporting period. The GWTS was also shut down at this time for freeze protection.

#### 830-DISS GWTS

- The GWTS operated intermittently during the reporting period due to operational issues with the Central GSA.
- Extraction well W-830-2216 low level switch was changed on July 23.
- Due to the air compressor failure at the CGSA GWTS on December 20 that activates the flow control valve, which allows the flow of ground water from 830-DISS to the CGSA, all flow and treatment of water at 830-DISS stopped at that time and remained off for the remainder of the reporting period.
- Extraction well W-830-2216 was shut down on November 22 to prevent damage from freezing temperatures. The system continued to operate on the artesian wells.

#### **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 new 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 832-SRC due to being shut down for freeze protection and at 830-DISS GWTSs due to the flow control valve shutdown.

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

The only treatment facility modifications in OU 7 during the reporting period occurred at 830-DISS. Extraction well W-830-2216 was initially plumbed into the treatment chain after the ion exchange vessels, as it was believed that no perchlorate contamination existed in this well. Due to a trace perchlorate detection at concentrations below the reporting limit, the extraction line from W-830-2216 was re-plumbed to also run through the ion exchange resin along with the extracted water from the artesian wells. The system is being monitored to ensure any backpressure from W-830-2216 will not decrease the natural flow from the artesian wells.

#### **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; twenty-three required analyses

were not performed because there was insufficient water in the wells to collect the samples and eight required analyses were not performed due to an inoperable pump.

Ground water elevations and flow directions for the Qal/WBR HSU are presented on Figure 2.7-2. Ground water elevation contour maps for the Tnsc<sub>1b</sub> and Upper Tnbs<sub>1</sub> HSUs are presented on Figures 2.7-3 and 2.7-5, respectively. Ground water elevations are posted for the Tnsc<sub>1a</sub> HSU on Figure 2.7-4.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, 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 are summarized in Tables 2.7-8 through 2.7-10. The total masses removed during this reporting period 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; perchlorate and nitrate are the secondary COCs. These constituents have been identified primarily in the Qal/WBR, Tnsc<sub>1b</sub>, and Tnsc<sub>1a</sub>, HSUs. Total VOCs have also been detected at low concentrations in Building 832 Canyon in the Tnbs<sub>2</sub> and Upper Tnbs<sub>1</sub> HSUs.

Total VOC isoconcentration data are posted for the Qal/WBR and Tnsc<sub>1a</sub> HSUs and contoured for the Tnsc<sub>1b</sub> and Upper Tnbs<sub>1</sub> 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<sub>1b</sub> and Upper Tnbs<sub>1</sub> HSU ground water elevation 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<sub>1a</sub> HSUs; and for nitrate in the Qal/WBR, Tnsc<sub>1b</sub>, and Tnsc<sub>1a</sub> HSUs. Concentration data, isoconcentration contours, and hydraulic capture zones are presented for perchlorate in the Tnsc<sub>1b</sub> HSU. All secondary COC maps are based on data collected during the first semester 2010. For collocated wells, the highest concentration was used for contouring.

##### **2.7.3.2.1. Total VOC Concentrations and Distribution**

Historically, ground water samples from wells located in the Building 830 source area have contained the highest total VOC concentrations in the Qal/WBR HSU. As shown on Figure 2.7-6, total 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 (SVI-830-035) in 2003 to a 2010 maximum concentration of 1,100 µg/L (SVI-830-035, March).

Since remediation began in 1999 in the Building 832 source area, total VOC concentrations in wells screened in the Qal/WBR HSU have decreased from a historic maximum of 1,800 µg/L (W-832-18) in 1998 to a 2010 maximum concentration of 220 µg/L (W-832-23). Monitor well W-832-23 is used to monitor plume concentrations in both the Qal/WBR and Tnsc<sub>1b</sub> HSUs, since it is screened across both units. Ground water samples for VOC analyses were not collected

from several wells completed in the Qal and Tnsc<sub>1b</sub> HSUs because the water table dropped below the screened intervals.

Total VOC concentrations in ground water samples taken from Qal/WBR HSU guard wells located south of Building 832 Canyon near the Site 300 southern boundary continue to be low (<1 µg/L) to below reporting limits (<0.5 µg/L) and have decreased from a historic maximum of 1.9 µg/L (W-35B-01) in 2001 to 1.0 µg/L (W-880-02) during 2010.

Since remediation began in the Building 830 source area in 2000, total VOC concentrations in ground water in the Tnsc<sub>1b</sub> HSU, have decreased from a historic maximum of 13,000 µg/L (W-830-49) in 2003 to a 2010 maximum of 4,200 µg/L (W-830-19, February). Although remediation efforts in the Tnsc<sub>1b</sub> 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, total VOC concentrations in Tnsc<sub>1b</sub> 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 2010 maximum concentration of 30 µg/L (W-830-52, October). Farther south along Building 832 Canyon, the leading edge of the Tnsc<sub>1b</sub> 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.

Remediation of the Tnsc<sub>1a</sub> HSU began in early 2007. Since that time, total VOC concentrations in Tnsc<sub>1a</sub> HSU ground water have decreased from a historic maximum of 1,700 µg/L (W-830-27, 1998) to a 2010 maximum concentration of 813 µg/L (W-830-2214, April). Monitor well W-830-2311, which is located near Spring 3, was installed in 2007 to evaluate the downgradient extent of VOCs in the Tnsc<sub>1a</sub> HSU. The maximum VOC concentration sampled in groundwater collected from this well during 2010 was 26 µg/L (March). A new Tnsc<sub>1a</sub> 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<sub>1</sub> HSU, total VOC concentrations in ground water have decreased from a historic maximum of 100 µg/L (W-830-28, June 1998) to a 2010 maximum concentration of 27 µg/L (W-830-60 and W-830-2215, February). During 2010, total 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<sub>1</sub> HSU.

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

During 2010, HE compounds (RDX, HMX, 2-amino-4, 6-dinitrotoluene, and nitrobenzene) 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 (W-830-34, December 1998) to a 2010 maximum concentration of 17 µg/L (W-832-18, March). The maximum perchlorate concentration measured in ground water from W-832-23 during 2010 was below the reporting limit of 4 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<sub>1b</sub> HSUs, since this well is screened across both units. During 2010, perchlorate was also not detected above the 4 µg/L reporting



limit in guard wells W-35B-01 and W-880-02. These guard wells are both screened in the Qal/WBR HSU.

The maximum perchlorate ground water concentration sampled in the Tnsc<sub>1b</sub> HSU during 2010 was 17 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 March 2010, the perchlorate concentration in ground water at monitor well W-830-58 was 6 µg/L. During 2010, perchlorate was not detected above the reporting limit in guard wells screened in the Tnsc<sub>1b</sub> HSU.

During 2010, the maximum perchlorate ground water concentration sampled in the Tnsc<sub>1a</sub> HSU was 7.3 µg/L in extraction well W-832-25 (February). The highest historic perchlorate concentration sampled in the Tnsc<sub>1a</sub> HSU was 13 µg/L (W-832-25, February 1999).

During 2010, perchlorate was not detected above the reporting limit of 4 µg/L in any ground water samples collected from the Upper Tnbs<sub>1</sub> 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 2010, nitrate ground water concentrations detected in samples from the Qal/WBR HSU ranged from <0.5 mg/L reporting limit (guard wells) near the site boundary to 180 mg/L (SVI-830-033, March) in the Building 832 source area.

Nitrate ground water concentrations detected in samples from the Tnsc<sub>1b</sub> HSU ranged from <0.5 mg/L to 190 mg/L in dual extraction well W-830-49 (February). Historically, well W-830-49 has contained the highest nitrate concentrations in the Tnsc<sub>1b</sub> HSU (501 mg/L, June 1998). Nitrate concentrations in the Tnsc<sub>1b</sub> guard wells ranged from <0.5 mg/L to 1.7 mg/L (W-830-1730, August), significantly below the 45 mg/L cleanup standard.

During 2010, the maximum nitrate ground water concentration detected in samples from the Tnsc<sub>1a</sub> HSU was 88 mg/L (W-832-25, February). Nitrate ground water concentrations detected in samples from the Upper Tnbs<sub>1</sub> ranged from <0.5 mg/L to 25 mg/L (W-26R-01, October). During 2010, nitrate ground water concentrations were not detected above the 45 mg/L cleanup standard in any Upper Tnbs<sub>1</sub> HSU guard wells. 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 optimization continued during 2010 to prevent offsite plume migration, reduce source area concentrations, and increase mass removal. 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 most of the first semester 2010 due to a problem with the Programmable Logic Control. Long-term mass removal rates are not expected to be impacted by this shutdown and both facilities were back online during the second semester 2010. At the 830-SRC, a modification was made in early 2010 to allow Upper Tnbs<sub>1</sub> HSU extraction wells that do not contain perchlorate concentrations above 4 µg/L (W-830-60, W-830-2215, and W-830-57 wells) to bypass the ion-exchange treatment system. This modification will reduce back pressure and allow the extraction well pumps to operate more effectively, thereby increasing flow, mass removal rates, and hydraulic capture.

In the Qal/WBR and Tnsc<sub>1b</sub> HSUs, extraction wells target the highest total 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<sub>1b</sub> HSU extraction wells were offline for part of the reporting period due to treatment facility improvements, pump repairs and freeze protection. While these shutdowns may have had a small impact on VOC concentrations in nearby monitor wells such as W-830-58, no long-term impact is expected.

The Tnsc<sub>1a</sub> 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<sub>1a</sub> HSU began in 2007 and during the time the Tnsc<sub>1a</sub> 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<sub>1a</sub> HSU. During 2010, one new guard well, W-830-2610, was installed in the Tnsc<sub>1a</sub> HSU. This well will be added to the compliance monitoring plan after final well development and baseline sampling are completed. During 2011, a new Tnsc<sub>1a</sub> extraction well (W-830-2701) is planned for installation near Upper Tnbs<sub>1</sub> HSU extraction well W-830-60. The purpose of this well is to increase hydraulic capture in the Tnsc<sub>1a</sub> HSU downgradient of extraction well W-830-2214.

Extraction wells in the Upper Tnbs<sub>1</sub> target areas with the highest total VOC concentrations. Monitor well W-830-1832, located on the leading edge of the VOC plume, displayed increasing total VOC concentrations prior to activation of the 830-SRC GWTS. Following activation of the GWTS, total VOC concentrations in this well have generally declined. Since remediation began in this HSU, the overall extent of total VOCs have also decreased. Ground water in Upper Tnbs<sub>1</sub> guard wells, which are located downgradient of W-830-1832 and upgradient of water supply Well 20, continue to show analytical results below reporting limits for all COCs.

As extraction proceeds from the 832-SRC, 830-SRC and 830-DISS extraction wells, it is expected that concentrations in all identified OU 7 HSUs will continue to decline. Over the past year, the extent of the VOC plume in the Upper Tnbs<sub>1</sub> HSU has decreased slightly and this trend is expected to persist with continued pumping. Total VOC concentration trends in the Upper Tnbs<sub>1</sub> HSU continue to be monitored closely because pumping at water supply Well 20 and backup water supply Well 18 has the potential to influence contaminant concentrations.

#### **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 ground water contamination 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 and K8-03B monitor Building 801 ground water contaminants while wells K8-02B, K8-04, and K8-05 are detection monitor wells for 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 exception; two required analyses were inadvertently not added to the sampling plan.

Ground water elevations and flow direction are posted for the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU on Figure 2.8-1.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, respectively.

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

At Building 801, VOCs 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 2010, nitrate, perchlorate, and total VOC data for the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU are posted on Figure 2.8-1.

During 2010, the maximum total VOC concentration detected in ground water samples from wells in the Building 801/Pit 8 Landfill area was 6.2 µg/L (K8-01, June). This total VOC concentration was comprised of 4.2 µg/L of TCE and 2 µg/L of 1,2-DCA. A duplicate sample

collected the same day from well K8-01 contained total VOCs at a concentration of 5.8 µg/L comprised of 3.9 µg/L of TCE and 1.9 µg/L of 1,2-DCA. Total VOC concentrations detected in ground water samples collected from wells downgradient of Building 801 have decreased from a historic maximum of 10 µg/L (K8-01, 1990).

During 2010, perchlorate was not detected above the 4 µg/L reporting limit in any ground water samples from 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 2010, the maximum nitrate concentration detected in a ground water sample from a well in the Building 801/Pit 8 Landfill area was 54 mg/L (K8-04, June). The sample from well K8-04 and the duplicate sample from well K8-01 (51 mg/L, June) were the only samples that exceeded the 45 mg/L 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 generally are similar to previous years.

## **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; seven required analyses were not performed because there was insufficient water in the wells to collect the samples.

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

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, respectively.

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

At Building 833, VOCs are the primary COC in ground water; there are no secondary COCs. Total VOC concentrations 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 total VOC concentrations in Tpsg HSU ground water from a historic maximum concentration of 2,100 µg/L in 1992 (W-833-03). During 2010, wells W-830-12 and W-833-33, both screened in the Tpsg HSU, yielded samples containing total VOC concentrations of 4.7 and 110 µg/L, respectively (February). In 2010, VOCs were not detected in ground water samples collected from deep Tnbs<sub>1</sub> HSU monitor well W-833-30, indicating that VOC contamination continues to be confined to the shallow Tpsg perched water-bearing zone.

### **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, monitoring wells, ground water elevations, and approximate hydraulic gradient direction in the Tnsc<sub>0</sub> HSU are presented on Figure 2.8-3.

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

Wells K9-01 through K9-04 are detection monitor wells for the Building 845 and Pit 9 Landfill. Detection monitoring of this landfill, which is discussed in Section 3.3, is conducted to determine if releases have occurred.

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.

Ground water elevations and flow direction are posted for the Tnsc<sub>0</sub> HSU on Figure 2.8-3.

Analytical results and ground water elevation measurements obtained during 2010 are presented in Appendices B and C, respectively.

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

The monitor wells near the Pit 9 Landfill are screened in the lower Neroly Formation Tnsc<sub>0</sub> HSU. Detection monitoring of the Pit 9 landfill (discussed in Section 3.3) is conducted to identify releases to ground water. 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 2010 were either below reporting limits or within the range of background concentrations. Because uranium and the HE compound HMX were identified as COCs in surface soil at Building 845/Pit 9 Landfill, ground water in this area is monitored for these constituents and the sample 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 <sup>235</sup>U/<sup>238</sup>U atom ratios indicate the presence of only natural uranium.

### **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.

Ground water elevations and flow direction are posted for the Tmss HSU on Figure 2.8-4.

Analytical results and ground water elevation measurements obtained during 2010 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; VOCs are a vadose zone COC. Total uranium and  $^{235}\text{U}/^{238}\text{U}$  atom ratio data for the Tmss HSU are posted on Figure 2.8-4.

The 2010 maximum total uranium activity detected in ground water samples from wells in the Building 851 area was 2.05 pCi/L (W-851-08, May). The historic maximum uranium activity was 3.2 pCi/L (W-851-07, October 1991). The atom ratio of  $^{235}\text{U}/^{238}\text{U}$  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. 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 these landfills. This section presents the results for the Pit 2, 3, 4, 5, 7, 8, and 9 Landfills ground water detection monitoring network, 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 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, except that fourteen required

analyses were not performed because there was insufficient water in the wells to collect the samples. There were no modifications made to the plan.

Analytical results and ground water elevation measurements obtained during 2010 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<sub>1</sub>/Tnbs<sub>0</sub> HSU is currently over 50 ft to over 70 ft beneath the Pit 2 Landfill.

A map of the second semester 2010 distribution of ground water tritium activity within the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU and including the Pit 2 Landfill is presented on Figure 2.5-5. The maximum 2010 tritium activity within the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU in the area immediately south of the Pit 2 Landfill was  $5,810 \pm 1,160$  pCi/L (NC2-08, May). 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<sub>1</sub>/Tnbs<sub>0</sub> HSU ground water immediately downgradient of the landfill are decreasing and are currently a fraction of the historic maximum. The May 2010 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).

A map of the first semester 2010 distribution of ground water uranium activity within the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU and including the Pit 2 Landfill is presented on Figure 2.5-7. The maximum 2010 uranium activity detected in a ground water sample from the Pit 2 area was 7.5 pCi/L (K2-01C, May). This well is completed in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU. Uranium isotope data from ground water samples collected from Qal/WBR wells W-PIT2-2301 and W-PIT2-2302 in March 2010 contained low activities of total uranium (1.2 and 0.13 pCi/L, respectively).

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<sub>1</sub>/Tnbs<sub>0</sub> HSU wells W-PIT2-1934 and W-PIT2-1935, both located along the northern margin of the Pit 2 Landfill, have decreased and the last two of three uranium samples collected from well W-PIT2-1935 in 2009 contained only natural uranium. The May 2010 sample from well W-PIT2-1935 was analyzed by alpha spectrometry and contained 0.99 pCi/L of uranium. The sample collected the same day and analyzed by mass spectrometry contained 0.89 pCi/L and yielded an atom ratio indicative of natural uranium.

A map of the first semester 2010 distribution of perchlorate concentrations within the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU and including the Pit 2 Landfill is presented on Figure 2.5-11. During 2010, 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 2010 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 first and second semesters of 2010. No problems were identified.

### 3.1.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring was conducted during the second semester 2010. No evidence of subsidence was observed.

### 3.1.5. Maintenance

No maintenance was conducted on Pit 2 during 2010.

## 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 exception; two required analyses were inadvertently not added to the sampling plan.

Analytical results and ground water elevation measurements obtained during 2010 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<sub>1</sub>/Tnbs<sub>0</sub> HSU ground water at Pit 8 are presented on Figure 2.8-1.

Historic and current data indicate that total 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 of total VOCs (comprised of 1,2-DCA and TCE) continues to be observed at well K8-01, located upgradient of Pit 8 where samples collected during the first and second semester 2010 contained 6.2 and 5.8 µg/L (June) and 4.7 µg/L (November) total VOCs. The presence of total VOCs in ground water samples from well K8-04, immediately downgradient of the Pit 8 Landfill (2 µg/L, June) 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. During 2010, 1,2-DCA was the only VOC detected above its cleanup standard (0.5 µg/L). However, the 2010 maximum concentration of 2 µg/L 1,2-DCA detected in well K8-01 ground water represents a decrease from the historic maximum 1,2-DCA concentration of 5 µg/L detected in a sample from the same well in 1990. This well is located upgradient of the Pit 8 Landfill, and therefore the observed VOCs appear to be the result of releases from the former Building 801 dry well. In ground water samples collected from downgradient wells K8-01 and K8-04, the presence of



1,2-DCA at concentrations of 2 and 0.6 µg/L, respectively, appears to also indicate the continuation of the VOC plume originating at the Building 801 dry well and is not due to a release from the Pit 8 Landfill.

The maximum 2010 nitrate concentration detected in a ground water sample from a well in the Pit 8 Landfill area was 54 mg/L (K8-04, June). A duplicate sample from well K8-01 (51 mg/L, June) 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 2010 were below the reporting limit (<100 pCi/L), except for the regular and duplicate June and single November 2010 samples from well K8-01 ( $155 \pm 70.3$  and  $150 \pm 55$ , and  $156 \pm 59.2$  pCi/L, respectively) and the single June and regular and duplicate November 2010 samples from well K8-03B ( $110 \pm 64.4$  and  $113 \pm 53.1$  and  $151 \pm 59.0$ , 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 2010 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 2010 as part of the Detection Monitoring Program in Tnbs<sub>1</sub>/Tnbs<sub>0</sub> 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 2010. No problems were reported.

### **3.2.4. Annual Subsidence Monitoring Results**

Annual subsidence monitoring was conducted during the second semester of 2010. No evidence of subsidence was observed.

### **3.2.5. Maintenance**

No maintenance was conducted at Pit 8 during the first semester 2010.

## **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 2010 are presented in Appendices B and C, respectively.

### **3.3.2. Contaminant Detection Monitoring Results**

A map showing the locations of the building, landfill, monitoring wells, ground water elevations, and approximate hydraulic gradient direction in the Tnsc<sub>0</sub> HSU 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 2010 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 2010. Some animal burrows were observed in the pit cover.

### **3.3.4. Annual Subsidence Monitoring Results**

Annual subsidence monitoring was conducted during the second semester of 2010. No evidence of subsidence was observed.

### **3.3.5. Maintenance**

Animal burrows were filled during the second quarter of 2010.

## **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 with the following exception; one ground water sample was not collected as required because it was inadvertently left off the sampling plan.

Analytical results and ground water elevation measurements obtained during 2010 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<sub>1</sub>/Tnbs<sub>0</sub> HSUs.
- K7-03, K7-10, NC7-26, and NC7-47: Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.
- K7-09: Tnsc<sub>0</sub> 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).

Maps of the second semester 2010 distribution of ground water tritium activity within the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs and including the Pit 7 Landfill are presented on Figures 2.5-4 and 2.5-5, respectively. The highest tritium activity detected in a 2010 ground water sample from a Pit 7 Complex detection monitor well was 82,000 pCi/L (April) in Tnbs<sub>0</sub> well K7-03. Tritium activities in samples from this well have generally been declining from the maximum historical tritium 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 117,000 pCi/L.

Tritium activities in detection monitor well K7-01 have decreased from the historic maximum activity of 72,900 pCi/L in October 1999 to a maximum 2010 tritium activity of 47,200 pCi/L detected in the April sample from this well. Last year, a maximum tritium activity of 51,700 pCi/L was detected in the October 2009 sample from this well.

Tritium activities in detection monitor well NC7-26 have decreased from the historic maximum activity of 30,000 pCi/L to a 2010 maximum of 2,600 pCi/L of tritium detected in the sample from this well in May. Last year, the maximum tritium activity in a sample from this well was 2,480 pCi/L.

Tritium activities in all samples collected in 2010 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<sub>1</sub>/Tnbs<sub>0</sub> and Qal/WBR HSUs in the Pit 7 Complex area are consistent with those observed in 2009 and no new release of tritium from the landfills is indicated by the 2010 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).

Maps of the first semester 2010 distribution of ground water uranium activity within the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs and including the Pit 7 Landfill are presented on Figures 2.5-6 and 2.5-7, respectively. Uranium activities were below the 20 pCi/L cleanup standard in all detection monitor well samples collected in 2010. The maximum uranium activity in a 2010 sample from a detection monitor well was 19.2 pCi/L (May) in 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 1997-1987 El Niño and <sup>235</sup>U/<sup>238</sup>U isotopic ratios have indicated added depleted uranium. The maximum uranium activity detected in a sample from this well was 27 pCi/L (September 1984). The maximum tritium activity detected in a sample from this well in 2009 was 20 pCi/L.

The next highest uranium activity in a 2010 detection monitor well sample was 13.3 pCi/L in the April 2010 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). The maximum tritium activity detected in a sample from this well in 2009 was 8.5 pCi/L. Ground water samples from this well have historically contained depleted uranium.

Uranium activities in all detection monitor wells have decreased from their historic maximum uranium activities. Uranium activities in wells K7-06, K7-09, K7-10, NC7-26, and NC7-47 have decreased to near or below the detection limit in 2010.

The extent of uranium in Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> ground water is similar to recent years. Ground water uranium data from 2010 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**

Maps of the first semester 2010 distribution of ground water nitrate concentrations within the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs and including the Pit 7 Landfill are presented on Figures 2.5-8 and 2.5-9, respectively.

The maximum nitrate concentration detected in a 2010 sample from a Pit 7 Complex detection monitor well was 68 mg/L (April 2010) from Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU well NC7-47. Wells screened in the Qal/WBR HSU, NC7-16, NC7-21, and NC7-34, yielded February 2010 samples with reported nitrate concentrations of 290, 210, and 150 mg/L, respectively. These results are suspect as the subsequent May 2010 samples yielded nitrate concentrations of 39, 40, and

27 mg/L, respectively. These subsequent results are equivalent to historic nitrate concentrations observed at these wells.

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 2010 samples containing nitrate concentrations in excess of the cleanup standard. Nitrate concentrations in samples from the other detection monitor wells ranged from <0.5 mg/L at well K7-09 to 44 mg/L at well K7-01. Nitrate concentrations trends in the detection monitoring wells are all stable, and generally decreasing from their maximum historic 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**

Maps of the first semester 2010 distribution of ground water perchlorate concentrations within the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs and including the Pit 7 Landfill are presented on Figures 2.5-10 and 2.5-11, respectively. Wells K7-01 (screened in the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs) and K7-03 (screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU) are the only detection monitor wells from which ground water samples have historically contain perchlorate at concentrations in excess of the 4 µg/L detection limit. Perchlorate concentrations in samples from these wells have decreased from the historic maximum of 25 µg/L in K7-01 (July 2006) and 29 µg/L in K7-03 (April 2005) to 12 µg/L and 7.7 µg/L of perchlorate in 2010, respectively. The overall extent of perchlorate in ground water in the Pit 7 Complex area did not change significantly from 2009 to 2010. The 2010 data did 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**

Maps of the first semester 2010 distribution of ground water total VOC concentrations within the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs and including the Pit 7 Landfill are presented on Figures 2.5-12 and 2.5-13, respectively. In 2010, VOCs were detected in samples from only two detection monitor wells at concentrations above the 0.5 µg/L detection limits. In 2010, samples from wells K7-01 and K7-03 contained 1.2 and 0.88 µg/L of total VOCs (all as TCE), respectively. The historic maximum total VOC concentrations in samples from these wells were 20 µg/L (K7-01, May 1985) and 15.2 µg/L (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 2009 to the 2010. The 2010 data did 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 2010, 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 or cleanup standards. These data did not indicate a release of metals during 2010 from any of the landfills.

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

Maps of the first semester 2010 distribution of Qal/WBR HSU ground water HMX and RDX concentrations and including the Pit 7 Landfill are presented on Figures 2.5-14 and 2.5-15, respectively. During 2010, 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 1-2.7  $\mu\text{g/L}$ . These data did not indicate a release of HE compounds during 2010 from any of the landfills.

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

During 2010, 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  $\mu\text{g/L}$ . These data did not indicate a release of PCBs during 2010 from any of the landfills.

#### **3.4.3. Landfill Inspection Results**

The Pit 7 landfill cap engineering inspection was conducted in June 2010. 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. The Pit 3 and 5 Landfill covers were not inspected during 2010. These landfill covers will be inspected in 2011.

#### **3.4.4. Annual Subsidence Monitoring Results**

Annual subsidence monitoring of the Pit 7 landfill was conducted during the second semester 2010. No evidence of subsidence was observed.

#### **3.4.5. Maintenance**

Maintenance was not performed on any of the pit covers during 2010.

### **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 second semester 2010. The drainage diversion system was inspected on October 11, November 9, and December 14. Sediment and vegetative debris accumulation were noted. In addition, squirrel damage to the channel banks was also observed.

### **3.5.2. Drainage Diversion System Maintenance**

Vegetative debris and sediment buildup was removed during second semester 2010. In addition, 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**

The semi-annual CAMU inspection was performed on October 19, 2010. No issues requiring maintenance were observed.

### **3.6.2. Building 850 CAMU Maintenance**

Repair of erosional damage on the hillslope west of Building 850 that occurred during heavy winter/spring rains was completed on September 30.

## **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 2010 is presented in Appendix E.

### **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 2009:

- 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 is complete and will no longer be 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 2009 to prevent unacceptable exposure to contaminants during remediation for those buildings and areas that continue to show an unacceptable risk and/or hazard.

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 (US.EPA, 2002). 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 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 2010. Generally the concentrations of VOCs in wells show a declining trend, specifically in areas where there are ground water and soil vapor treatment systems in operation.

As shown in Table 4.1-1, the estimated risk in 2010 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 2010 was above  $10^{-6}$  and/or the hazard quotient was below 1 for the indoor ambient air exposure pathway evaluated. As a result, the building occupancy restrictions, engineered controls, 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. During 2010, active remediation using ground water and soil vapor extraction continued at both locations.



In 2010, the risk evaluation for Building 833 for indoor ambient air showed no human health risk for this exposure pathway. In 2009, dry conditions limited ground water sampling at Building 833. “No Risk” is defined as an individual and cumulative excess cancer risk below  $10^{-6}$  and a hazard quotient below 1. The 2006 and 2008 evaluations for Building 833 also resulted in no human health risk. 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 would be considered complete as the estimated risk has remained below  $10^{-6}$  and the hazard quotient has remained below 1 for two consecutive years. However, because dry conditions limited ground water sampling in 2007 and 2009, this condition has not been met. Consequently, the risk and hazard evaluation for Building 833 will continue until all representative ground water samples have been collected and no human health risk for this pathway remains.

#### **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  $7 \times 10^{-5}$ , hazard index 2.3 due to TCE and PCE.
2. Spring 5 (HEPA OU) – Cumulative risk  $1 \times 10^{-5}$ , due to 1,1-DCE and TCE.
3. Spring 7 (Pit 6 Landfill OU) – Cumulative risk  $4 \times 10^{-5}$ , 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  $3 \times 10^{-6}$  (hypothetical), due to TCE.

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.

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 2010:

- 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 2010, 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 2011 and air samples will be collected if water is present.

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

An unacceptable cumulative risk of  $1 \times 10^{-3}$  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 will 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 results of the 2010 risk re-evaluation of Well 8 Spring is presented in Table 4.1-2. The 2010 maximum activity of tritium in Well 8 Spring surface water samples (16,800 pCi/L) exceeds the August 2010 Inhalation PRG for tap water of 188 pCi/L. 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. If workers occupy or plan to occupy the site in the near future, the risk based on projected actual exposure will be recalculated. If the recalculated risk is above  $10^{-6}$  or the hazard index exceeds 1, engineering controls will be implemented to prevent exposure for workers occupying the area 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 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: (1) 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, (2) ensuring the integrity of the Pit 7 Complex landfill caps to prevent exposure to burrowing animals from uranium isotopes, and (3) 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 CMR/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 CMR/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 background data. The results of the most recent five-year ecological review were reported in the 2008 Annual CMR.

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**

In the baseline ecological risk assessment (Webster-Scholten, 1994), ecological hazard (defined as a hazard index greater than 1) was associated with the ingestion of cadmium at several areas though out Site 300. Ecological risk and hazard management measures were developed as part of the 2002 CMP/CP for Buildings 834 and 850, due to a hazard index greater than 1 associated with kit fox (an important fossorial vertebrate species). As described above, additional surface soil data collected from the Building 834 area revealed no ecological hazard was present in this area. In addition, remediation activities targeting PCBs, dioxins and furans in surface soil at Building 850 also eliminated the cadmium ecological hazard present in this area.

While a hazard associated with cadmium in soil was also identified for ground squirrels and deer at Buildings 801, 851, and the HEPA, wildlife surveys available at the time of the ecological baseline risk assessment found no impacts to the squirrel or deer populations. Because potential ecological hazard was not identified for either individual special-status species or deer and squirrel populations in these areas, additional sampling and analysis of cadmium in surface soil was not required under the 2002 CMP/CP. As required by the 2009 CMP/CP, available biological survey data was reviewed to identify changes in the abundance of these species over time that could indicate impacts to the populations. Available survey data were also reviewed to identify the presence of special status species.

Figures 4.2-1 through 4.2-5 show the locations of surface soil samples with cadmium concentrations in excess of the Site 300 maximum background concentration of 1.9 mg/kg in the vicinity of Building 801, 851 and HEPA. In addition to the five-year ecological review reported on in the 2008 Annual CMR, biological resource data was reviewed and updated by LLNL's biologists in January 2011 for inclusion into a Draft Site 300 Programmatic Biological Assessment (PBA) being prepared for the U.S. Fish and Wildlife Service. Information from the PBA was used to evaluate potential biological resources in areas with elevated cadmium concentrations in surface soil. Both the Building 801 (Figure 4.2-1) and Building 851 (Figure 4.2-1) areas are located within grasslands that are a mix of introduced exotic annual

grasses from the Mediterranean and native perennial grasses. The Building 815 (Figure 4.2-3), Well 18 (Figure 4.2-4) and Building 827 (Figure 4.2-5) areas are all located within grasslands composed primarily of exotic annual grasses. All of these grasslands could be used as dispersal habitat for the California red-legged frog (*Rana draytonii*), a federal threatened species. No California red-legged frogs have been directly observed in the areas containing elevated cadmium concentrations in the surface soil, although in the past, frogs were routinely observed in the drainage along Route 3, located about 1000 ft south east of Building 801. In 2006, ten to fifteen adult frogs were translocated from this area to the Elk Ravine mitigation pools when the cooling tower surface water discharges were redirected. This population had been in the drainage near Building 801 for more than a decade. The Building 851 area is also located within 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 have been directly observed in areas containing elevated cadmium concentrations in surface soil. The Building 815, old well 18 and Building 827 areas are also located within the 1100 meters buffer on California tiger salamander (*Ambystoma californiense*) breeding sites (a federal threatened species). The breeding sites that are within 1100 meters of these locations are located along the southeastern boundary of Site 300 near Corral Hollow Road. These areas may also be used as upland habitat for the Western spadefoot toad (*Spea hammondi*), a California species of special concern. The toads have also been observed along the southeastern boundary of the site. No California red-legged frogs or California tiger salamanders have been observed in these areas since the closure of the Building 827 wastewater lagoons, although species-specific surveys have not been conducted since the closure of the lagoons. Western spadefoot toads have also not been directly observed in these areas.

In addition to evaluating the available biological survey data from the Buildings 801, 851 and HE Process Areas, 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. This will be conducted by 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. This sampling is currently planned for the summer of 2011.

#### **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 animals from unacceptable exposure to the pit waste. This will be 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 June 2010 by Abri Environmental Engineering, Inc. No recommendations to fill the holes were made. Small animal holes on the outer edge of the

Pit 7 cap were also observed in October 2010.

#### **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 most recent Five-Year Ecological Review (reported on in the 2008 Annual CMR) due to either a limited data set or the lack background data. In surface soil, the ecological hazard from potassium-40 (K-40) in surface soil 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 2008 Annual CMR also reported that chloride, ortho-phosphate, total phosphorus, nitrate plus nitrite, ammonia nitrogen and uranium in several springs had the potential for ecological hazard due to exceeding available conservative ecological screening levels, but could not be completely evaluated due to a limited data set and/or the lack of background data. These springs included Spring 14 (HEPA OU), Springs 3 and 4 (Building 832 Canyon OU) and Springs 10 and 11 (Building 854 OU).

As reported in the 2010 First Semester CMR, available data from the Site 300 background springs were reviewed for chloride, ortho-phosphate, total phosphorus and ammonia nitrogen. Background levels were determined for chloride, ortho-phosphate, and total phosphorus. No ammonia nitrogen data available from the background springs. The maximum concentration for ortho-phosphate, total phosphorus as P and total phosphorus as  $PO_4$  in Spring 14 are all below the maximum concentrations detected in the background springs. Therefore, these constituents in Spring 14 will not be considered further for ecological hazard. 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.

As reported in the 2010 First Semester CMR, the nitrate plus nitrite as N concentration in Spring 3 evaluated in the 2008 Annual CMR was incorrectly compared to the background level for nitrite as N. The most recent sample collected from Spring 3 detected nitrate as  $NO_3$  below background. In addition, all samples collected from Spring 3 that have either been analyzed for nitrite as N (7 samples) or nitrite as  $NO_2$  (5 samples) did not detect nitrite. Therefore, this constituent in Spring 3 will not be considered further for ecological hazard.

As reported in the 2010 First Semester CMR, the 2008 Annual CMR reported the following constituents detected in Spring 4 were not completely evaluated due to the lack of background data: ammonia nitrogen as N, ortho-phosphate, and total phosphorus concentration as P. The maximum ortho-phosphate concentration in Spring 4 is below maximum concentration observed in the background springs. Therefore, this constituent in Spring 4 will not be considered further for ecological hazard. The single sample from Spring 4 analyzed for total phosphorus as P exceeds the maximum concentration observed in the background springs. Therefore, future samples collected from Spring 4 will be analyzed for total phosphorus to determine if the maximum concentration is representative of total phosphorus concentrations in this spring. Data

for ammonia nitrogen are not available for 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. Therefore, future samples collected from Spring 4 will also be analyzed for ammonia nitrogen to determine if the maximum concentration is representative of ammonia concentrations 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.

As reported in the 2010 First Semester CMR, the 2008 Annual CMR reported that 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.

#### **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. As mentioned above in Section 4.2.2, LLNL's biologists recently prepared a Draft Site 300 PBA for submittal to the U.S. Fish and Wildlife Service. New biological information available since the preparation of the Five-Year Ecological Review (reported on in the 2008 Annual CMR) is included in the PBA. This new information includes results of pre-construction surveys and ongoing monitoring conducted by LLNL biologists.

Biological information available in the draft PBA was used to evaluate the potential presence of special status species in areas containing elevated cadmium concentrations in surface soil (Section 4.2.2. above). Since the completion of the Five Year Ecological Review, no new special status species have been identified in areas of potentially elevated ecological risk.

## **5. Data Management Program**

The management of data collected during second semester 2010 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. During the second semester of 2010, the applications used to access the data were migrated from a Sun Solaris server to a Linux server. General maintenance and refinements were implemented to improve chains of custody, data entry verification, and querying abilities. Sample Planning and Chain of Custody Tracking (SPACT) was further improved to handle more varied sampling schedules for a wider range of sampling media. Additionally, applications for field operations for scheduling and logging samples were enhanced. Improvements and additions to the ERD data management process continue to be implemented in an ongoing effort to automate and improve the applications, including updates to verifications. The Treatment Facility Real Time (TFRT) application, a high frequency data acquisition system for Treatment Facilities and their associated extraction wells, continues to be improved and its scope of coverage extended. Standard operating procedures are up to date.

## 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. Several new applications using geographic information systems (GIS) have been implemented. GIS Analysis and Visualization Tool (GAVT) is an all-encompassing LLNL/S300 mapping and analysis tool, which allows visual referencing and queries about various locations using a map. The Hit Hunter tool now can display the maximum concentrations for a given analyte on a map. It also gives the user the new ability to step through yearly results of a given analyte concentration since 1985. The Clean Well Tool displays and provides early warning of contaminant detection in wells that are expected to be outside the area of impacted ground water. The GIS Concentration Trend tool facilitates the map-based display of the most recent analyte results for all wells in a certain hydro-stratigraphic unit or the soil results for a specified range of depth. The GIS Gallery tool provides a generic map-viewing portal for all maps uploaded to ArcGIS server, enabling all staff to upload and easily access created maps. The GIS TFRT tool gives the real time status of any treatment facility and the associated wells, displaying the real time values of monitored parameters of a treatment facility.

An existing legacy tool, Multi-well Time Series (MWTS), is being replaced by a modernized version, MWTS-2. MWTS-2 adds many advancements such as: improved performance, enhanced customization options, new plotting package options, dynamic plot manipulation, additional image export options, and more.

## 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, 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

The ERD SOPs have been updated and are currently going through the final review 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 a total of twenty-seven procedures which will be distributed as controlled documents, as follows: 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 4.15: 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. During the review process, certain procedures, as listed, 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. Other procedures will not be included in this release as planned. These procedures are still undergoing the review and updating process: 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, SOP 4.7B: Site 300 Treatment and Disposal of Well Development and Well Purge Fluids, and SOP 4.14: Mapping with the Trimble Pathfinder Pro XR GPS System,

## 6.2. New Procedures

There were no new procedures developed during this reporting period.



### **6.3. Self-assessments**

ERD participates in formal and informal self-assessments. These assessments are used to evaluate work activities to procedural, QA, management, and Integrated Safety Management System (ISMS) practices. External regulatory agencies and management also performs frequent walkabouts during ERD work activities. There were a total of twenty-four assessments and walkabouts performed for the ERD Site 300 work activities during 2010. Issues and deficiencies observed during the assessments are tracked from inception to resolution using the institutional Issues Tracking System (ITS). To date, all ERD Site 300 work related issues and deficiencies have been successfully corrected and closed-out in the ITS.

### **6.4. Quality Issues and Corrective Actions**

Quality improvement, nonconformance, and corrective action reporting is documented using the Quality Improvement Form (QIF). There were four QIFs processed during this reporting period. Corrective action(s) recommended in all four QIFs has been implemented. All QIFs to date have been successfully closed-out.

### **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. During this reporting period an inquiry was made to the analytical lab requesting that tritium activities reported for two ground water monitoring locations be investigated due to results being significantly different from historic results for these locations. A QIF was developed to document the data anomalies and submitted to the analytical lab requesting a data review. As a result of the review, an entire batch of samples were re-prepped and re-counted. The re-analyses coincide with tritium activities typically reported for these locations.

### **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. There were no cross-contamination issues indicated by trip blank, field blank, or equipment blank analyses during this reporting period.

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## Figures

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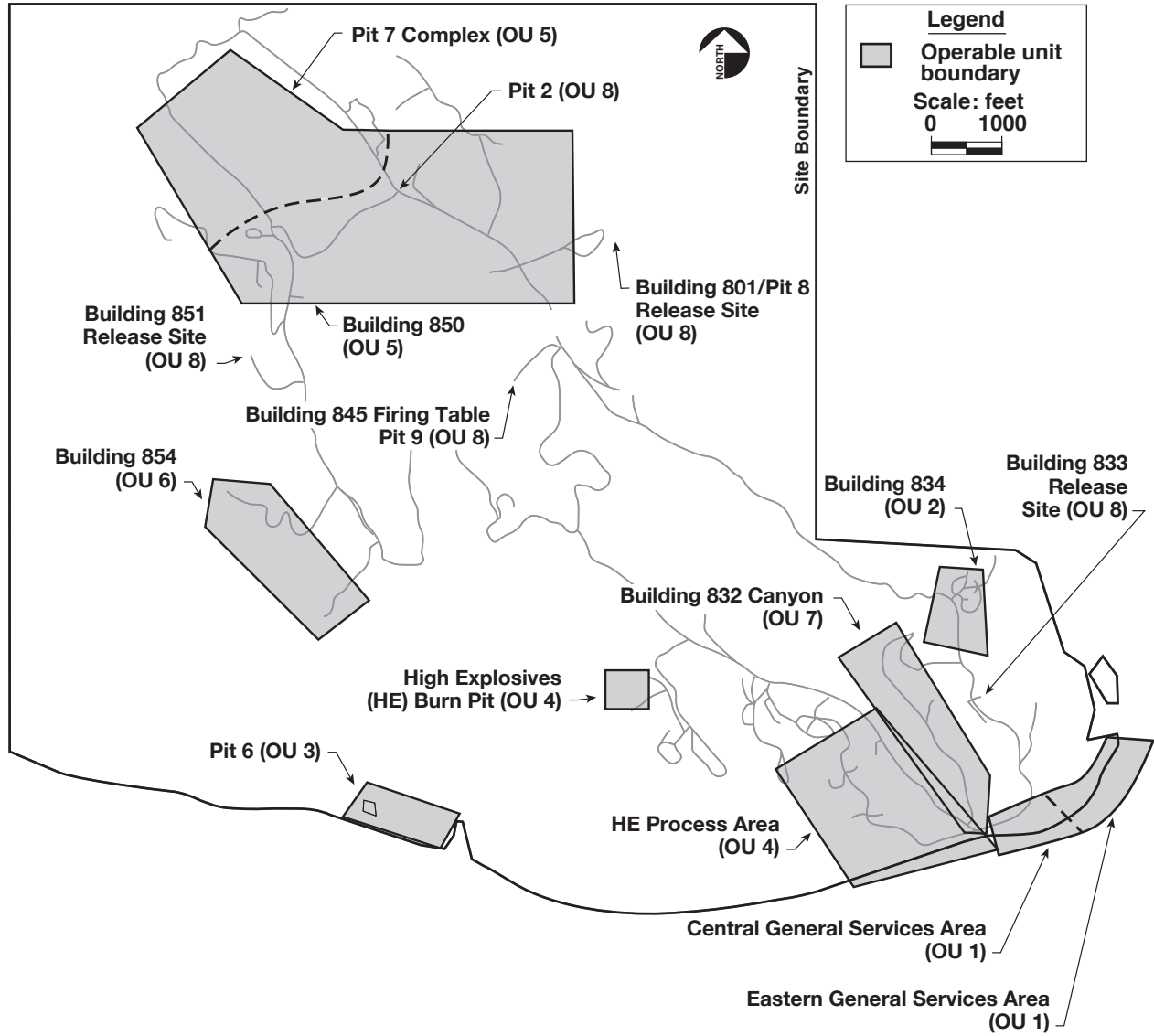
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- Figure 2.5-3. Building 850 and Pit 7 Complex area ground water potentiometric surface map for the Tnbs<sub>1</sub>/ Tnbs<sub>0</sub> HSU.
- Figure 2.5-4. Building 850 and Pit 7 Complex area tritium activity isocontour map for the Qal/WBR HSU.
- Figure 2.5-5. Building 850 and Pit 7 Complex area tritium activity isocontour map for the Tnbs<sub>1</sub>/ Tnbs<sub>0</sub> HSU.
- Figure 2.5-6. Building 850 and Pit 7 Complex area map showing ground water uranium activities for the Qal/WBR HSU.
- Figure 2.5-7. Building 850 and Pit 7 Complex area map showing ground water uranium activities for the Tnbs<sub>1</sub>/ Tnbs<sub>0</sub> HSU.



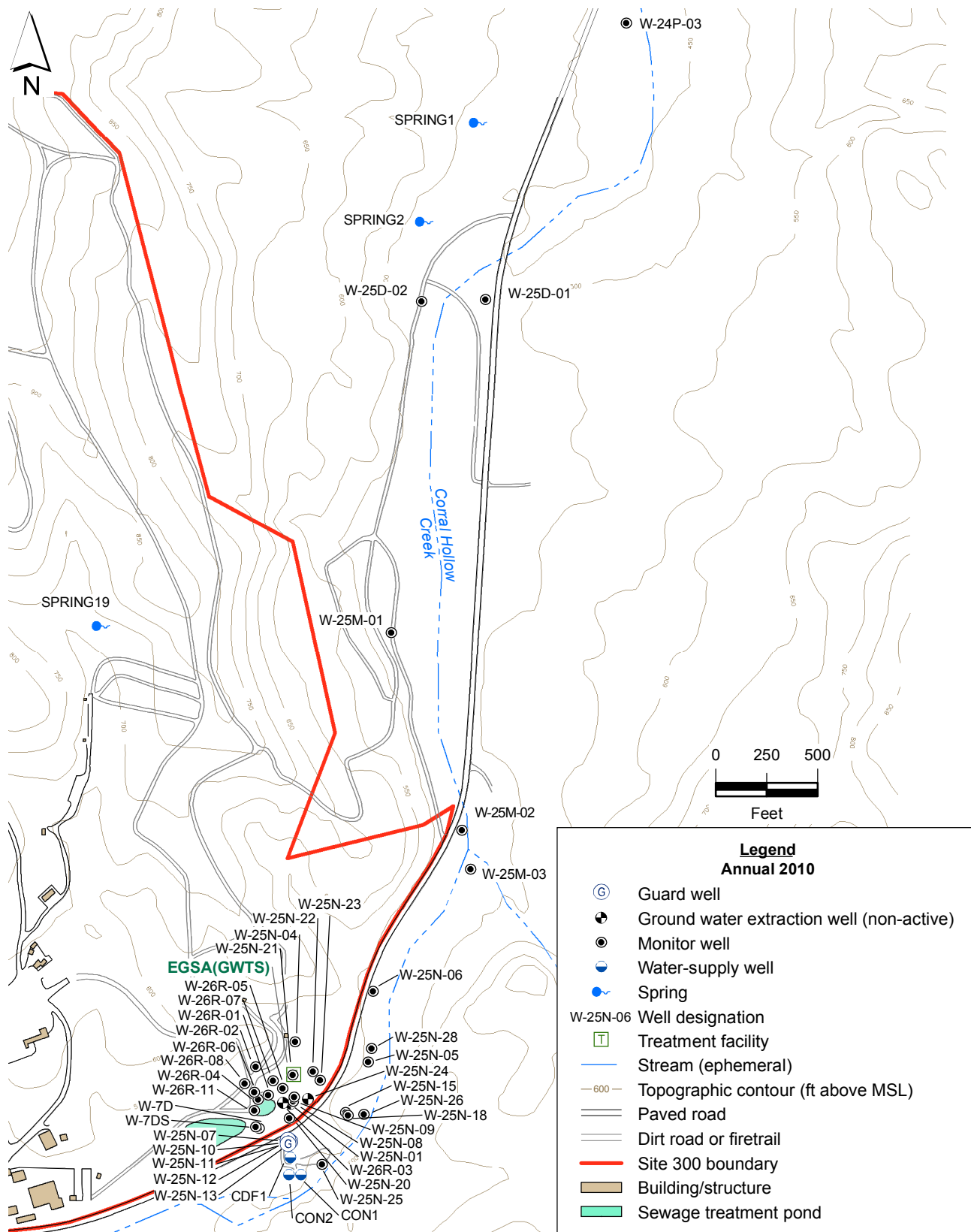
- Figure 2.5-8. Building 850 and Pit 7 Complex area map showing nitrate concentrations for the Qal/WBR HSU.
- Figure 2.5-9. Building 850 and Pit 7 Complex area map showing nitrate concentrations for the Tnbs<sub>1</sub>/ Tnbs<sub>0</sub> HSU.
- Figure 2.5-10. Building 850 and Pit 7 Complex area perchlorate isoconcentration contour map for the Qal/WBR HSU.
- Figure 2.5-11. Building 850 and Pit 7 Complex area perchlorate isoconcentration contour map for the Tnbs<sub>1</sub>/ Tnbs<sub>0</sub> HSU.
- Figure 2.5-12. Pit 7 Complex area total VOC isoconcentration contour map for the Qal/WBR HSU.
- Figure 2.5-13. Pit 7 Complex area total VOC isoconcentration contour map for the Tnbs<sub>1</sub>/ Tnbs<sub>0</sub> HSU.
- Figure 2.5-14. Building 850 and Pit 7 Complex area HMX isoconcentration contour map for the Qal/WBR HSU.
- Figure 2.5-15. Building 850 and Pit 7 Complex area RDX isoconcentration contour map for the Qal/WBR HSU.
- Figure 2.6-1. Building 854 OU site map showing monitor and extraction wells, and treatment facilities.
- Figure 2.6-2. Building 854 OU ground water potentiometric surface map for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU.
- Figure 2.6-3. Building 854 OU total VOC isoconcentration contour map for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU.
- Figure 2.6-4. Building 854 OU perchlorate isoconcentration contour map for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU.
- Figure 2.6-5. Building 854 OU map showing nitrate concentrations for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU.
- Figure 2.6-6. Building 854 OU map showing ground water elevations, total VOCs, perchlorate, and nitrate concentrations for the combined QIs and Tnbs<sub>1</sub> HSUs.
- Figure 2.7-1. Building 832 Canyon OU site map showing monitor, extraction and water-supply wells, and treatment facilities.
- Figure 2.7-2. Building 832 Canyon OU map showing ground water elevations and ground water flow direction for the Qal/WBR HSU.
- Figure 2.7-3. Building 832 Canyon OU ground water potentiometric surface map for the Tnsc<sub>1b</sub> HSU.
- Figure 2.7-4. Building 832 Canyon OU map showing ground water elevations and ground water flow direction for the Tnsc<sub>1a</sub> HSU.
- Figure 2.7-5. Building 832 Canyon OU ground water potentiometric surface map for the Upper Tnbs<sub>1</sub> HSU.
- Figure 2.7-6. Building 832 Canyon OU map showing total VOC concentrations for the Qal/WBR HSU.

- Figure 2.7-7. Building 832 Canyon OU total VOC isoconcentration contour map for the Tnsc<sub>1b</sub> HSU.
- Figure 2.7-8. Building 832 Canyon OU map showing total VOC concentrations for the Tnsc<sub>1a</sub> HSU.
- Figure 2.7-9. Building 832 Canyon OU total VOC isoconcentration contour map for the Upper Tnbs<sub>1</sub> HSU.
- Figure 2.7-10. Building 832 Canyon OU map showing perchlorate concentrations for the Qal/WBR HSU.
- Figure 2.7-11. Building 832 Canyon OU perchlorate isoconcentration contour map for the Tnsc<sub>1b</sub> HSU.
- Figure 2.7-12. Building 832 Canyon OU map showing perchlorate concentrations for the Tnsc<sub>1a</sub> HSU.
- Figure 2.7-13. Building 832 Canyon OU map showing nitrate concentrations for the Qal/WBR HSU.
- Figure 2.7-14. Building 832 Canyon OU map showing nitrate concentrations for the Tnsc<sub>1b</sub> HSU.
- Figure 2.7-15. Building 832 Canyon OU map showing nitrate concentrations for the Tnsc<sub>1a</sub> HSU.
- 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<sub>1</sub>/Tnbs<sub>0</sub> HSU.
- Figure 2.8-2. Building 833 site map showing monitor well locations, ground water elevations, and total VOC concentrations in the Tpsg HSU.
- 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 <sup>235</sup>U/<sup>238</sup>U isotope atom ratios in the Tnsc<sub>0</sub> HSU.
- Figure 2.8-4. Building 851 Firing Table site map showing monitor well locations, ground water elevations, uranium activities, and <sup>235</sup>U/<sup>238</sup>U isotope atom ratios in the Tmss HSU.
- Figure 4.2-1. Surface soil in the vicinity of Building 801 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.
- Figure 4.2-2. Surface soil in the vicinity of Building 851 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.
- Figure 4.2-3. Surface soil in the vicinity of Building 815 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.
- Figure 4.2-4. Surface soil in the vicinity of the HE Process Area Old Well 18 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.
- Figure 4.2-5. Surface soil in the vicinity of the HE Process Area Building 827 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.



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Figure 2-1. Site 300 map showing OU locations.



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

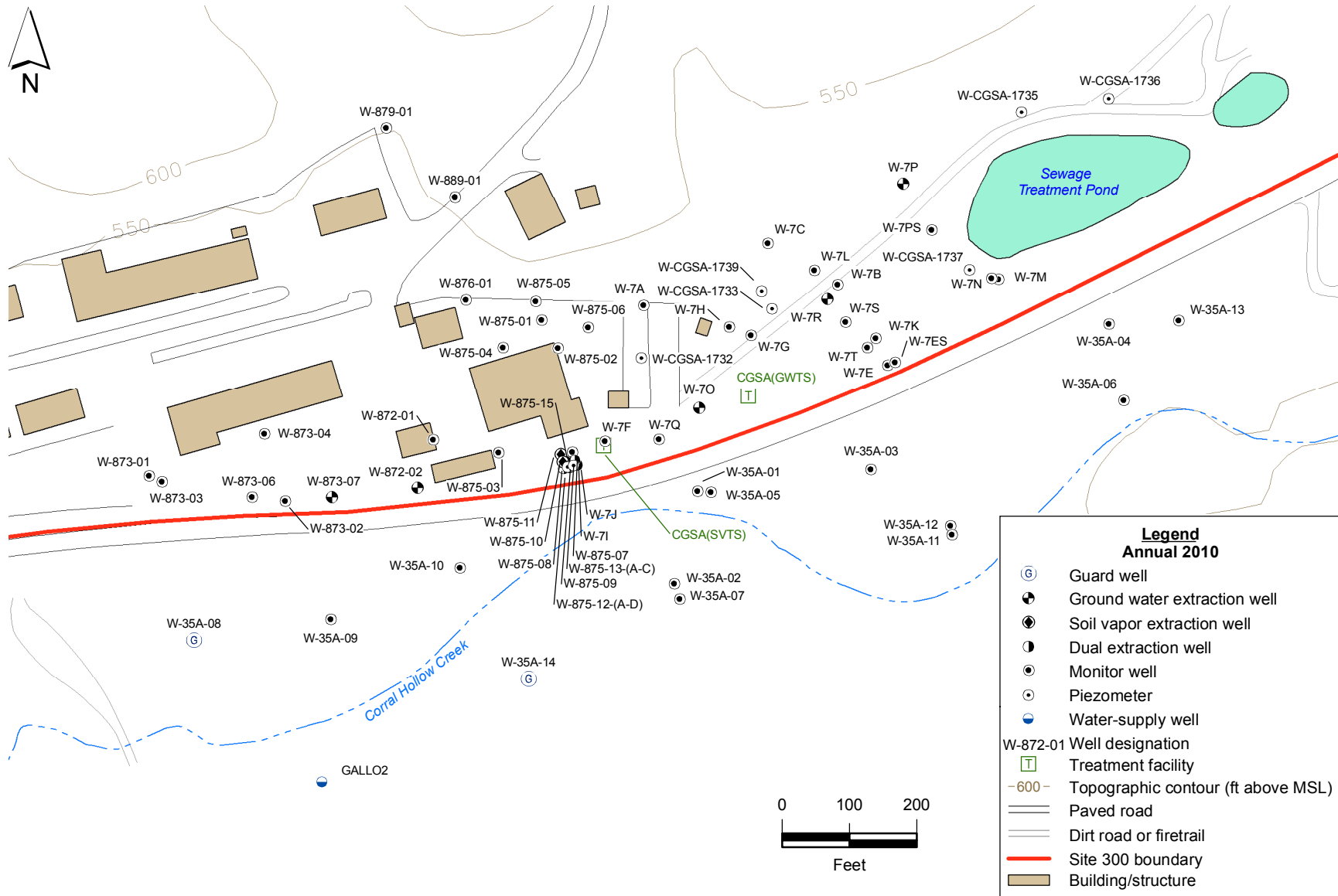
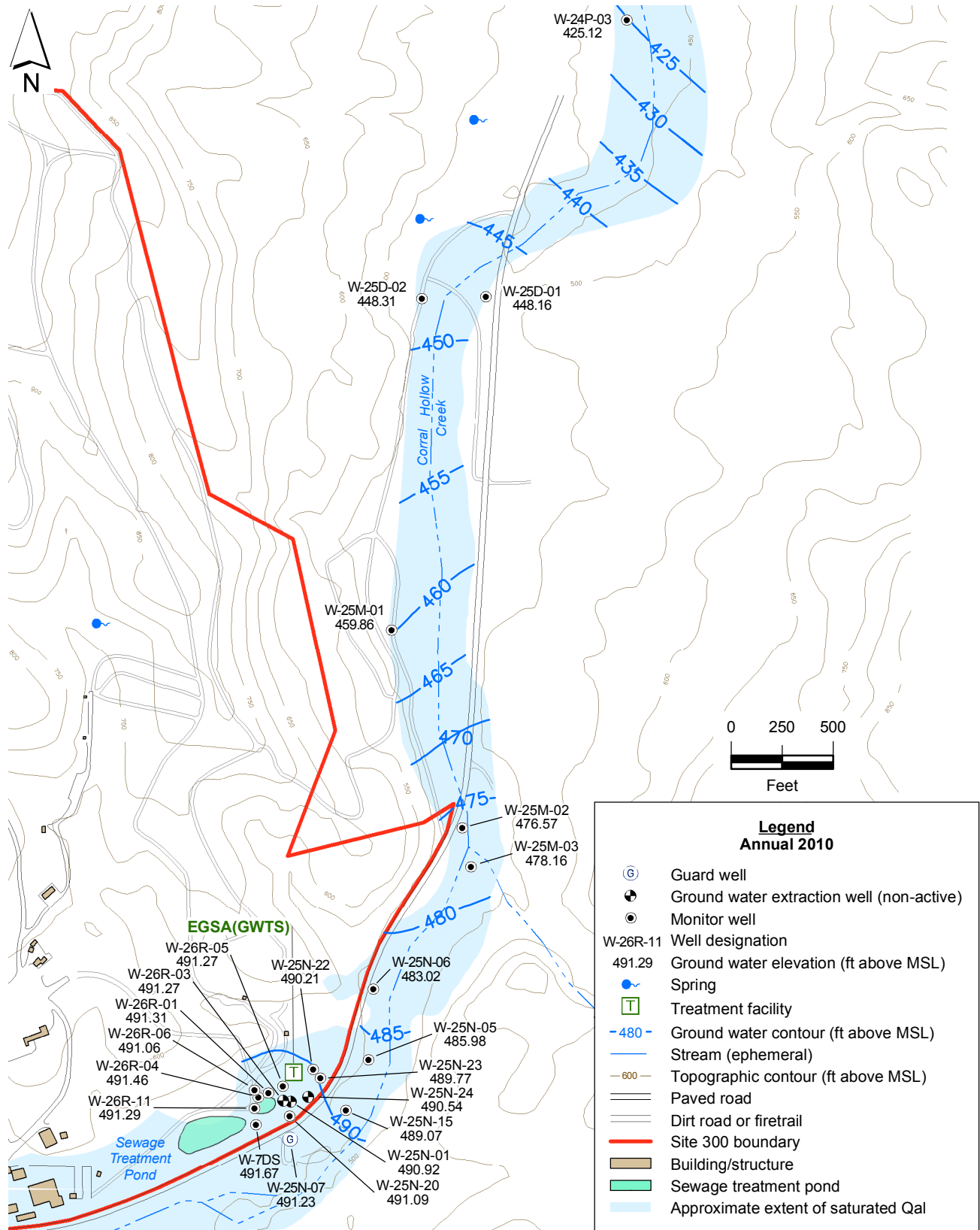


Figure 2.1-2. Central General Services Area OU site map showing monitor, extraction and water-supply wells, and treatment facilities.



**Figure 2.1-3. Eastern General Services Area OU ground water potentiometric surface map for the Qal-Tnbs<sub>1</sub> HSU.**

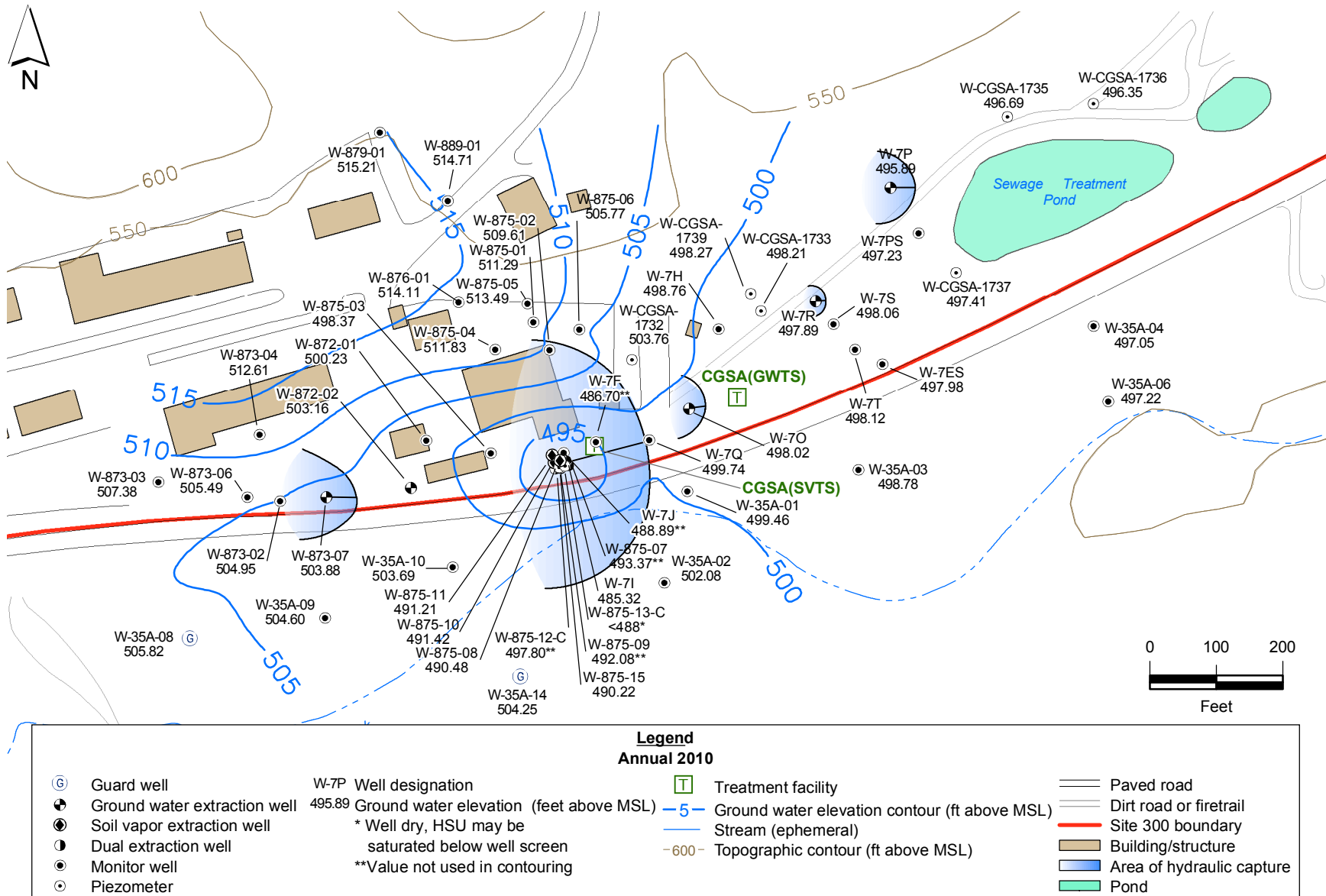
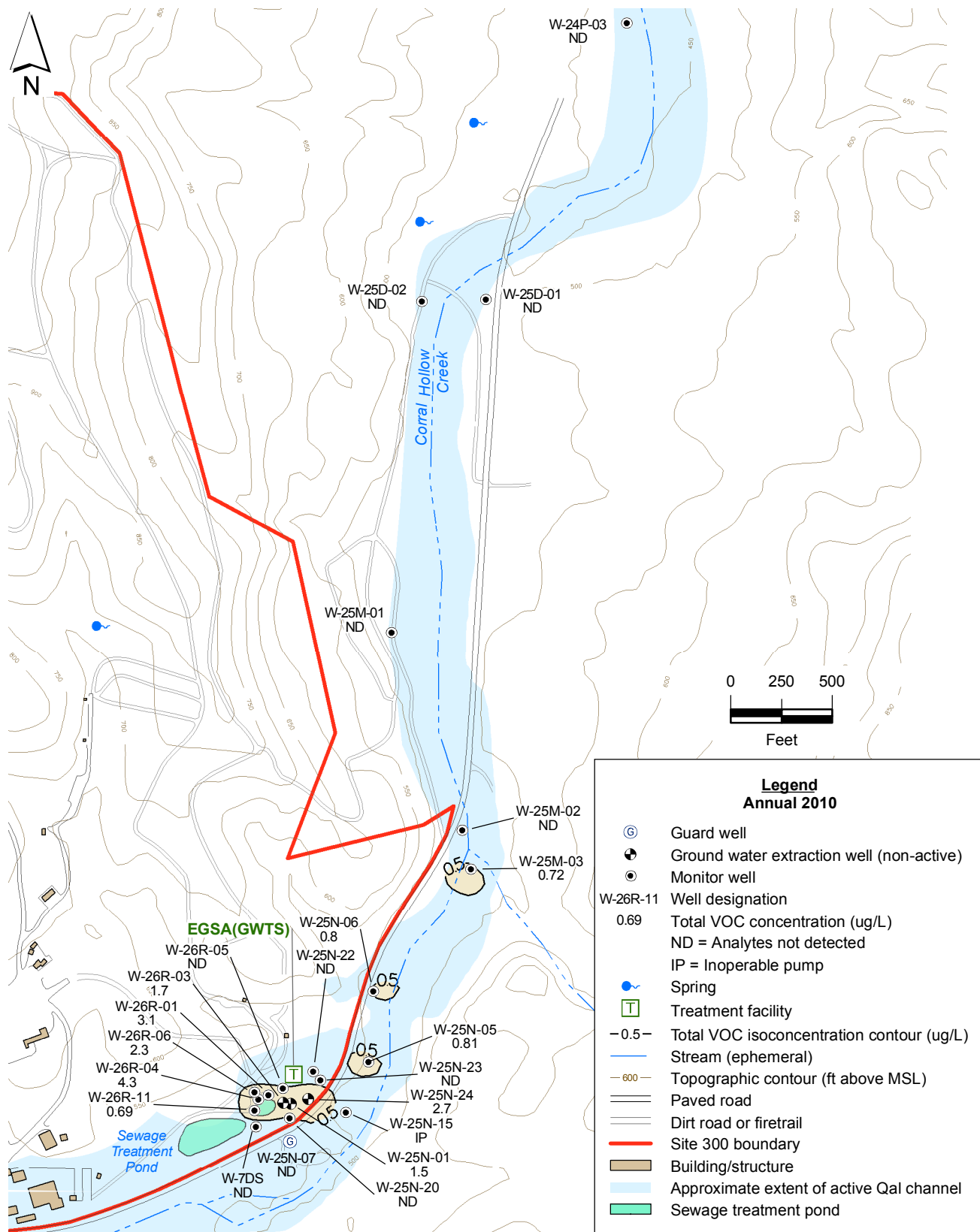


Figure 2.1-4. Central General Services Area OU ground water potentiometric surface map for the Qt-Tnsc<sub>1</sub> and Qal-Tnbs<sub>1</sub> HSUs.



**Figure 2.1-5. Eastern General Services Area OU total VOC isoconcentration contour map for the Qal-Tnbs<sub>1</sub> HSU.**



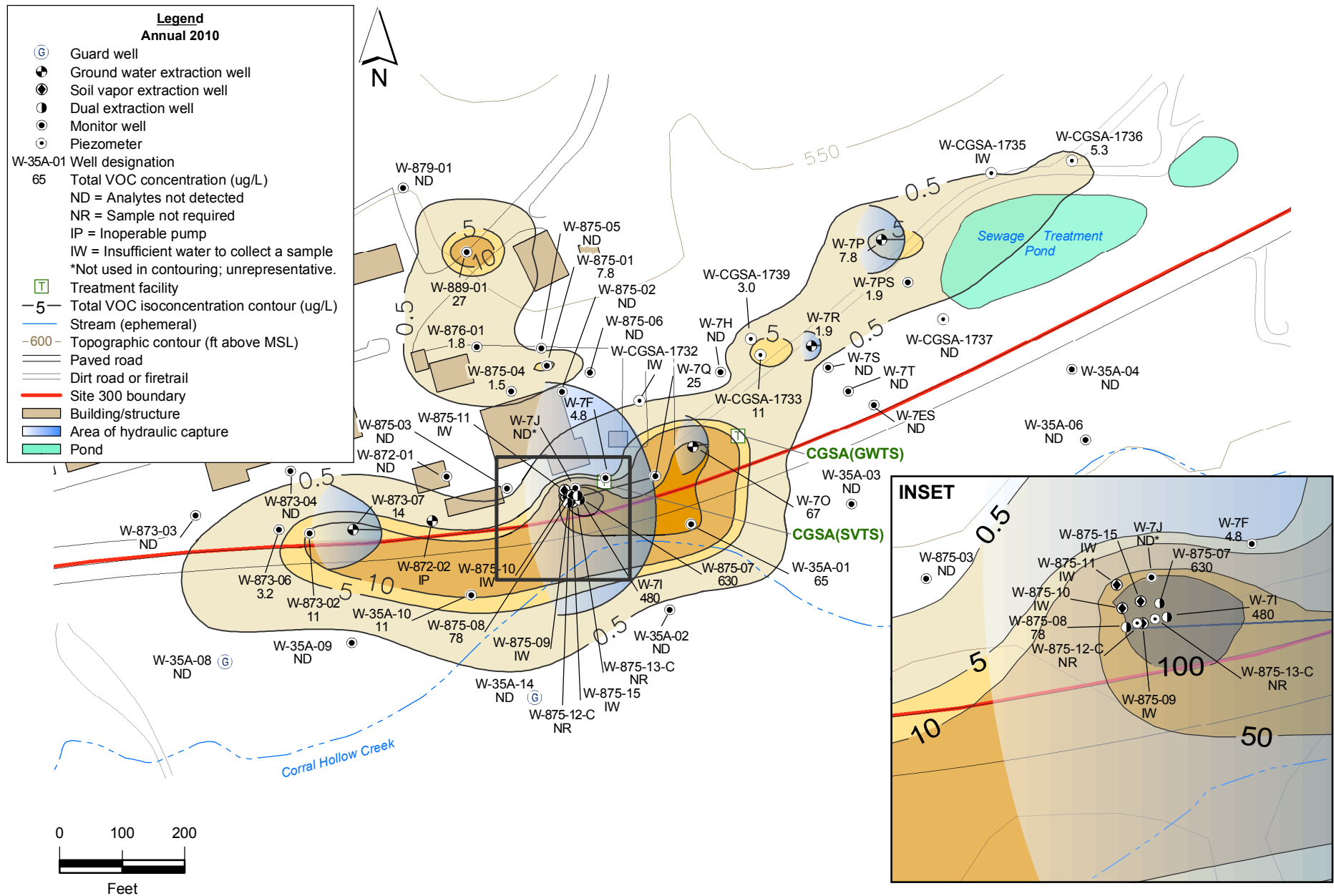
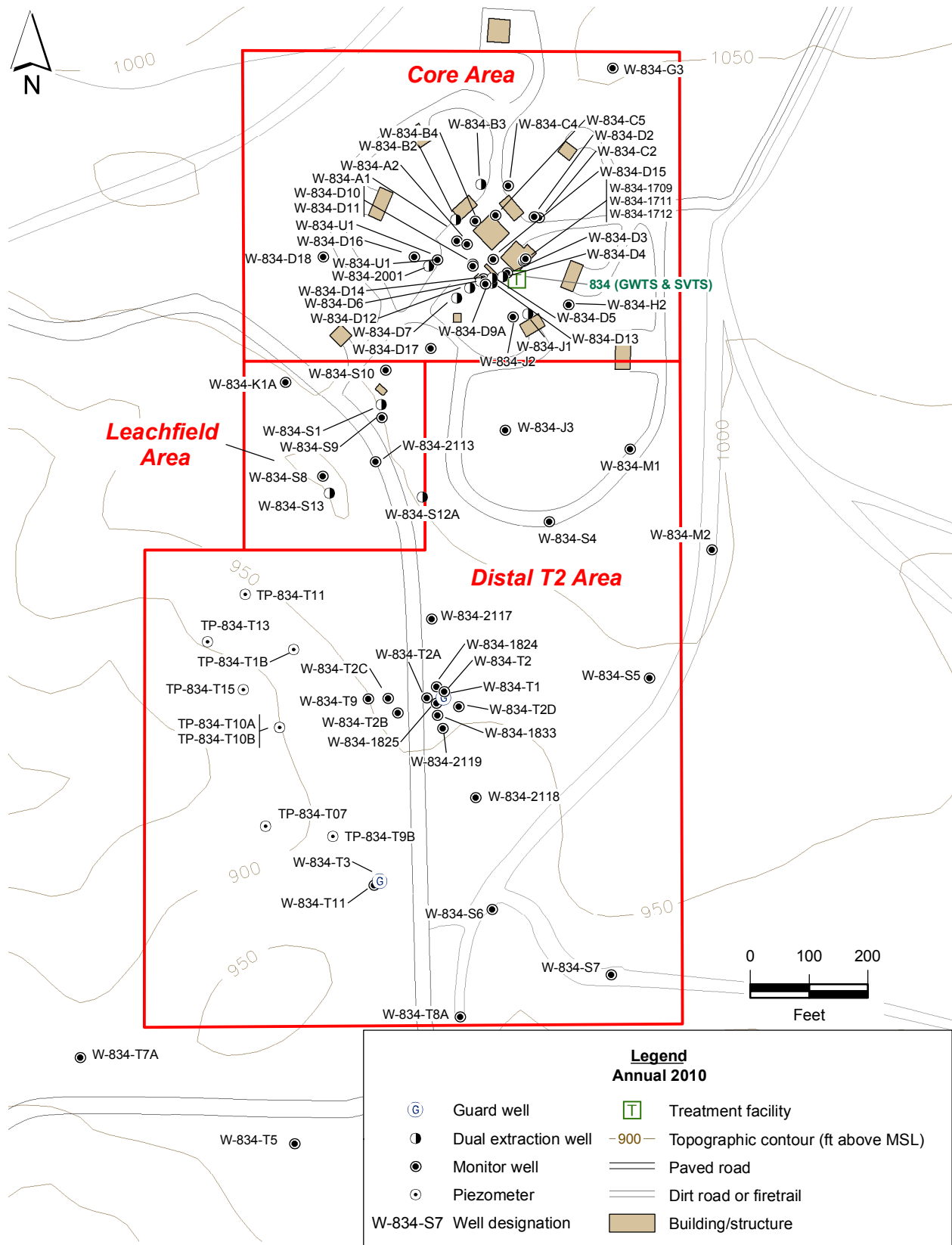
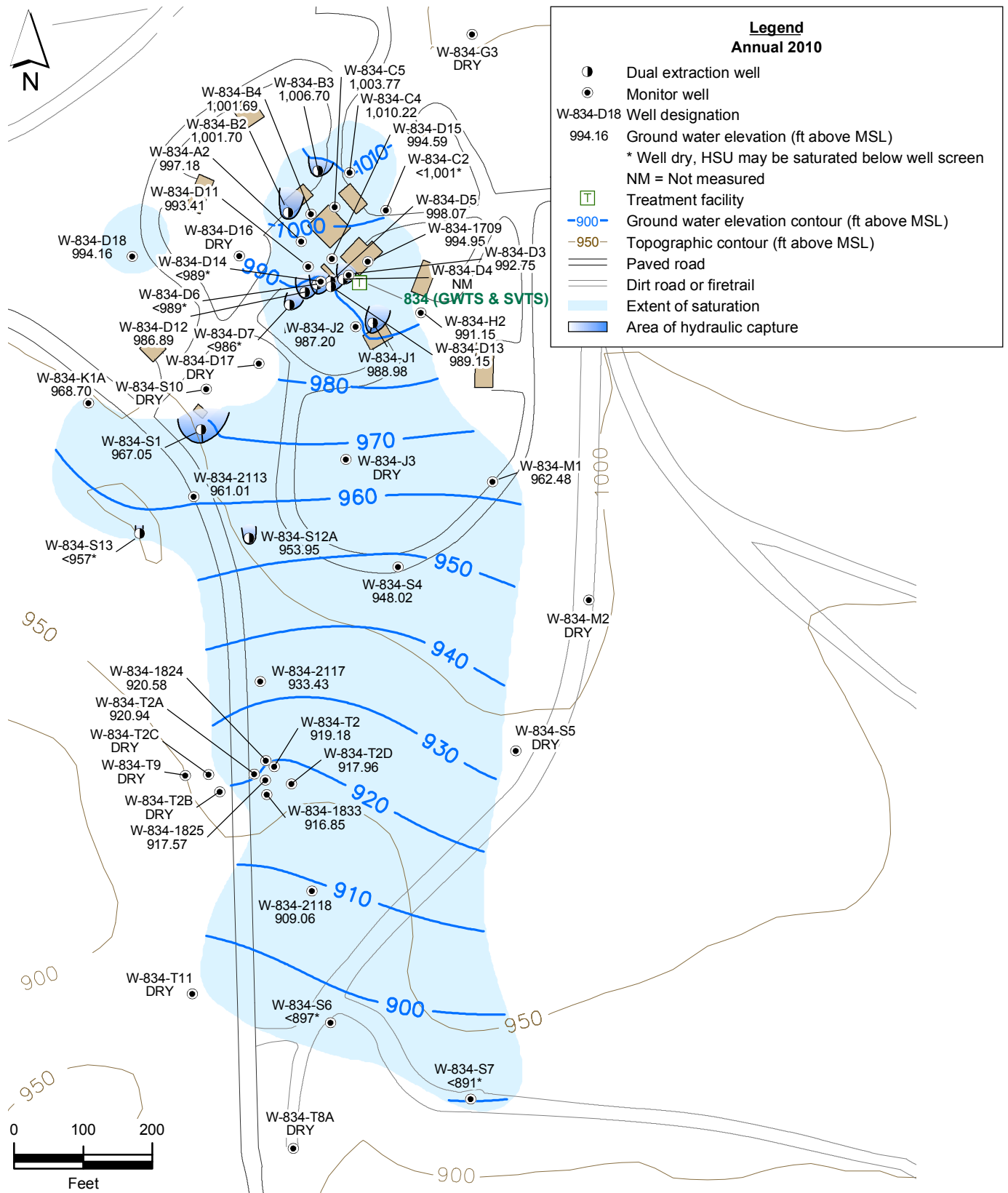


Figure 2.1-6. Central General Services Area OU total VOC isoconcentration contour map for the Qt-Tnsc<sub>1</sub> and Qal-Tnbs<sub>1</sub> HSUs.



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



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

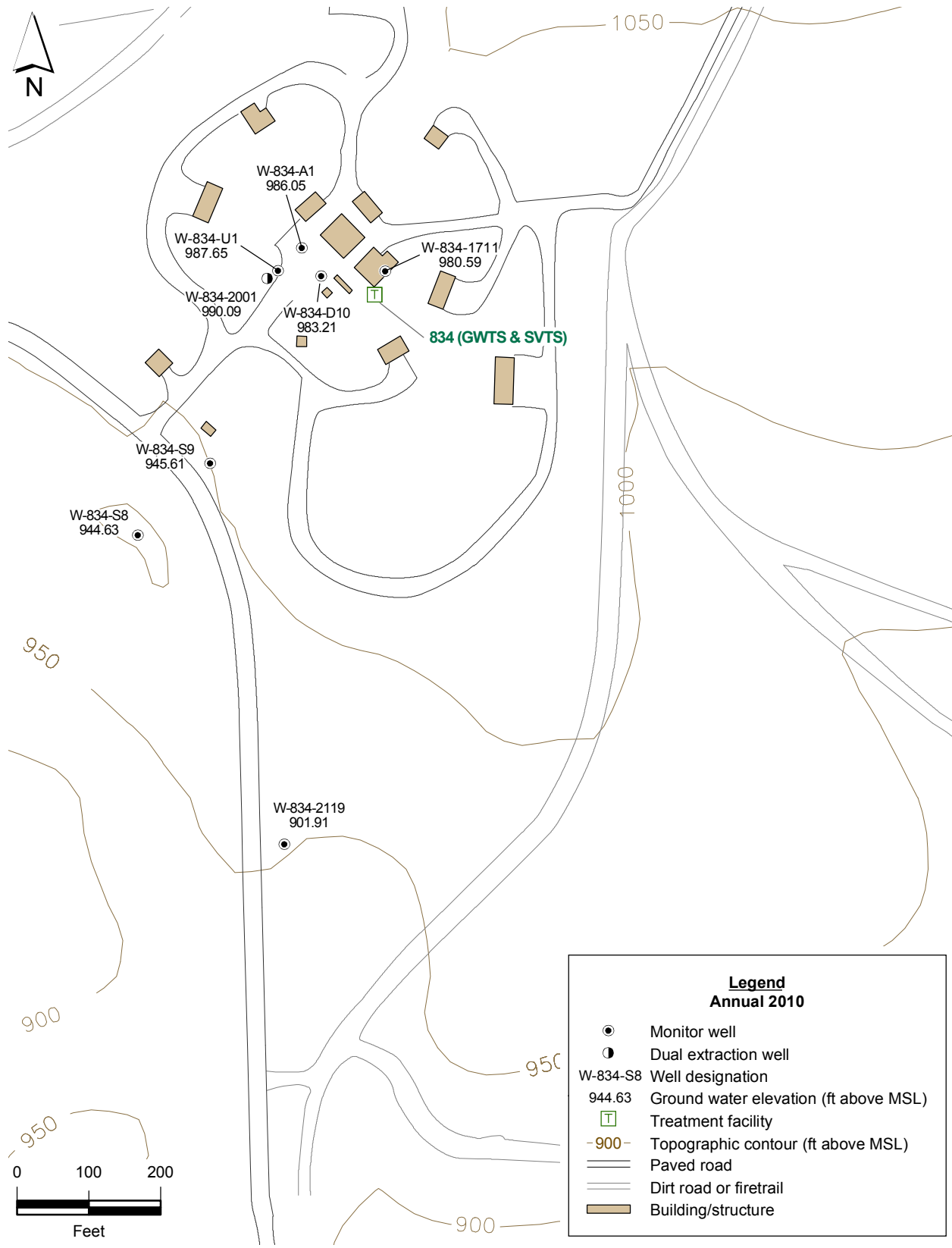


Figure 2.2-3. Building 834 OU map showing ground water elevations for the Tps-Tnsc<sub>2</sub> HSU.

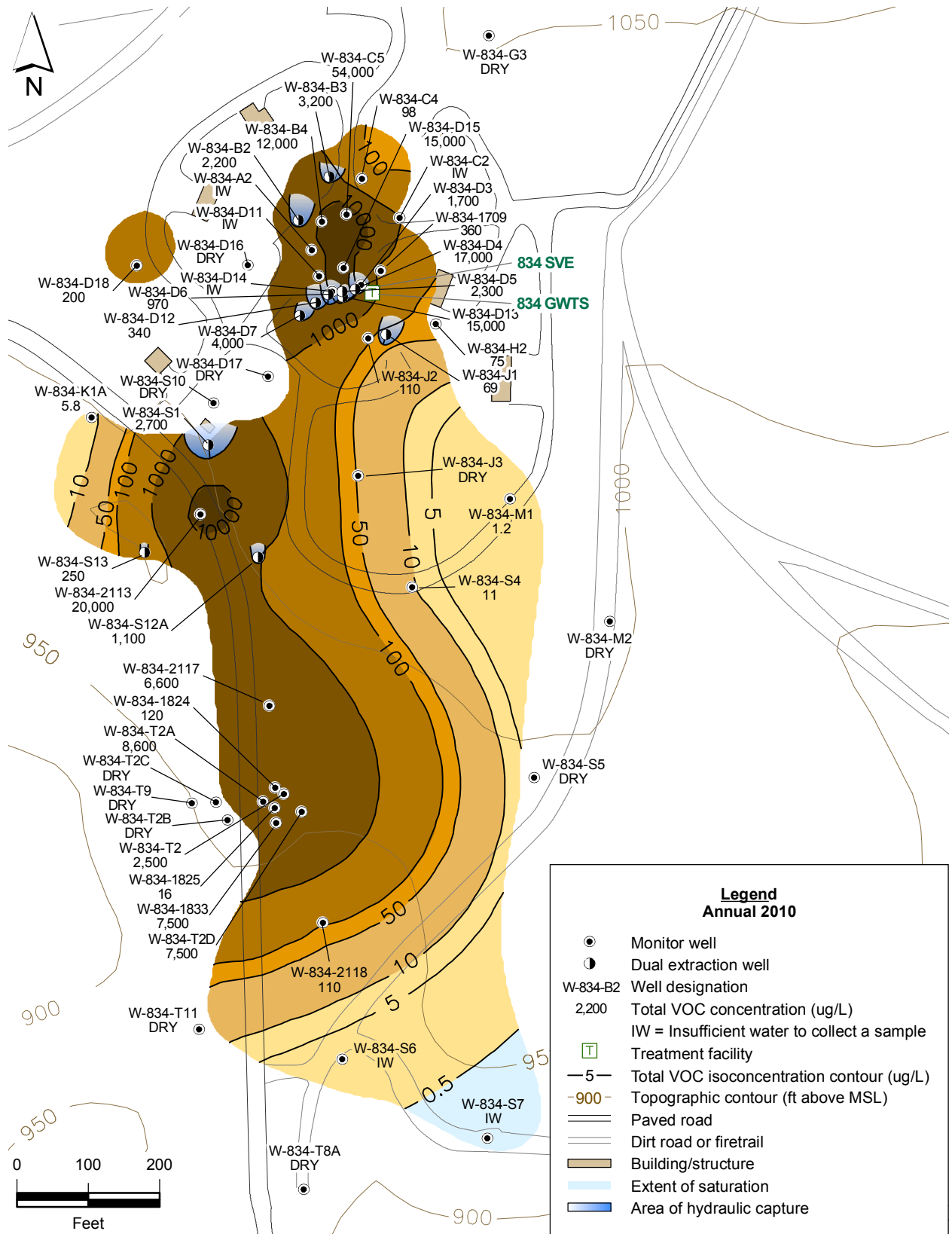


Figure 2.2-4. Building 834 OU total VOC isoconcentration contour map for the Tpsg perched water-bearing zone.

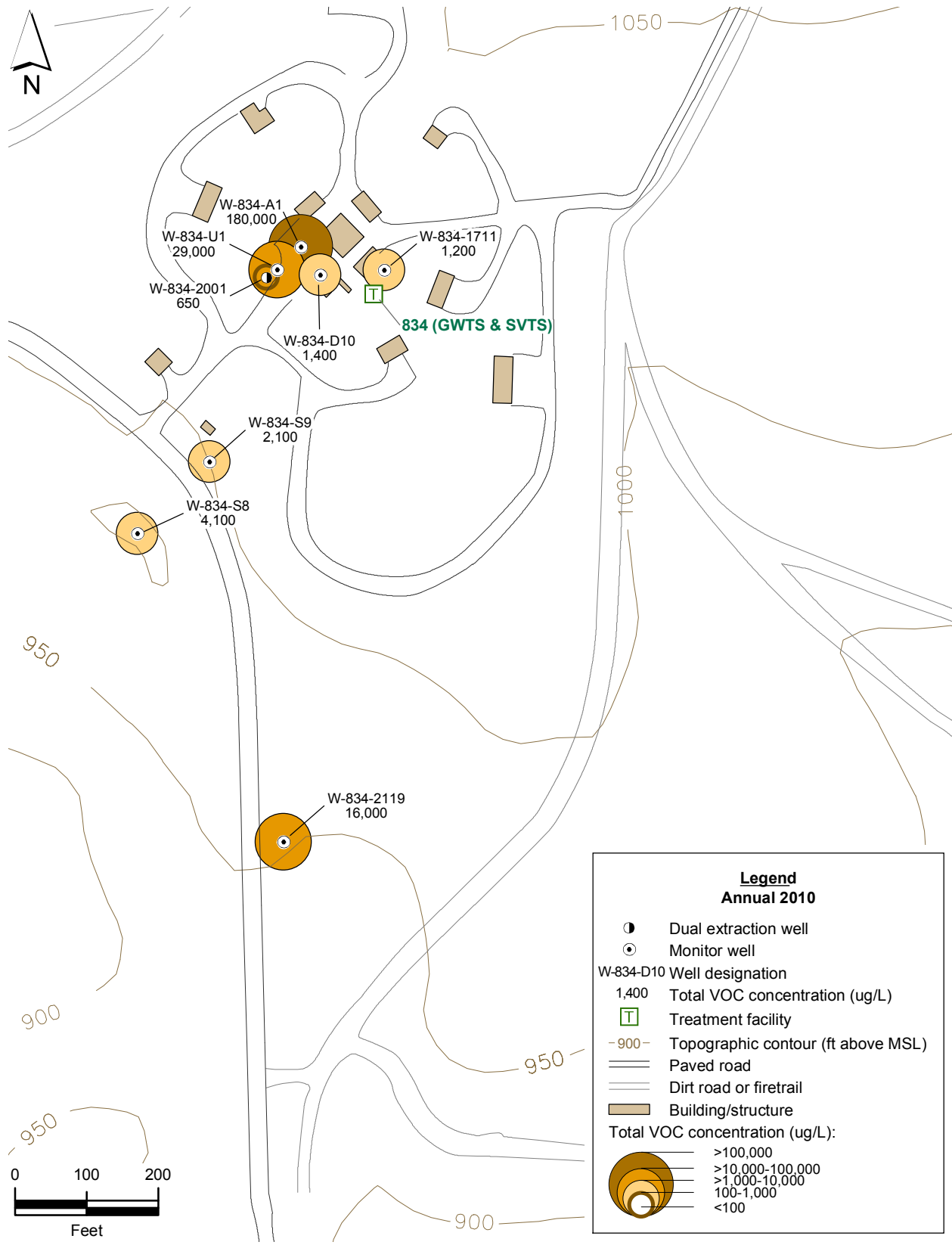


Figure 2.2-5. Building 834 OU map showing total VOC concentrations for the Tps-Tnsc<sub>2</sub> HSU.

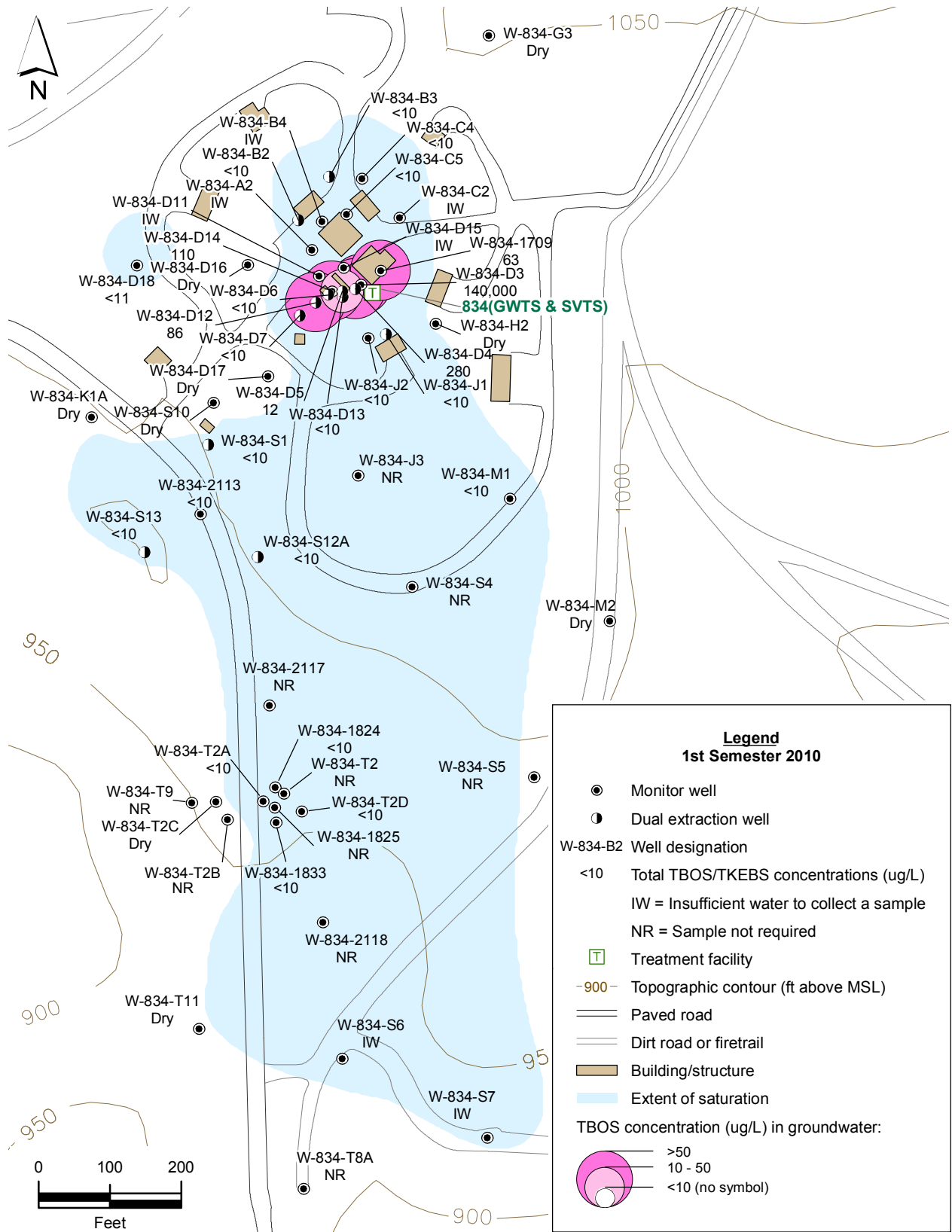


Figure 2.2-6. Building 834 OU map showing TBOS/TKEBS concentrations for the Tpsg perched water-bearing zone.

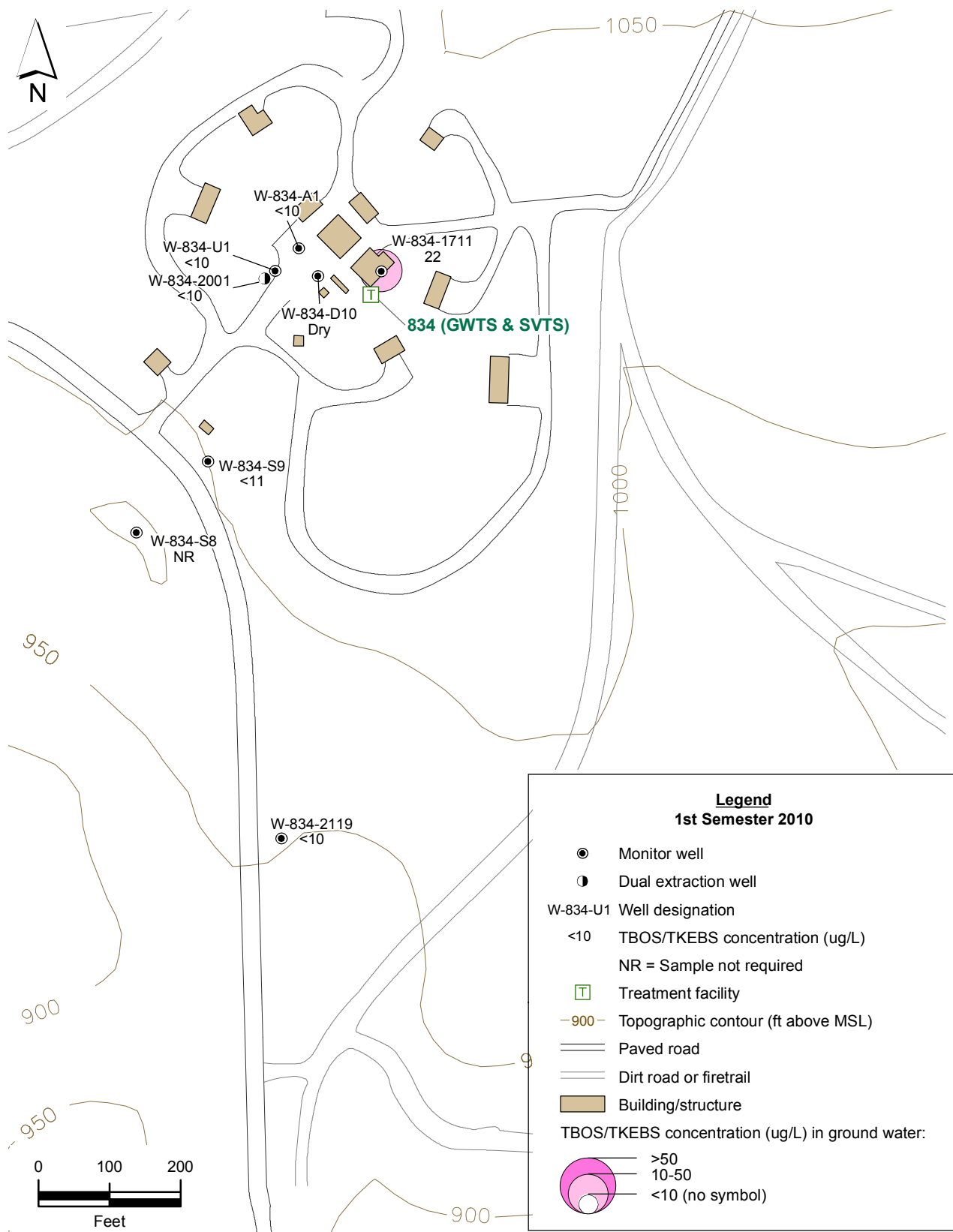
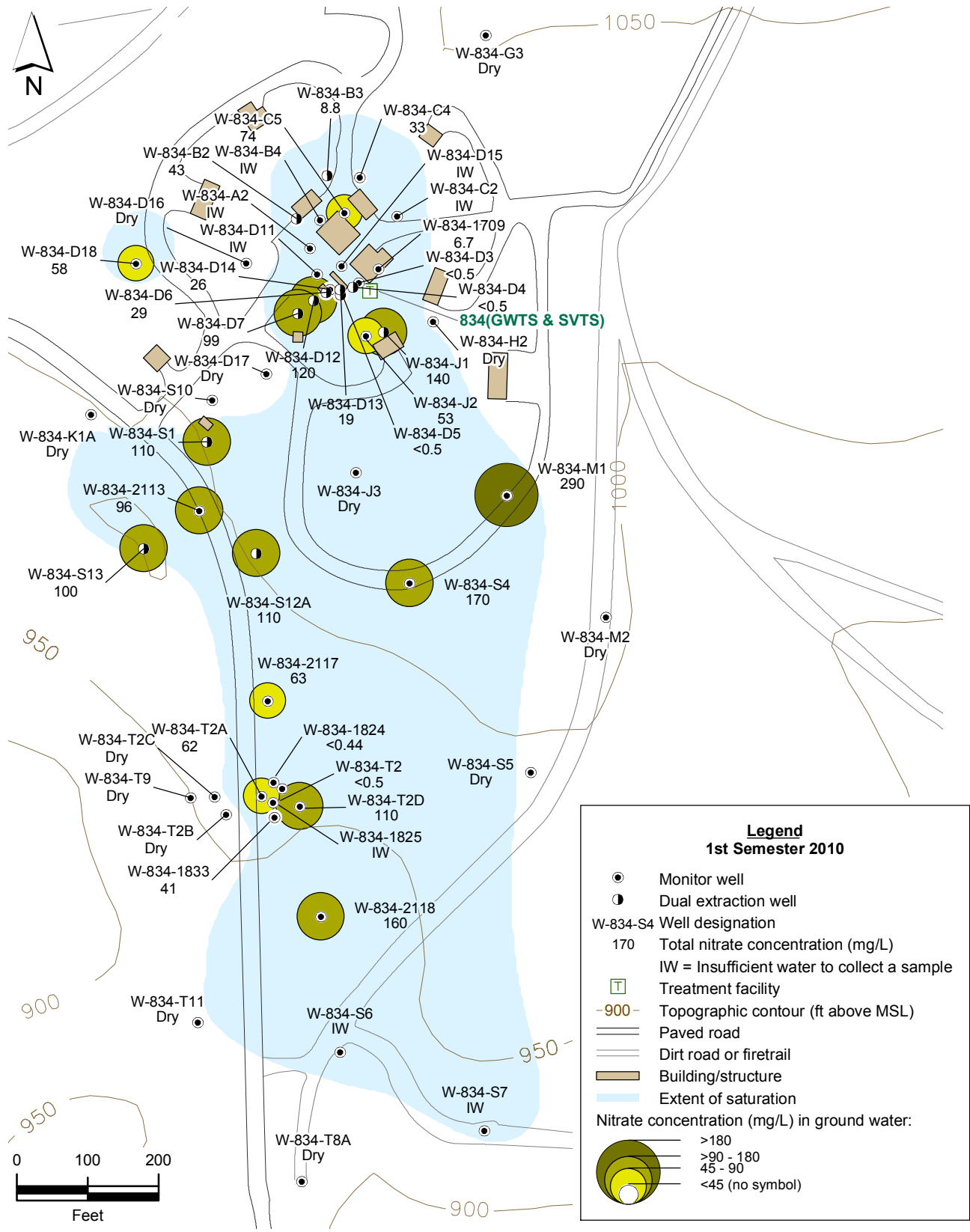


Figure 2.2-7. Building 834 OU map showing TBOS/TKEBS concentrations for the Tps-Tnsc<sub>2</sub> HSU.





**Figure 2.2-8. Building 834 OU map showing nitrate concentrations for the Tpsg perched water-bearing zone.**

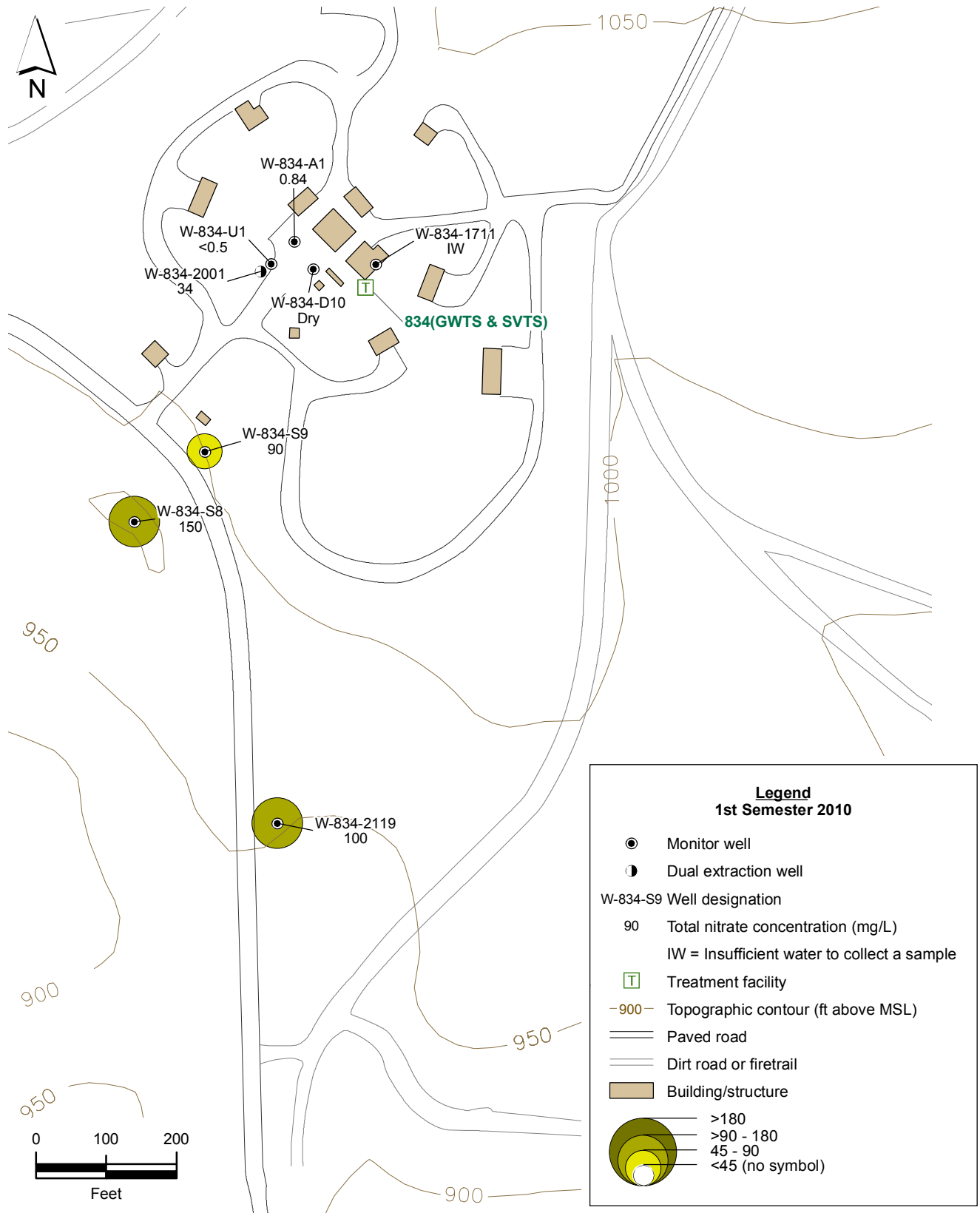


Figure 2.2-9. Building 834 OU map showing nitrate concentrations for the Tps-Tnsc<sub>2</sub> HSU.

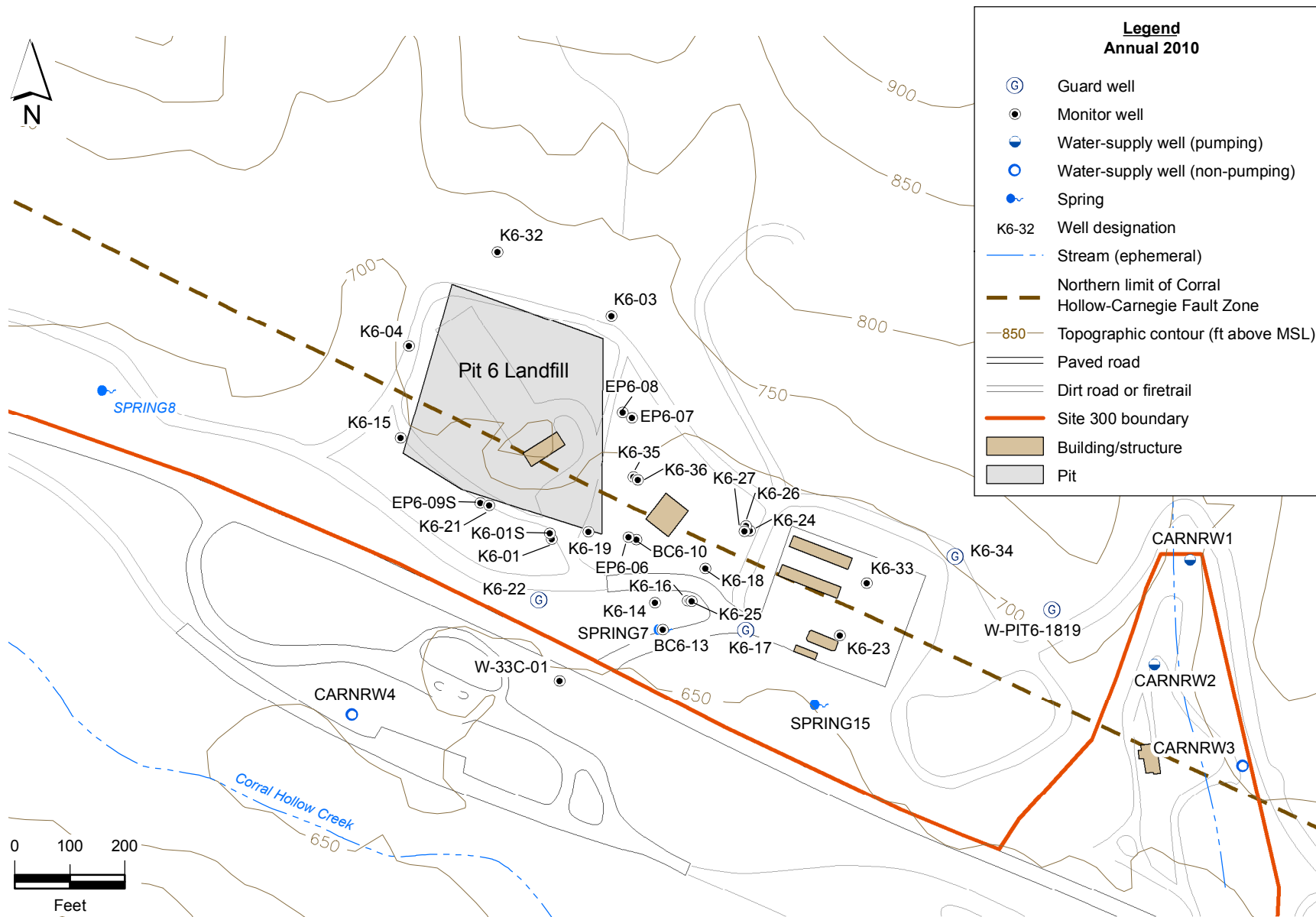


Figure 2.3-1. Pit 6 Landfill OU site map showing monitor and water-supply wells.

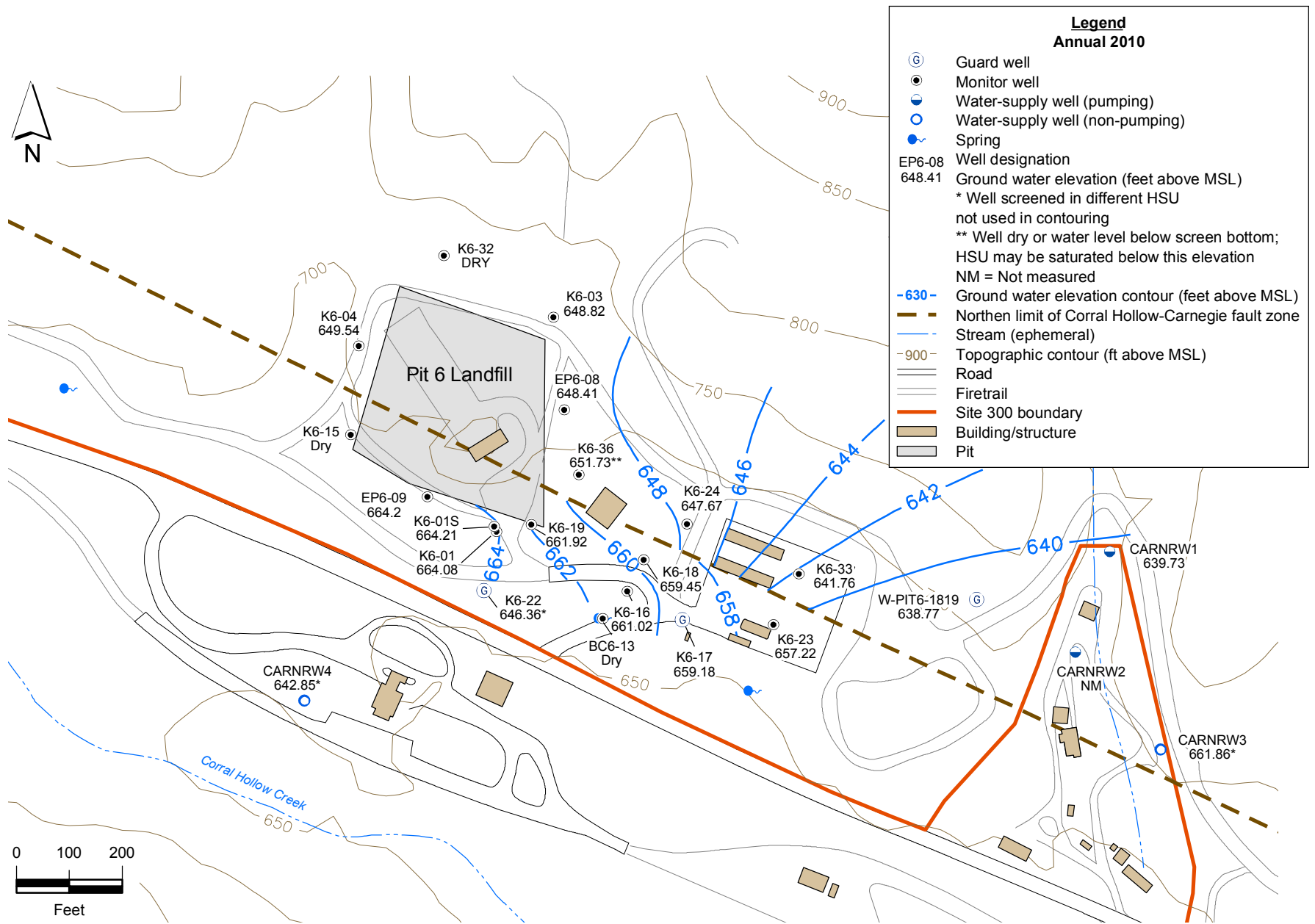


Figure 2.3-2. Pit 6 Landfill OU ground water potentiometric surface map for the Qt-Tnbs<sub>1</sub> HSU.

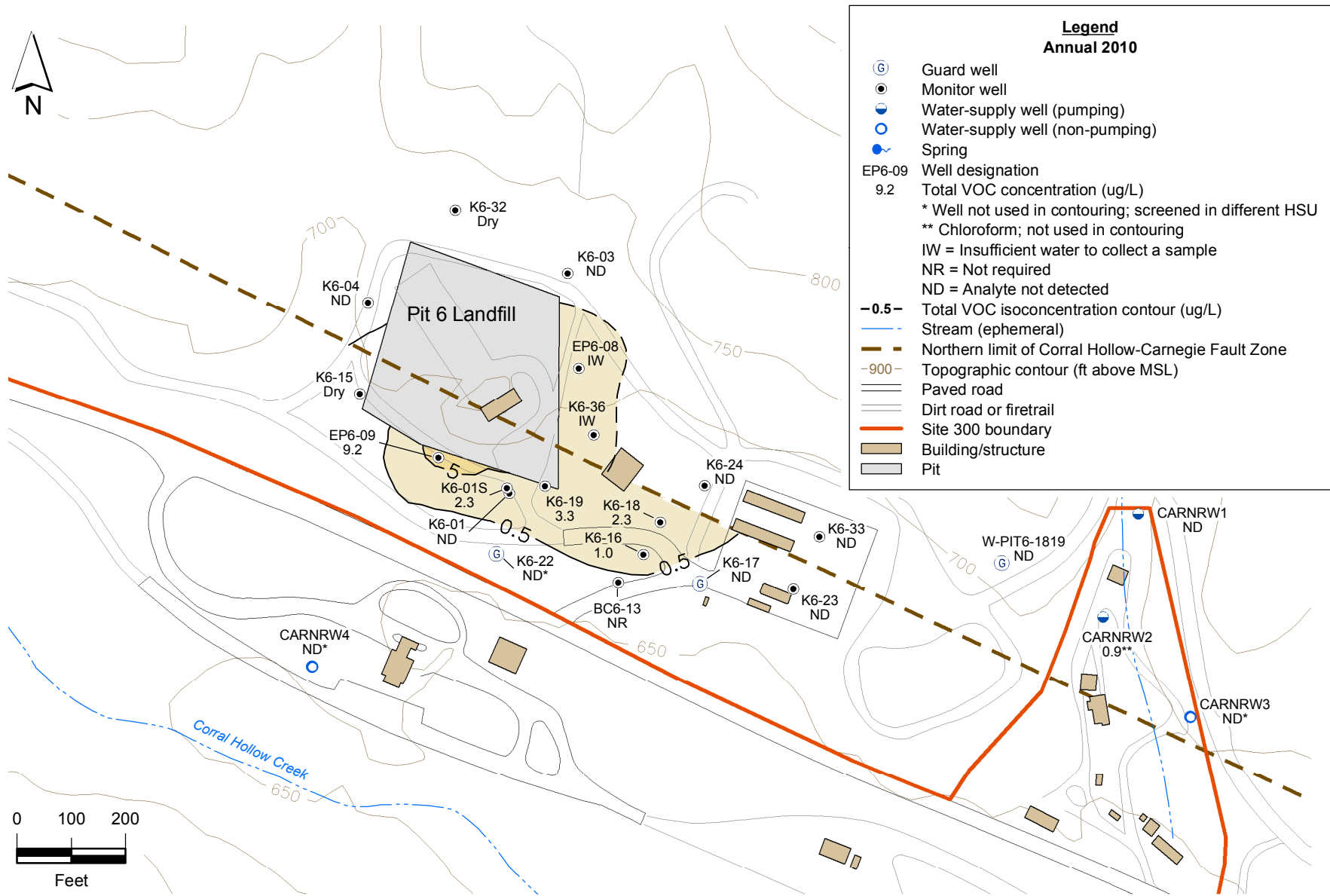


Figure 2.3-3. Pit 6 Landfill OU total VOC isoconcentration contour map for the Qt-Tnbs<sub>1</sub> HSU.

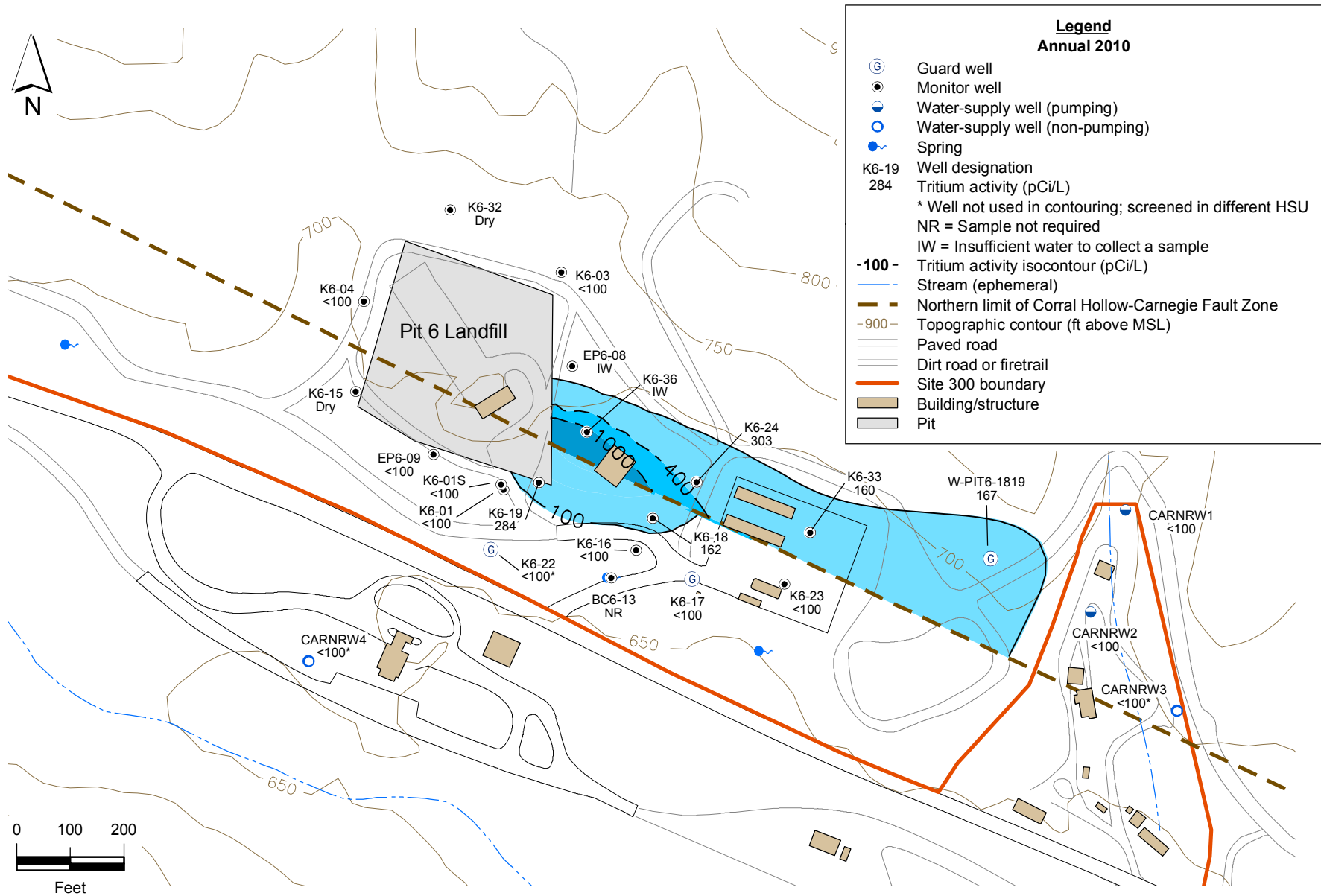


Figure 2.3-4. Pit 6 Landfill OU tritium activity isocontour map for the Qt-Tnbs<sub>1</sub> HSU.

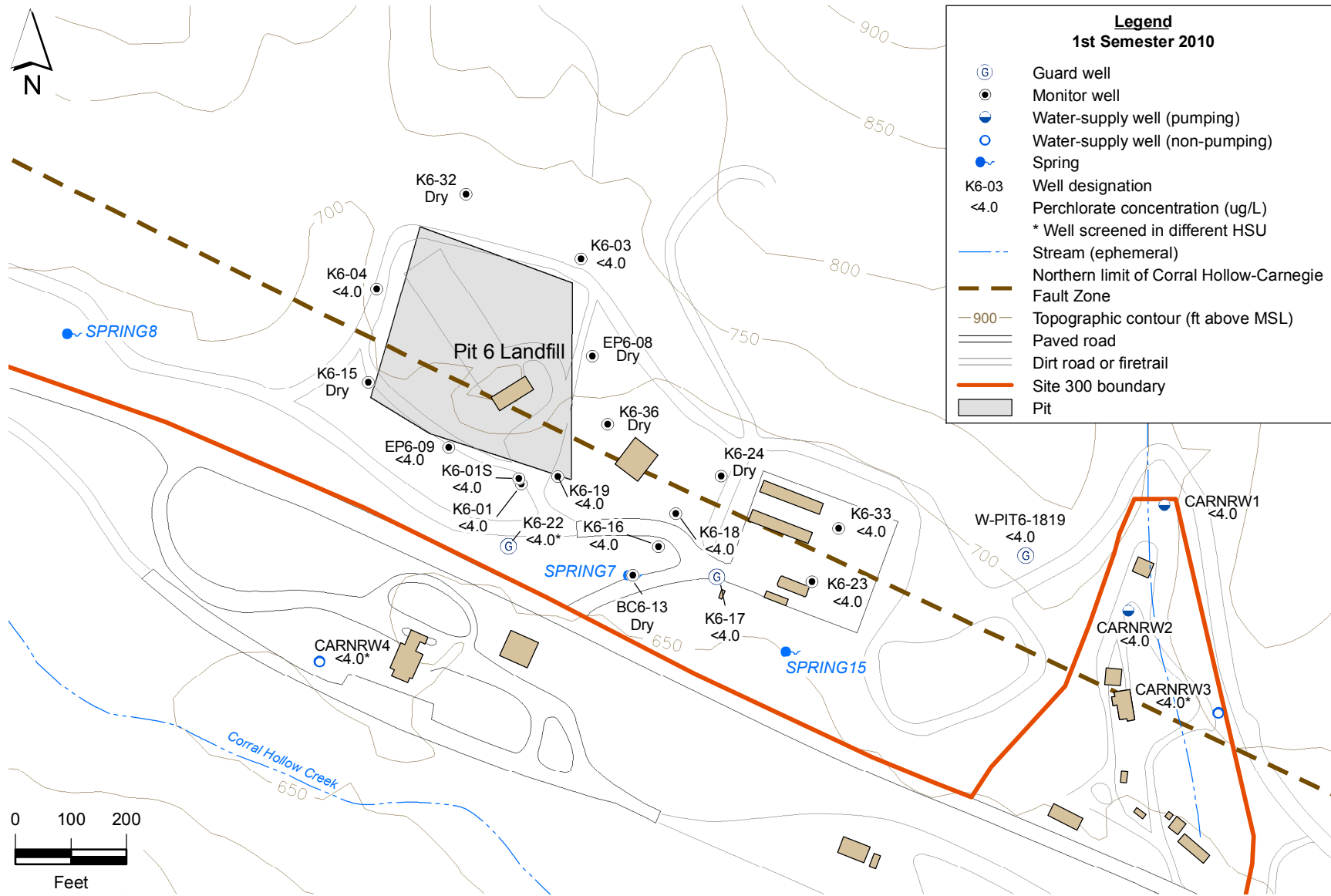


Figure 2.3-5. Pit 6 Landfill OU map showing perchlorate concentrations for the Qt-Tnbs<sub>1</sub> HSU.

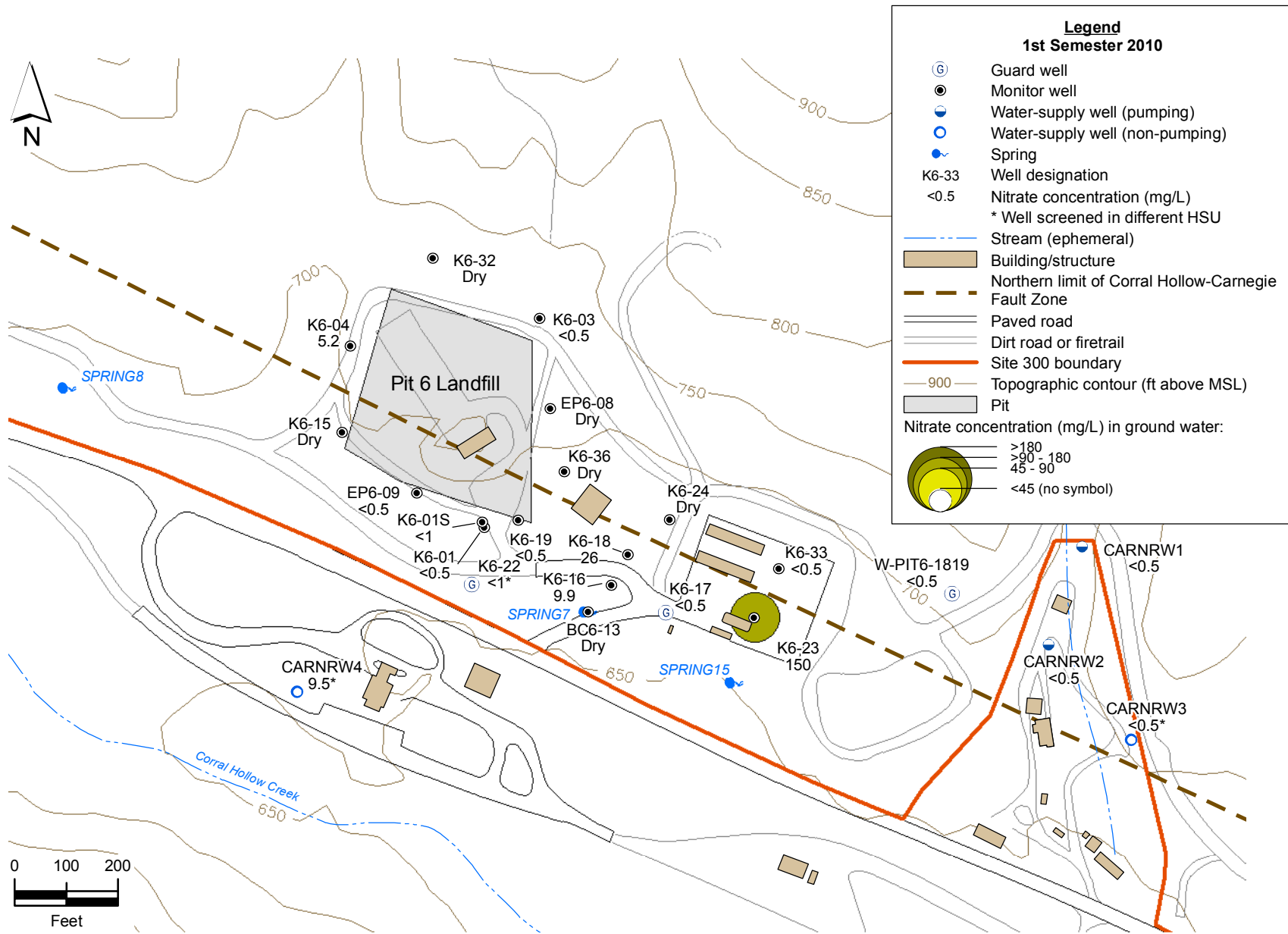


Figure 2.3-6. Pit 6 Landfill OU map showing nitrate concentrations for the Qt-Tnbs<sub>1</sub> HSU.



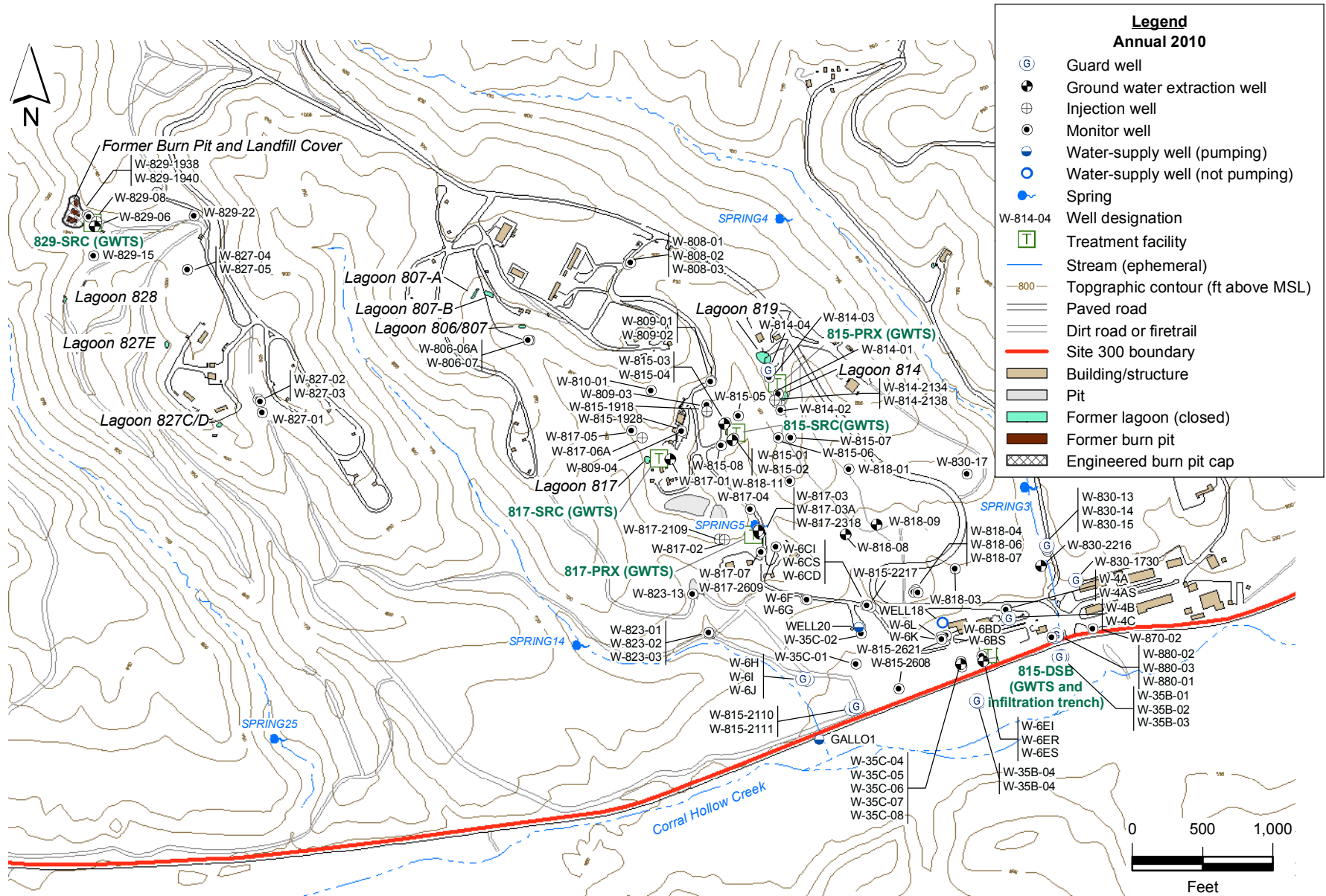


Figure 2.4-1. High Explosives Process Area OU site map showing monitor, extraction, injection and water-supply wells, and treatment facilities.

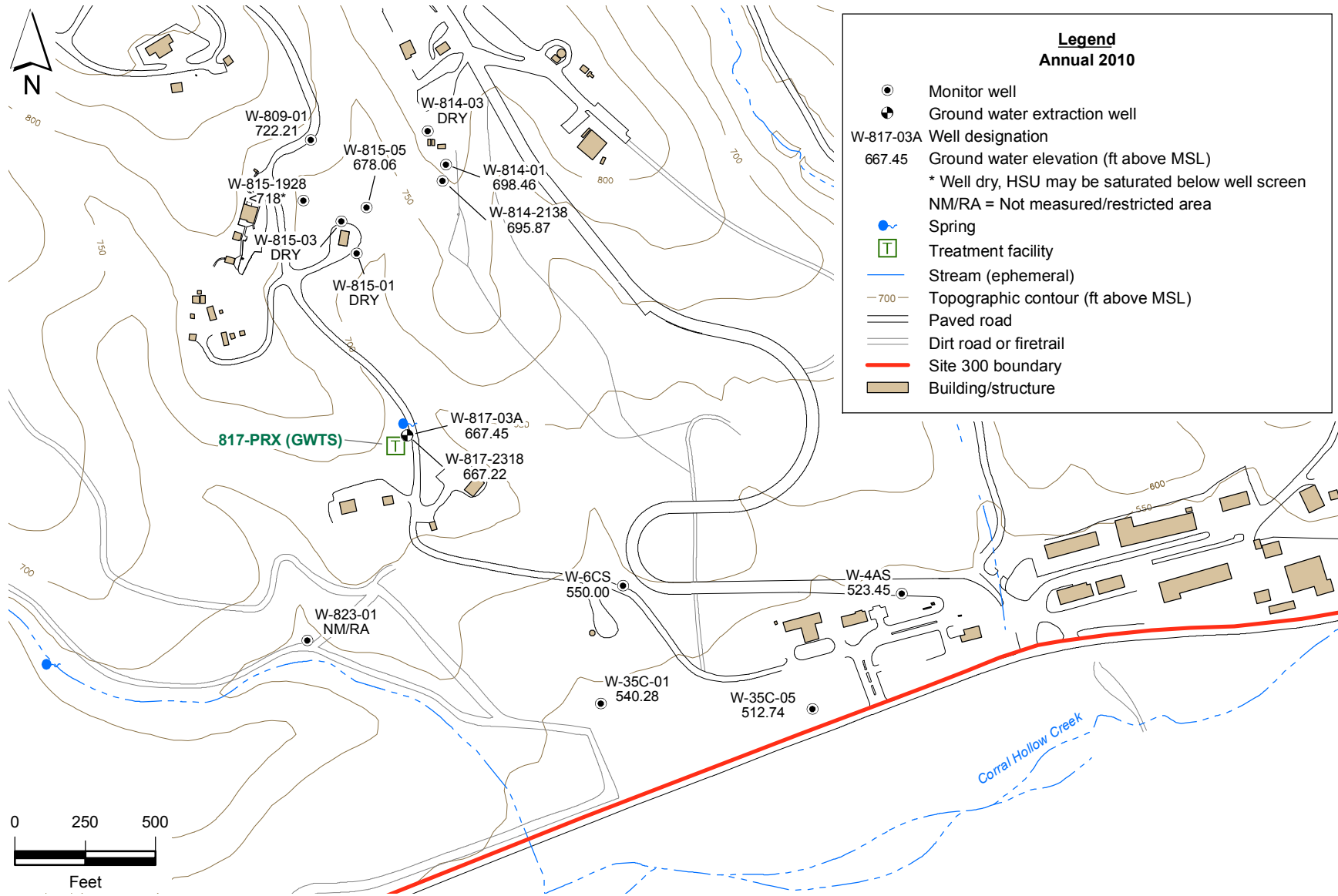


Figure 2.4-2. High Explosives Process Area OU map showing ground water elevations for the Tpsg-Tps HSU.

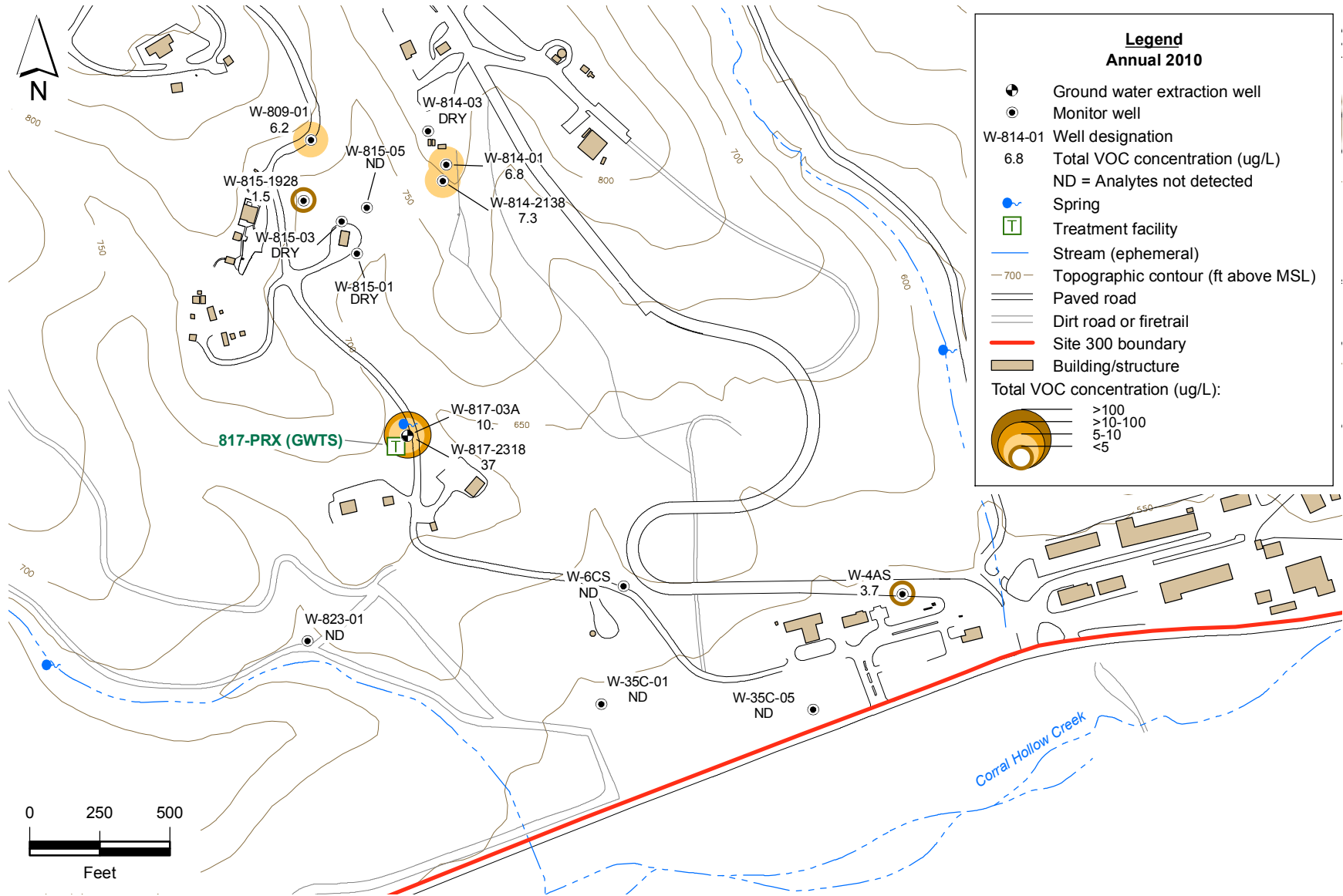


Figure 2.4-3. High Explosives Process Area OU map showing total VOC concentrations for the Tpsg-Tps HSU.

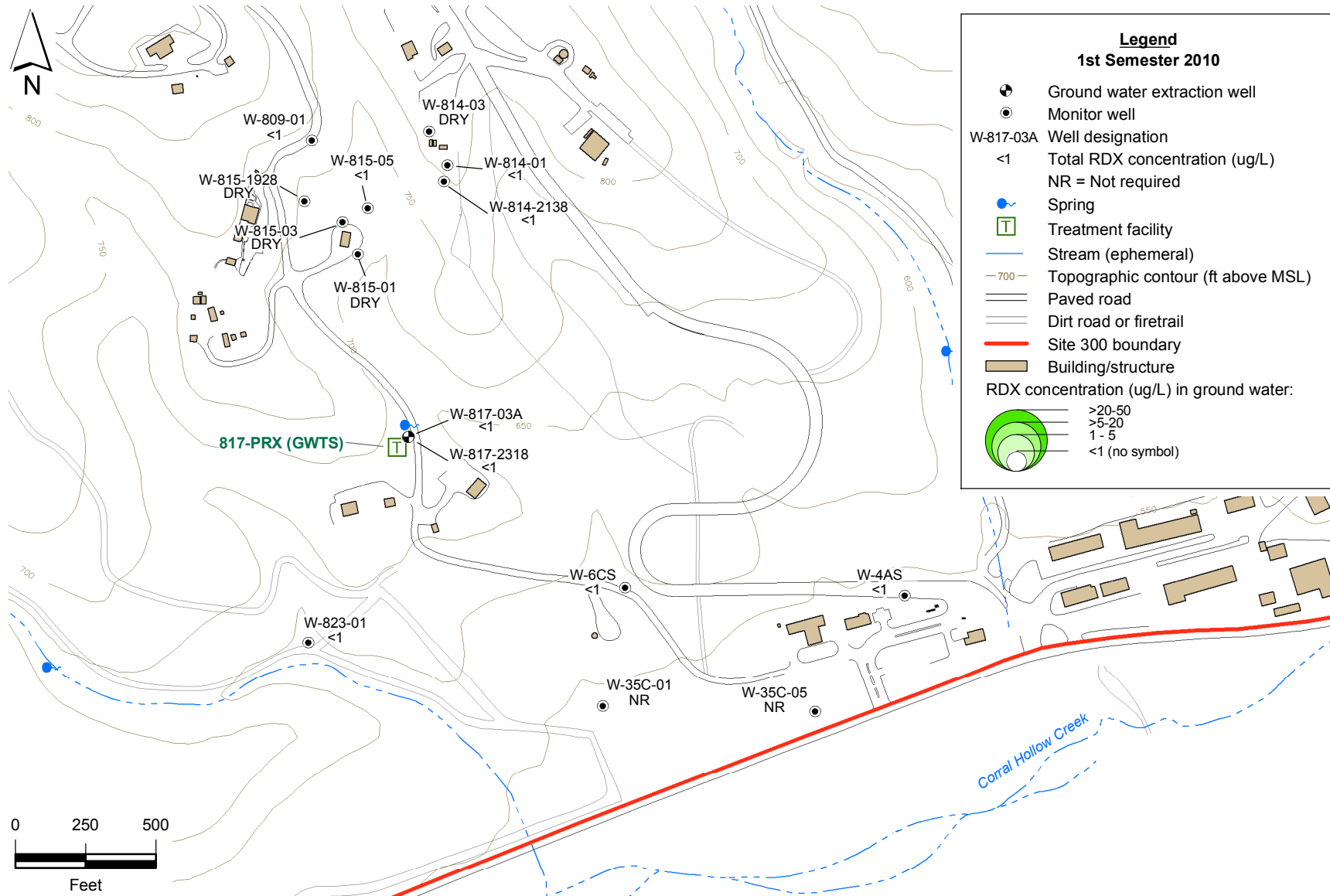


Figure 2.4-4. High Explosives Process Area OU map showing RDX concentrations for the Tpsg-Tps HSU.

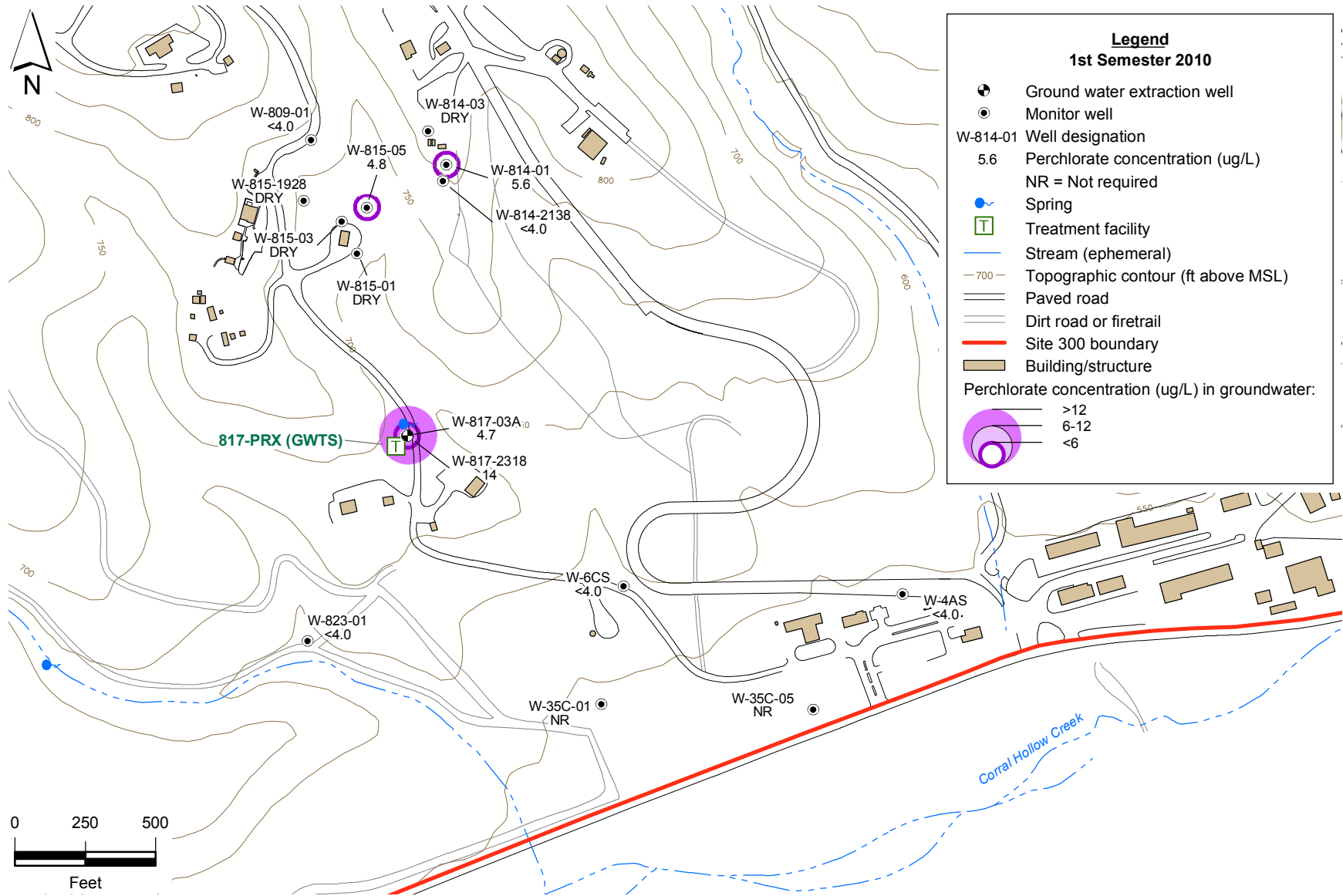


Figure 2.4-5. High Explosives Process Area OU map showing perchlorate concentrations for the Tpsg-Tps HSU.

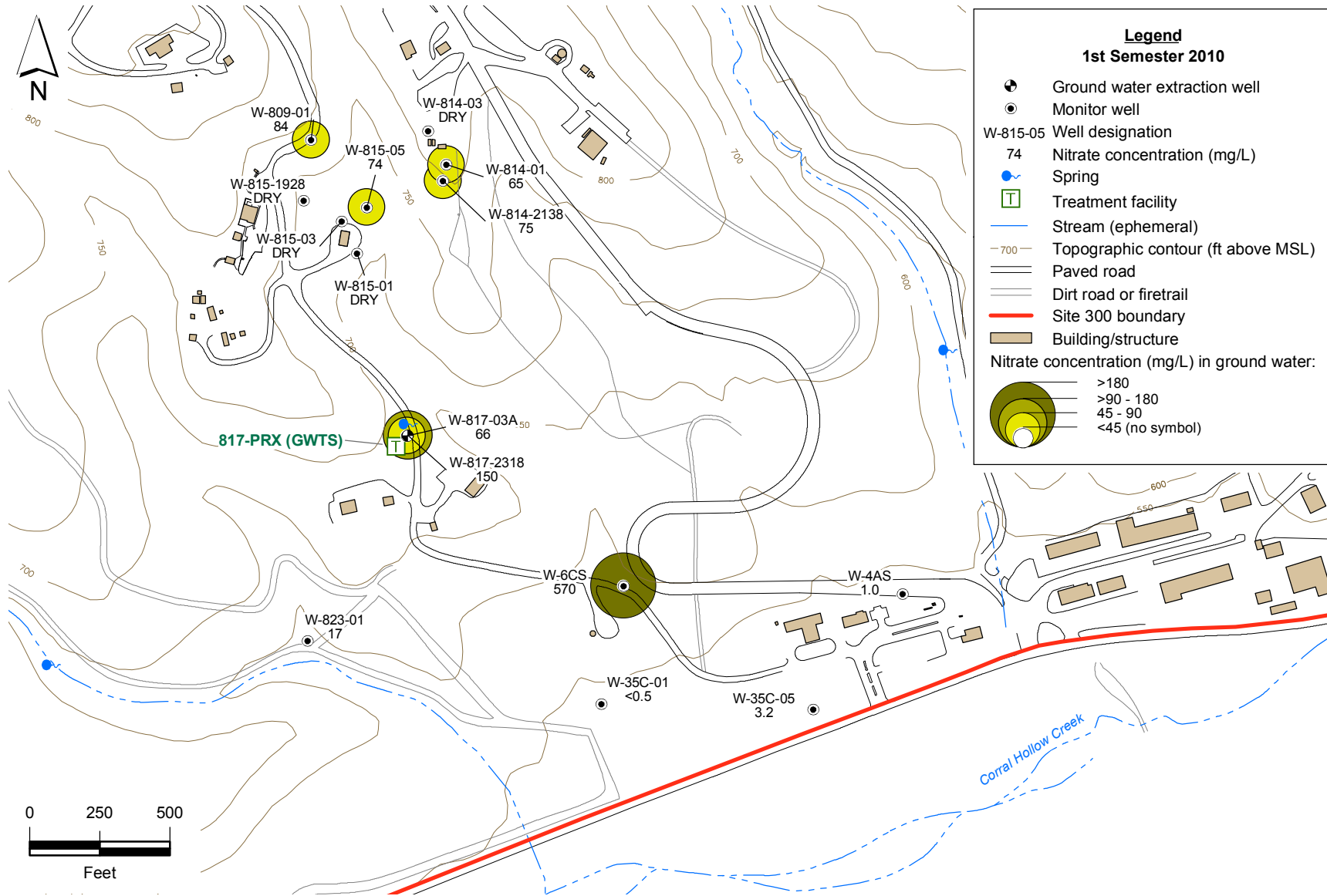


Figure 2.4-6. High Explosives Process Area OU map showing nitrate concentrations for the Tpsg-Tps HSU.

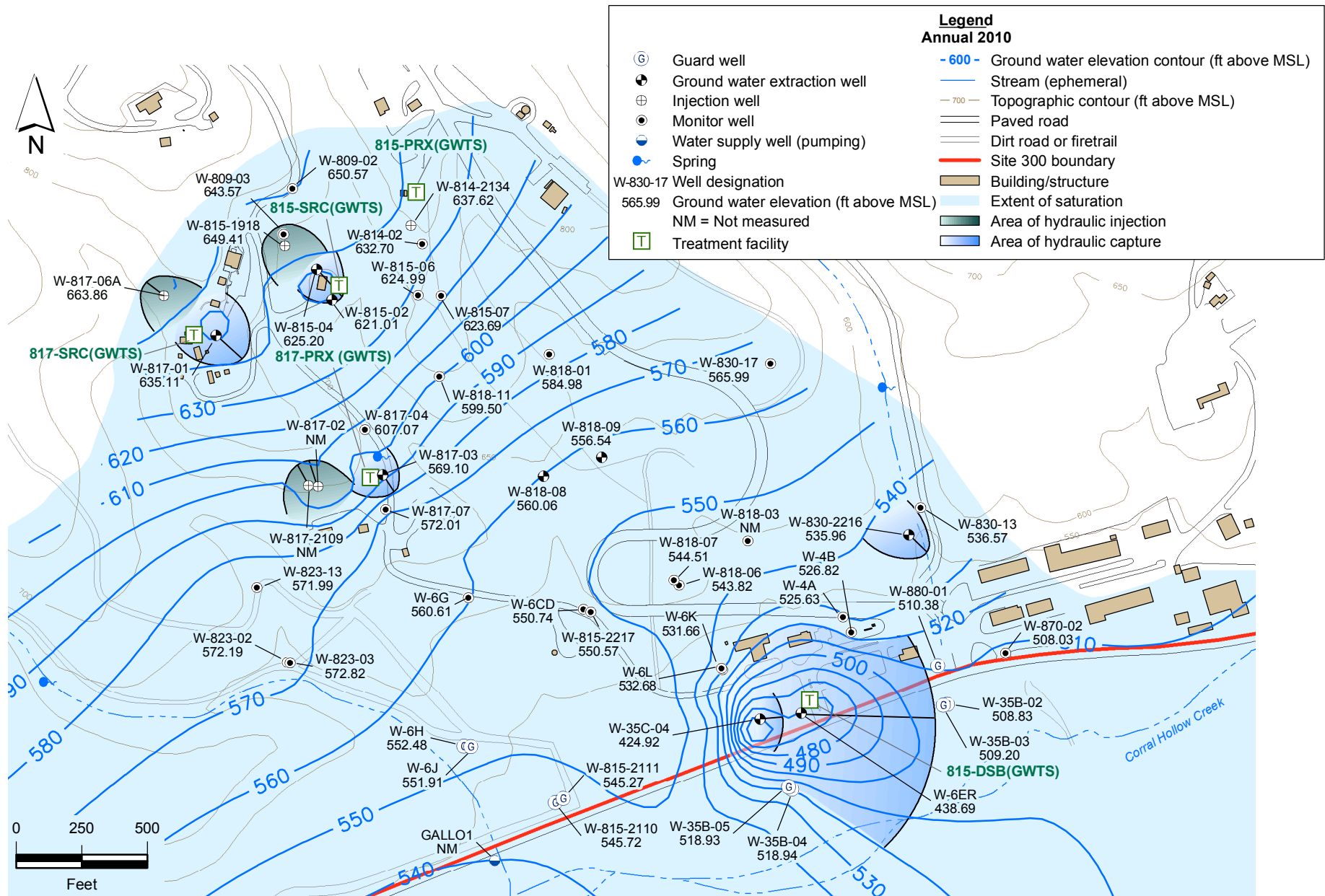


Figure 2.4-7. High Explosives Process Area OU ground water potentiometric surface map for the Tnbs<sub>2</sub> HSU.

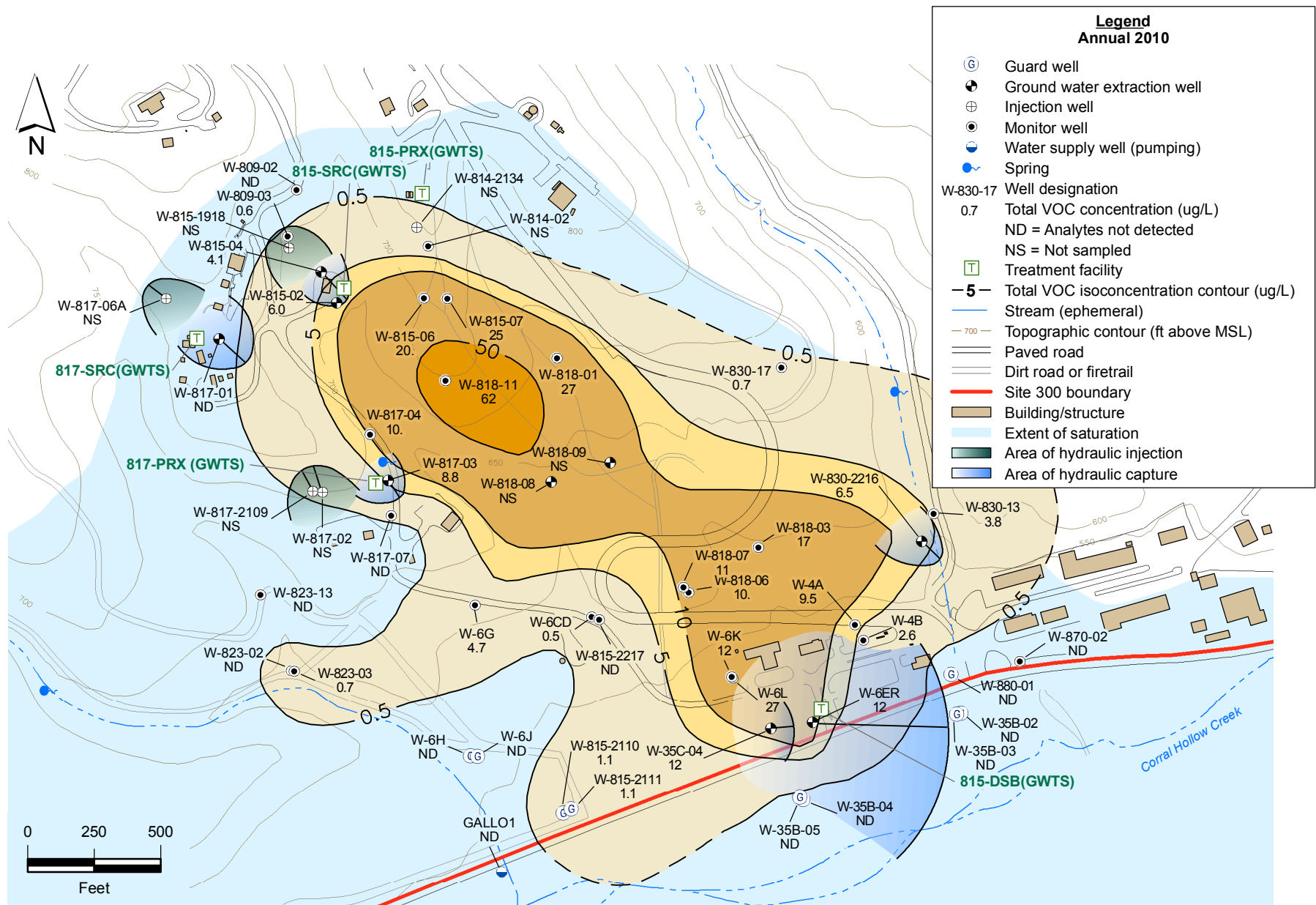


Figure 2.4-8. High Explosives Process Area OU total VOC isoconcentration contour map for the Tnbs<sub>2</sub> HSU.



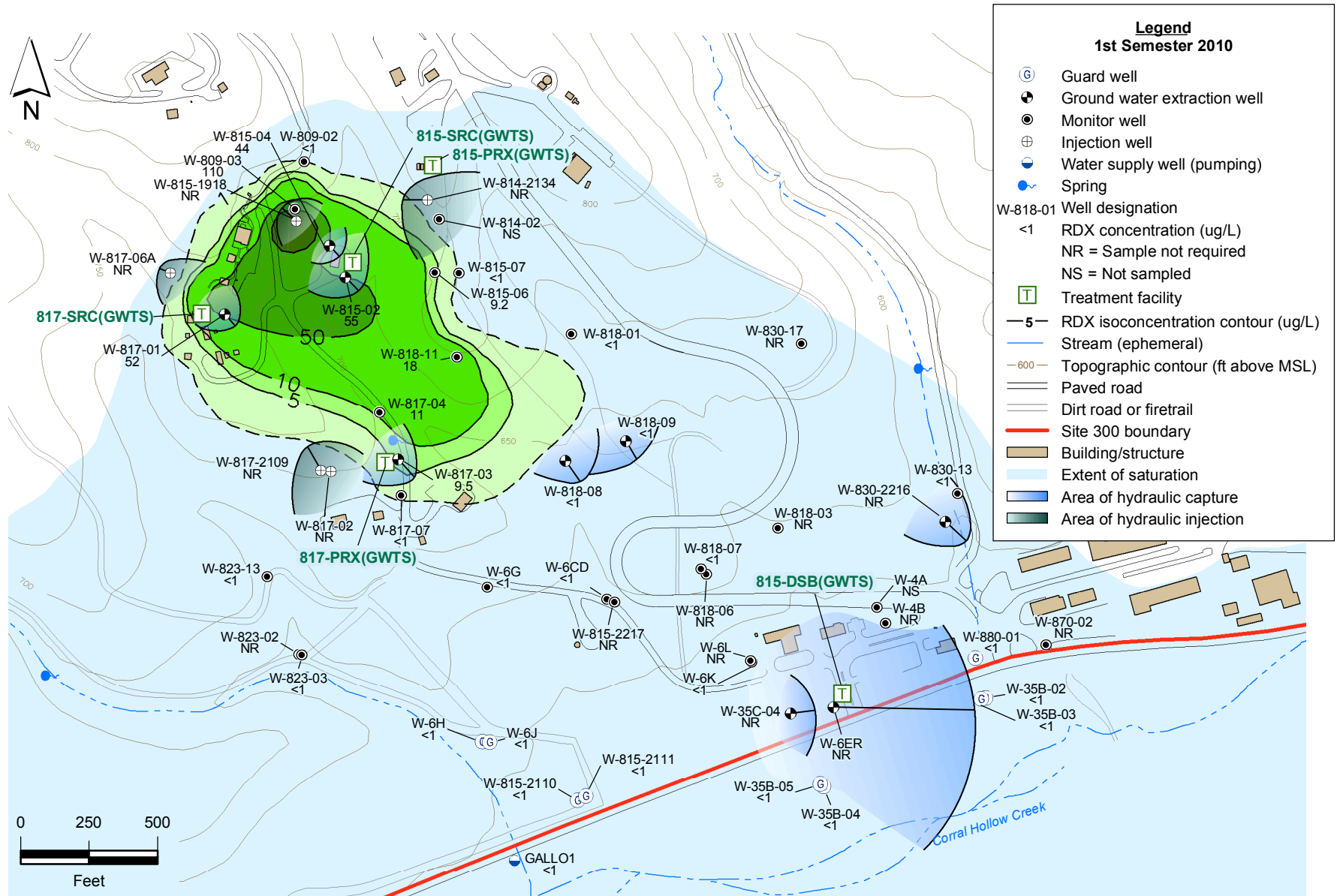


Figure 2.4-9. High Explosives Process Area OU RDX isoconcentration contour map for the Tnbs<sub>2</sub> HSU.

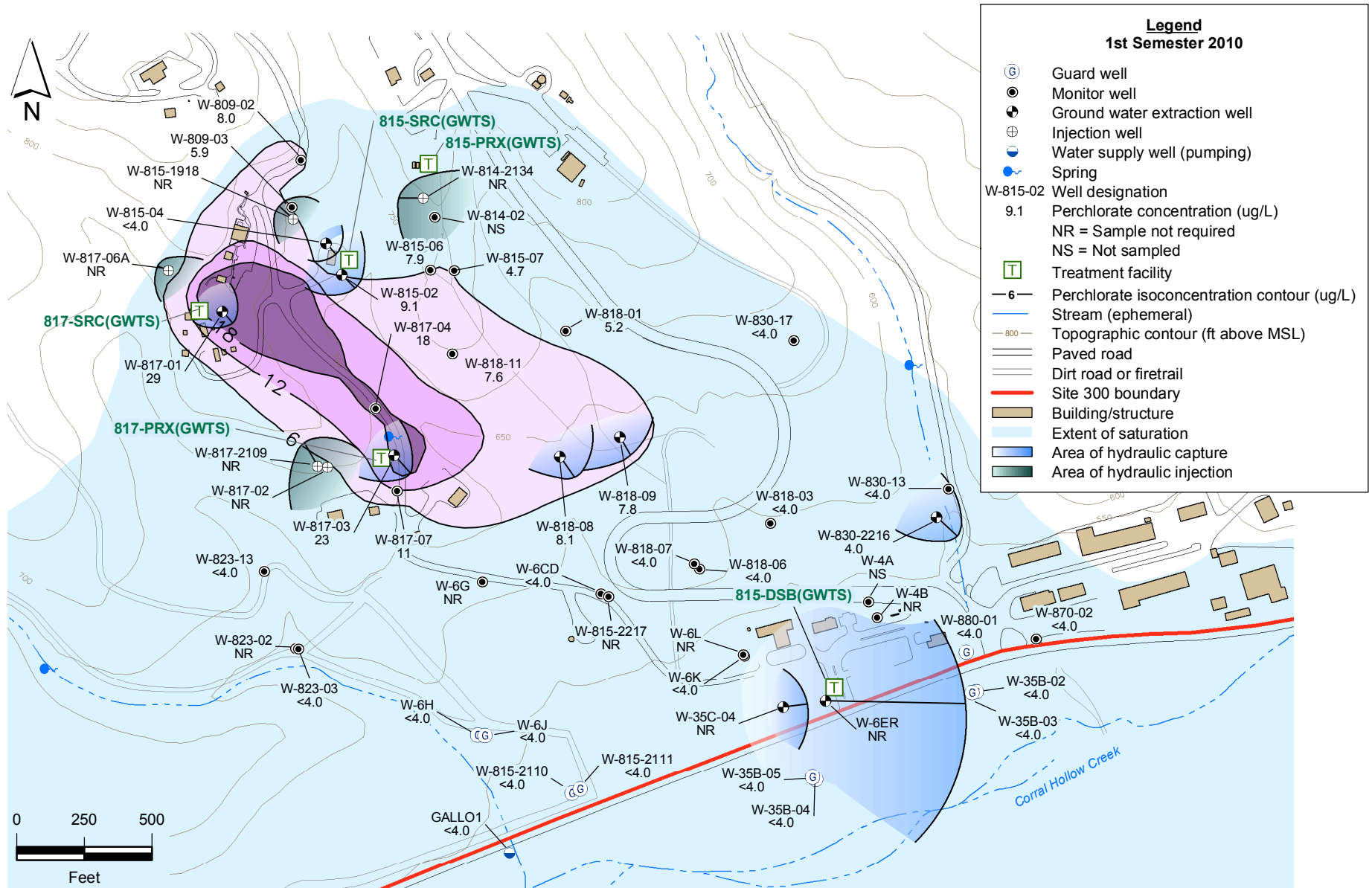


Figure 2.4-10. High Explosives Process Area OU perchlorate isoconcentration contour map for the Tnbs<sub>2</sub> HSU.

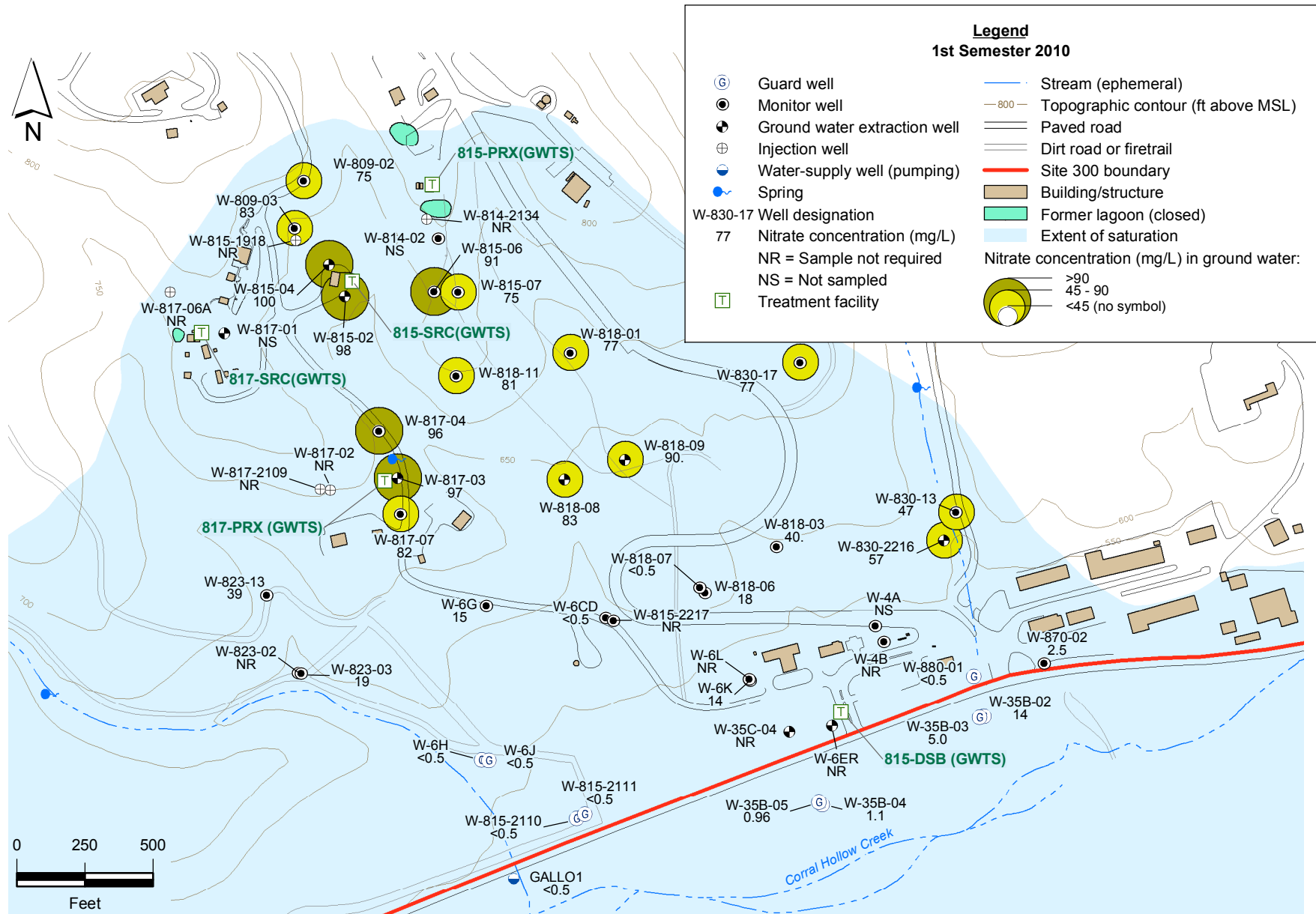


Figure 2.4-11. High Explosives Process Area OU map showing nitrate concentrations for the Tnbs<sub>2</sub> HSU.

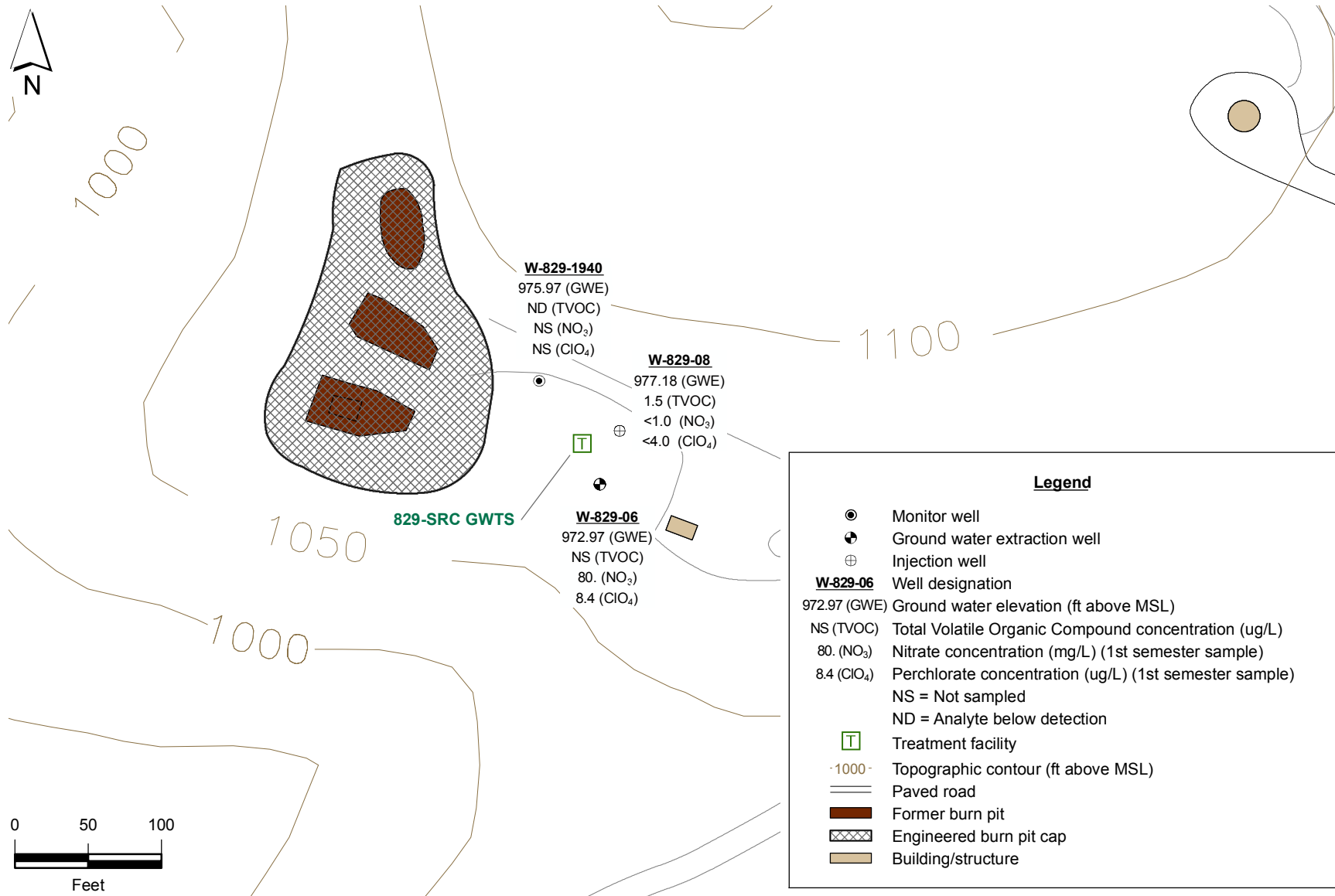


Figure 2.4-12. Building 829 burn pit map showing monitor, extraction and injection wells; ground water elevations; and total VOC, perchlorate, and nitrate concentrations for the Tnsc<sub>1b</sub> HSU.

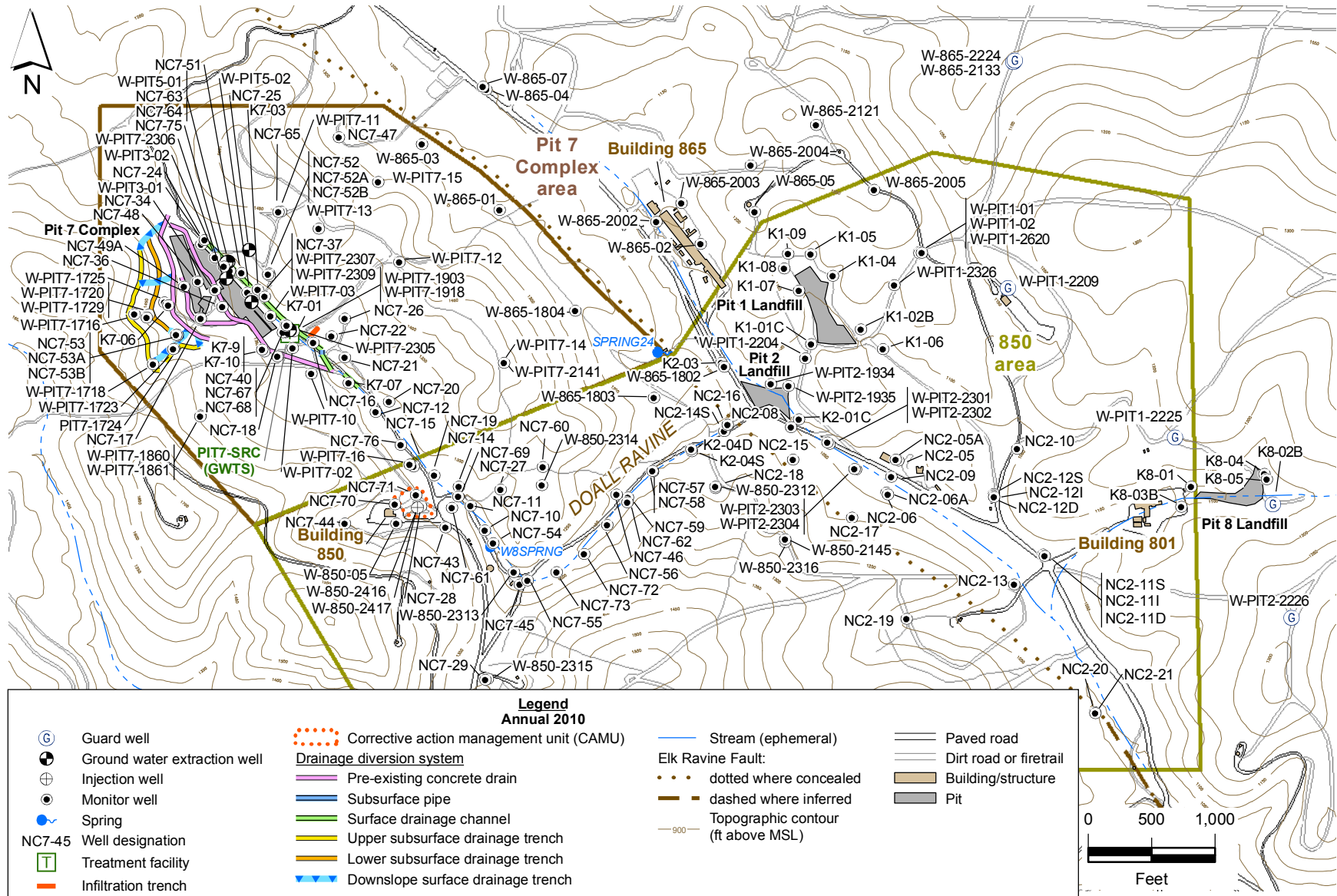


Figure 2.5-1. Building 850 and Pit 7 Complex area site map showing monitor, extraction, and injection wells, treatment facility and other remediation features.

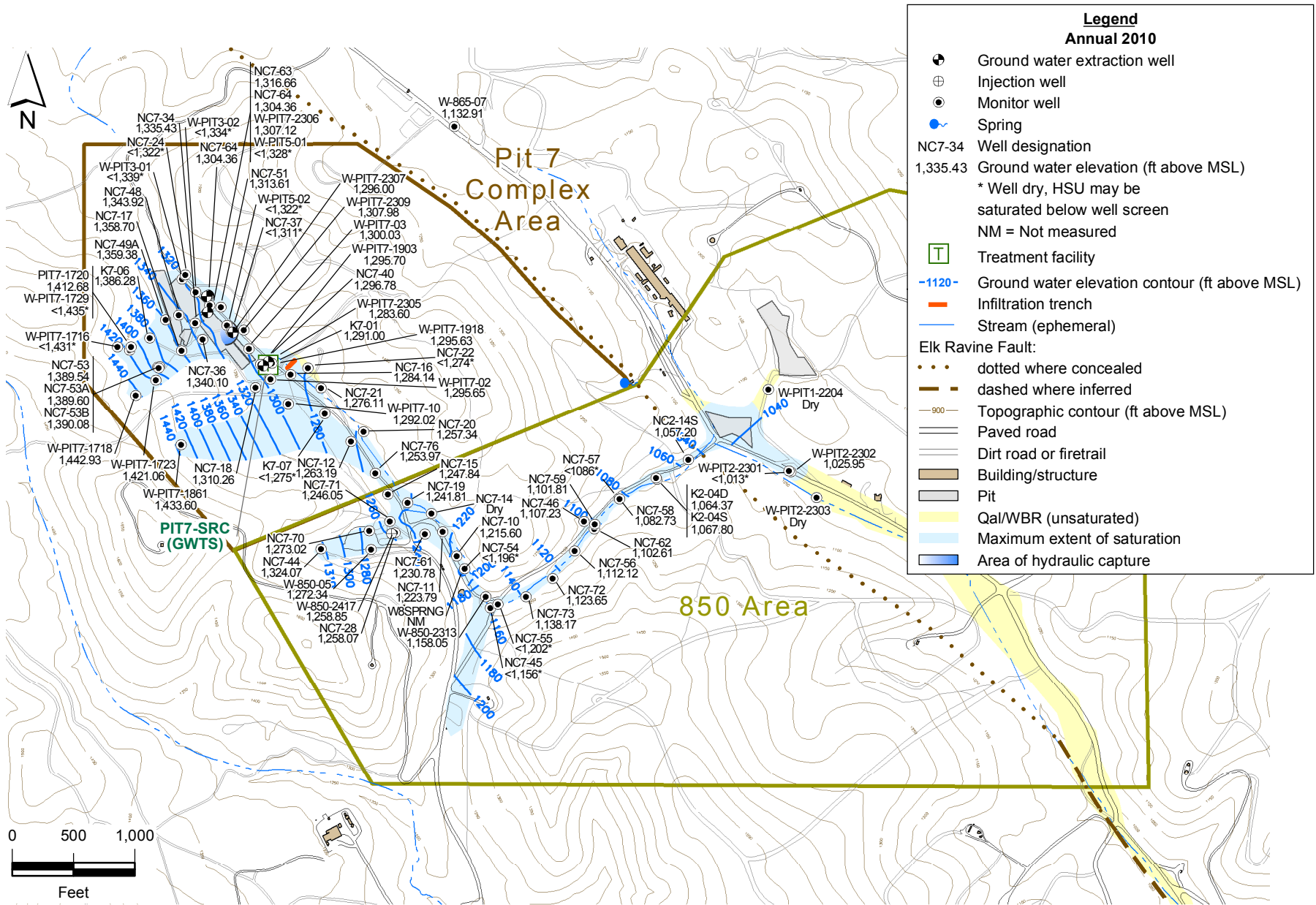


Figure 2.5-2. Building 850 and Pit 7 complex area ground water potentiometric surface map for the Qal/WBR HSU.

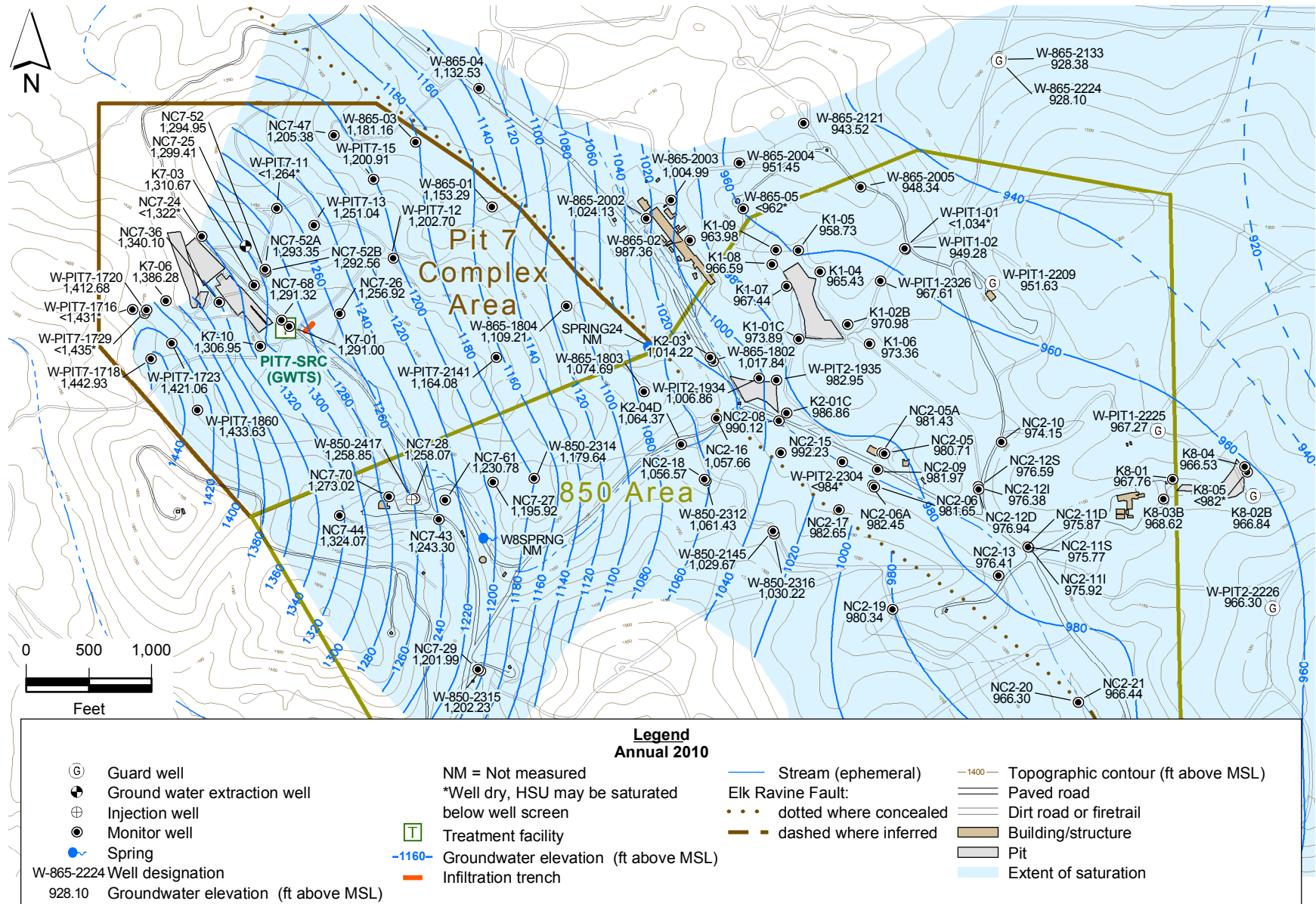


Figure 2.5-3. Building 850 and Pit 7 Complex area ground water potentiometric surface map for the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.

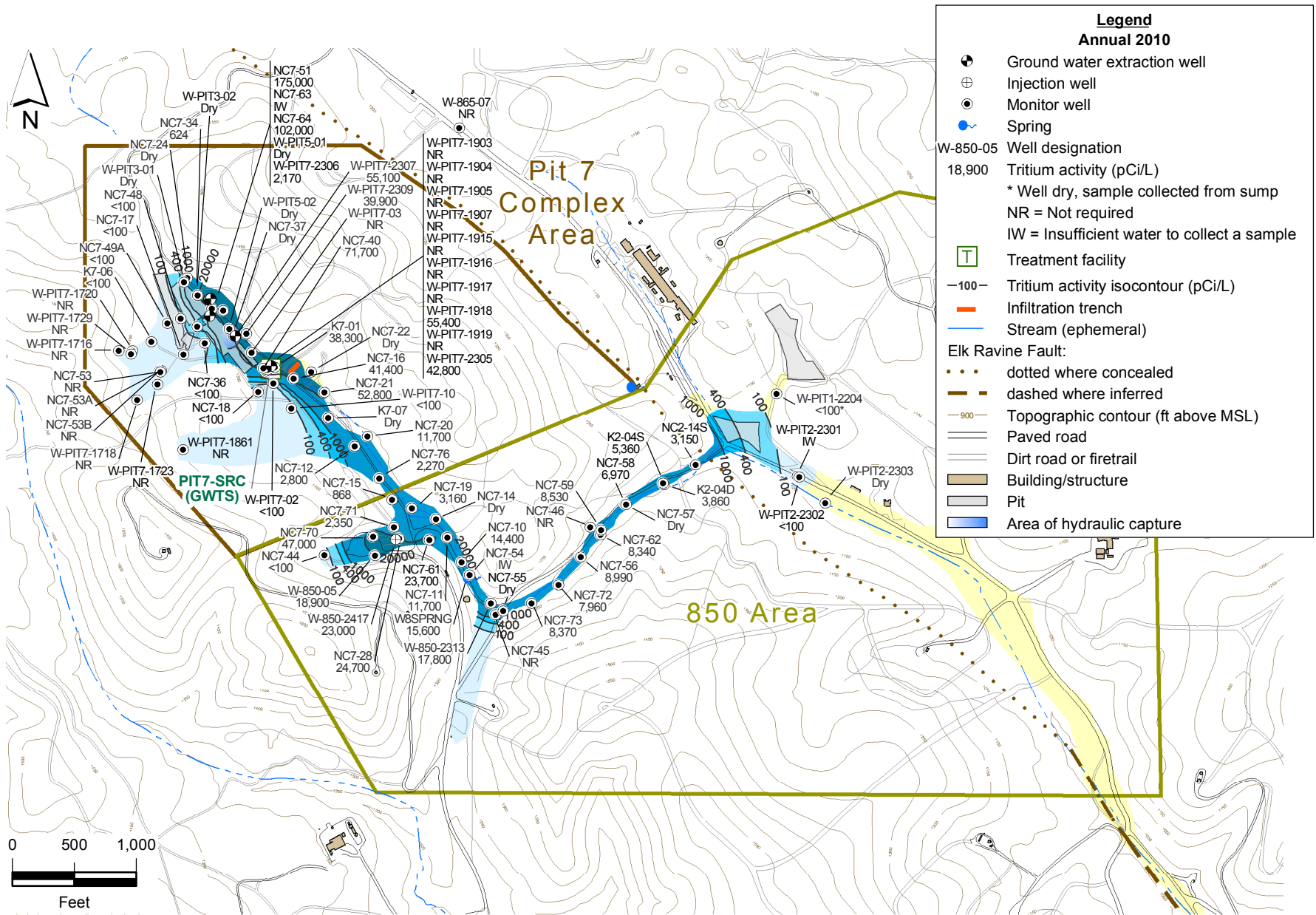


Figure 2.5-4. Building 850 and Pit 7 complex area tritium activity isocontour map for the Qal/WBR HSU.



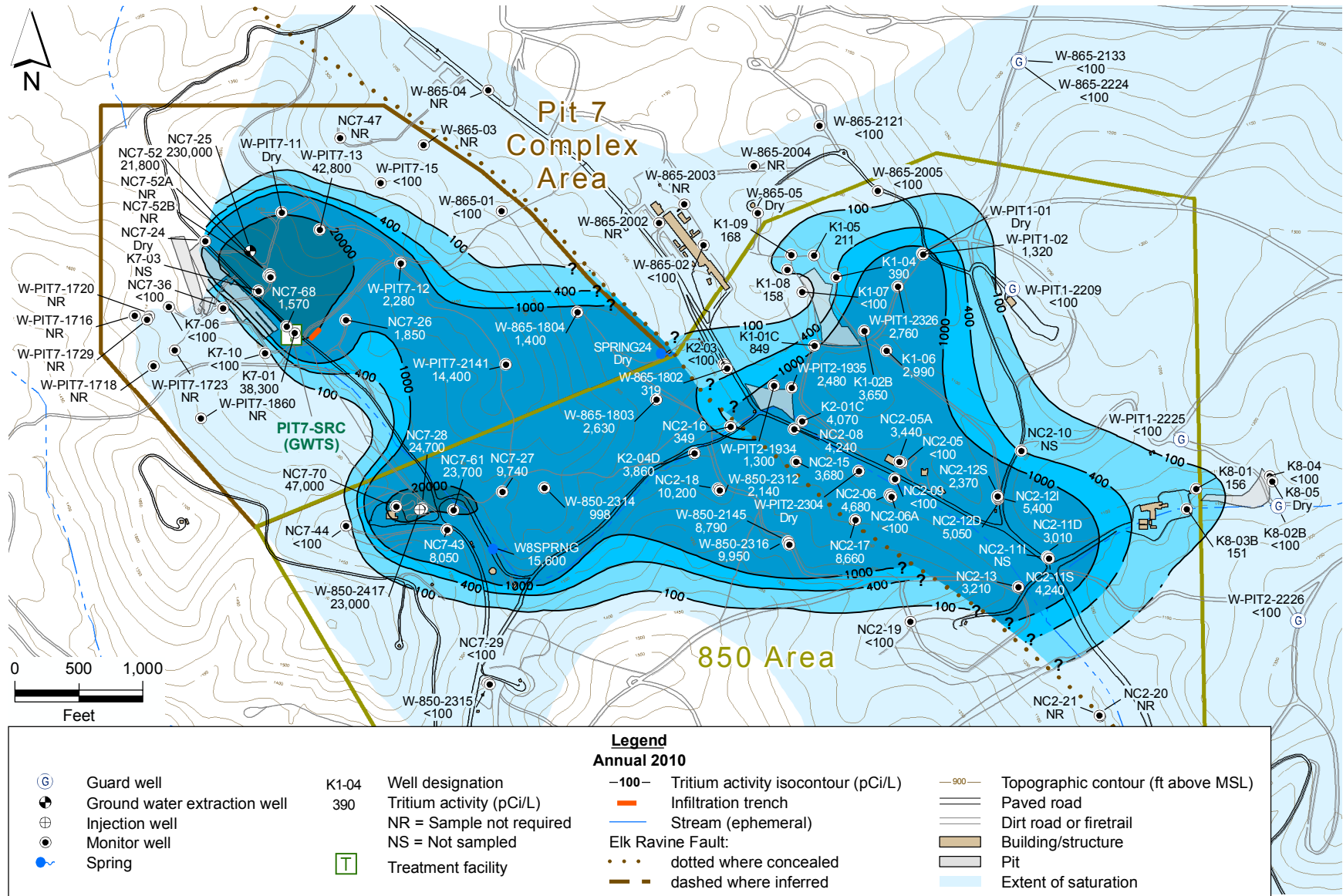


Figure 2.5-5. Building 850 and Pit 7 Complex area tritium activity isocontour map for the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.

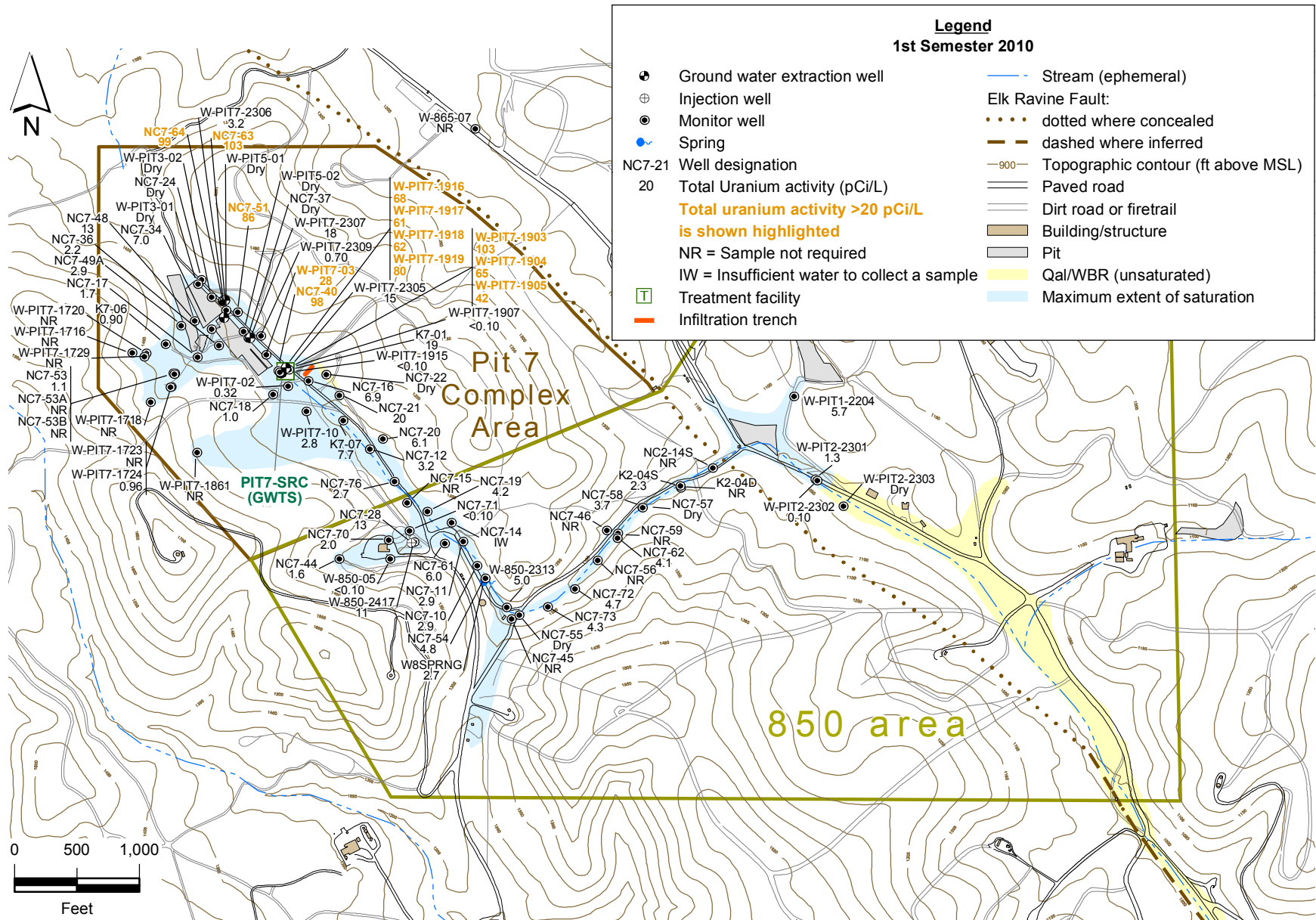


Figure 2.5-6. Building 850 and Pit 7 Complex area map showing ground water uranium activities for the Qal/WBR HSU.

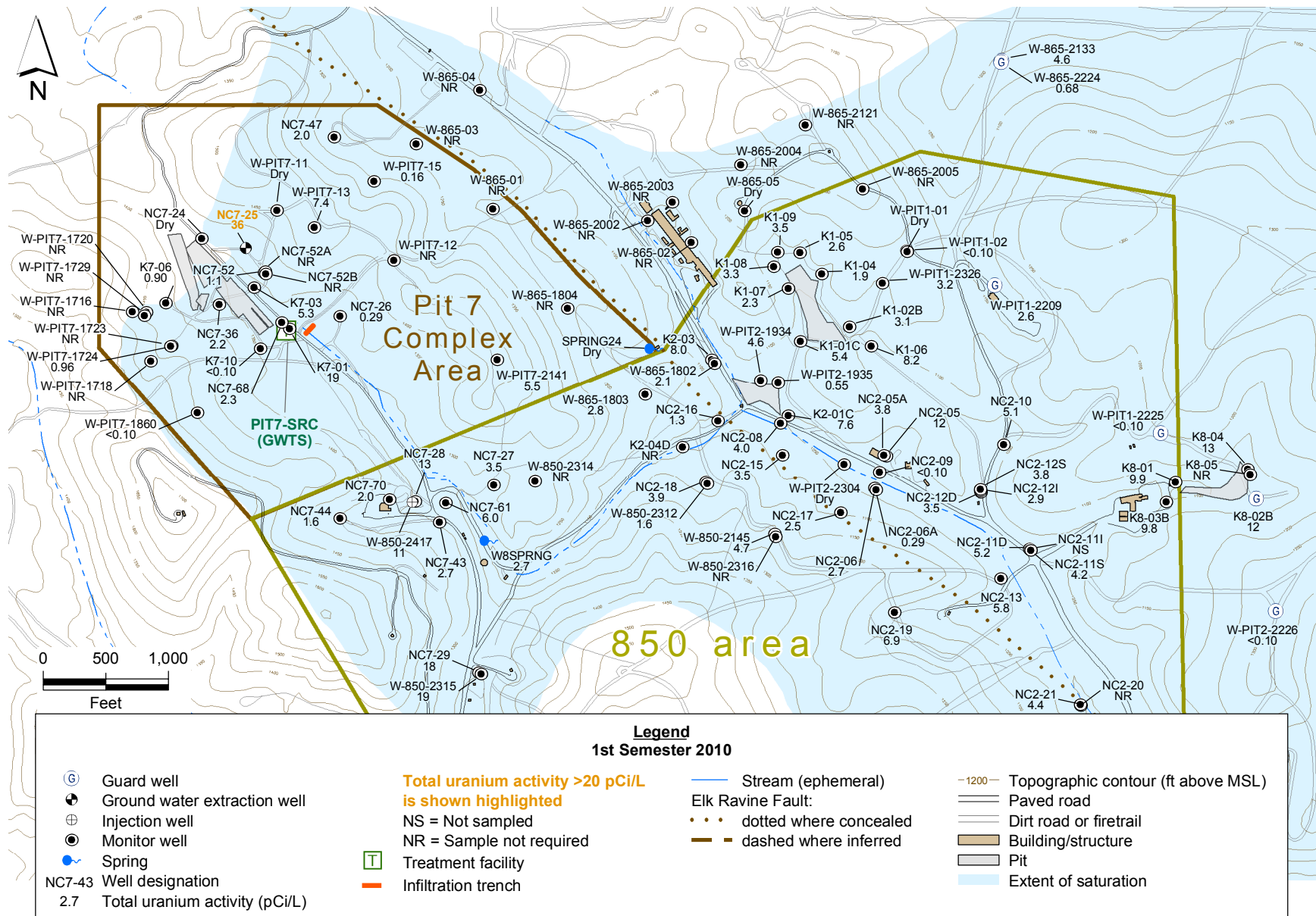


Figure 2.5-7. Building 850 and Pit 7 Complex area map showing ground water uranium activities for the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.

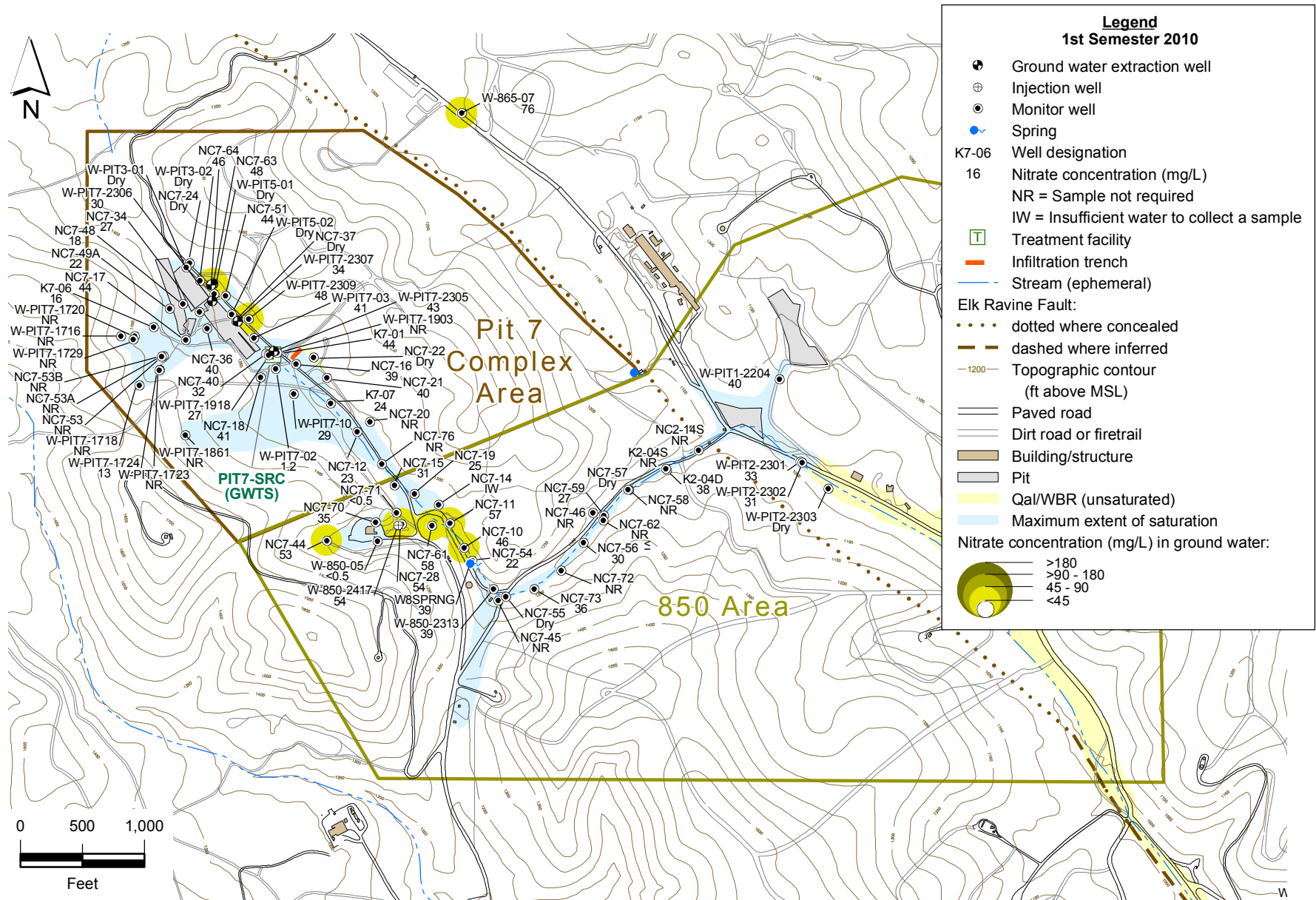


Figure 2.5-8. Building 850 and Pit 7 Complex area map showing nitrate concentrations for the Qal/WBR HSU.

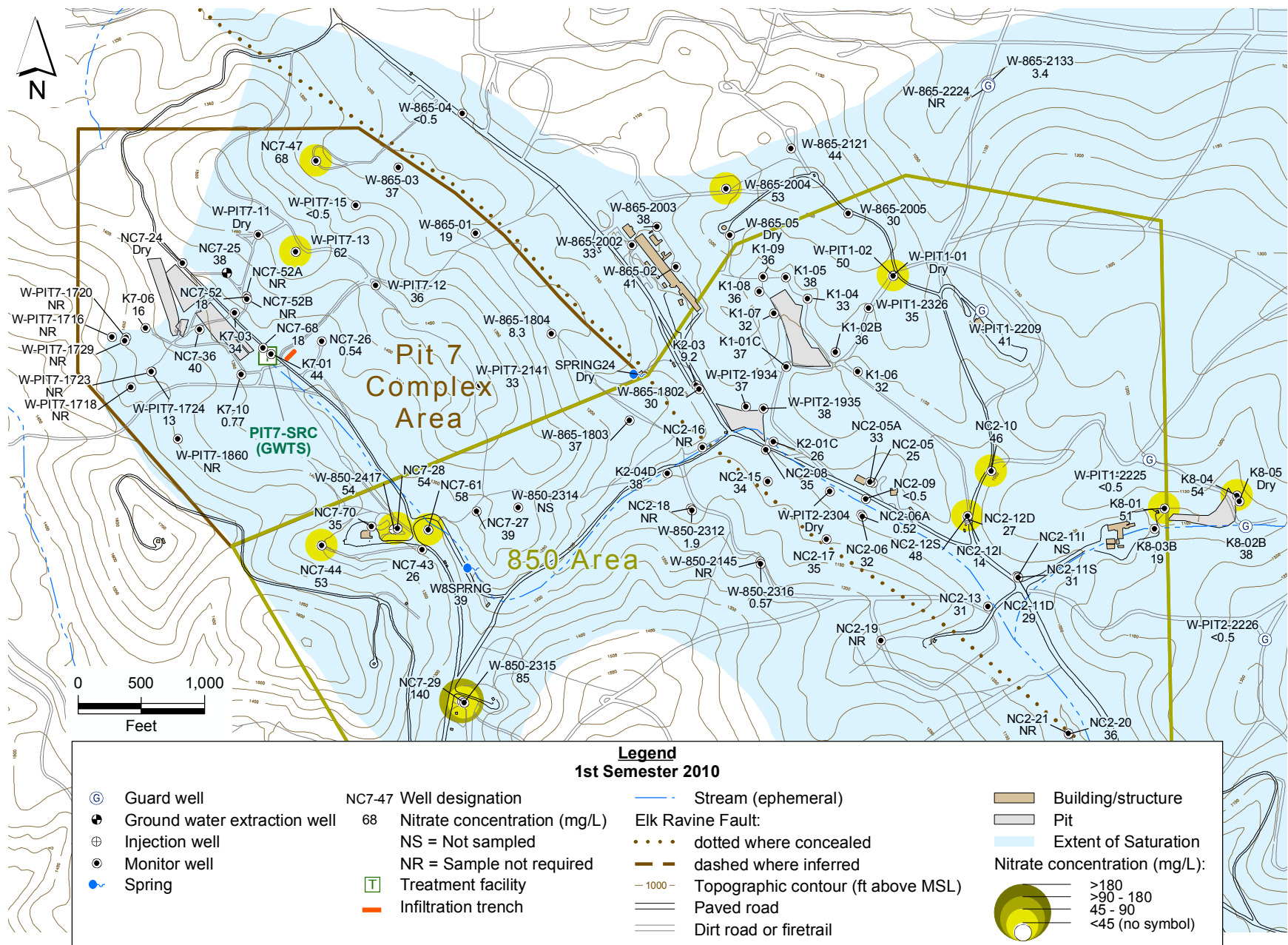


Figure 2.5-9. Building 850 and Pit 7 Complex area map showing nitrate concentrations for the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.

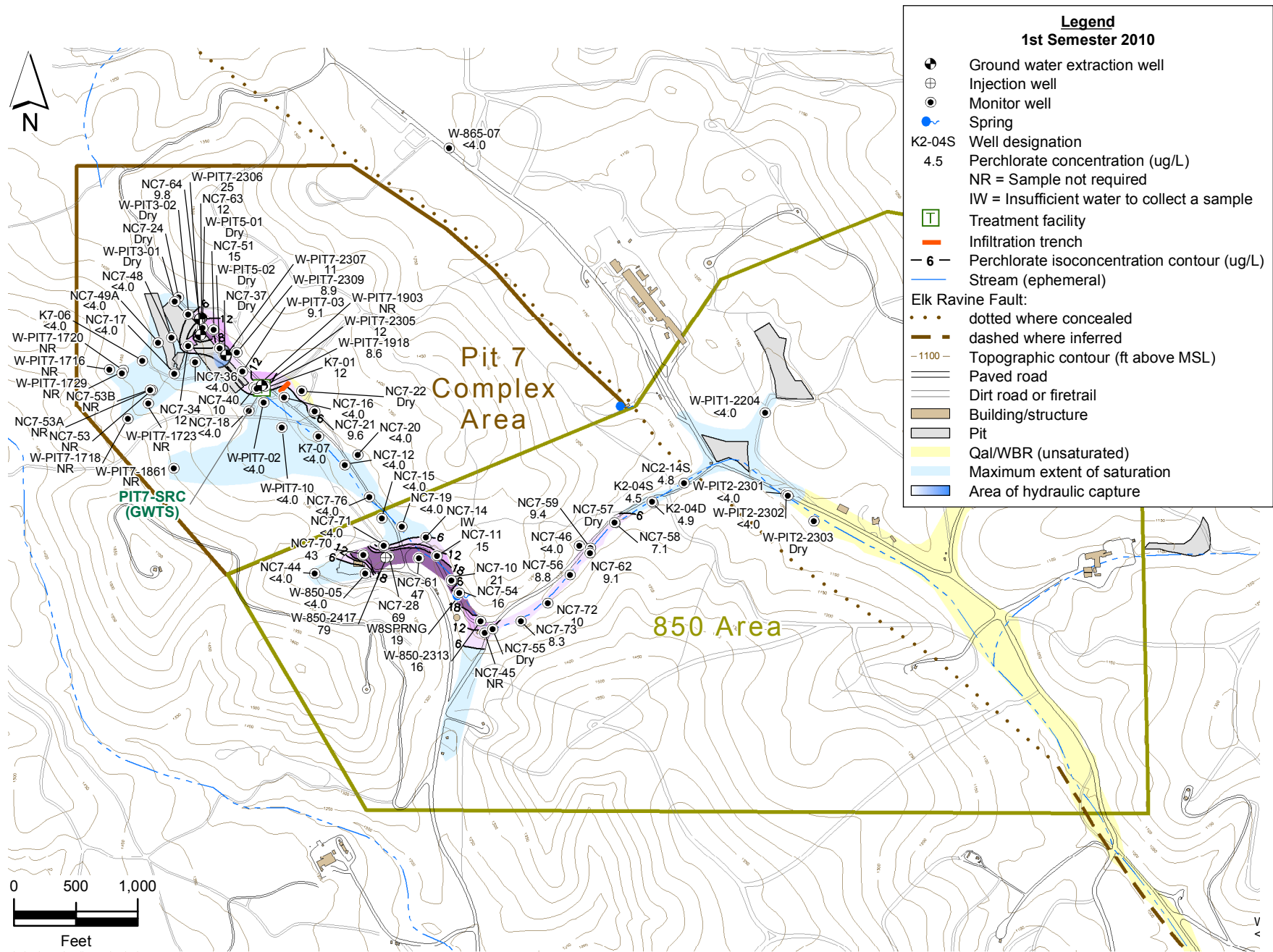


Figure 2.5-10. Building 850 and Pit 7 Complex area perchlorate isoconcentration contour map for the Qal/WBR HSU.

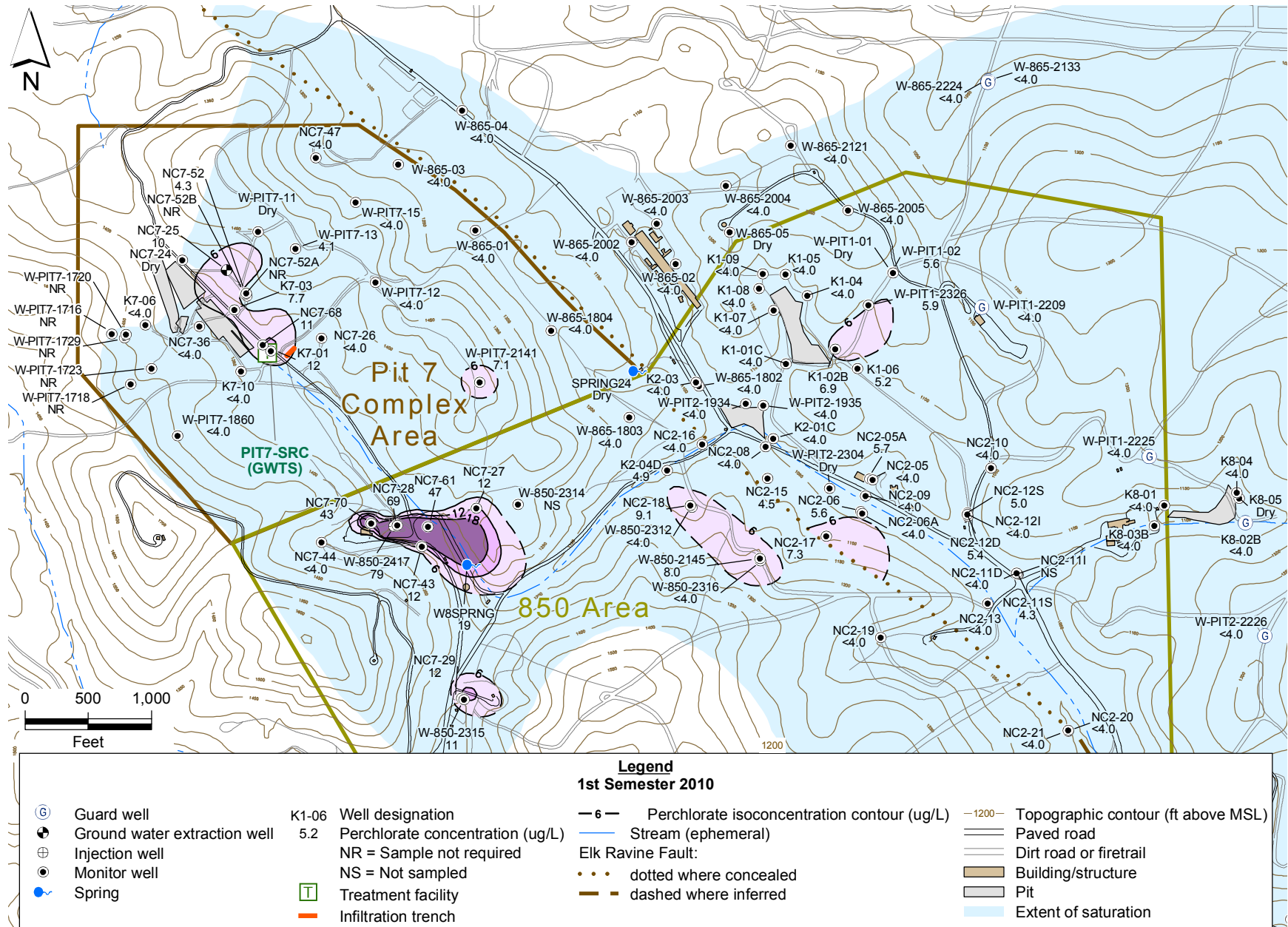


Figure 2.5-11. Building 850 and Pit 7 Complex area perchlorate isoconcentration contour map for the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.

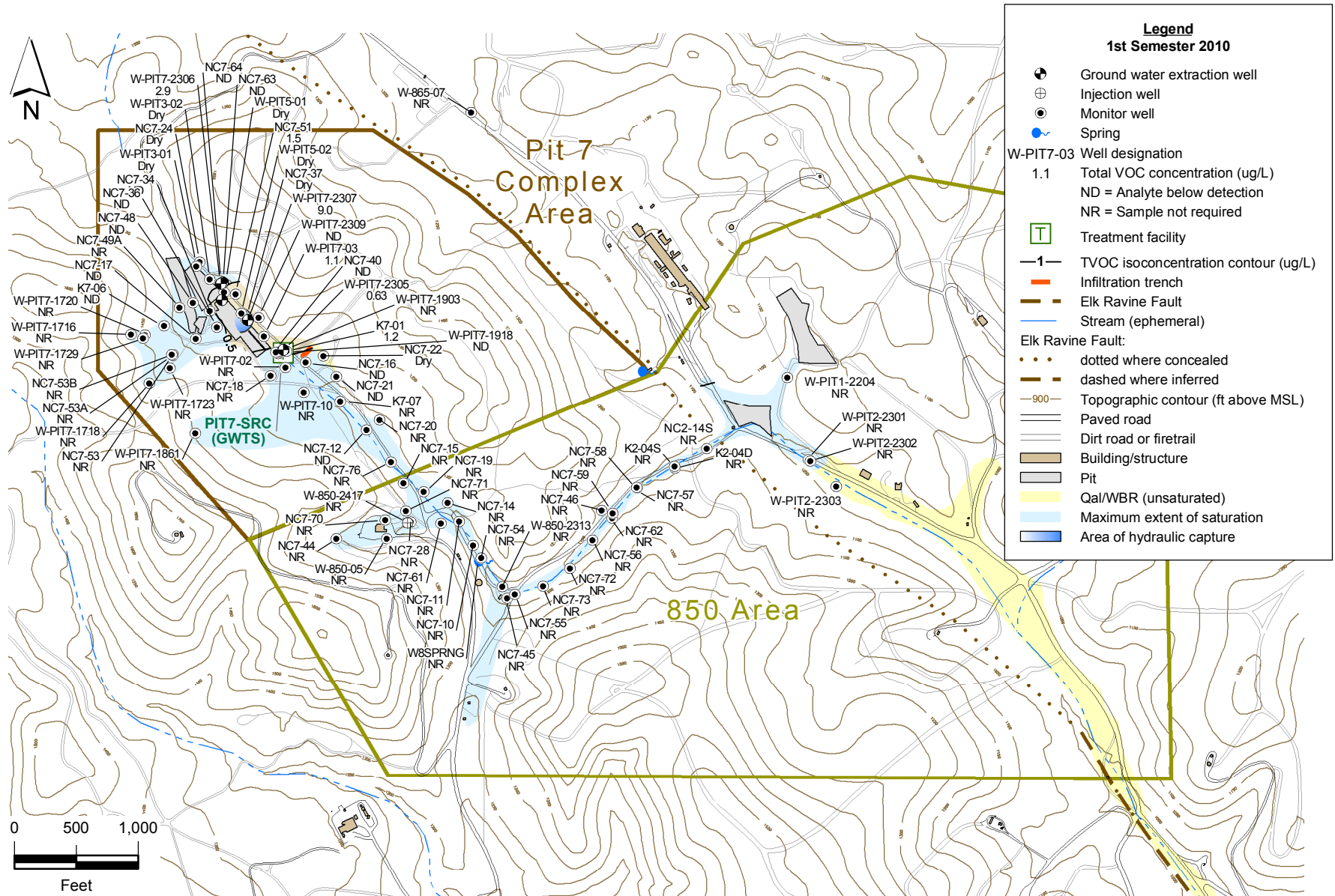


Figure 2.5-12 Pit 7 Complex area total VOC isoconcentration contour map for the QalWBR HSU.



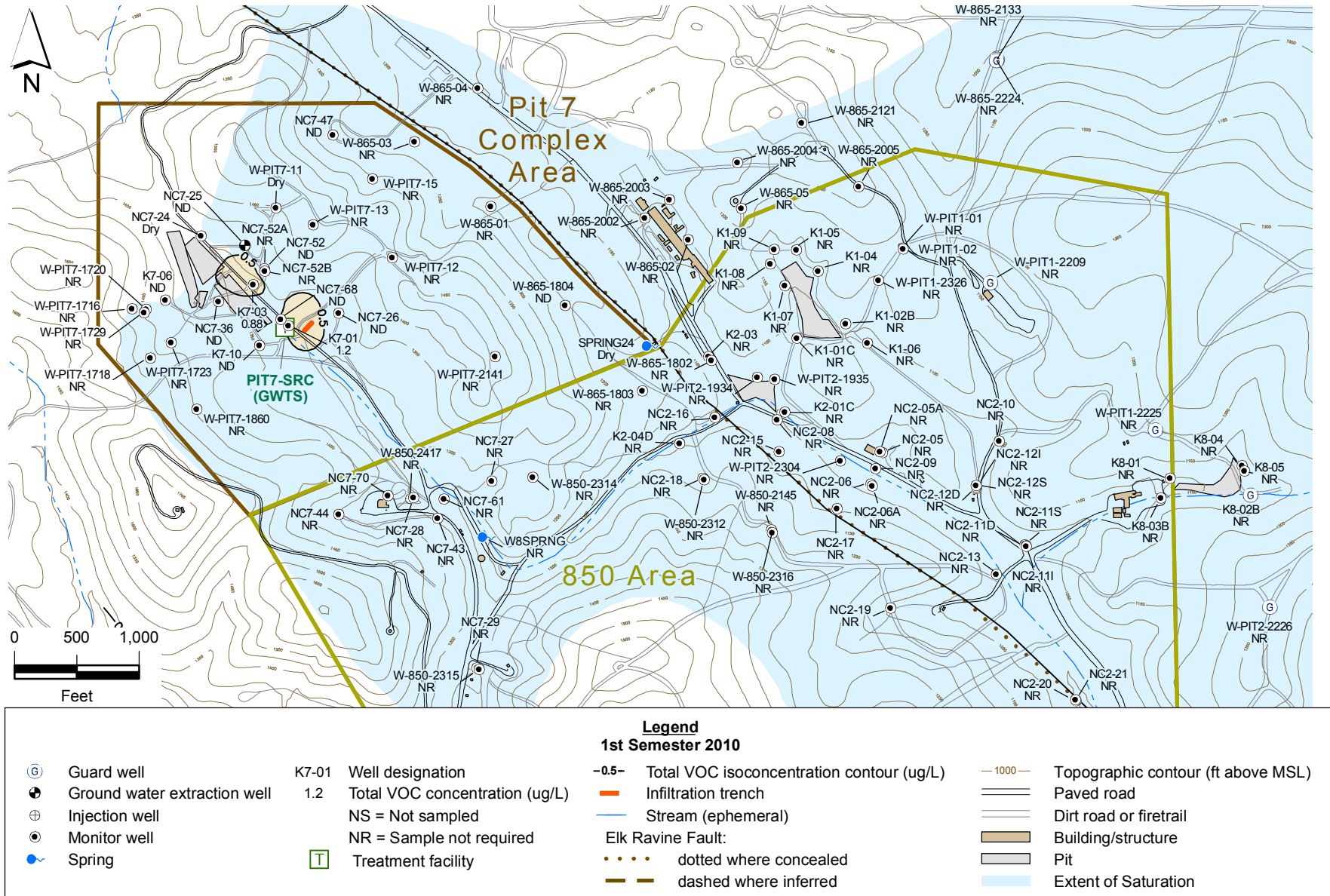


Figure 2.5-13. Pit 7 Complex area total VOC isoconcentration contour map for the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.

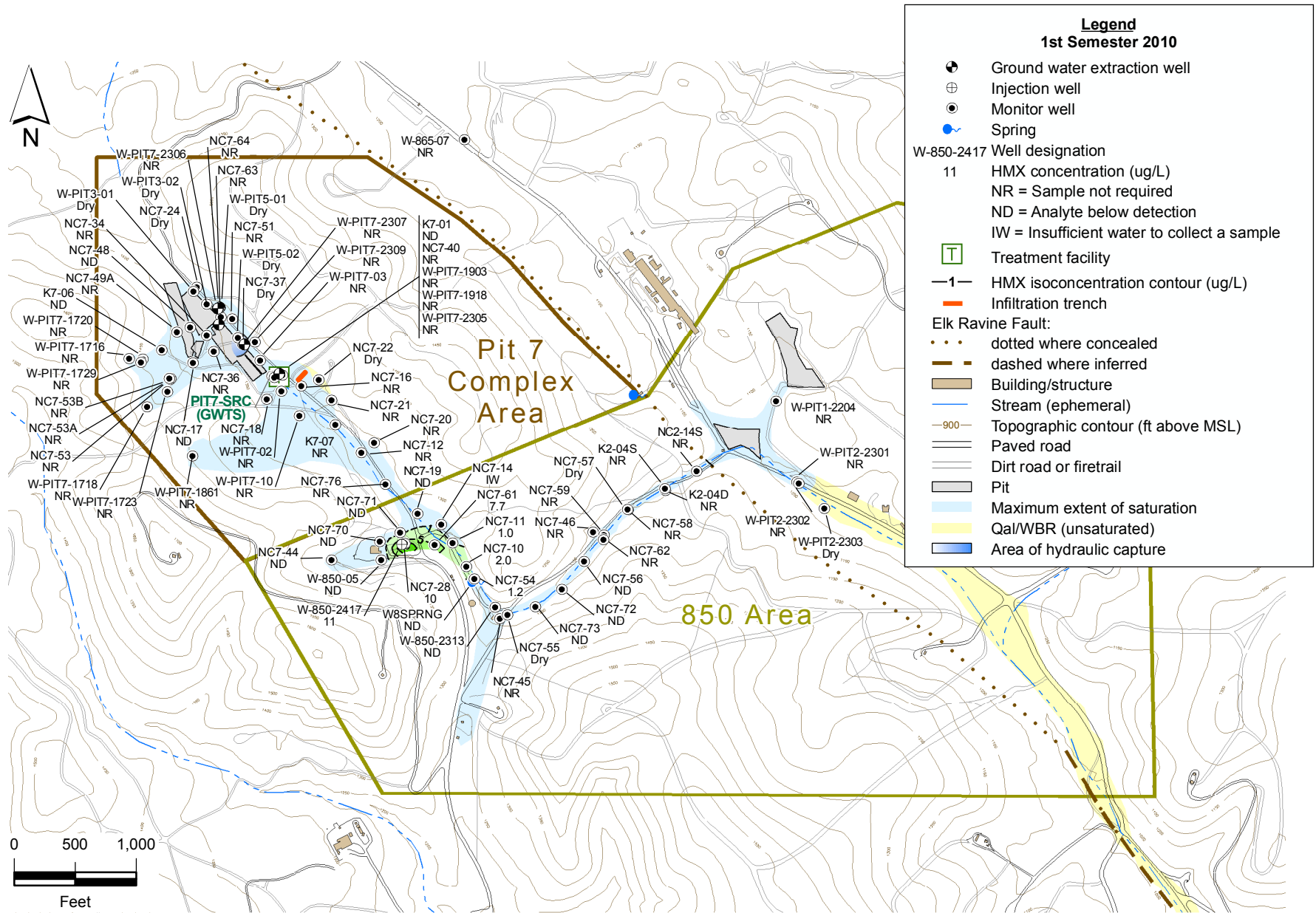


Figure 2.5-14 Building 850 and Pit 7 Complex area HMX isoconcentration contour map for the Qal/WBR HSU.

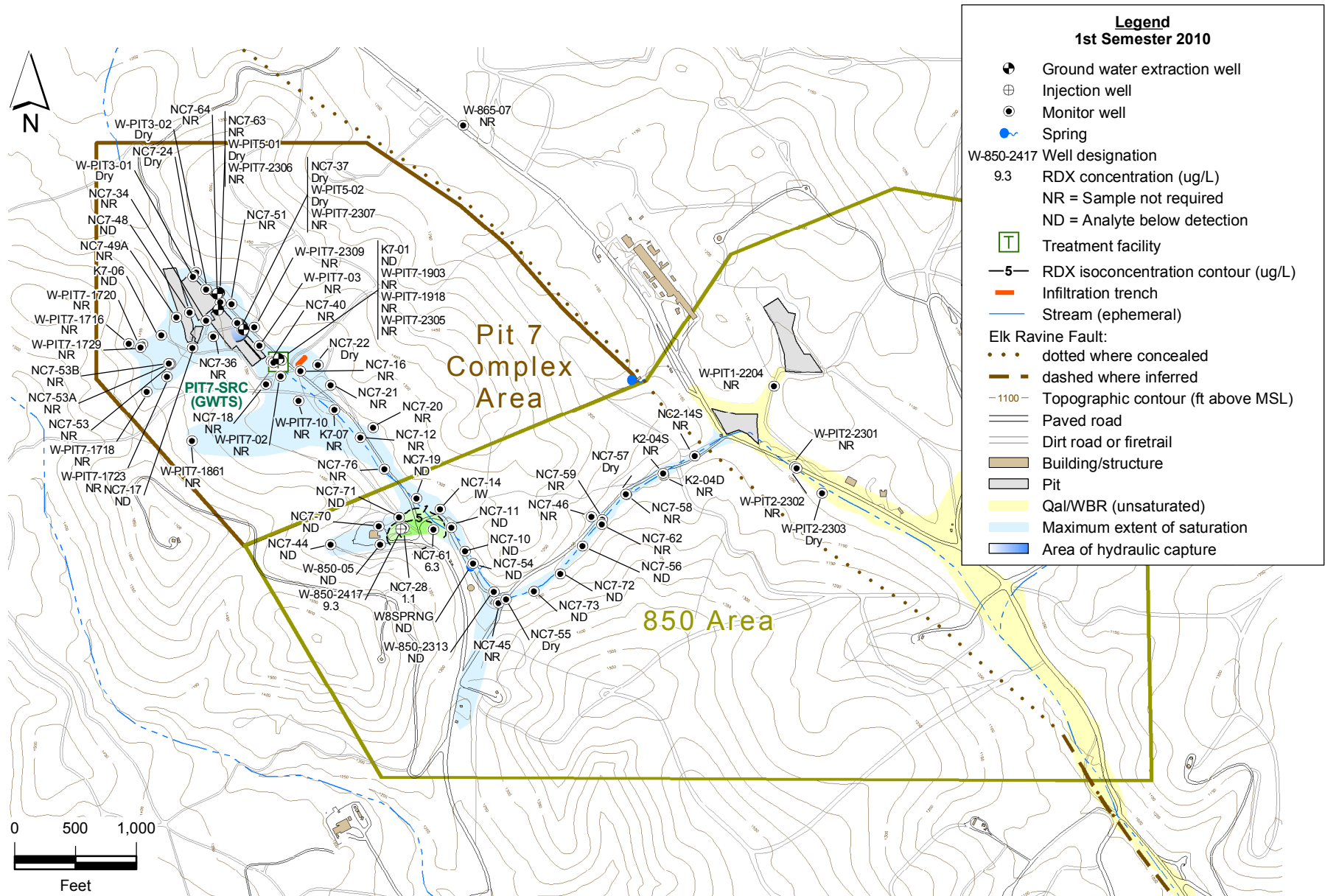


Figure 2.5-15 Building 850 and Pit 7 Complex area RDX isoconcentration contour map for the Qal/WBR HSU.

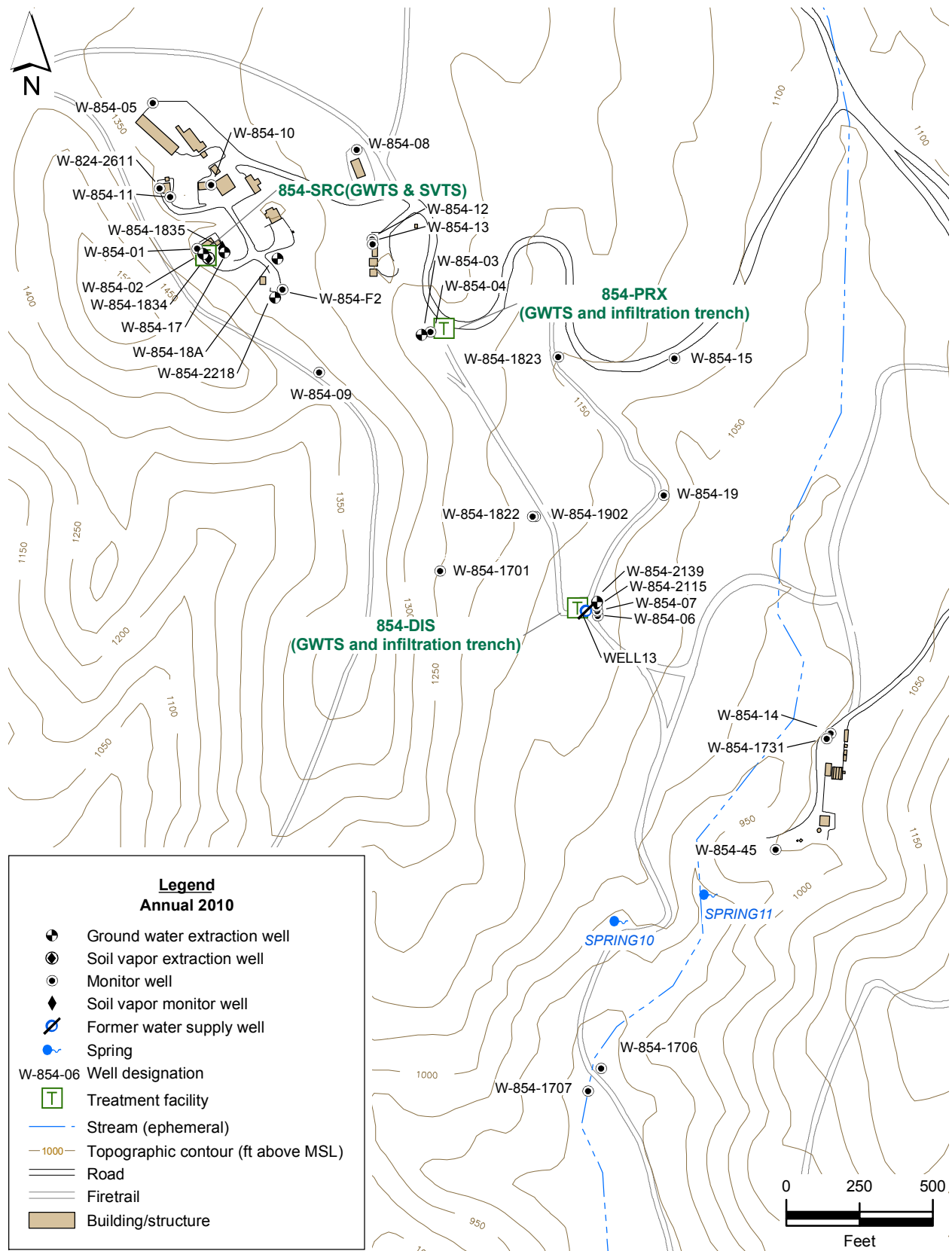


Figure 2.6-1. Building 854 OU site map showing monitor and extraction wells, and treatment facilities.

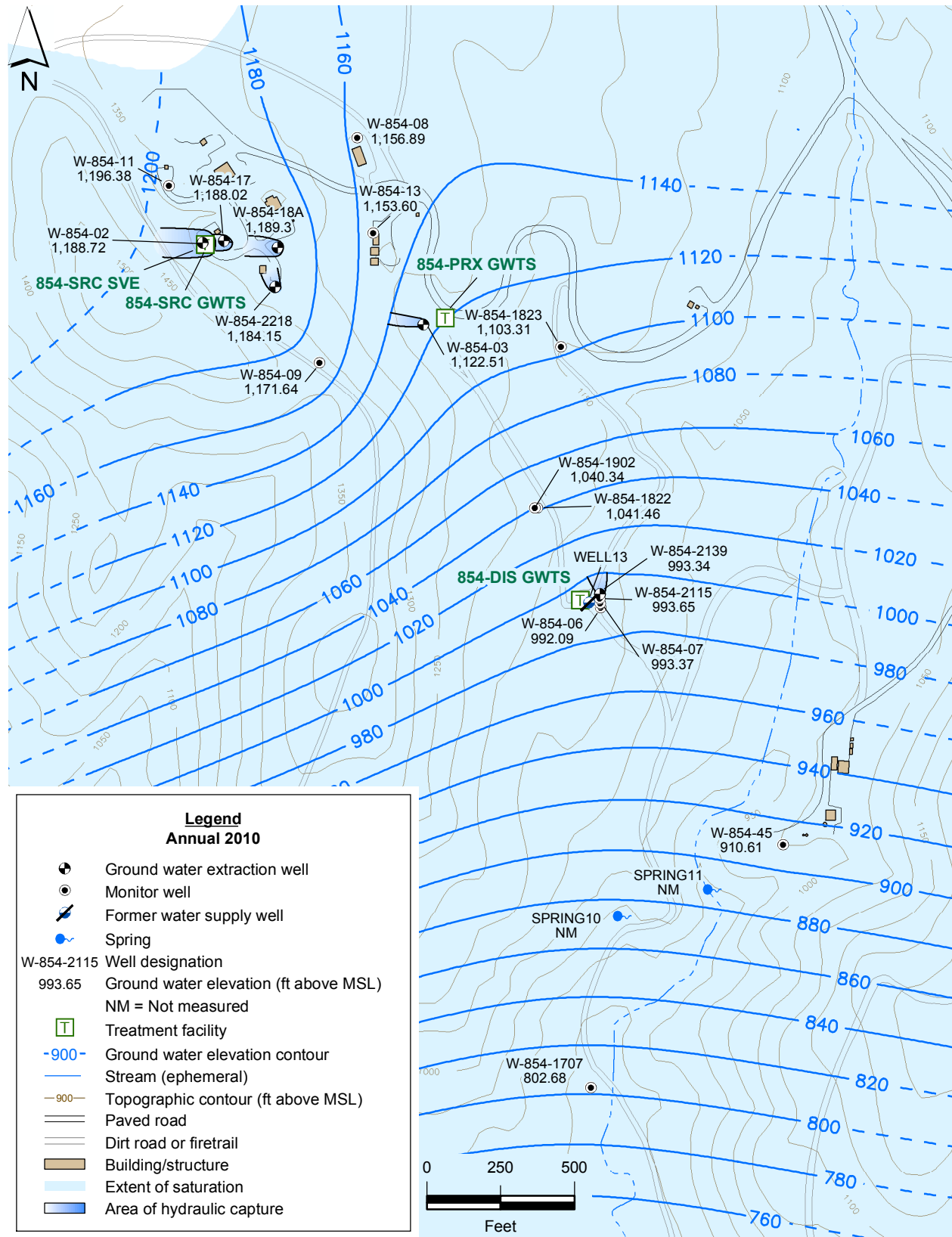


Figure 2.6-2. Building 854 OU ground water potentiometric surface map for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU.

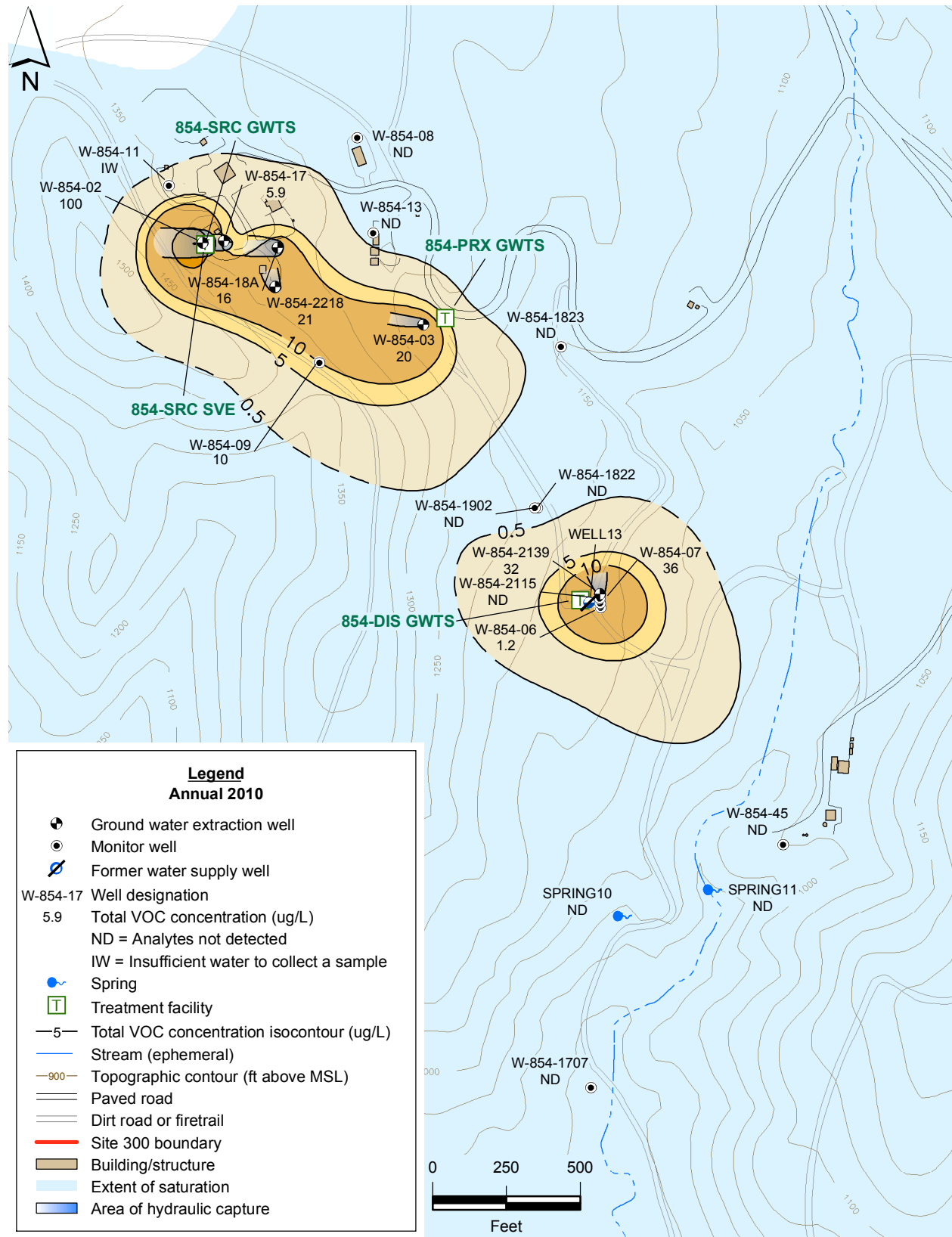


Figure 2.6-3. Building 854 OU total VOC isoconcentration contour map for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU.

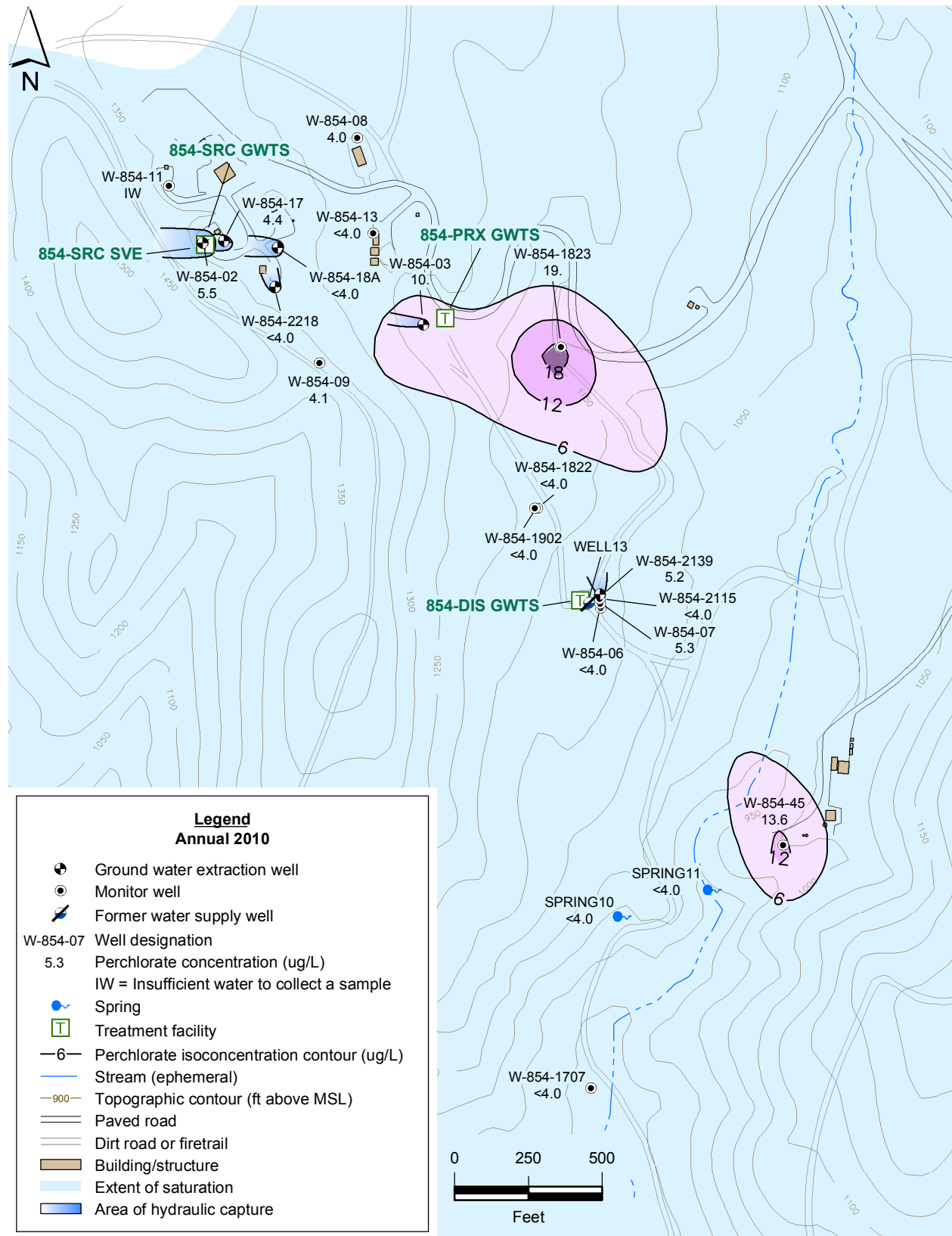


Figure 2.6-4. Building 854 OU perchlorate isoconcentration contour map for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU.

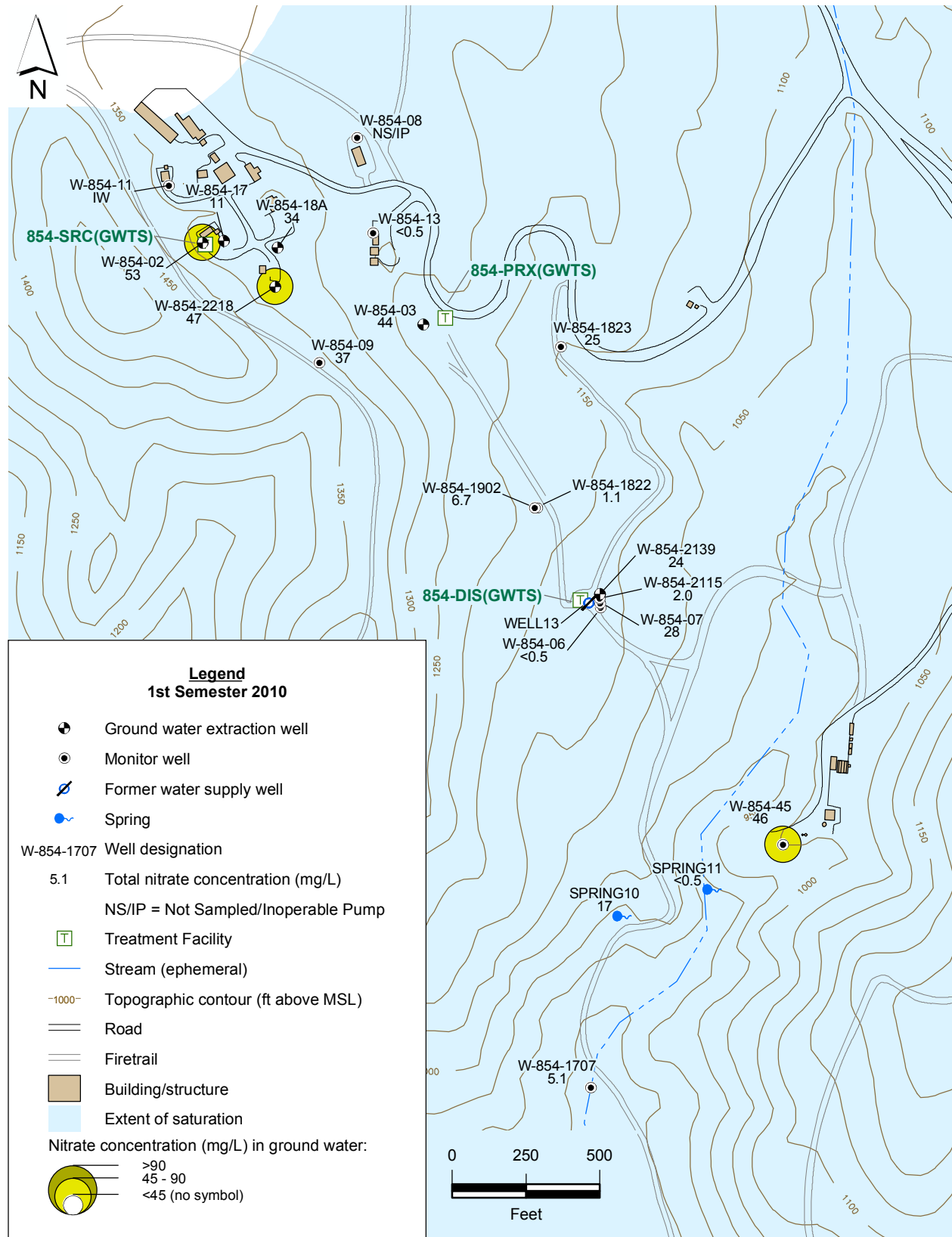


Figure 2.6-5. Building 854 OU map showing nitrate concentrations for the Tnbs<sub>1</sub>/Tnsc<sub>0</sub> HSU.



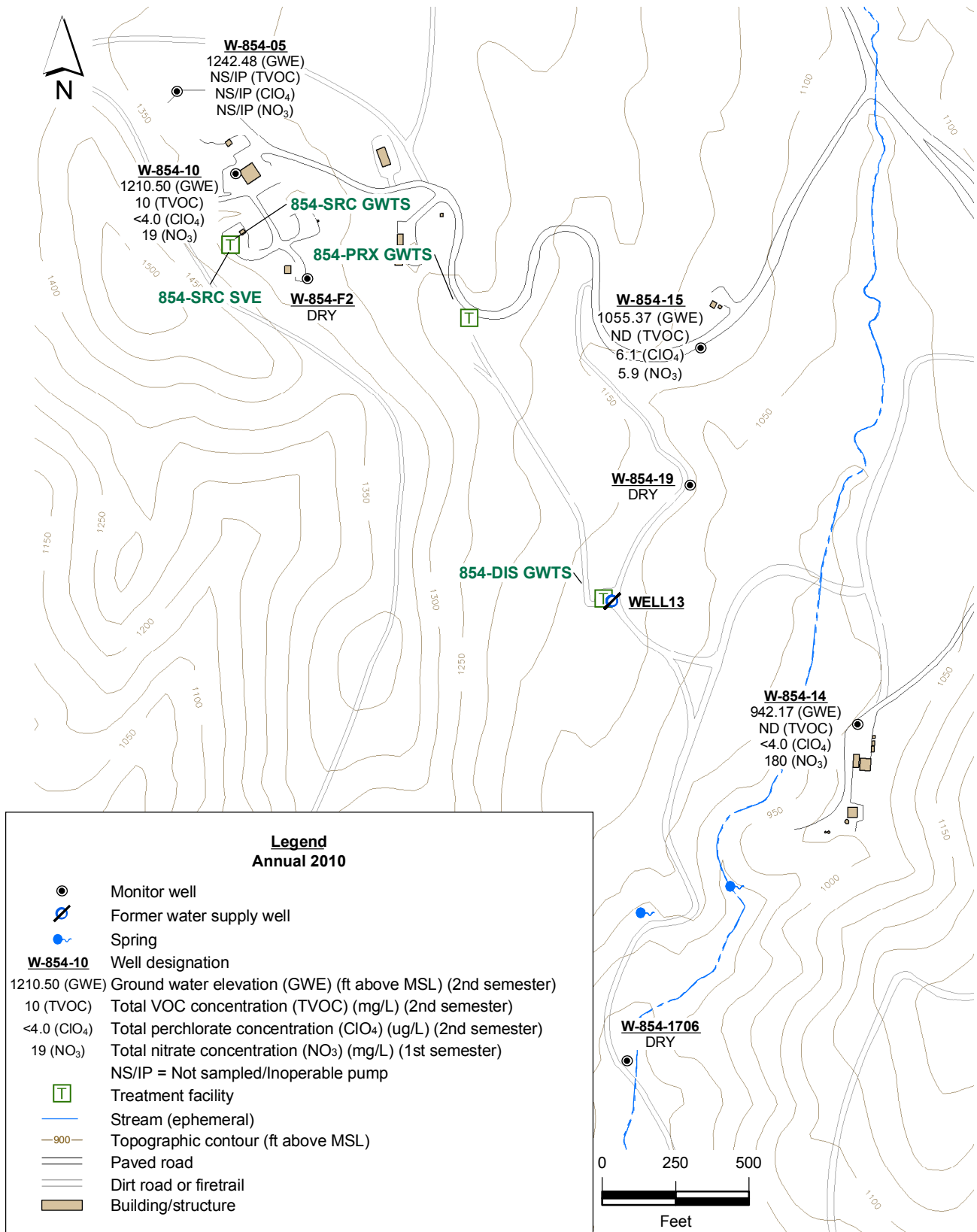


Figure 2.6-6. Building 854 OU map showing ground water elevations, total VOCs, perchlorate, and nitrate concentrations for the combined QIs and Tnbs<sub>1</sub> HSUs.

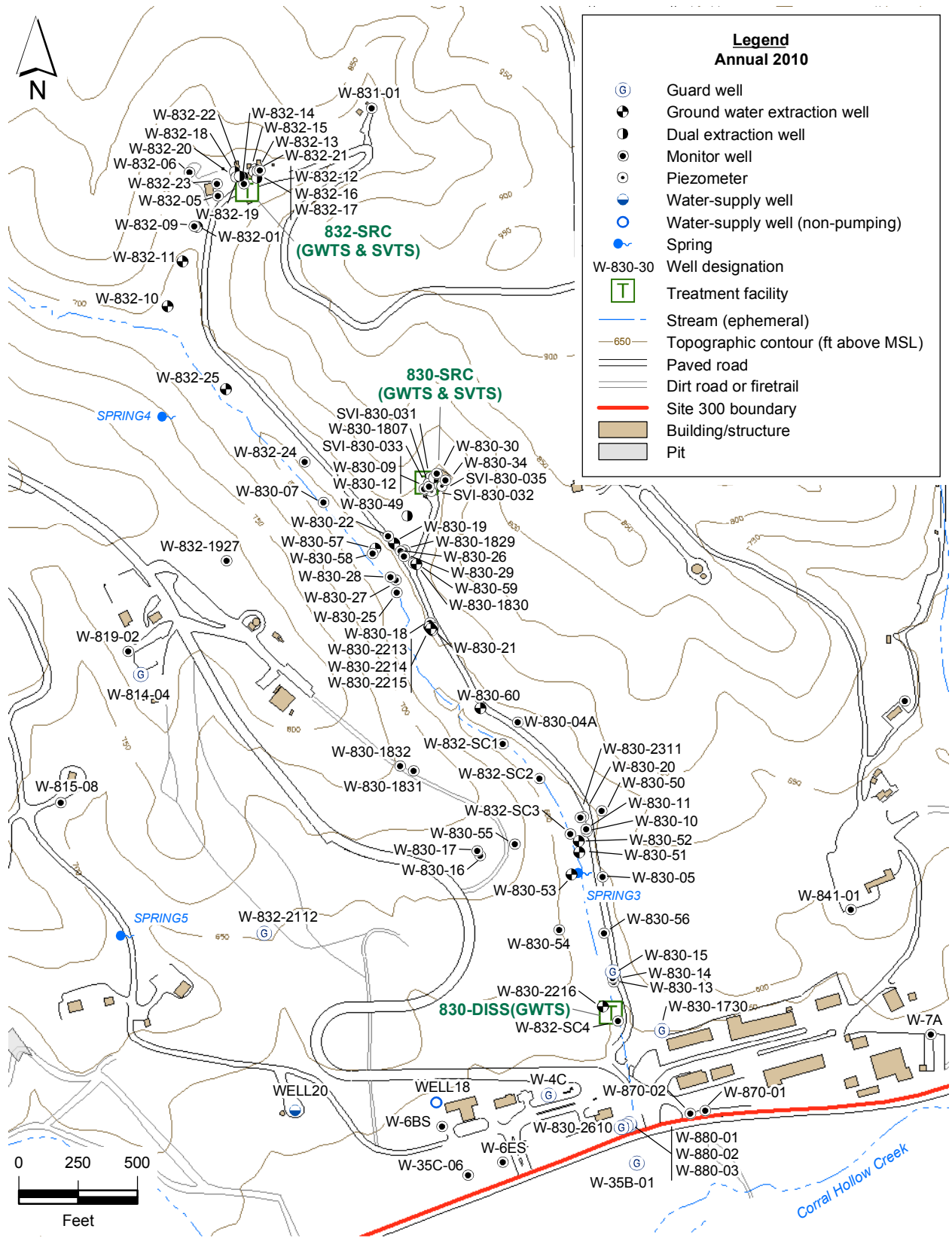


Figure 2.7-1. Building 832 Canyon OU site map showing monitor, extraction and water-supply wells, and treatment facilities.

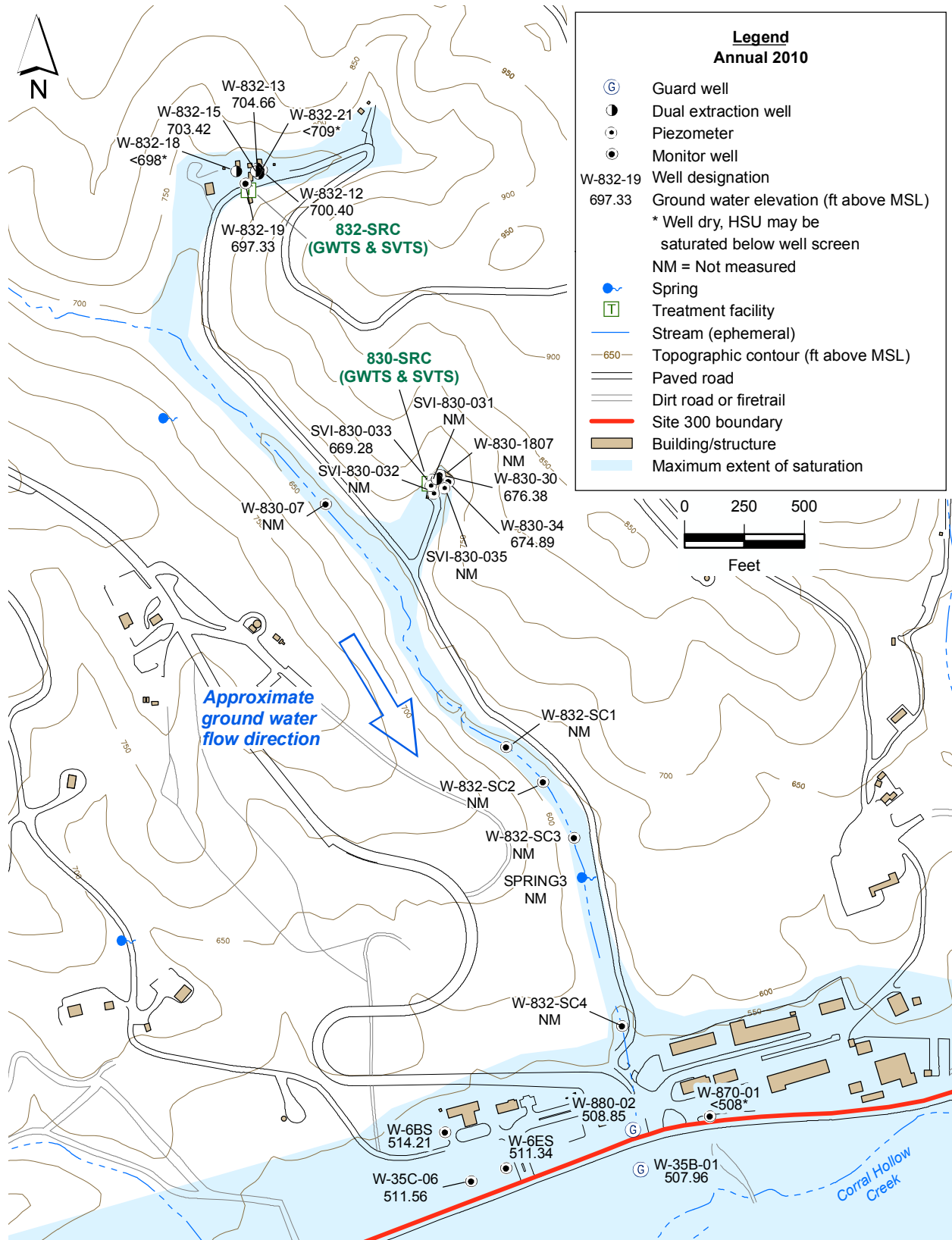


Figure 2.7-2. Building 832 Canyon OU map showing ground water elevations and ground water flow direction for the Qal/WBR HSU.

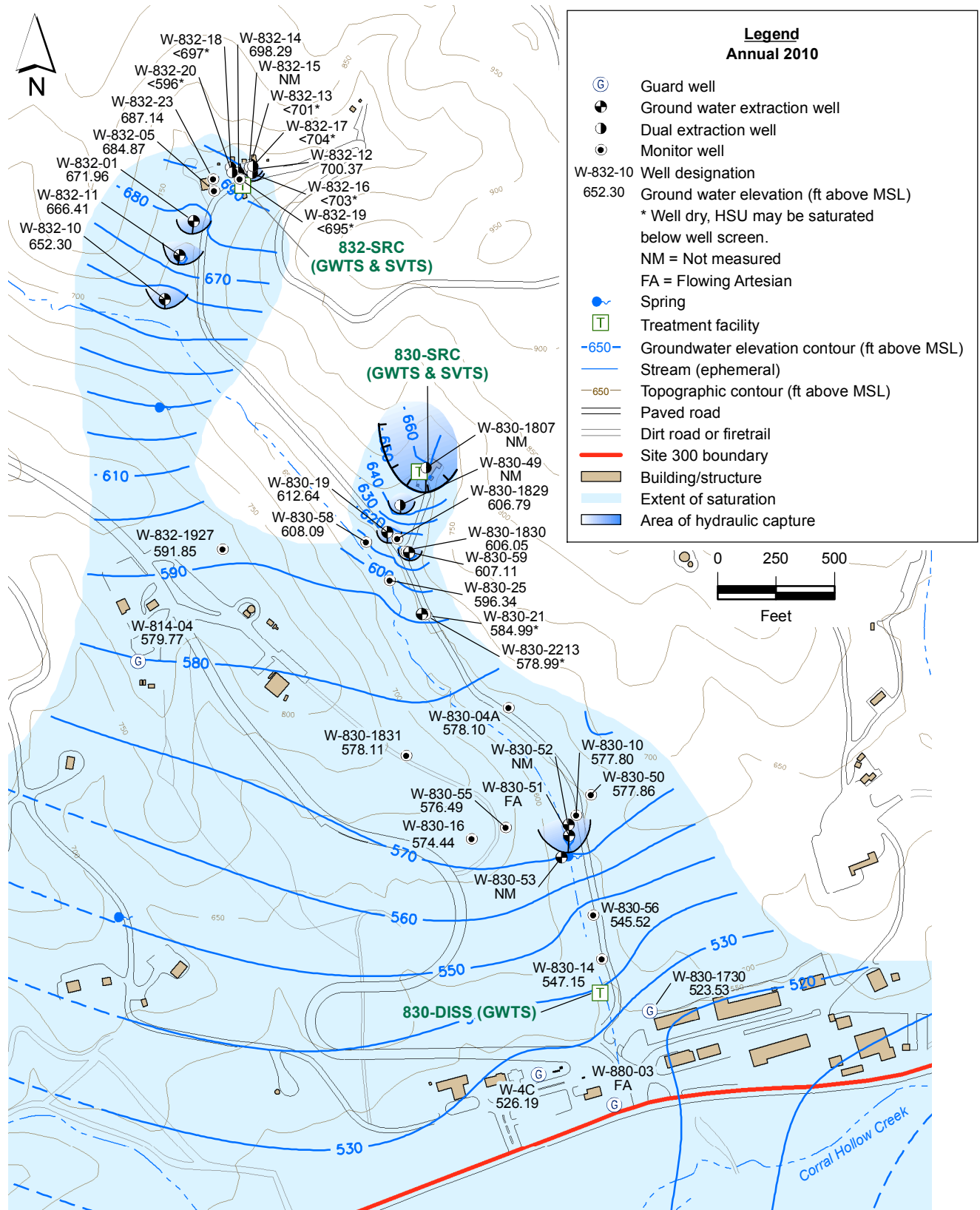


Figure 2.7-3. Building 832 Canyon OU ground water potentiometric surface map for the Tnsc<sub>1b</sub> HSU.

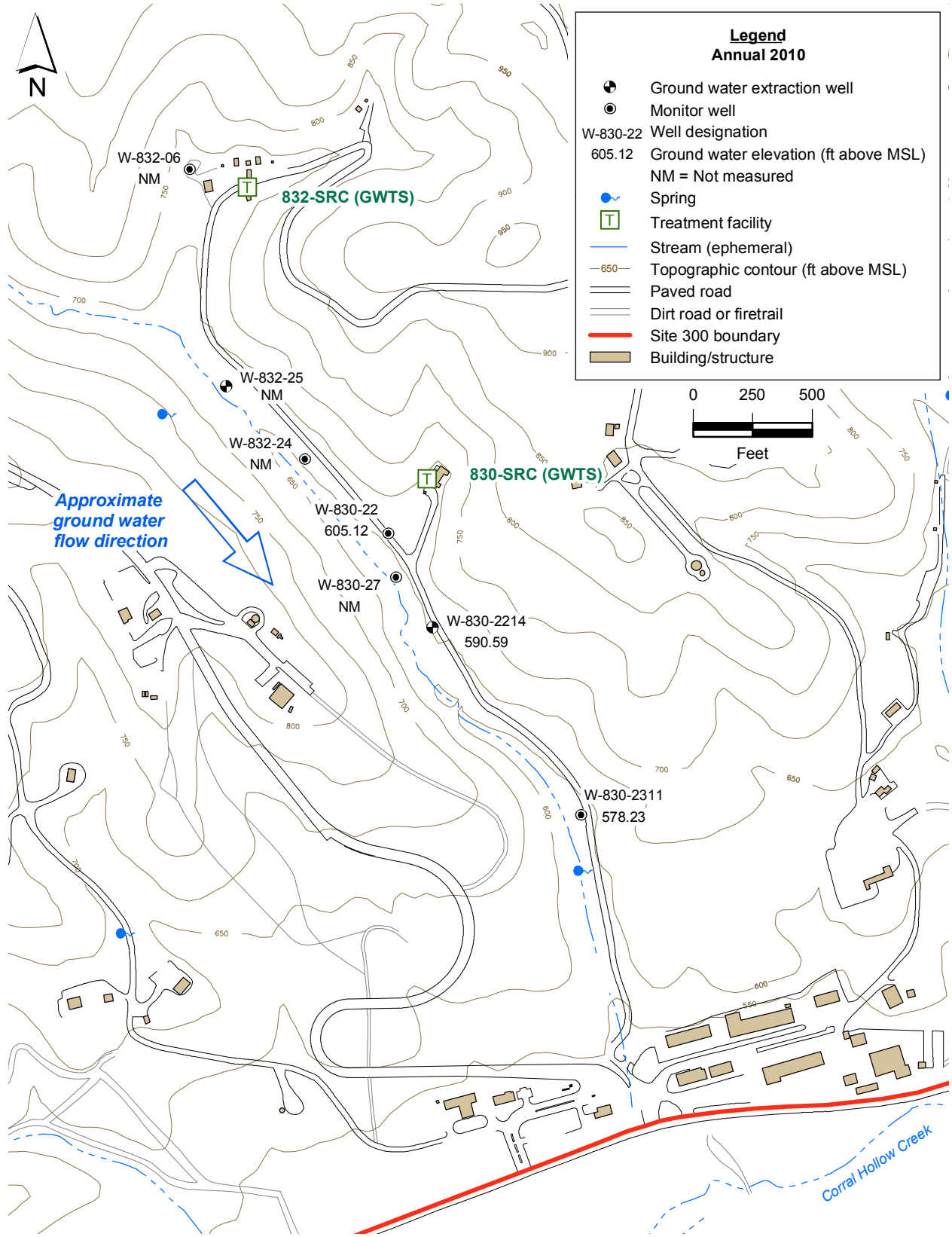


Figure 2.7-4. Building 832 Canyon OU map showing ground water elevations and ground water flow direction for the Tnsc<sub>1a</sub> HSU.

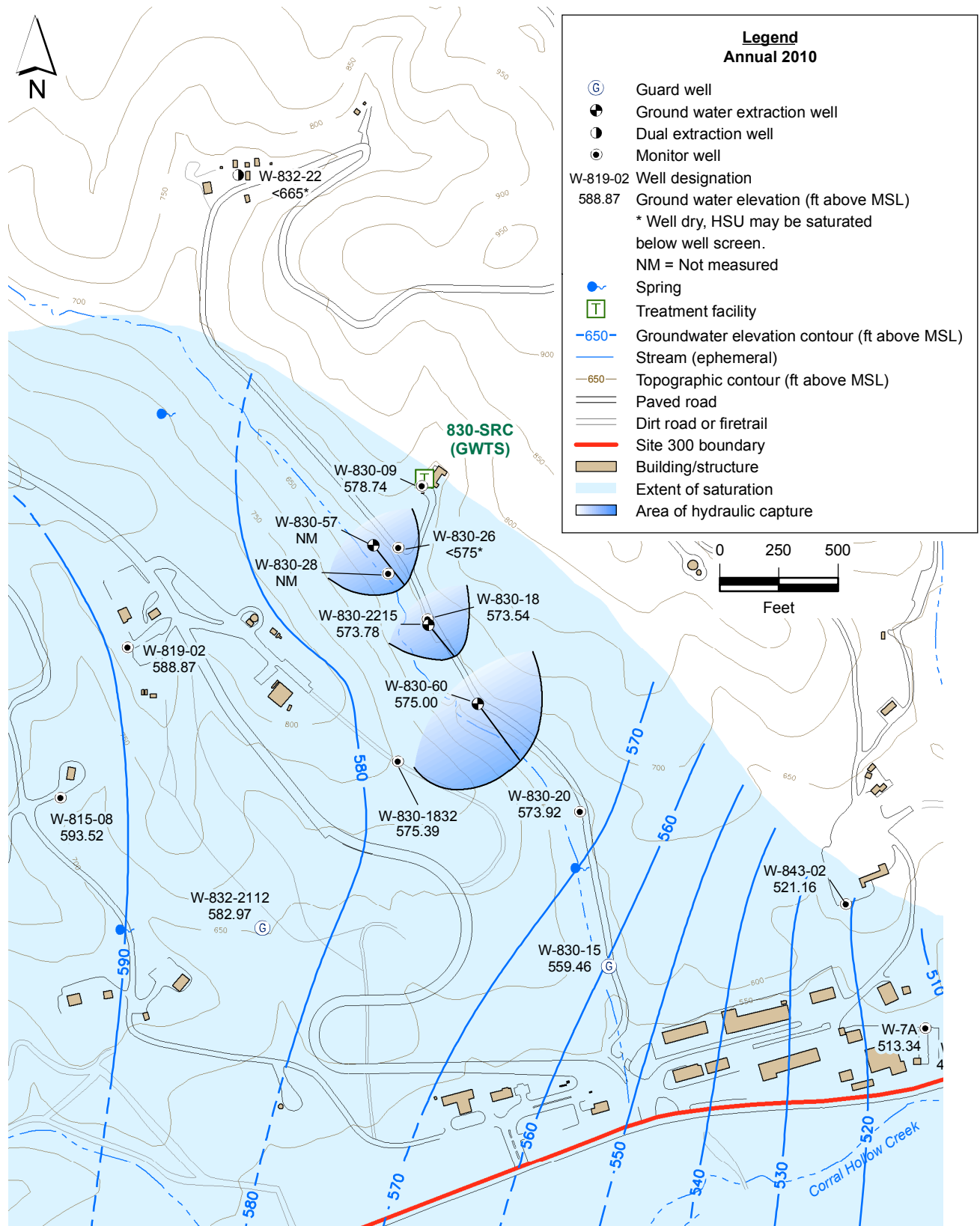


Figure 2.7-5. Building 832 Canyon OU ground water potentiometric surface map for the Upper Tnbs<sub>1</sub> HSU.

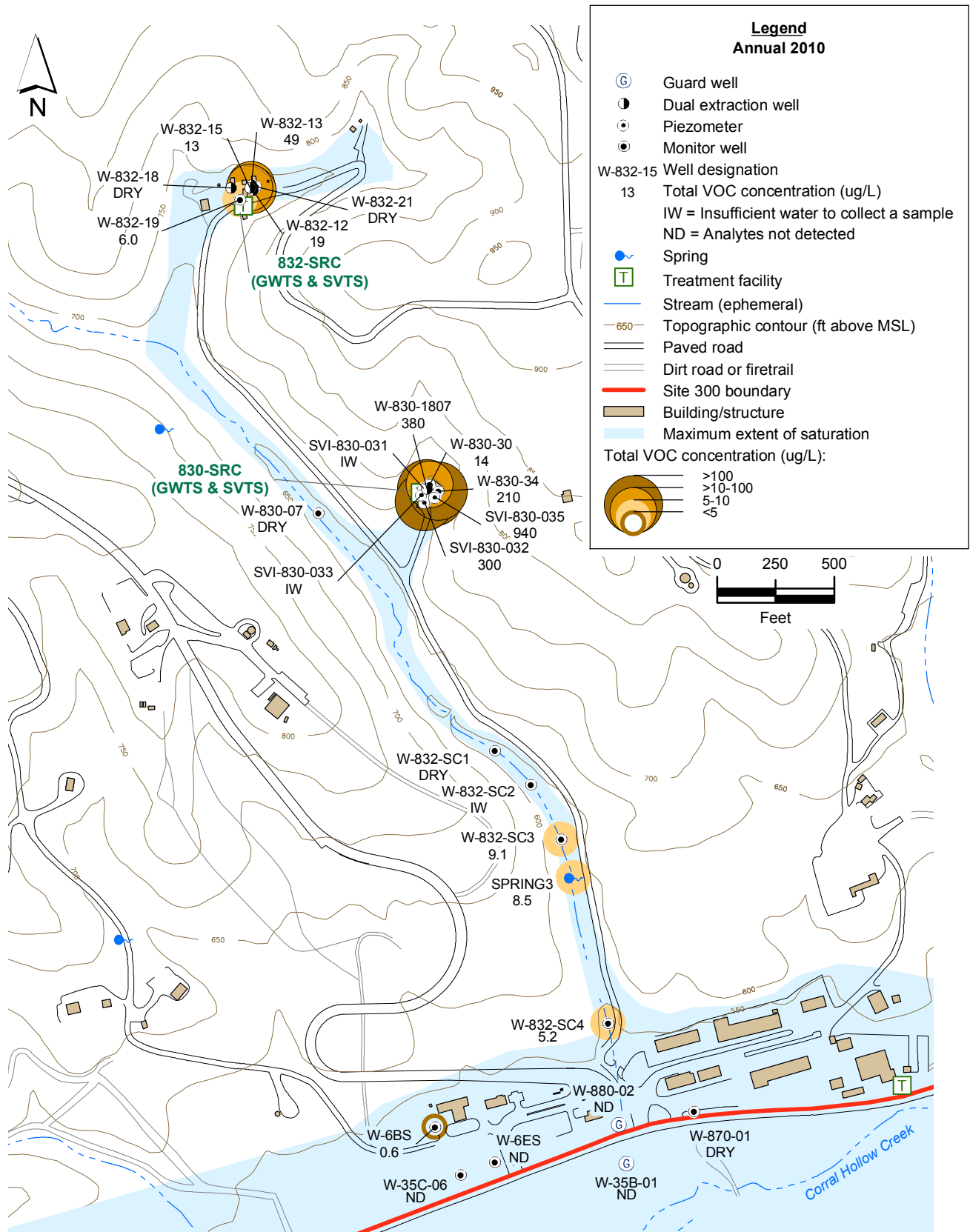


Figure 2.7-6. Building 832 Canyon OU map showing total VOC concentrations for the Qal/WBR HSU.

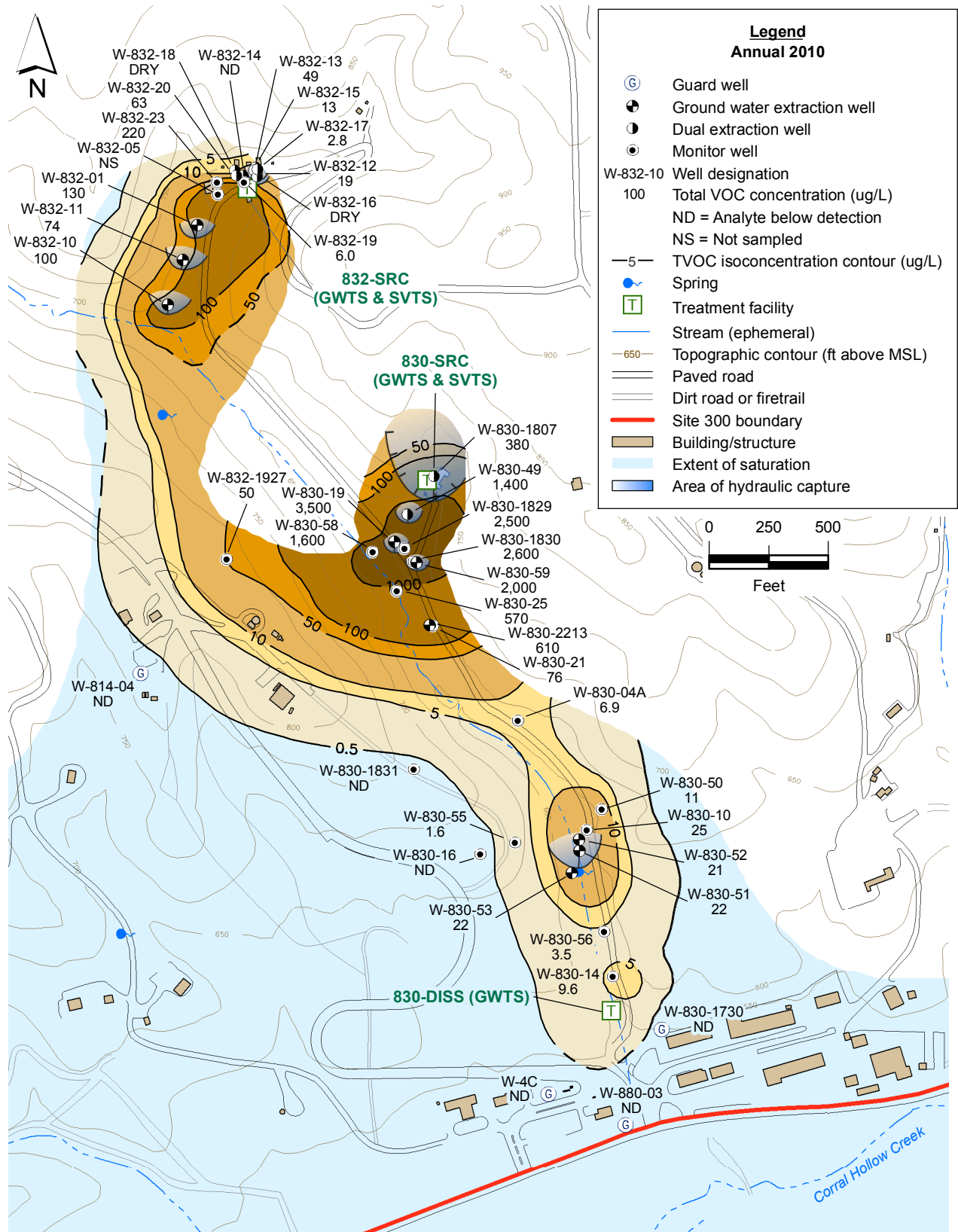


Figure 2.7-7. Building 832 Canyon OU total VOC isoconcentration contour map for the Tnsc<sub>1b</sub> HSU.



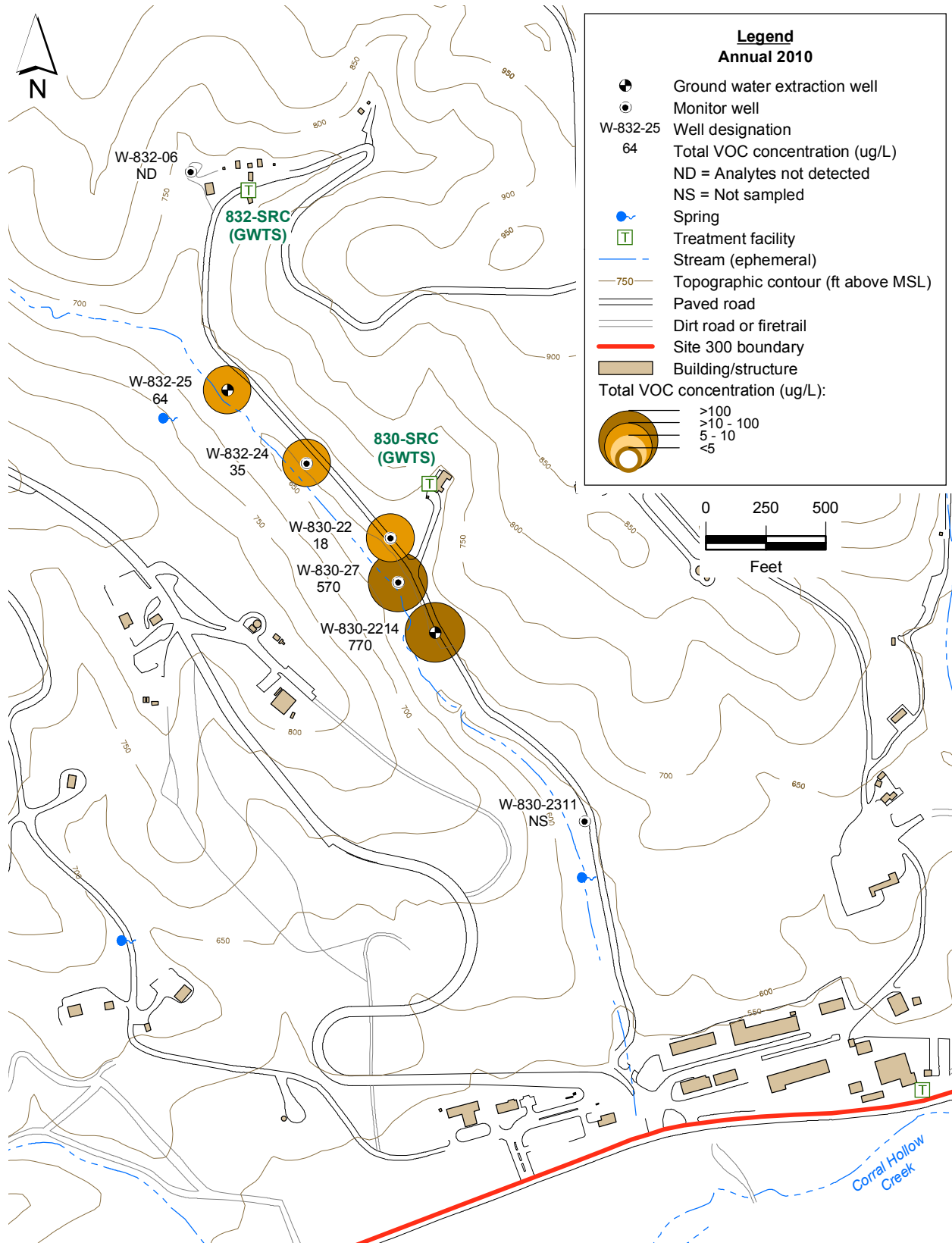


Figure 2.7-8. Building 832 Canyon OU map showing total VOC concentrations for the Tnsc<sub>1a</sub> HSU.

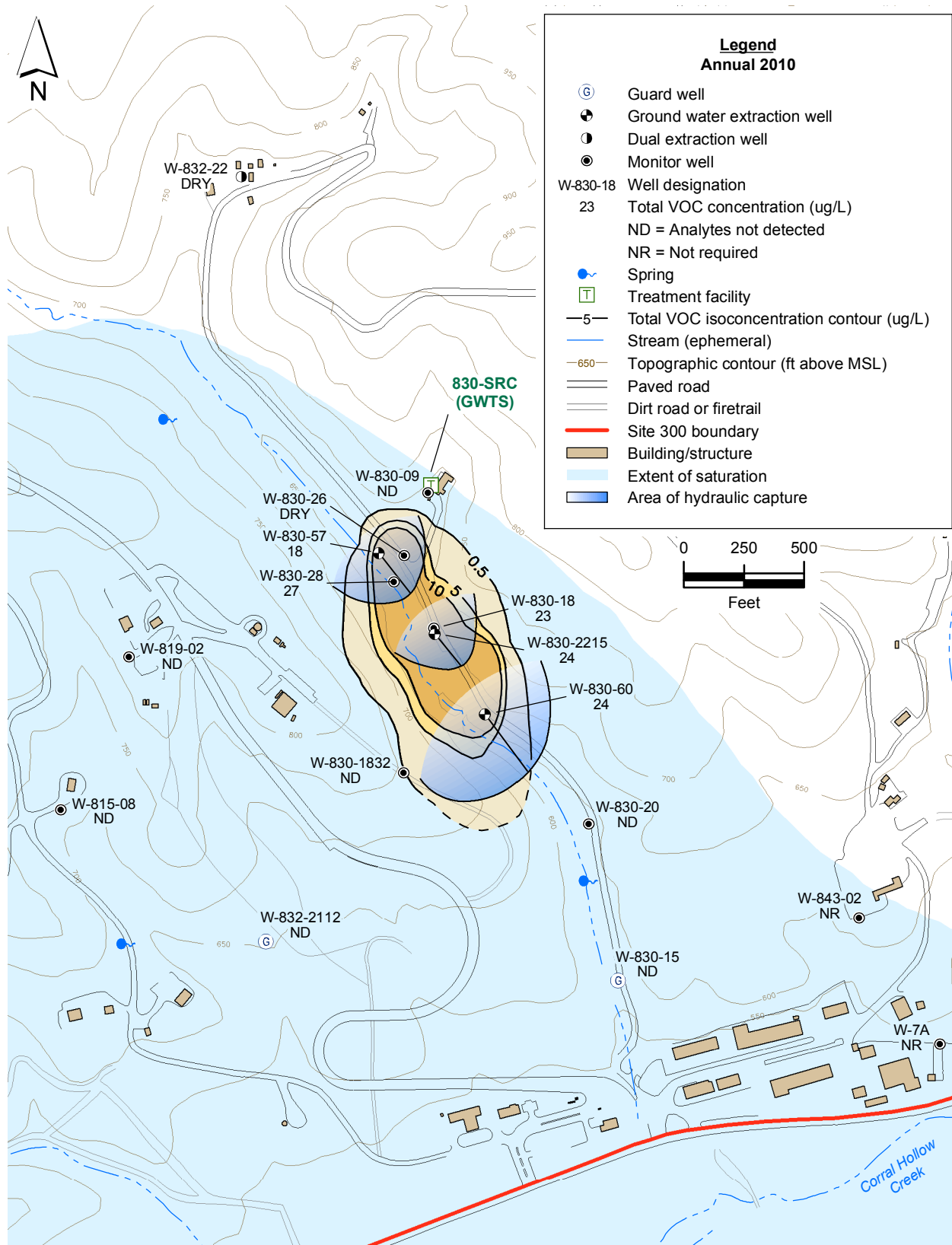


Figure 2.7-9. Building 832 Canyon OU total VOC isoconcentration contour map for the Upper Tnbs<sub>1</sub> HSU.

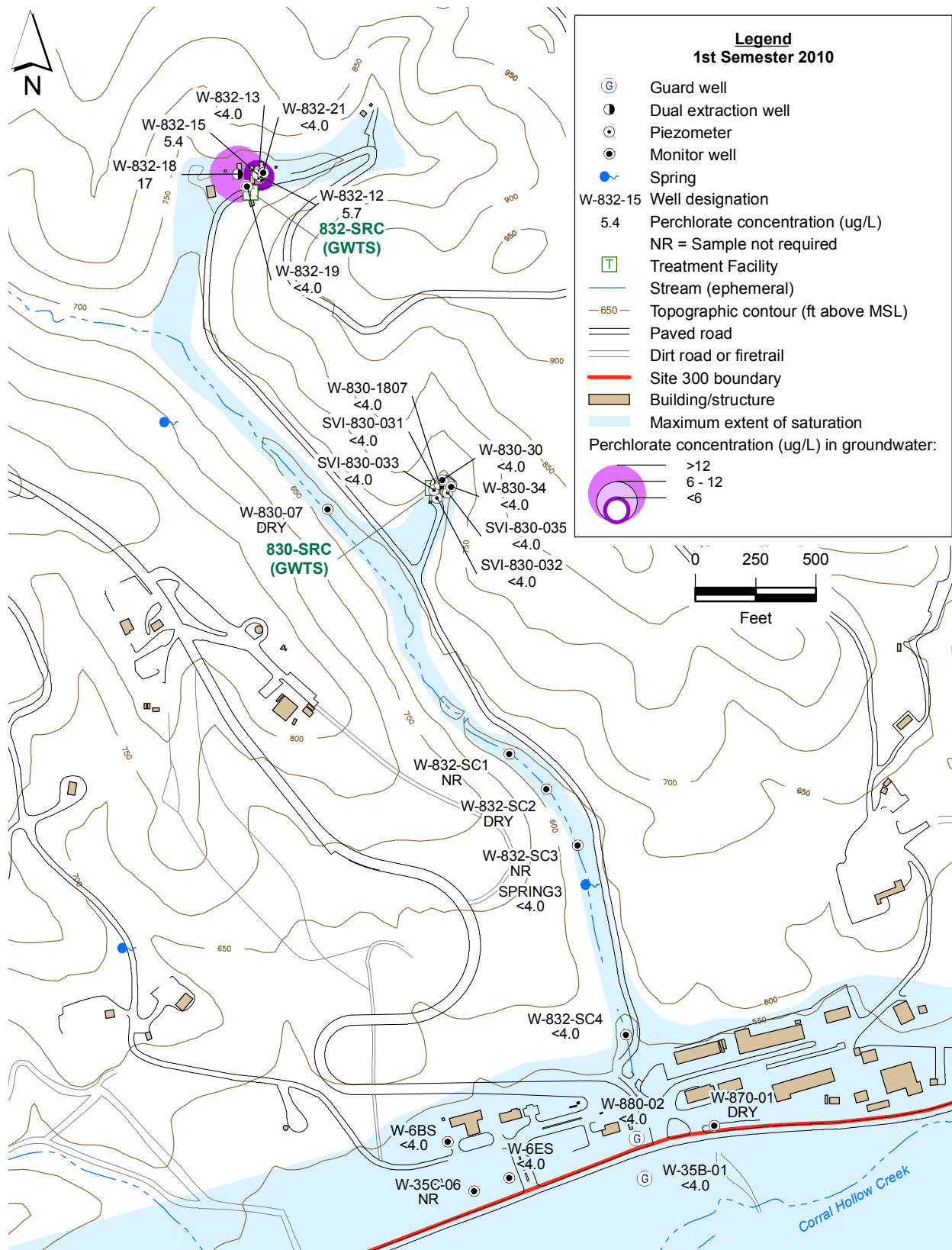


Figure 2.7-10. Building 82 Canyon OU map showing perchlorate concentrations for the Qa1/WBR HSU.

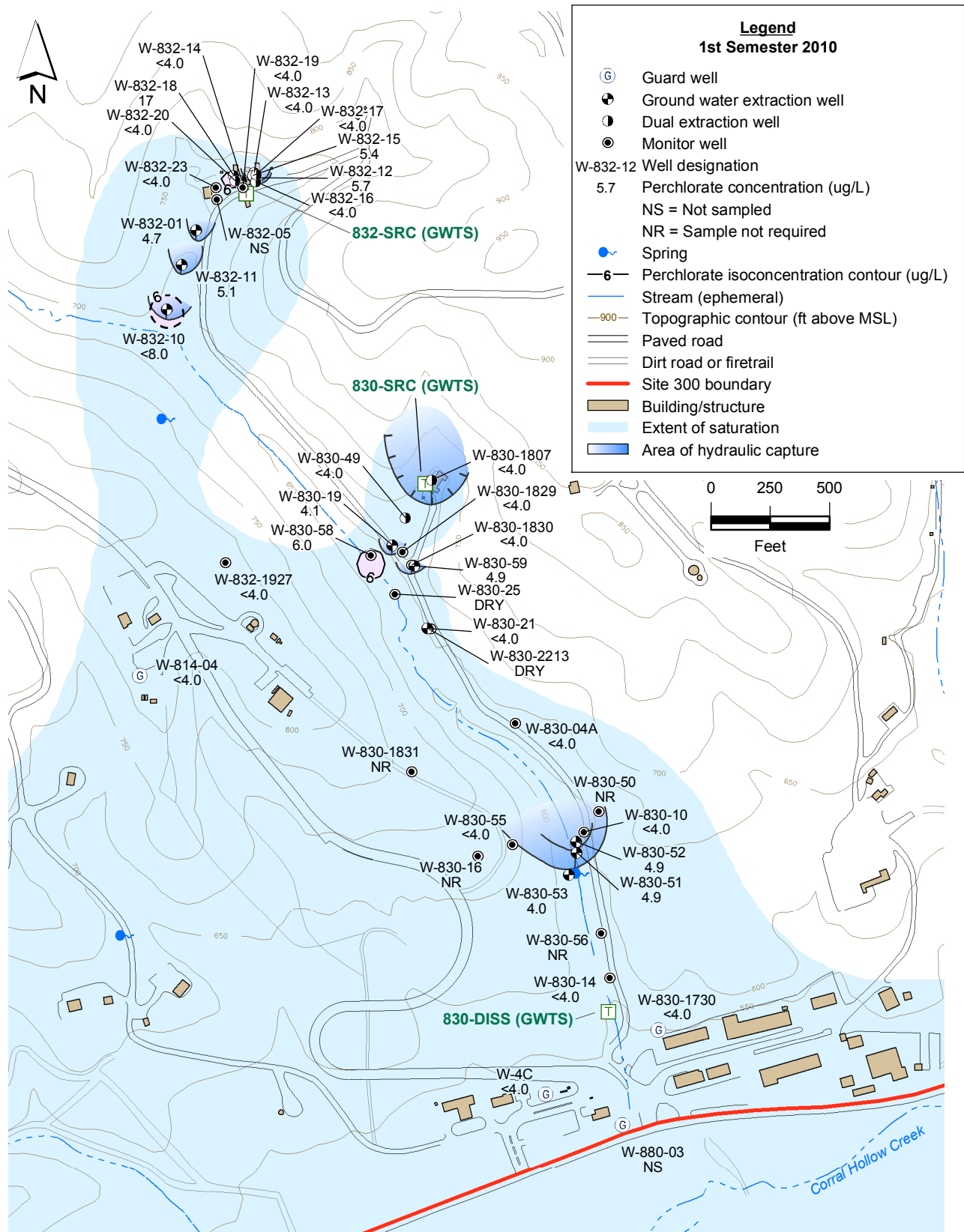


Figure 2.7-11. Building 832 Canyon OU perchlorate isoconcentration contour map for the Tnsc<sub>1b</sub> HSU.

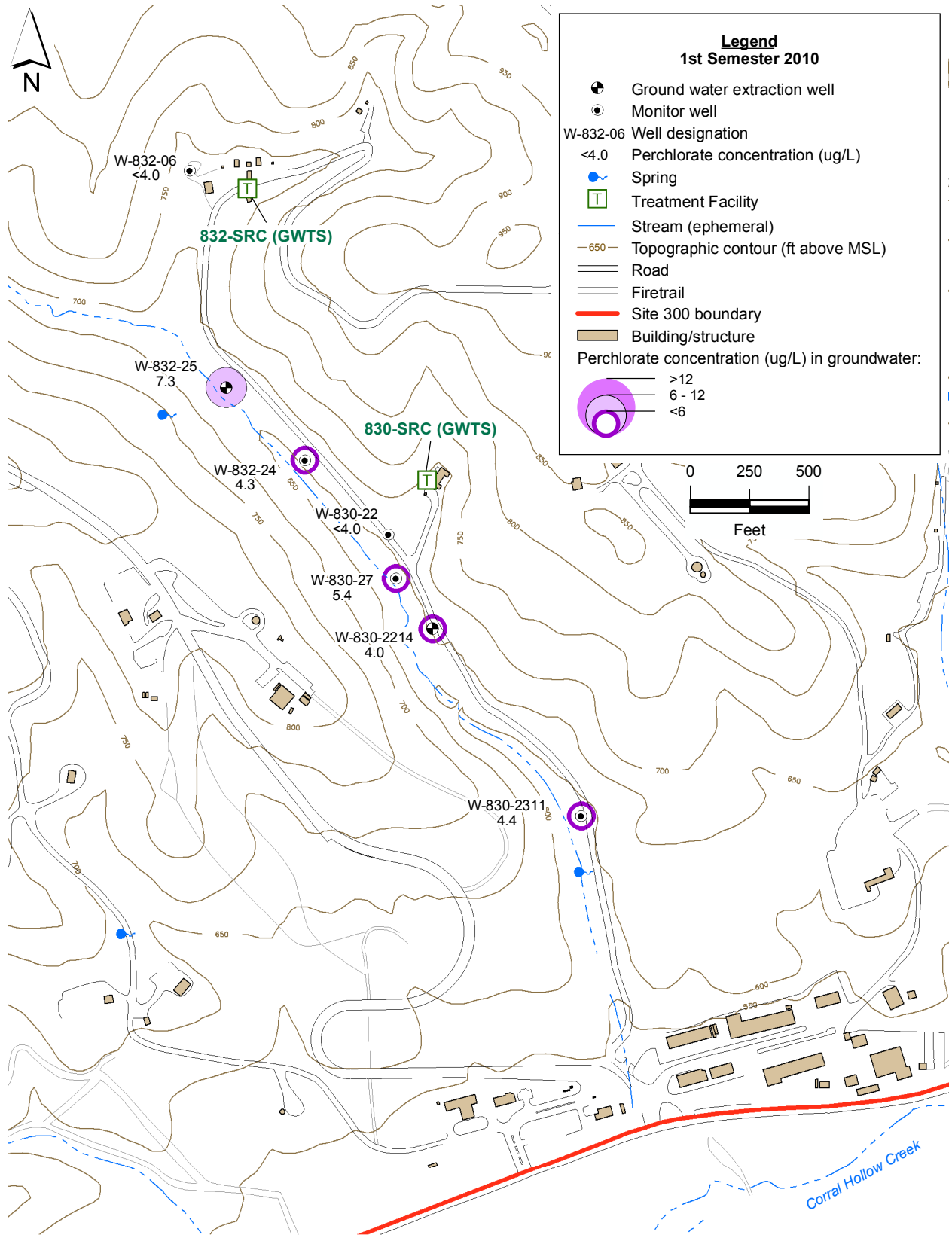


Figure 2.7-12. Building 832 Canyon OU map showing perchlorate concentrations for the Tnsc<sub>1a</sub> HSU.

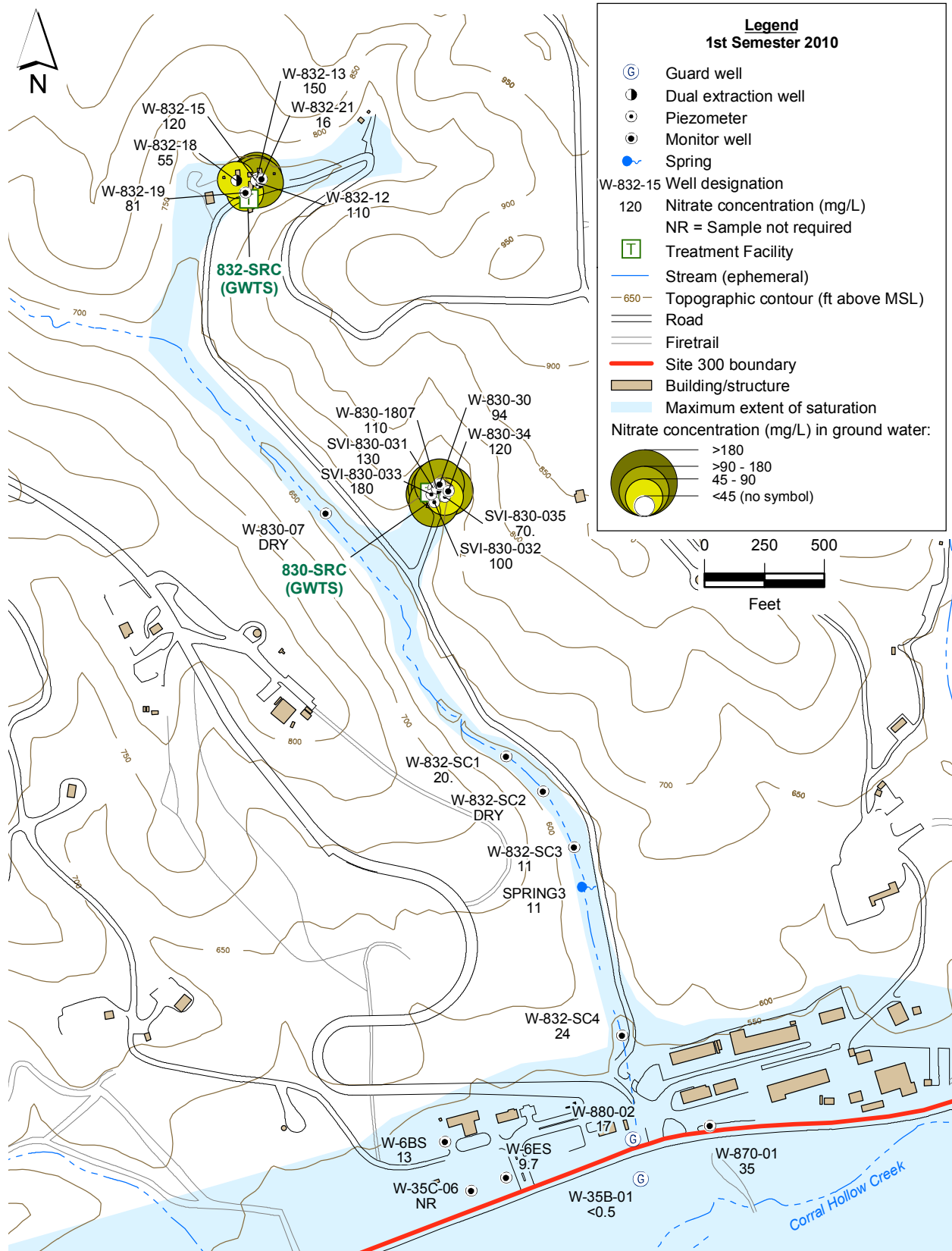


Figure 2.7-13. Building 832 Canyon OU map showing nitrate concentrations for the Qal/WBR HSU.

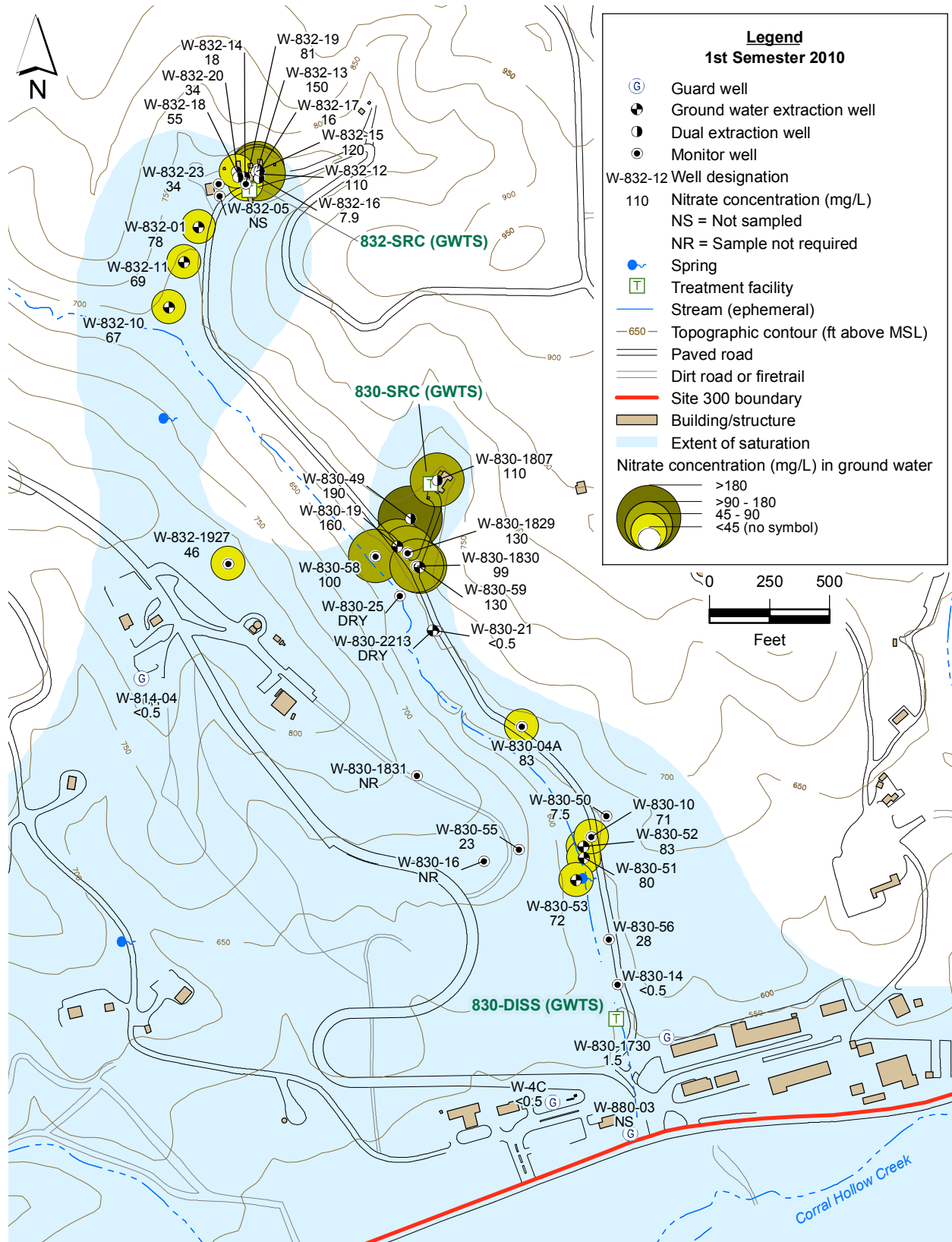


Figure 2.7-14. Building 832 Canyon OU map showing nitrate concentrations for the Tnsc<sub>1b</sub> HSU.

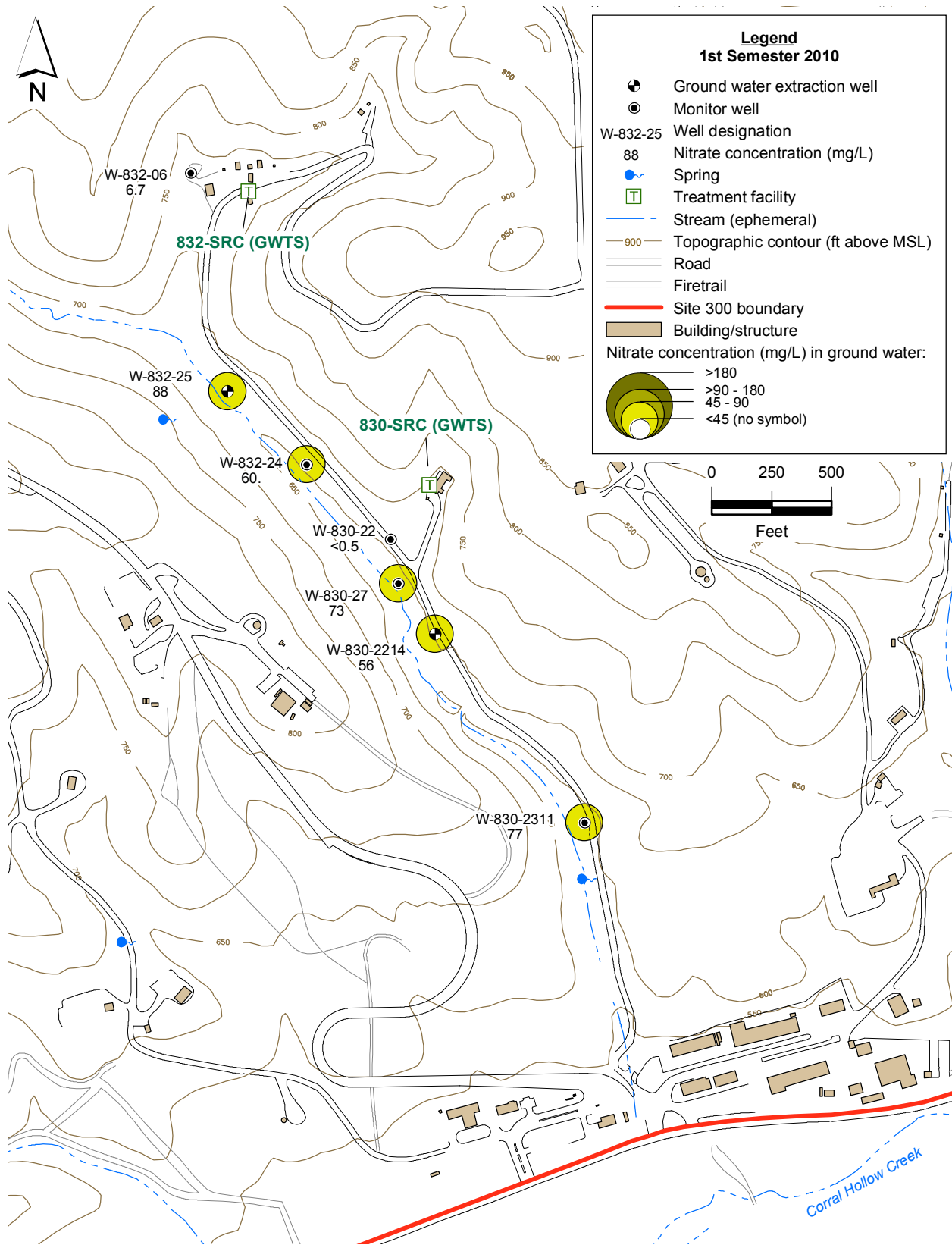


Figure 2.7-15. Building 832 Canyon OU map showing nitrate concentrations for the Tnsc<sub>1a</sub> HSU.



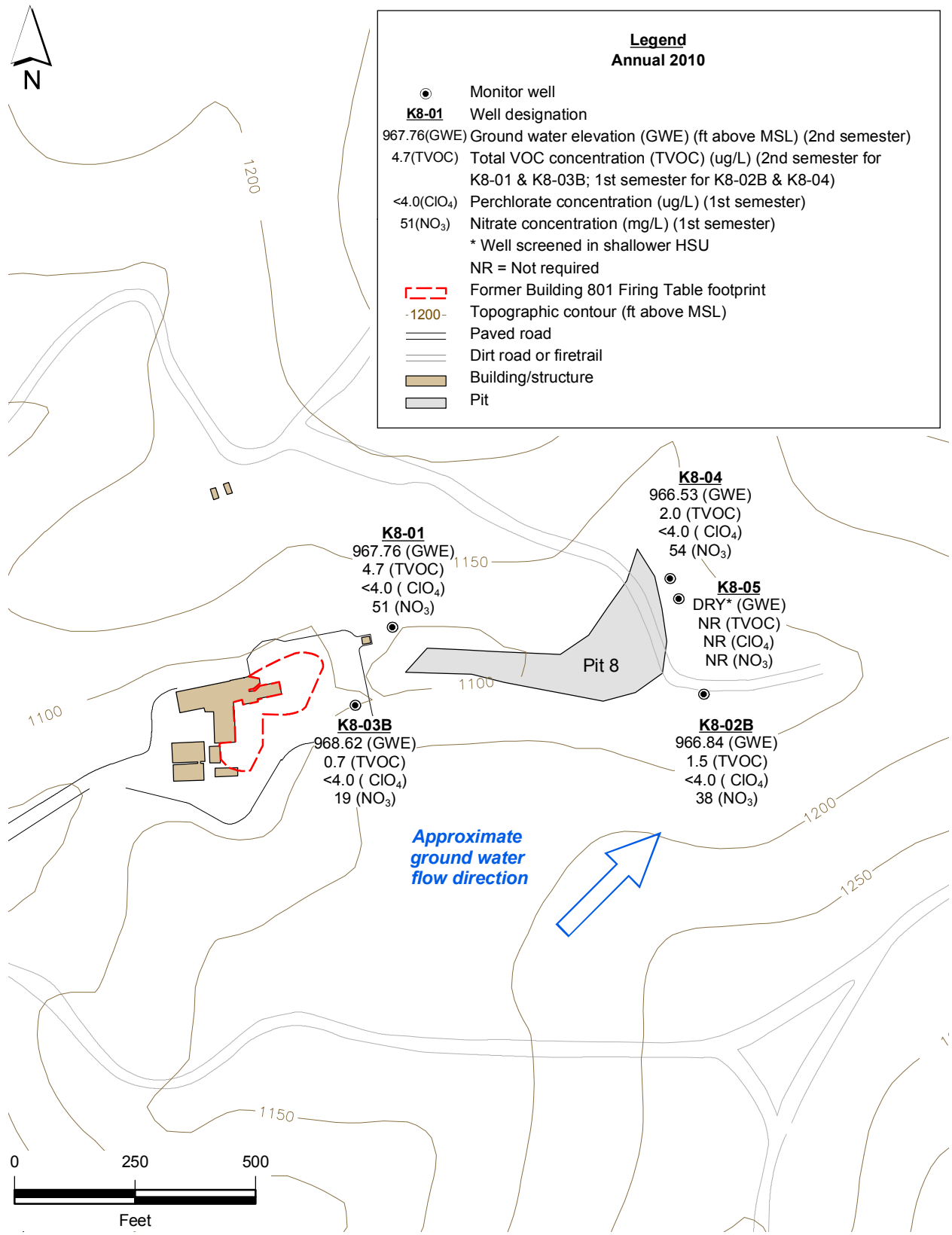


Figure 2.8-1. Building 801 Firing Table and Pit 8 Landfill site map showing monitor well locations, ground water elevations, and nitrate, perchlorate and total VOC concentrations, and ground water flow direction in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.

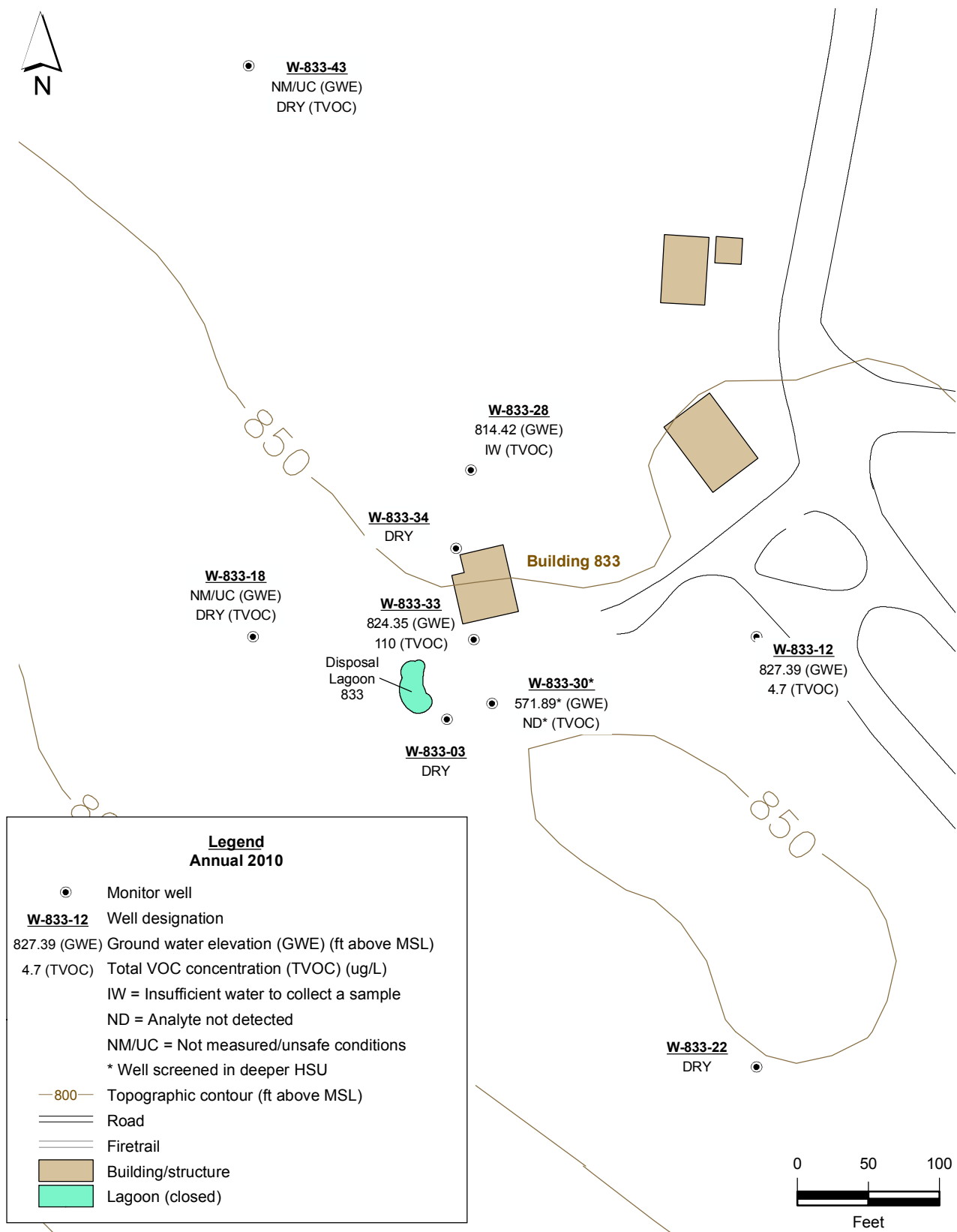


Figure 2.8-2. Building 833 site map showing monitor well locations, ground water elevations and total VOC concentrations in the Tpsg HSU.

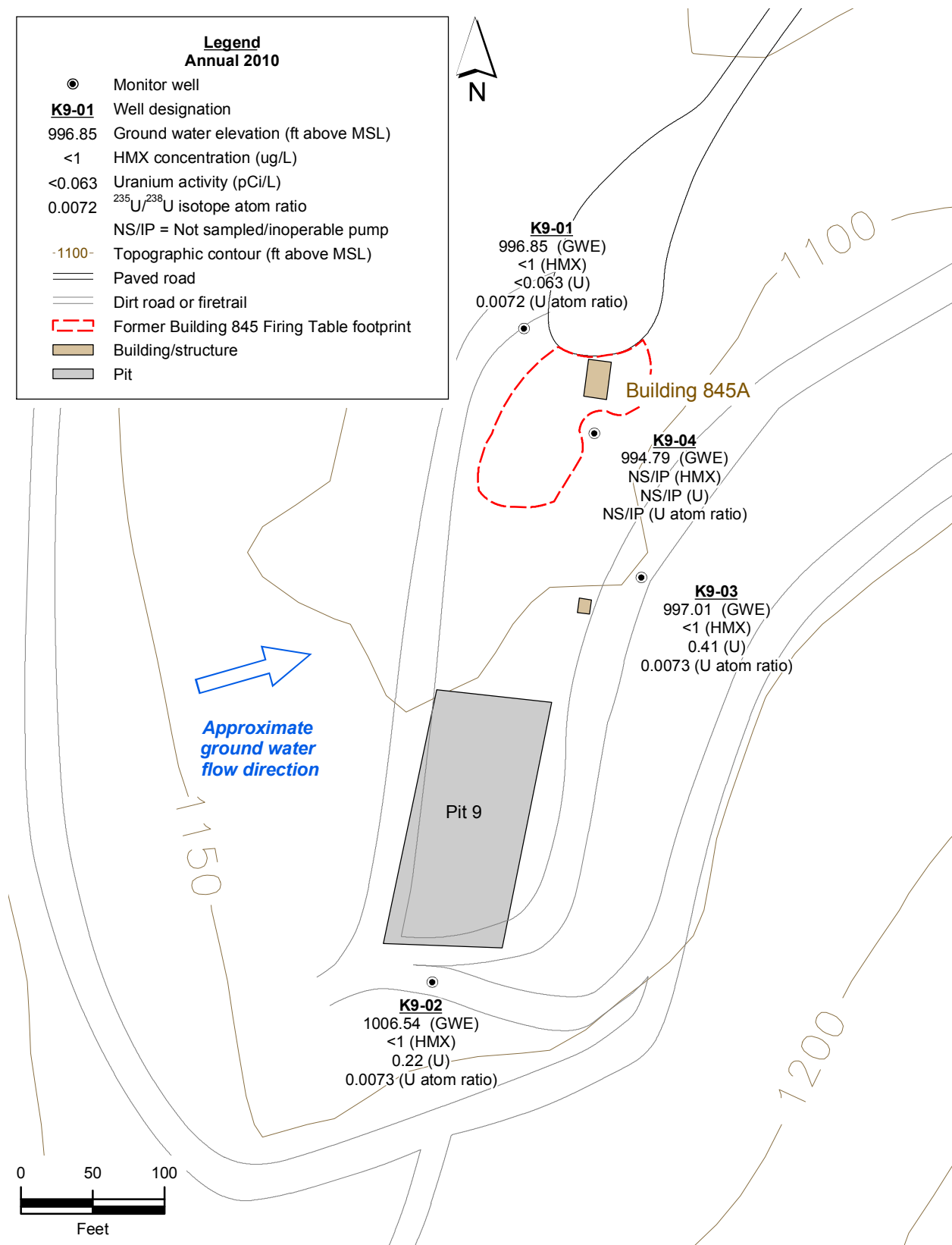


Figure 2.8-3. Building 845 Firing Table and Pit 9 Landfill site map showing monitor well locations, ground water elevations, ground water flow direction, and HMX concentrations, uranium activities and <sup>235</sup>U/<sup>238</sup>U isotope atom ratios in the Tnsc<sub>0</sub> HSU.

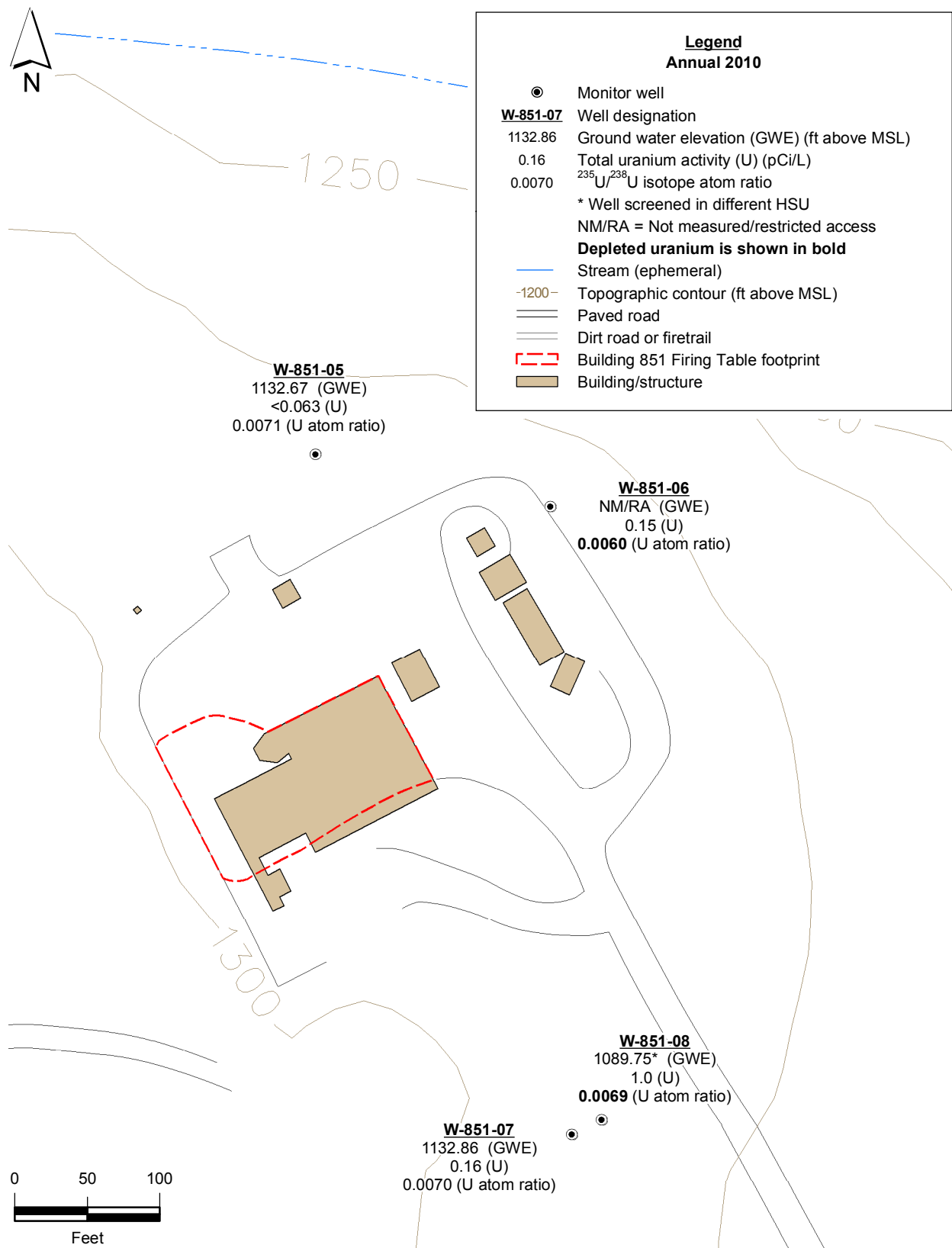


Figure 2.8-4. Building 851 Firing Table site map showing monitor well locations, ground water elevations, uranium activities, and <sup>235</sup>U/<sup>238</sup>U isotope atom ratios in the Tmss HSU.

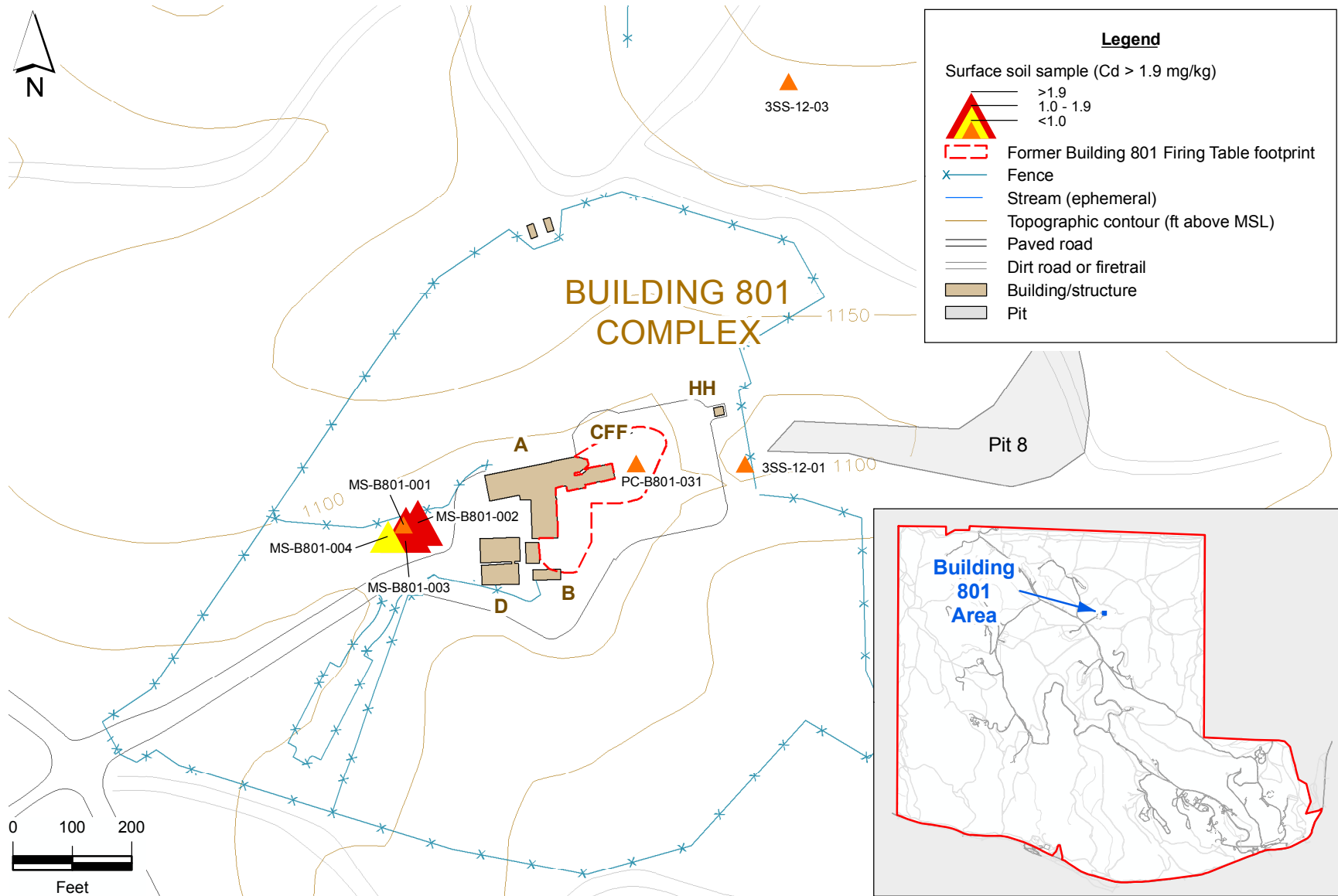
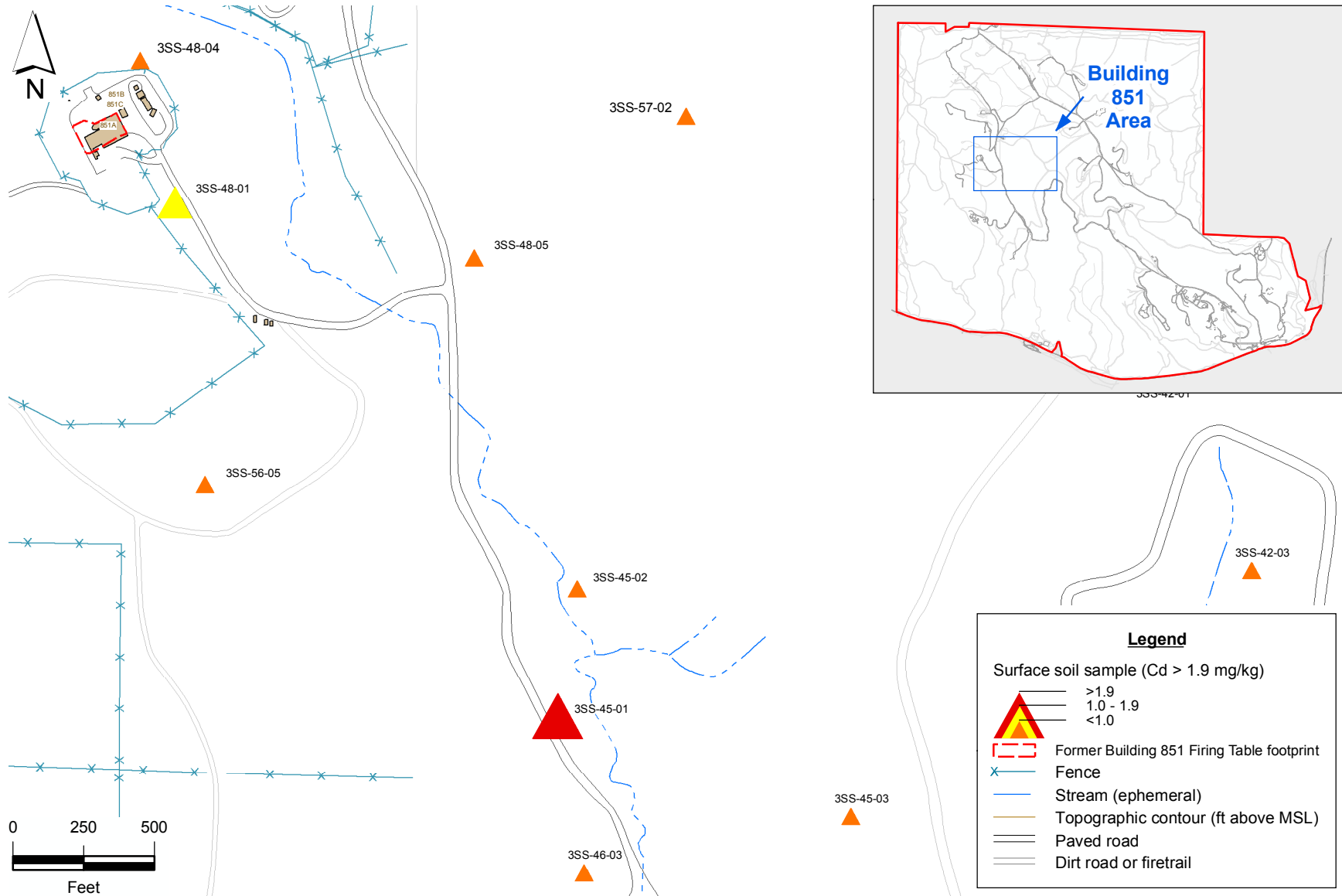
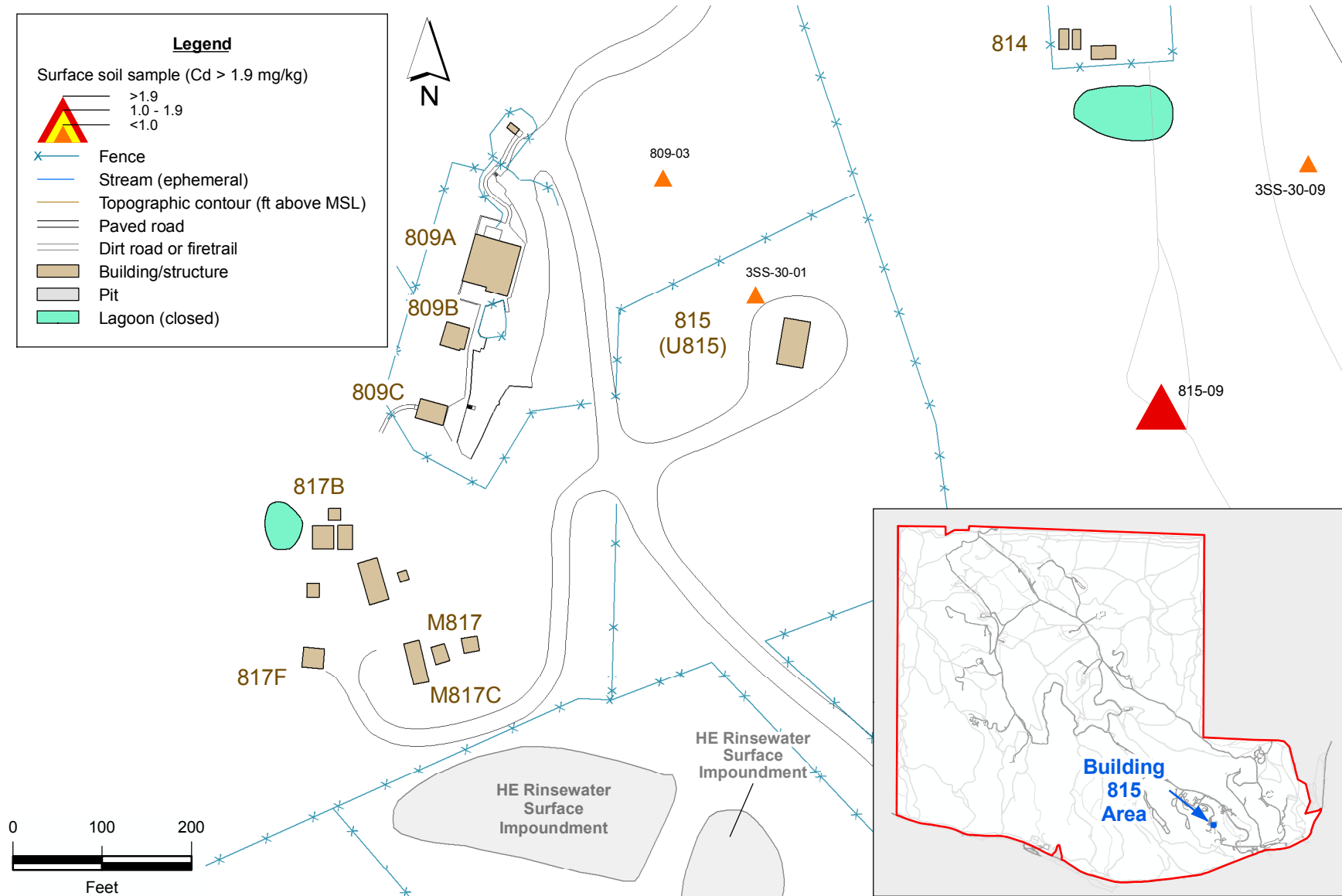


Figure 4.2-1. Surface soil in the vicinity of Building 801 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.



**Figure 4.2-2. Surface soil in the vicinity of Building 851 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.**



**Figure 4.2-3. Surface soil in the vicinity of Building 815 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.**

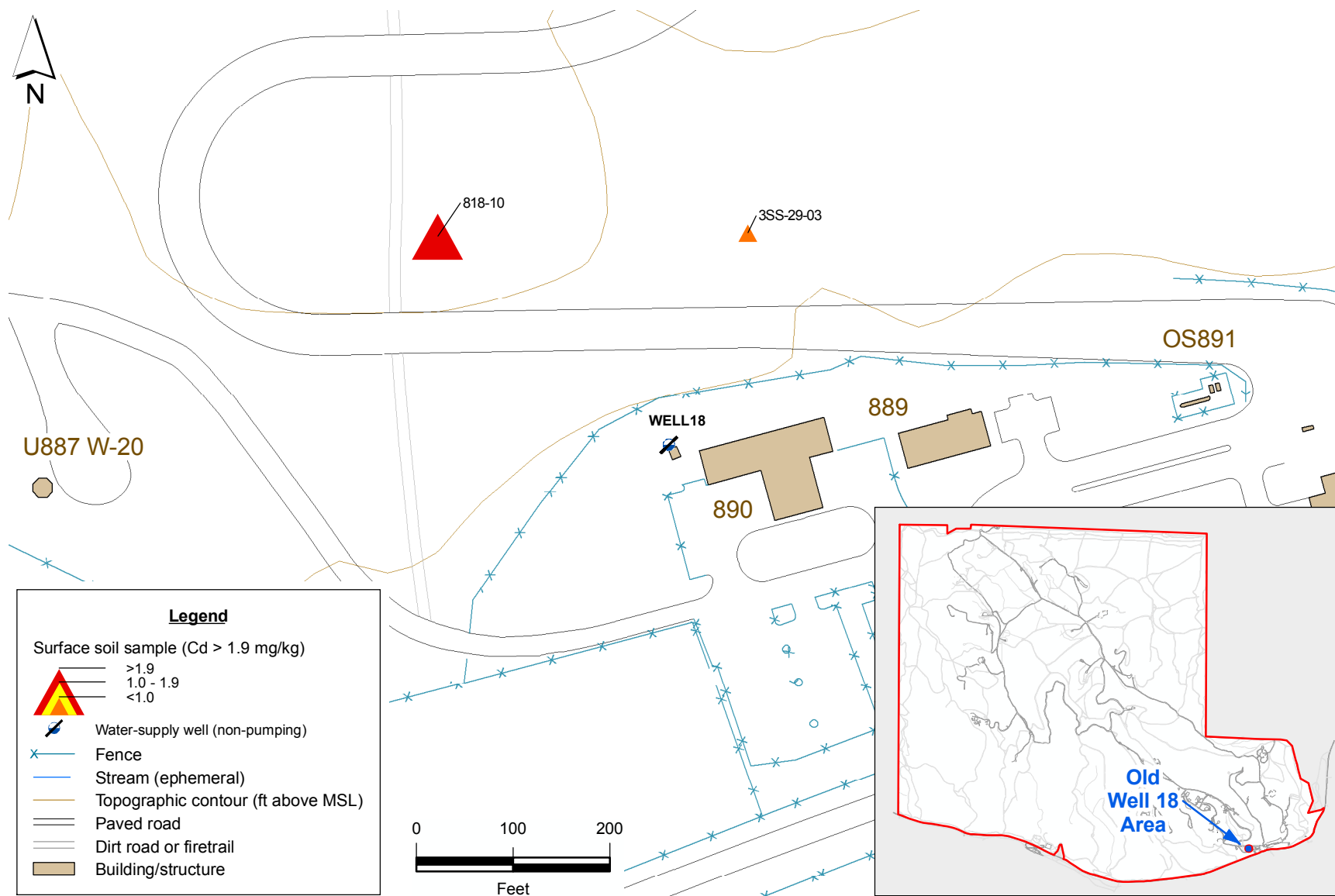


Figure 4.2-4. Surface soil in the vicinity of HE Process Area Old Well 18 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.



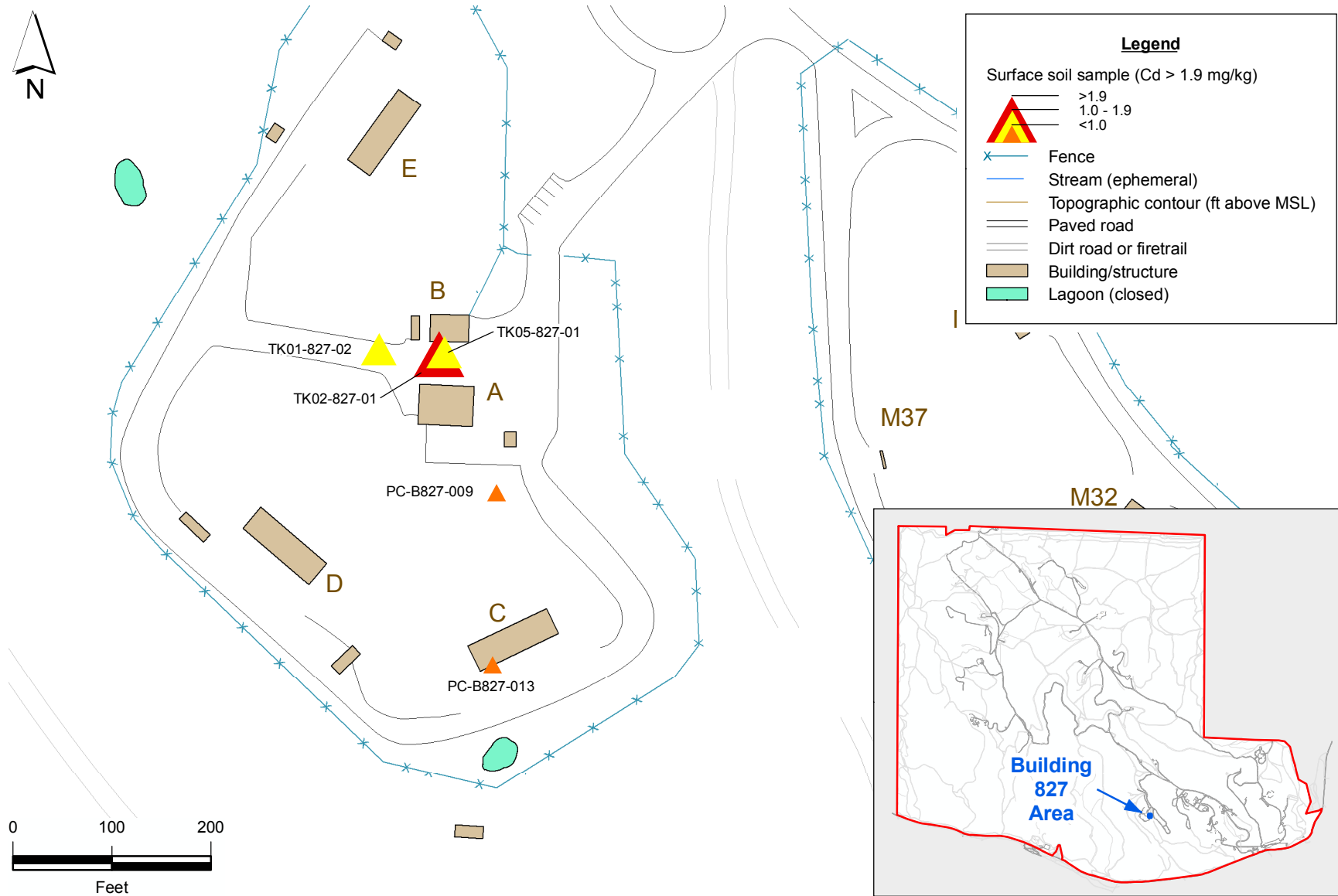


Figure 4.2-5. Surface soil in the vicinity of HE Process Area Building 827 exceeding background levels (1.9 mg/kg) for cadmium and posing a potential ecological hazard.

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## Tables

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## 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 <sub>3</sub>	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
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 <sub>2</sub>	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)
EGSA	Eastern General Services Area
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
EPA	Environmental Protection Agency
ERD	Environmental Restoration Department
ES&H	Environmental Safety and Health
EV	Effluent vapor
EW	Extraction well
ft	Feet
ft <sup>3</sup>	Cubic feet
g	Gram(s)
GAC	Granular activated carbon
gal	Gallon(s)
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	<i>In Situ</i> Microcosm Array
ISMS	Integrated Safety Management System
ITS	Issues Tracking System
IV	Influent vapor
IW	Injection well
IWS	Integrated Work Sheet
K-40	Potassium-40
kft <sup>3</sup>	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
µg/m <sup>3</sup>	Micrograms per meters cubed
µmhos/cm	Micro ohms per centimeter
µS	Microsiemens
M	Monthly
MCL	Maximum Contaminant Level
Mgal	Millions of gallons
mg/L	Milligrams per liter
MNA	Monitored Natural Attenuation
MSL	Mean Sea Level
MTU	Miniature Treatment Unit
mv	Millivolts
MWB	Monitor well used for background
N	No
NB	Nitrobenzene
N <sub>2</sub>	Nitrogen
NO <sub>3</sub>	Nitrate
NA	Not applicable
NT	Nitrotoluene
NTU	Nephelometric turbidity units
O	Sample to be collected during odd numbered years (i.e., 2013)
ORP	Oxidation/reduction potential
OU	Operable unit
O&M	Operations and Maintenance
P/PO <sub>4</sub>	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 <sub>v</sub>	Parts per billion by volume
ppm <sub>v</sub>	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
SRC	Source
SPR	Spring
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
$^{235}\text{U}/^{238}\text{U}$	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<sub>1</sub> = 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<sub>1a</sub>, Tnsc<sub>1b</sub>, Tnsc<sub>1c</sub> = Sandstone bodies within the Tnsc<sub>1</sub> Neroly middle siltstone/claystone (1a = deepest).
- Tnbs<sub>1</sub> = Lower member of the Neroly lower blue sandstone.
- Tnbs<sub>0</sub> = Neroly silty sandstone.
- Tnbs<sub>2</sub> = Miocene Neroly upper blue sandstone.
- Tnsc<sub>0</sub> = Tertiary Neroly Formation—lower siltstone/claystone member.
- Tnsc<sub>2</sub> = Miocene Neroly Formation—upper siltstone/claystone member.
- Tps = Pliocene non-marine unit.
- Tpsg = Miocene non-marine unit (gravel facies).
- Tts = Tesla Formation.
- UTnbs<sub>1</sub> = 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:UIISO = 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:UIISO = Uranium isotopes performed by mass spectrometry.
- T26METALS:ALL = Title 26 metals.
- TBOS:ALL = Tetraethylorthosilicate/ 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.

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- Table 2.5-3. Pit 7-Source (PIT7-SRC) volatile organic compounds (VOCs) in ground water treatment system influent and effluent.
- Table 2.5-4. Pit 7-Source (PIT7-SRC) nitrate and perchlorate in ground water treatment system influent and effluent.
- Table 2.5-5. Pit 7-Source (PIT7-SRC) total uranium in ground water treatment system influent and effluent.
- Table 2.5-6. Pit 7-Source (PIT7-SRC) tritium in ground water treatment system influent and effluent.
- Table 2.5-7. Pit 7-Source (PIT7\_SRC) treatment facility sampling and analysis plan.

- Table 2.5-8. Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.
- Table 2.5-9. Pit 7-Source (PIT7-SRC) mass removed, July 1, 2010 through December 31, 2010.
- Table 2.6-1. Building 854-Source (854-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.
- Table 2.6-2. Building 854-Proximal (854-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.
- Table 2.6-3. Building 854-Distal (854-DIS) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.
- Table 2.6-4. Building 854 Operable Unit volatile organic compounds (VOCs) in ground water treatment system influent and effluent.
- Table 2.6-5. Building 854 Operable Unit nitrate and perchlorate in ground water treatment system influent and effluent.
- Table 2.6-6. Building 854 Operable Unit treatment facility sampling and analysis plan.
- Table 2.6-7. Building 854 Operable Unit ground and surface water sampling and analysis plan.
- Table 2.6-8. Building 854-Source (854-SRC) mass removed, July 1, 2010 through December 31, 2010.
- Table 2.6-9. Building 854-Proximal (854-PRX) mass removed, July 1, 2010 through December 31, 2010.
- Table 2.6-10. Building 854-Distal (B854-DIS) mass removed, July 1, 2010 through December 31, 2010.
- Table 2.7-1. Building 832-Source (832-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.
- Table 2.7-2. Building 830-Source (830-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.
- Table 2.7-3. Building 830-Distal South (830-DISS) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.
- Table 2.7-4. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground water treatment system influent and effluent.
- Table 2.7-5. Building 832 Canyon Operable Unit perchlorate in ground water treatment system influent and effluent.
- Table 2.7-6. Building 832 Canyon Operable Unit treatment facility sampling and analysis plan.
- Table 2.7-7. Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.
- Table 2.7-8. Building 832-Source (832-SRC) mass removed, July 1, 2010 through December 31, 2010.

- Table 2.7-9. Building 830-Source (830-SRC) mass removed, July 1, 2010 through December 31, 2010.
- Table 2.7-10. Building 830-Distal South (830-DISS) mass removed, July 1, 2010 through December 31, 2010.
- Table 2.8-1. Building 801 and Pit 8 Landfill area ground water sampling and analysis plan.
- Table 2.8-2. Building 833 area ground water sampling and analysis plan.
- Table 2.8-3. Building 845 Firing Table and Pit 9 Landfill area ground water sampling and analysis plan.
- Table 2.8-4. Building 851 area ground water sampling and analysis plan.
- Table 3.1-1. Pit 2 Landfill area ground water sampling and analysis plan.
- Table 4.1-1. Summary of inhalation risks and hazards resulting from transport of contaminant vapors to indoor ambient air.
- Table 4.1-2. 2010 Well 8 Spring Risk Reevaluation.

**Table Summ-1. Mass removed, January 1, 2010 through December 31, 2010.**

Treatment facility	Volume of ground water treated (thousands of gal)	Volume of soil vapor treated (thousands of ft <sup>3</sup> )	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	1,473	NA	250	NA	NA	NA	NA	NA
CGSA SVTS	NA	12,163	1,700	NA	NA	NA	NA	NA
834 GWTS	132	NA	1,300	NA	43	NA	6.1	NA
834 SVTS	NA	41,404	6,500	NA	NA	NA	NA	NA
815-SRC GWTS	599	NA	11	14	220	130	NA	NA
815-PRX GWTS	236	NA	23	7.1	79	NA	NA	NA
815-DSB GWTS	1,610	NA	75	NA	NA	NA	NA	NA
817-SRC GWTS	1	NA	0	0.13	0.40	0.25	NA	NA
817-PRX GWTS	679	NA	27	58	270	21	NA	NA
829-SRC GWTS	<1	NA	0.015	0.0070	0.063	NA	NA	NA
PIT7-SRC GWTS	80	NA	2.1	3.3	11	NA	NA	7.8
854-SRC GWTS	1,471	NA	290	8.1	260	NA	NA	NA
854-SRC SVTS	NA	15,098	800	NA	NA	NA	NA	NA
854-PRX GWTS	292	NA	19	12	48	NA	NA	NA
854-DIS GWTS	9	NA	1.2	0.19	0.87	NA	NA	NA
832-SRC GWTS	98	NA	23	2.0	36	NA	NA	NA
832-SRC SVTS	NA	532	7.7	NA	NA	NA	NA	NA
830-SRC GWTS	2,254	NA	1,400	3.9	190	NA	NA	NA
830-SRC SVTS	NA	10,908	610	NA	NA	NA	NA	NA
830-DISS GWTS	728	NA	68	8.7	220	NA	NA	NA
<b>Total</b>	<b>9,663</b>	<b>80,104</b>	<b>13,000</b>	<b>120</b>	<b>1,400</b>	<b>150</b>	<b>6.1</b>	<b>7.8</b>

**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<sup>3</sup> = 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<sub>2</sub> HSU undergoes in-situ biotransformation to benign N<sub>2</sub> gas by anaerobic denitrifying bacteria.

**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	20,232	NA	25	NA	NA	NA	NA	NA
CGSA SVTS	NA	132,709	75	NA	NA	NA	NA	NA
834 GWTS	987	NA	43	NA	240	NA	9.5	NA
834 SVTS	NA	300,227	320	NA	NA	NA	NA	NA
815-SRC GWTS	5,146	NA	0.12	250	1,800	1.4	NA	NA
815-PRX GWTS	6,320	NA	0.71	150	1,900	NA	NA	NA
815-DSB GWTS	13,262	NA	0.48	NA	NA	NA	NA	NA
817-SRC GWTS	31	NA	0	3.1	9.8	0.0052	NA	NA
817-PRX GWTS	2,852	NA	0.12	260	1,000	0.078	NA	NA
829-SRC GWTS	5	NA	0.00031	0.16	1.3	NA	NA	NA
PIT7-SRC GWTS	80	NA	0.0021	3.3	11	NA	NA	0.0078
854-SRC GWTS	8,669	NA	5.3	140	1,700	NA	NA	NA
854-SRC SVTS	NA	72,168	10	NA	NA	NA	NA	NA
854-PRX GWTS	3,064	NA	0.62	130	520	NA	NA	NA
854-DIS GWTS	38	NA	0.0048	0.61	2.9	NA	NA	NA
832-SRC GWTS	696	NA	0.21	18	280	NA	NA	NA
832-SRC SVTS	NA	20,724	2.0	NA	NA	NA	NA	NA
830-SRC GWTS	7,077	NA	4.7	14	540	NA	NA	NA
830-SRC SVTS	NA	47,727	51	NA	NA	NA	NA	NA
830-PRXN GWTS	1,949	NA	0.26	NA	22	NA	NA	NA
830-DISS GWTS	5,876	NA	1.4	47	1,400	NA	NA	NA
<b>Total</b>	<b>385,664</b>	<b>573,555</b>	<b>550</b>	<b>1,000</b>	<b>9,400</b>	<b>1.5</b>	<b>9.5</b>	<b>0.0078</b>

**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<sub>2</sub> HSU undergoes in-situ biotransformation to benign N<sub>2</sub> gas by anaerobic denitrifying bacteria.



**Table 2-1. Wells and boreholes installed during 2010.**

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-815-2608	EW	OU4	2/4/10	Tnbs <sub>2</sub>	215	200.7	160-200	VOCs	Semi-annually	Perchlorate, Nitrate, HE	Annually
W-817-2609	EW	OU4	3/9/10	Tnbs <sub>2</sub>	125	116.7	76-116	VOCs	Semi-annually	Perchlorate, Nitrate, HE	Annually
W-854-2611	PTMW	OU6	4/13/10	Tnbs <sub>1</sub> / Tnsc <sub>0</sub>	165	160.7	130-160	Perchlorate, VOCs	Semi-annually	Nitrate	Annually
W-830-2610	GW	OU7	6/7/10	Tnsc <sub>1a</sub>	185	175.4	165-175	VOCs	Quarterly	Perchlorate, Nitrate	Semi-annually
W-PIT1-2620	PIDMW	OU5	10/28/10	Tnbs <sub>1</sub>	270	261	245-260	Tritium	Semi-annually	Perchlorate	Annually
W-815-2621	EW	OU4	12/13/10	Tnbs <sub>2</sub>	146	120.7	100-120	VOCs	Semi-annually	Perchlorate, Nitrate, HE	Annually

**Notes:**

- bgs = Below ground surface.
- COC = Contaminant of concern.
- EW = Extraction well.
- ft = Feet.
- HE = High explosives (HMX, RDX).
- GW = Guard well.
- HSU = Hydrostratigraphic unit.
- OU = Operable Unit.
- PTMW = Plume tracking monitoring well.
- VOCs = Volatile organic compounds.
- PIDMW = Pit 1 detection monitor well.

**Table 2.1-1. Central General Services Area (CGSA) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
CGSA	July	672	456	1,368	125,563
	August	480	432	976	103,999
	September	720	528	1,518	89,667
	October	648	408	1,361	113,075
	November	504	528	1,055	144,440
	December	0	480	0	158,202
<b>Total</b>		<b>3,024</b>	<b>2,832</b>	<b>6,278</b>	<b>734,946</b>

**Table 2.1-2. Central General Services Area Operable Unit volatile organic compounds (VOCs) in ground water 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-GWTS-E	7/12/10	<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	<0.5
CGSA-GWTS-E	8/3/10	<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	<0.5
CGSA-GWTS-E	9/13/10	<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	<0.5
CGSA-GWTS-E	10/11/10	<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	<0.5
CGSA-GWTS-E	11/1/10	<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	<0.5
CGSA-GWTS-E	12/6/10	<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	<0.5
CGSA-GWTS-I	7/12/10	96	7.8	5.1	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-I	10/11/10	34	2.3	0.68	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.76	<0.5	<0.5

Notes:

See Acronyms and Abbreviations in the Tables section of this report for 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-GWTS-E	7/12/10	0 of 18	–
CGSA-GWTS-E	8/3/10	0 of 18	–
CGSA-GWTS-E	9/13/10	0 of 18	–
CGSA-GWTS-E	10/11/10	0 of 18	–
CGSA-GWTS-E	11/1/10	0 of 18	–
CGSA-GWTS-E	12/6/10	0 of 18	–
CGSA-GWTS-I	7/12/10	1 of 18	5.2
CGSA-GWTS-I	10/11/10	0 of 18	–

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.1-3. Central General Services Area Operable Unit treatment facility sampling and analysis plan.**

Sample location	Sample identification	Parameter	Frequency
<i>CGSA GWTS</i>			
Influent Port	CGSA-I	VOCs	Quarterly
Effluent Port	CGSA-E	VOCs	Monthly
		pH	Monthly
<i>CGSA SVTS</i>			
Influent Port	CGSA-VI	No Monitoring Requirements	
Effluent Port	CGSA-VE	VOCs	Weekly <sup>a</sup>
Intermediate GAC	CGSA-VCF4I	VOCs	Weekly <sup>a</sup>

**Notes:**

One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.

<sup>a</sup> Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.

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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-35A-01	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-35A-01	PTMW	Qal	S	CMP	E601:ALL	4	N	Inoperable pump.
W-35A-02	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-35A-02	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-35A-03	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-35A-03	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-35A-04	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-35A-04	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-35A-05	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-35A-05	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-35A-06	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-35A-06	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-35A-07	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-35A-07	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-35A-08	GW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-35A-08	GW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-35A-08	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
W-35A-08	GW	Tnbs2	Q	CMP	E601:ALL	4	Y	
W-35A-09	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-35A-09	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-35A-10	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-35A-10	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-35A-11	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-35A-11	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-35A-12	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-35A-12	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-35A-13	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-35A-13	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-35A-14	GW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-35A-14	GW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-35A-14	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
W-35A-14	GW	Tnbs2	Q	CMP	E601:ALL	4	Y	
W-7A	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-7A	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-7B	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-7B	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-7C	PTMW	Tnbs1	S	CMP	E601:ALL	2	N	Inoperable pump.
W-7C	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-7E	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-7E	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-7ES	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-7ES	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-7F	PTMW	Tnsc1	S	CMP	E601:ALL	2	Y	
W-7F	PTMW	Tnsc1	S	CMP	E601:ALL	4	Y	
W-7G	PTMW	Tnbs1	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-7G	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-7H	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-7H	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-7I	EW	Tnbs2	S	CMP-TF	E601:ALL	2	Y	
W-7I	EW	Tnbs2	S	CMP-TF	E601:ALL	4	Y	
W-7J	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-7J	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-7K	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-7K	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-7L	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-7L	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-7M	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-7M	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-7N	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-7N	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-7O	EW	Qal	S	CMP-TF	E601:ALL	2	Y	
W-7O	EW	Qal	S	CMP-TF	E601:ALL	4	Y	
W-7P	EW	Tnbs1	S	CMP-TF	E601:ALL	2	Y	
W-7P	EW	Tnbs1	S	CMP-TF	E601:ALL	4	N	Insufficient water.
W-7PS	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-7PS	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-7R	EW	Qal	S	CMP-TF	E601:ALL	2	Y	
W-7R	EW	Qal	S	CMP-TF	E601:ALL	4	Y	
W-843-01	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-843-01	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-843-02	PTMW	Tnbs1	S	CMP	E601:ALL	2	N	Inoperable pump.
W-843-02	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-872-01	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-872-01	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-872-02	EW	Tnbs2	S	CMP-TF	E601:ALL	2	N	Insufficient water.
W-872-02	EW	Tnbs2	S	CMP-TF	E601:ALL	4	N	Inoperable pump.
W-873-01	PTMW	Tnbs1	S	CMP	E601:ALL	2	Y	
W-873-01	PTMW	Tnbs1	S	CMP	E601:ALL	4	Y	
W-873-02	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-873-02	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-873-03	PTMW	Tnsc1	S	CMP	E601:ALL	2	Y	
W-873-03	PTMW	Tnsc1	S	CMP	E601:ALL	4	Y	
W-873-04	PTMW	Tnsc1	S	CMP	E601:ALL	2	Y	
W-873-04	PTMW	Tnsc1	S	CMP	E601:ALL	4	Y	
W-873-06	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-873-06	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-873-07	EW	Tnbs2	S	CMP-TF	E601:ALL	2	Y	
W-873-07	EW	Tnbs2	S	CMP-TF	E601:ALL	4	Y	
W-875-01	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-875-01	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-875-02	PTMW	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-875-02	PTMW	Tnsc1	S	CMP	E601:ALL	4	Y	
W-875-03	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-875-03	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-875-04	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-875-04	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-875-05	PTMW	Tnsc1	S	CMP	E601:ALL	2	Y	
W-875-05	PTMW	Tnsc1	S	CMP	E601:ALL	4	Y	
W-875-06	PTMW	Tnsc1	S	CMP	E601:ALL	2	Y	
W-875-06	PTMW	Tnsc1	S	CMP	E601:ALL	4	Y	
W-875-07	EW	Tnbs2	S	CMP-TF	E601:ALL	2	Y	
W-875-07	EW	Tnbs2	S	CMP-TF	E601:ALL	4	Y	
W-875-08	EW	Tnbs2	S	CMP-TF	E601:ALL	2	Y	
W-875-08	EW	Tnbs2	S	CMP-TF	E601:ALL	4	Y	
W-875-09	EW	Tnbs2	S	CMP-TF	E601:ALL	2	N	Insufficient water.
W-875-09	EW	Tnbs2	S	CMP-TF	E601:ALL	4	N	Insufficient water.
W-875-10	EW	Tnbs2	S	CMP-TF	E601:ALL	2	N	Insufficient water.
W-875-10	EW	Tnbs2	S	CMP-TF	E601:ALL	4	N	Insufficient water.
W-875-11	EW	Tnbs2	S	CMP-TF	E601:ALL	2	N	Insufficient water.
W-875-11	EW	Tnbs2	S	CMP-TF	E601:ALL	4	N	Insufficient water.
W-875-15	EW	Tnbs2	S	CMP-TF	E601:ALL	2	N	Insufficient water.
W-875-15	EW	Tnbs2	S	CMP-TF	E601:ALL	4	N	Insufficient water.
W-876-01	PTMW	Tnbs2	S	CMP	E601:ALL	2	Y	
W-876-01	PTMW	Tnbs2	S	CMP	E601:ALL	4	Y	
W-879-01	PTMW	Tnsc1	S	CMP	E601:ALL	2	Y	
W-879-01	PTMW	Tnsc1	S	CMP	E601:ALL	4	Y	
W-889-01	PTMW	Tnsc1	S	CMP	E601:ALL	2	Y	
W-889-01	PTMW	Tnsc1	S	CMP	E601:ALL	4	Y	
W-CGSA-1732	PTMW	Qal	S	CMP	E601:ALL	2	N	Insufficient water.
W-CGSA-1732	PTMW	Qal	S	CMP	E601:ALL	4	N	Insufficient water.
W-CGSA-1733	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-CGSA-1733	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-CGSA-1735	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-CGSA-1735	PTMW	Qal	S	CMP	E601:ALL	4	N	Insufficient water.
W-CGSA-1736	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-CGSA-1736	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-CGSA-1737	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-CGSA-1737	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-CGSA-1739	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-CGSA-1739	PTMW	Qal	S	CMP	E601:ALL	4	Y	

## Notes:

- 1) General Services Area primary COC: VOCs (E601 or E624).
- 2) 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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	1	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	1	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	1	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	2	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	2	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	2	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	3	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	3	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	3	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	4	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	4	Y	
CDF1	WS	Qal-Tnsc0	M	CMP	E601:ALL	4	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	1	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	1	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	1	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	2	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	2	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	2	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	3	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	3	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	3	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	4	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	4	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	4	Y	
CON1	WS	Tnsc0	M	CMP	E601:ALL	4	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	1	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	1	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	1	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	2	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	2	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	2	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	3	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	3	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	3	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	4	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	4	Y	
CON2	WS	Qal-Tnsc0	M	CMP	E601:ALL	4	Y	
W-24P-03	PTMW	Qal	A	CMP	E601:ALL	2	Y	
W-25D-01	PTMW	Qal	A	PSDMP	E601:ALL	2	Y	
W-25D-02	PTMW	Qal	A	PSDMP	E601:ALL	2	Y	
W-25M-01	PTMW	Qal	A	PSDMP	E601:ALL	2	Y	
W-25M-02	PTMW	Qal	A	PSDMP	E601:ALL	2	Y	
W-25M-03	PTMW	Qal	A	PSDMP	E601:ALL	2	Y	
W-25N-01	PTMW	Qal	S	PSDMP	E601:ALL	2	Y	
W-25N-01	PTMW	Qal	S	PSDMP	E601:ALL	4	Y	
W-25N-04	PTMW	Tmss	A	PSDMP	E601:ALL	2	Y	
W-25N-05	PTMW	Tnbs1	S	PSDMP	E601:ALL	2	Y	
W-25N-05	PTMW	Tnbs1	S	PSDMP	E601:ALL	4	N	Restricted access.
W-25N-06	PTMW	Qal	A	PSDMP	E601:ALL	2	Y	
W-25N-07	GW	Qal	Q	PSDMP	E601:ALL	1	Y	
W-25N-07	GW	Qal	Q	PSDMP	E601:ALL	2	Y	
W-25N-07	GW	Qal	Q	PSDMP	E601:ALL	3	Y	
W-25N-07	GW	Qal	Q	PSDMP	E601:ALL	4	Y	
W-25N-08	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-25N-09	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	



**Table 2.1-5. (Cont.). Eastern General Services Area ground water sampling and analysis plan.**

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-25N-10	GW	Tnbs1	Q	PSDMP	E601:ALL	1	Y	
W-25N-10	GW	Tnbs1	Q	PSDMP	E601:ALL	2	Y	
W-25N-10	GW	Tnbs1	Q	PSDMP	E601:ALL	3	Y	
W-25N-10	GW	Tnbs1	Q	PSDMP	E601:ALL	4	Y	
W-25N-11	GW	Tnbs1	Q	PSDMP	E601:ALL	1	Y	
W-25N-11	GW	Tnbs1	Q	PSDMP	E601:ALL	2	Y	
W-25N-11	GW	Tnbs1	Q	PSDMP	E601:ALL	3	Y	
W-25N-11	GW	Tnbs1	Q	PSDMP	E601:ALL	4	Y	
W-25N-12	GW	Tnbs1	Q	PSDMP	E601:ALL	1	Y	
W-25N-12	GW	Tnbs1	Q	PSDMP	E601:ALL	2	Y	
W-25N-12	GW	Tnbs1	Q	PSDMP	E601:ALL	3	Y	
W-25N-12	GW	Tnbs1	Q	PSDMP	E601:ALL	4	Y	
W-25N-13	GW	Tnbs1	Q	PSDMP	E601:ALL	1	Y	
W-25N-13	GW	Tnbs1	Q	PSDMP	E601:ALL	2	Y	
W-25N-13	GW	Tnbs1	Q	PSDMP	E601:ALL	3	Y	
W-25N-13	GW	Tnbs1	Q	PSDMP	E601:ALL	4	Y	
W-25N-15	PTMW	Qal	A	PSDMP	E601:ALL	2	N	Inoperable pump.
W-25N-18	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-25N-20	PTMW	Qal	A	PSDMP	E601:ALL	2	Y	
W-25N-21	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-25N-22	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-25N-23	PTMW	Tnbs1	S	PSDMP	E601:ALL	2	Y	
W-25N-23	PTMW	Tnbs1	S	PSDMP	E601:ALL	4	Y	
W-25N-24	PTMW	Qal	S	PSDMP	E601:ALL	2	Y	
W-25N-24	PTMW	Qal	S	PSDMP	E601:ALL	4	Y	
W-25N-25	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-25N-26	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-25N-28	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-26R-01	PTMW	Tnbs1	S	PSDMP	E601:ALL	2	Y	
W-26R-01	PTMW	Tnbs1	S	PSDMP	E601:ALL	4	Y	
W-26R-02	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-26R-03	PTMW	Qal	S	PSDMP	E601:ALL	2	Y	
W-26R-03	PTMW	Qal	S	PSDMP	E601:ALL	4	Y	
W-26R-04	PTMW	Qal	S	PSDMP	E601:ALL	2	Y	
W-26R-04	PTMW	Qal	S	PSDMP	E601:ALL	4	Y	
W-26R-05	PTMW	Qal	S	PSDMP	E601:ALL	2	Y	
W-26R-05	PTMW	Qal	S	PSDMP	E601:ALL	4	Y	
W-26R-06	PTMW	Tnbs1	S	PSDMP	E601:ALL	2	Y	
W-26R-06	PTMW	Tnbs1	S	PSDMP	E601:ALL	4	Y	
W-26R-07	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-26R-08	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-26R-11	PTMW	Qal	S	CMP	E601:ALL	2	Y	
W-26R-11	PTMW	Qal	S	CMP	E601:ALL	4	Y	
W-7D	PTMW	Tnbs1	A	PSDMP	E601:ALL	2	Y	
W-7DS	PTMW	Qal	A	PSDMP	E601:ALL	2	Y	

**Notes:**

- 1) Sampling frequency for PSDMP wells is described in the Eastern GSA Post Shut-down Monitoring Plan (Holtzapfle, 2006).
- 2) General Services Area primary COC: VOCs (E601 or E624).
- 3) 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, 2010 through December 31, 2010.**

<b>Treatment facility</b>	<b>Month</b>	<b>SVTS VOC mass removed (g)</b>	<b>GWTS VOC mass removed (g)</b>	<b>Perchlorate mass removed (g)</b>	<b>Nitrate mass removed (kg)</b>	<b>RDX mass removed (g)</b>	<b>TBOS/TKEBS mass removed (g)</b>
<b>CGSA</b>	<b>July</b>	<b>180</b>	<b>23</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
	<b>August</b>	<b>130</b>	<b>17</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
	<b>September</b>	<b>220</b>	<b>12</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
	<b>October</b>	<b>200</b>	<b>14</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
	<b>November</b>	<b>170</b>	<b>18</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
	<b>December</b>	<b>0</b>	<b>19</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Total</b>		<b>900</b>	<b>100</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

**Table 2.2-1. Building 834 (834) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
834	July	670	670	4,085	12,584
	August	721	721	4,374	13,350
	September	657	657	4,014	12,087
	October	645	645	4,069	11,029
	November	484	484	3,069	7,664
	December	0	0	0	0
<b>Total</b>		<b>3,177</b>	<b>3,177</b>	<b>19,611</b>	<b>56,714</b>

**Table 2.2-2. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water extraction treatment system influent and effluent.**

Location	Date	TCE (µg/L)	PCE (µg/L)	Carbon		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)
				cis-1,2- DCE (µg/L)	trans-1,2- DCE (µg/L)									
834-GWTS-E	7/13/10	<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
834-GWTS-E	8/2/10	<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
834-GWTS-E	9/8/10	<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
834-GWTS-E	10/5/10	<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
834-GWTS-E	11/1/10	<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
834-GWTS-E <sup>a</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
834-GWTS-I	8/2/10	1,700 D	16 D	350 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
834-GWTS-I	10/5/10	1,700 D	19	400 D	<25 D	<0.5	0.53	<0.5	<0.5	0.84	<0.5	0.84	<0.5	<0.5

Notes:

<sup>a</sup> 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-GWTS-E	7/13/10	0 of 18	-
834-GWTS-E	8/2/10	0 of 18	-
834-GWTS-E	9/8/10	0 of 18	-
834-GWTS-E	10/5/10	0 of 18	-
834-GWTS-E	11/1/10	0 of 18	-
834-GWTS-E <sup>a</sup>	-	-	-
834-GWTS-I	8/2/10	1 of 18	350 D
834-GWTS-I	10/5/10	1 of 18	400 D

Notes:

<sup>a</sup> 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 2.2-3. Building 834 Operable Unit diesel range organic compounds in ground water extraction treatment system influent and effluent.**

<b>Location</b>	<b>Date</b>	<b>Diesel Range Organics (C12-C24) (<math>\mu\text{g/L}</math>)</b>
834-GWTS-E	7/13/10	<200
834-GWTS-E	8/2/10	<200
834-GWTS-E	9/8/10	<200
834-GWTS-E	10/5/10	<200
834-GWTS-E	11/1/10	<200
834-GWTS-E <sup>a</sup>	-	-
834-GWTS-I	8/2/10	<200
834-GWTS-I	10/5/10	<200

**Notes:**

<sup>a</sup> 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 2.2-4. Building 834 Operable Unit tetrabutyl orthosilicate/tetrakis (2-ethylbutyl) silane (TBOS/TKEBS) in ground water extraction treatment system influent and effluent.**

Location	Date	TBOS/TKEBS ( $\mu\text{g/L}$ )
834-GWTS-E	7/13/10	<10
834-GWTS-E	8/2/10	<10
834-GWTS-E	9/8/10	<10
834-GWTS-E	10/5/10	<10
834-GWTS-E	11/1/10	<10
834-GWTS-E <sup>a</sup>	-	-
834-GWTS-I	8/2/10	<10
834-GWTS-I	10/5/10	<10

**Notes:**

- <sup>a</sup> 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 2.2-5. Building 834 Operable Unit treatment facility sampling and analysis plan.**

Sample location	Sample identification	Parameter	Frequency
<b>834 GWTS</b>			
Influent Port	834-I	VOCs	Quarterly
		TBOS	Quarterly
		Diesel	Quarterly
Effluent Port	834-E	VOCs	Monthly
		TBOS	Monthly
		Diesel	Monthly
		pH	Monthly
<b>834 SVTS</b>			
Influent Port	834-VI	No Monitoring Requirements	
Effluent Port	834-VE	VOCs	Weekly <sup>a</sup>
Intermediate GAC	834-VCF4I	VOCs	Weekly <sup>a</sup>

**Notes:**

One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.

<sup>a</sup> Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.

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	Completion Interval	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	A	CMP	E300.0:NO3	1	Y	
W-834-1711	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-834-1711	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-834-1711	PTMW	Tps	A	CMP	TBOS:ALL	3	Y	
W-834-1824	PTMW	Tpsg	A	DIS	E200.7:FE	1	Y	
W-834-1824	PTMW	Tpsg	A	DIS	E200.8:AS	1	Y	
W-834-1824	PTMW	Tpsg	A	DIS	E200.8:CR	1	Y	
W-834-1824	PTMW	Tpsg	A	DIS	E200.8:MN	1	Y	
W-834-1824	PTMW	Tpsg	A	DIS	E200.8:SE	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	A	DIS	GENMIN:ALL	1	Y	
W-834-1824	PTMW	Tpsg	E	CMP	TBOS:ALL	1	Y	
W-834-1825	PTMW	Tpsg	A	DIS	E200.7:FE	1	N	Insufficient water.
W-834-1825	PTMW	Tpsg	A	DIS	E200.8:AS	1	N	Insufficient water.
W-834-1825	PTMW	Tpsg	A	DIS	E200.8:CR	1	N	Insufficient water.
W-834-1825	PTMW	Tpsg	A	DIS	E200.8:MN	1	N	Insufficient water.
W-834-1825	PTMW	Tpsg	A	DIS	E200.8:SE	1	N	Insufficient water.
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	A	DIS	GENMIN:ALL	1	N	Insufficient water.
W-834-1825	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	To be sampled in 2011.
W-834-1833	PTMW	Tpsg	A	DIS	E200.7:FE	1	N	Insufficient water.
W-834-1833	PTMW	Tpsg	A	DIS	E200.8:AS	1	N	Insufficient water.
W-834-1833	PTMW	Tpsg	A	DIS	E200.8:CR	1	N	Insufficient water.
W-834-1833	PTMW	Tpsg	A	DIS	E200.8:MN	1	N	Insufficient water.
W-834-1833	PTMW	Tpsg	A	DIS	E200.8:SE	1	N	Insufficient water.
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	A	DIS	GENMIN:ALL	1	N	Insufficient water.
W-834-1833	PTMW	Tpsg	E	CMP	TBOS:ALL	1	Y	
W-834-2001	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-2001	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
W-834-2001	EW	Tpsg	S	CMP-TF	E601:ALL	3	Y	
W-834-2001	EW	Tpsg	S	DIS-TF	E624:ALL	2	Y	
W-834-2001	EW	Tpsg	S	DIS-TF	E624:ALL	4	Y	
W-834-2001	EW	Tpsg	S	DIS-TF	EM8015:DIESEL	1	Y	
W-834-2001	EW	Tpsg	S	DIS-TF	EM8015:DIESEL	3	Y	
W-834-2001	EW	Tpsg	A	CMP-TF	TBOS:ALL	1	Y	
W-834-2001	EW	Tpsg	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	Y	
W-834-2117	PTMW	Tpsg	A	DIS	E200.7:FE	1	Y	
W-834-2117	PTMW	Tpsg	A	DIS	E200.8:AS	1	Y	
W-834-2117	PTMW	Tpsg	A	DIS	E200.8:CR	1	Y	
W-834-2117	PTMW	Tpsg	A	DIS	E200.8:MN	1	Y	
W-834-2117	PTMW	Tpsg	A	DIS	E200.8:SE	1	Y	



Table 2.2-6. (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	A	DIS	GENMIN:ALL	1	Y	
W-834-2117	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	To be sampled in 2011.
W-834-2118	PTMW	Tpsg	A	DIS	E200.7:FE	1	Y	
W-834-2118	PTMW	Tpsg	A	DIS	E200.8:AS	1	Y	
W-834-2118	PTMW	Tpsg	A	DIS	E200.8:CR	1	Y	
W-834-2118	PTMW	Tpsg	A	DIS	E200.8:MN	1	Y	
W-834-2118	PTMW	Tpsg	A	DIS	E200.8:SE	1	Y	
W-834-2118	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2118	PTMW	Tpsg	A	DIS	E300.0:PERC	1	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	A	DIS	GENMIN:ALL	1	Y	
W-834-2118	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	To be sampled in 2011.
W-834-2119	PTMW	Tpsg	A	DIS	E200.7:FE	1	Y	
W-834-2119	PTMW	Tpsg	A	DIS	E200.8:AS	1	Y	
W-834-2119	PTMW	Tpsg	A	DIS	E200.8:CR	1	Y	
W-834-2119	PTMW	Tpsg	A	DIS	E200.8:MN	1	Y	
W-834-2119	PTMW	Tpsg	A	DIS	E200.8:SE	1	Y	
W-834-2119	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2119	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-2119	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-2119	PTMW	Tpsg	A	DIS	GENMIN:ALL	1	Y	
W-834-2119	PTMW	Tpsg	E	CMP	TBOS:ALL	1	Y	
W-834-A1	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-A1	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-834-A1	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-834-A1	PTMW	Tps	E	DIS	EM8015:DIESEL	1	Y	
W-834-A1	PTMW	Tps	A	CMP	TBOS:ALL	1	Y	
W-834-A2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-A2	PTMW	Tpsg	A	DIS	E300.0:PERC	1	N	Dry.
W-834-A2	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-A2	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Insufficient water.
W-834-A2	PTMW	Tpsg	O	DIS	EM8015:DIESEL	1	N	To be sampled in 2011.
W-834-A2	PTMW	Tpsg	A	CMP	TBOS:ALL	1	N	Dry.
W-834-B2	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-B2	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
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	Y	
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	N	Dry.
W-834-B4	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-B4	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-B4	PTMW	Tpsg	A	CMP	TBOS:ALL	3	N	Insufficient water.
W-834-C2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-C2	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.

Table 2.2-6. (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-834-C2	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-C2	PTMW	Tpsg	A	CMP	TBOS:ALL	1	N	Dry.
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-D10	PTMW	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D10	PTMW	Tps	S	CMP	E601:ALL	1	N	Dry.
W-834-D10	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-834-D10	PTMW	Tps	O	DIS	EM8015:DIESEL	1	N	To be sampled in 2011.
W-834-D10	PTMW	Tps	A	CMP	TBOS:ALL	1	N	Dry.
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:DIESEL	1	N	Insufficient water.
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	N	Insufficient water.
W-834-D14	PTMW	Tpsg	A	CMP	TBOS:ALL	1	Y	
W-834-D15	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-D15	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Insufficient water.
W-834-D15	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-D15	PTMW	Tpsg	A	CMP	TBOS:ALL	1	N	Insufficient water.
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:DIESEL	1	N	To be sampled in 2011.
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	N	Dry.
W-834-D17	PTMW	Tpsg	O	DIS	EM8015:DIESEL	1	N	To be sampled in 2011.
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-D2	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	N	Dry.

Table 2.2-6. (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-834-D2	PTMW	Tnbs1	A	CMP	E601:ALL	1	N	Dry.
W-834-D2	PTMW	Tnbs1	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	
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-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	N	Dry.
W-834-H2	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-H2	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-H2	PTMW	Tpsg	A	CMP	TBOS:ALL	1	N	Dry.
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-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	N	Dry.
W-834-J3	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	To be sampled in 2011.
W-834-K1A	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.

Table 2.2-6. (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-834-K1A	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-K1A	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-K1A	PTMW	Tpsg	E	DIS	EM8015:DIESEL	1	N	Dry.
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	Y	
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	Dry.
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-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:DIESEL	1	N	Dry.
W-834-S10	PTMW	Tpsg	A	CMP	TBOS:ALL	1	N	Dry.
W-834-S12A	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-S12A	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
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	Y	
W-834-S13	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-S13	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
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	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	N	To be sampled in 2011.
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	To be sampled in 2011.
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	Insufficient water.
W-834-S7	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-S7	PTMW	Tpsg	S	DIS	E300.0:PERC	1	N	Insufficient water.
W-834-S7	PTMW	Tpsg	S	DIS	E300.0:PERC	3	N	Insufficient water.
W-834-S7	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Insufficient water.
W-834-S7	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Insufficient water.
W-834-S7	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	Insufficient water.
W-834-S8	PTMW	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-S8	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-834-S8	PTMW	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-834-S8	PTMW	Tnsc2	O	DIS	EM8015:DIESEL	1	N	To be sampled in 2011.
W-834-S8	PTMW	Tnsc2	O	CMP	TBOS:ALL	1	N	To be sampled in 2011.
W-834-S9	PTMW	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-S9	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-834-S9	PTMW	Tnsc2	S	CMP	E601:ALL	3	Y	
W-834-S9	PTMW	Tnsc2	E	DIS	EM8015:DIESEL	1	Y	
W-834-S9	PTMW	Tnsc2	E	CMP	TBOS:ALL	1	Y	
W-834-T1	GW	Tnbs1	S	CMP	E300.0:NO3	1	Y	
W-834-T1	GW	Tnbs1	S	CMP	E300.0:NO3	3	Y	
W-834-T1	GW	Tnbs1	Q	CMP	E601:ALL	1	Y	
W-834-T1	GW	Tnbs1	Q	CMP	E601:ALL	2	Y	
W-834-T1	GW	Tnbs1	Q	CMP	E601:ALL	3	Y	
W-834-T1	GW	Tnbs1	Q	CMP	E601:ALL	4	Y	
W-834-T1	GW	Tnbs1	S	CMP	TBOS:ALL	1	Y	
W-834-T1	GW	Tnbs1	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	Dry.
W-834-T2	PTMW	Tpsg	A	DIS	E200.7:FE	1	Y	
W-834-T2	PTMW	Tpsg	A	DIS	E200.8:AS	1	Y	
W-834-T2	PTMW	Tpsg	A	DIS	E200.8:CR	1	Y	
W-834-T2	PTMW	Tpsg	A	DIS	E200.8:MN	1	Y	
W-834-T2	PTMW	Tpsg	A	DIS	E200.8:SE	1	Y	
W-834-T2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
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	A	DIS	GENMIN:ALL	1	Y	
W-834-T2	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	To be sampled in 2011.
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	Y	
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	To be sampled in 2011.
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	Dry.
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	Y	
W-834-T3	GW	Tnbs1	S	CMP	E300.0:NO3	1	Y	
W-834-T3	GW	Tnbs1	S	CMP	E300.0:NO3	3	Y	
W-834-T3	GW	Tnbs1	Q	CMP	E601:ALL	1	Y	
W-834-T3	GW	Tnbs1	Q	CMP	E601:ALL	2	Y	
W-834-T3	GW	Tnbs1	Q	CMP	E601:ALL	3	Y	
W-834-T3	GW	Tnbs1	Q	CMP	E601:ALL	4	Y	
W-834-T3	GW	Tnbs1	S	CMP	TBOS:ALL	1	Y	
W-834-T3	GW	Tnbs1	S	CMP	TBOS:ALL	3	Y	
W-834-T5	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T5	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-T5	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-T5	PTMW	Tpsg	E	CMP	TBOS:ALL	1	Y	

**Table 2.2-6. (Cont.). Building 834 Operable Unit ground water sampling and analysis plan.**

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-834-T7A	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T7A	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-T7A	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-T7A	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	To be sampled in 2011.
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	To be sampled in 2011.
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	To be sampled in 2011.
W-834-U1	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-U1	PTMW	Tps	S	CMP	E624:ALL	1	Y	
W-834-U1	PTMW	Tps	S	CMP	E624:ALL	3	Y	
W-834-U1	PTMW	Tps	A	DIS	EM8015:DIESEL	1	Y	
W-834-U1	PTMW	Tps	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, 2010 through December 31, 2010.**

<b>Treatment facility</b>	<b>Month</b>	<b>SVTS VOC mass removed (g)</b>	<b>GWTS VOC mass removed (g)</b>	<b>Perchlorate mass removed (g)</b>	<b>Nitrate mass removed (kg)</b>	<b>RDX mass removed (g)</b>	<b>TBOS/TKEBS mass removed (g)</b>
<b>834</b>	<b>July</b>	<b>430</b>	<b>150</b>	<b>NA</b>	<b>4.3</b>	<b>NA</b>	<b>0.63</b>
	<b>August</b>	<b>570</b>	<b>110</b>	<b>NA</b>	<b>4.6</b>	<b>NA</b>	<b>0.46</b>
	<b>September</b>	<b>520</b>	<b>90</b>	<b>NA</b>	<b>4.0</b>	<b>NA</b>	<b>0.37</b>
	<b>October</b>	<b>930</b>	<b>110</b>	<b>NA</b>	<b>3.7</b>	<b>NA</b>	<b>0.31</b>
	<b>November</b>	<b>670</b>	<b>72</b>	<b>NA</b>	<b>2.5</b>	<b>NA</b>	<b>0.20</b>
	<b>December</b>	<b>0</b>	<b>0</b>	<b>NA</b>	<b>0</b>	<b>NA</b>	<b>0</b>
<b>Total</b>		<b>3,100</b>	<b>520</b>	<b>NA</b>	<b>19</b>	<b>NA</b>	<b>2.0</b>

Table 2.3-1. Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
BC6-10	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
BC6-10	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
BC6-10	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
BC6-10	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
BC6-10	PTMW	Tnbs1	S	CMP	E906:ALL	1	Y	
BC6-10	PTMW	Tnbs1	S	CMP	E906:ALL	3	Y	
BC6-13	PTMW	Qt/Tnbs1	E	CMP	E300.0:NO3	1	N	Dry.
BC6-13	PTMW	Qt/Tnbs1	E	CMP	E300.0:PERC	1	N	Dry.
BC6-13	PTMW	Qt/Tnbs1	E	CMP	E601:ALL	1	N	Dry.
BC6-13	PTMW	Qt/Tnbs1	E	CMP	E906:ALL	1	N	Dry.
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW1	WS	Tnbs1/Tmss	Q	WGMG	E624:ALL	1	Y	
CARNRW1	WS	Tnbs1/Tmss	Q	WGMG	E624:ALL	2	Y	
CARNRW1	WS	Tnbs1/Tmss	Q	WGMG	E624:ALL	3	Y	
CARNRW1	WS	Tnbs1/Tmss	Q	WGMG	E624:ALL	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	1	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	



Table 2.3-1. (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	3	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	4	Y	
CARNRW1	WS	Tnbs1/Tmss	M	CMP	E906:ALL	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW2	WS	Tnbs1/Tmss	Q	WGMG	E502.2:ALL	1	Y	
CARNRW2	WS	Tnbs1/Tmss	Q	WGMG	E502.2:ALL	2	Y	
CARNRW2	WS	Tnbs1/Tmss	Q	WGMG	E502.2:ALL	3	Y	
CARNRW2	WS	Tnbs1/Tmss	Q	WGMG	E502.2:ALL	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	1	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906: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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	3	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	4	Y	
CARNRW2	WS	Tnbs1/Tmss	M	CMP	E906:ALL	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:NO3	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E300.0:PERC	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E601:ALL	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	1	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	2	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	3	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	4	Y	
CARNRW3	WS	Tnbs1/Tmss	M	CMP	E906:ALL	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601:ALL	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	3	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	4	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906:ALL	4	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E300.0:NO3	1	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E300.0:NO3	2	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E300.0:NO3	3	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E300.0:NO3	4	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E300.0:PERC	1	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E300.0:PERC	2	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E906: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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E906:ALL	2	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E906:ALL	3	Y	
EP6-06	DMW	Qt/Tnbs1	Q	WGMG	E906:ALL	4	Y	
EP6-07	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
EP6-07	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
EP6-07	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
EP6-07	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
EP6-07	PTMW	Tnbs1	S	CMP	E906:ALL	1	Y	
EP6-07	PTMW	Tnbs1	S	CMP	E906:ALL	3	Y	
EP6-08	DMW	Tnbs1	Q	WGMG	E300.0:NO3	1	N	Dry.
EP6-08	DMW	Tnbs1	Q	WGMG	E300.0:NO3	2	N	Insufficient water.
EP6-08	DMW	Tnbs1	Q	WGMG	E300.0:NO3	3	N	Insufficient water.
EP6-08	DMW	Tnbs1	Q	WGMG	E300.0:NO3	4	N	Insufficient water.
EP6-08	DMW	Tnbs1	Q	WGMG	E300.0:PERC	1	N	Dry.
EP6-08	DMW	Tnbs1	Q	WGMG	E300.0:PERC	2	N	Insufficient water.
EP6-08	DMW	Tnbs1	Q	WGMG	E300.0:PERC	3	N	Insufficient water.
EP6-08	DMW	Tnbs1	Q	WGMG	E300.0:PERC	4	N	Insufficient water.
EP6-08	DMW	Tnbs1	Q	WGMG	E906:ALL	1	N	Dry.
EP6-08	DMW	Tnbs1	Q	WGMG	E906:ALL	2	N	Insufficient water.
EP6-08	DMW	Tnbs1	Q	WGMG	E906:ALL	3	N	Insufficient water.
EP6-08	DMW	Tnbs1	Q	WGMG	E906:ALL	4	N	Insufficient water.
EP6-09	DMW	Tnbs1	Q	WGMG	E300.0:NO3	1	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E300.0:NO3	2	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E300.0:NO3	3	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E300.0:NO3	4	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E300.0:PERC	1	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E300.0:PERC	2	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E906:ALL	1	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E906:ALL	2	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E906:ALL	3	Y	
EP6-09	DMW	Tnbs1	Q	WGMG	E906:ALL	4	Y	
K6-01	DMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-01	DMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-01	DMW	Tnbs1	S	CMP	E601:ALL	1	Y	
K6-01	DMW	Tnbs1	S	CMP	E601:ALL	3	Y	
K6-01	DMW	Tnbs1	S	CMP	E906:ALL	1	Y	
K6-01	DMW	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	

Table 2.3-1. (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K6-03	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-03	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-03	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
K6-03	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
K6-03	PTMW	Tnbs1	S	CMP	E906:ALL	1	Y	
K6-03	PTMW	Tnbs1	S	CMP	E906:ALL	3	Y	
K6-04	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-04	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-04	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
K6-04	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
K6-04	PTMW	Tnbs1	S	CMP	E906:ALL	1	Y	
K6-04	PTMW	Tnbs1	S	CMP	E906:ALL	3	Y	
K6-14	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-14	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-14	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
K6-14	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
K6-14	PTMW	Tnbs1	S	CMP	E906:ALL	1	Y	
K6-14	PTMW	Tnbs1	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	
K6-21	PTMW	Qt	A	CMP	E300.0:NO3	1	N	Dry.
K6-21	PTMW	Qt	A	CMP	E300.0:PERC	1	N	Dry.
K6-21	PTMW	Qt	A	CMP	E601:ALL	1	N	Dry.
K6-21	PTMW	Qt	A	CMP	E906:ALL	1	N	Dry.
K6-22	GW	Tnbs1	S	CMP	E300.0:NO3	1	Y	
K6-22	GW	Tnbs1	S	CMP	E300.0:NO3	3	Y	
K6-22	GW	Tnbs1	S	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K6-22	GW	Tnbs1	S	CMP	E300.0:PERC	3	Y	
K6-22	GW	Tnbs1	Q	CMP	E601:ALL	1	Y	
K6-22	GW	Tnbs1	Q	CMP	E601:ALL	2	Y	
K6-22	GW	Tnbs1	Q	CMP	E601:ALL	3	Y	
K6-22	GW	Tnbs1	Q	CMP	E601:ALL	4	Y	
K6-22	GW	Tnbs1	Q	CMP	E906:ALL	1	Y	
K6-22	GW	Tnbs1	Q	CMP	E906:ALL	2	Y	
K6-22	GW	Tnbs1	Q	CMP	E906:ALL	3	Y	
K6-22	GW	Tnbs1	Q	CMP	E906:ALL	4	Y	
K6-23	PTMW	Tmss	A	CMP	E300.0:NO3	1	Y	
K6-23	PTMW	Tmss	A	CMP	E300.0:PERC	1	Y	
K6-23	PTMW	Tmss	S	CMP	E601:ALL	1	Y	
K6-23	PTMW	Tmss	S	CMP	E601:ALL	3	Y	
K6-23	PTMW	Tmss	S	CMP	E906:ALL	1	Y	
K6-23	PTMW	Tmss	S	CMP	E906:ALL	3	Y	
K6-24	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	N	Dry.
K6-24	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	N	Dry.
K6-24	PTMW	Tnbs1	S	CMP	E601:ALL	1	N	Dry.
K6-24	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
K6-24	PTMW	Tnbs1	S	CMP	E906:ALL	1	N	Dry.
K6-24	PTMW	Tnbs1	S	CMP	E906:ALL	3	Y	
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	Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-26	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-26	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
K6-26	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
K6-26	PTMW	Tnbs1	S	CMP	E906:ALL	1	Y	
K6-26	PTMW	Tnbs1	S	CMP	E906:ALL	3	Y	
K6-27	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-27	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-27	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
K6-27	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
K6-27	PTMW	Tnbs1	S	CMP	E906:ALL	1	Y	
K6-27	PTMW	Tnbs1	S	CMP	E906:ALL	3	Y	
K6-32	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	N	Dry.
K6-32	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	N	Dry.
K6-32	PTMW	Tnbs1	S	CMP	E601:ALL	1	N	Dry.
K6-32	PTMW	Tnbs1	S	CMP	E601:ALL	3	N	Dry.
K6-32	PTMW	Tnbs1	S	CMP	E906:ALL	1	N	Dry.
K6-32	PTMW	Tnbs1	S	CMP	E906:ALL	3	N	Dry.
K6-33	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-33	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-33	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
K6-33	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
K6-33	PTMW	Tnbs1	S	CMP	E906:ALL	1	Y	
K6-33	PTMW	Tnbs1	S	CMP	E906:ALL	3	Y	
K6-34	GW	Tnbs1	S	CMP	E300.0:NO3	1	Y	
K6-34	GW	Tnbs1	S	CMP	E300.0:NO3	3	Y	
K6-34	GW	Tnbs1	S	CMP	E300.0:PERC	1	Y	
K6-34	GW	Tnbs1	S	CMP	E300.0:PERC	3	Y	

Table 2.3-1. (Cont.). Pit 6 Landfill Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K6-34	GW	Tnbs1	Q	CMP	E601:ALL	1	Y	
K6-34	GW	Tnbs1	Q	CMP	E601:ALL	2	Y	
K6-34	GW	Tnbs1	Q	CMP	E601:ALL	3	Y	
K6-34	GW	Tnbs1	Q	CMP	E601:ALL	4	Y	
K6-34	GW	Tnbs1	Q	CMP	E906:ALL	1	Y	
K6-34	GW	Tnbs1	Q	CMP	E906:ALL	2	Y	
K6-34	GW	Tnbs1	Q	CMP	E906:ALL	3	Y	
K6-34	GW	Tnbs1	Q	CMP	E906:ALL	4	Y	
K6-35	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-35	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-35	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
K6-35	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
K6-35	PTMW	Tnbs1	S	CMP	E906:ALL	1	Y	
K6-35	PTMW	Tnbs1	S	CMP	E906:ALL	3	Y	
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:NO3	1	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:NO3	2	N	Insufficient water.
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:NO3	2	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:NO3	3	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:NO3	4	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:PERC	1	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:PERC	2	N	Insufficient water.
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:PERC	2	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:PERC	3	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E300.0:PERC	4	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E906:ALL	1	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E906:ALL	2	N	Insufficient water.
K6-36	DMW	Tnbs1	Q	WGMG	E906:ALL	2	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E906:ALL	3	N	Dry.
K6-36	DMW	Tnbs1	Q	WGMG	E906:ALL	4	N	Dry.
SPRING15	SPR	Qt	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
SPRING15	SPR	Qt	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
SPRING15	SPR	Qt	O	CMP	E601:ALL	1	N	To be sampled in 2011.
SPRING15	SPR	Qt	O	CMP	E906:ALL	1	N	To be sampled in 2011.
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	Tnsc1	A	DIS	E300.0:NO3	1	Y	
W-34-01	MWB	Tnsc1	A	DIS	E300.0:PERC	1	Y	
W-34-01	MWB	Tnsc1	A	DIS	E601:ALL	1	Y	
W-34-01	MWB	Tnsc1	A	DIS	E906:ALL	1	Y	
W-34-02	MWB	Upper Tnbs1	A	DIS	E300.0:NO3	1	Y	
W-34-02	MWB	Upper Tnbs1	A	DIS	E300.0:PERC	1	Y	
W-34-02	MWB	Upper Tnbs1	A	DIS	E601:ALL	1	Y	
W-34-02	MWB	Upper Tnbs1	A	DIS	E906:ALL	1	Y	
W-PIT6-1819	GW	Tnbs1	S	CMP	E300.0:NO3	1	Y	
W-PIT6-1819	GW	Tnbs1	S	CMP	E300.0:NO3	3	Y	
W-PIT6-1819	GW	Tnbs1	S	CMP	E300.0:PERC	1	Y	
W-PIT6-1819	GW	Tnbs1	S	CMP	E300.0:PERC	3	Y	
W-PIT6-1819	GW	Tnbs1	Q	CMP	E601:ALL	1	Y	
W-PIT6-1819	GW	Tnbs1	Q	CMP	E601:ALL	2	Y	
W-PIT6-1819	GW	Tnbs1	Q	CMP	E601:ALL	3	Y	
W-PIT6-1819	GW	Tnbs1	Q	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-PIT6-1819	GW	Tnbs1	Q	CMP	E906:ALL	1	Y	
W-PIT6-1819	GW	Tnbs1	Q	CMP	E906:ALL	2	Y	
W-PIT6-1819	GW	Tnbs1	Q	CMP	E906:ALL	3	Y	
W-PIT6-1819	GW	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) 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, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
815-SRC	July	NA	671	NA	48,656
	August	NA	838	NA	60,296
	September	NA	669	NA	47,646
	October	NA	694	NA	49,899
	November	NA	826	NA	57,345
	December	NA	652	NA	32,085
<b>Total</b>		NA	4,350	NA	295,927

**Table 2.4-2. Building 815-Proximal (815-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
815-PRX	July	NA	0	NA	0
	August	NA	0	NA	0
	September	NA	0	NA	0
	October	NA	0	NA	0
	November	NA	0	NA	0
	December	NA	0	NA	0
<b>Total</b>		NA	0	NA	0

**Table 2.4-3. Building 815-Distal Site Boundary (815-DSB) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
815-DSB	July	NA	676	NA	133,984
	August	NA	827	NA	161,019
	September	NA	586	NA	110,783
	October	NA	655	NA	119,076
	November	NA	821	NA	118,513
	December	NA	677	NA	99,606
<b>Total</b>		NA	4,242	NA	742,981

**Table 2.4-4. Building 817-Source (817-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
817-SRC	July	NA	5	NA	164
	August	NA	2	NA	63
	September	NA	3	NA	126
	October	NA	3	NA	102
	November	NA	3	NA	85
	December	NA	0	NA	0
<b>Total</b>		NA	16	NA	540

**Table 2.4-5. Building 817-Proximal (817-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
817-PRX	July	NA	679	NA	52,033
	August	NA	850	NA	66,211
	September	NA	677	NA	49,975
	October	NA	852	NA	51,260
	November	NA	658	NA	62,771
	December	NA	678	NA	42,552
<b>Total</b>		NA	4,394	NA	324,802

**Table 2.4-6. Building 829-Source (829-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
829-SRC	July	NA	0	NA	0
	August	NA	0	NA	0
	September	NA	0	NA	0
	October	NA	0	NA	0
	November	NA	0	NA	0
	December	NA	0	NA	0
<b>Total</b>		NA	0	NA	0

**Table 2.4-7. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground water 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)
<i>Building 815-Distal Site Boundary</i>															
815-DSB-GWTS-E	7/12/10	<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	<0.5
815-DSB-GWTS-E	8/2/10	<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	<0.5
815-DSB-GWTS-E	9/13/10	<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	<0.5
815-DSB-GWTS-E	10/5/10	<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	<0.5
815-DSB-GWTS-E	11/1/10	<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	<0.5
815-DSB-GWTS-E	12/6/10	<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	<0.5
815-DSB-GWTS-I	7/12/10	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
815-DSB-GWTS-I	10/5/10	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
<i>Building 815-Proximal<sup>a</sup></i>															
<i>Building 815-Source</i>															
815-SRC-GWTS-E	7/14/10	<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	<0.5
815-SRC-GWTS-E	8/9/10	<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	<0.5
815-SRC-GWTS-E	9/13/10	<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	<0.5
815-SRC-GWTS-E	10/4/10	<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	<0.5
815-SRC-GWTS-E	11/1/10	<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	<0.5
815-SRC-GWTS-E	12/6/10	<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	<0.5
815-SRC-GWTS-I	7/14/10	4.9	<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
815-SRC-GWTS-I	10/4/10	5.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.69	<0.5	<0.5	<0.5	<0.5	<0.5
<i>Building 817-Proximal</i>															
817-PRX-GWTS-E	7/14/10	<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	<0.5
817-PRX-GWTS-E	8/9/10	<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	<0.5
817-PRX-GWTS-E	9/13/10	<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	<0.5
817-PRX-GWTS-E	10/4/10	<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	<0.5
817-PRX-GWTS-E	11/1/10	<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	<0.5
817-PRX-GWTS-E	12/6/10	<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	<0.5
817-PRX-GWTS-I	7/14/10	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-GWTS-I	10/4/10	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

**Table 2.4-7 (Cont.). High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground water 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)
<i>Building 817-Source</i>															
817-SRC-GWTS-E	7/14/10	<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	<0.5
817-SRC-GWTS-E	8/3/10	<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	<0.5
817-SRC-GWTS-E	9/13/10	<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	<0.5
817-SRC-GWTS-E	10/4/10	<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	<0.5
817-SRC-GWTS-E	11/1/10	<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	<0.5
817-SRC-GWTS-E <sup>b</sup>															
817-SRC-GWTS-I	7/14/10	<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	<0.5
817-SRC-GWTS-I	10/4/10	<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	<0.5
<i>Building 829-Source<sup>c</sup></i>															

**Notes:**

- <sup>a</sup> No compliance monitoring conducted due to inoperative extraction wells.
- <sup>b</sup> No samples collected in December due to GWTS shut down for freeze protection.
- <sup>c</sup> No compliance monitoring conducted; system offline for evaluation and construction.
- See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.4-7 (Cont.). Analyte detected but not reported in main table.**

Location	Date	Detection frequency
<i>Building 815-Distal Site Boundary</i>		
815-DSB-GWTS-E	7/12/10	0 of 18
815-DSB-GWTS-E	8/2/10	0 of 18
815-DSB-GWTS-E	9/13/10	0 of 18
815-DSB-GWTS-E	10/5/10	0 of 18
815-DSB-GWTS-E	11/1/10	0 of 18
815-DSB-GWTS-E	12/6/10	0 of 18
815-DSB-GWTS-I	7/12/10	0 of 18
815-DSB-GWTS-I	10/5/10	0 of 18
<i>Building 815-Proximal<sup>a</sup></i>		
<i>Building 815-Source</i>		
815-SRC-GWTS-E	7/14/10	0 of 18
815-SRC-GWTS-E	8/9/10	0 of 18
815-SRC-GWTS-E	9/13/10	0 of 18
815-SRC-GWTS-E	10/4/10	0 of 18
815-SRC-GWTS-E	11/1/10	0 of 18
815-SRC-GWTS-E	12/6/10	0 of 18
815-SRC-GWTS-I	7/14/10	0 of 18
815-SRC-GWTS-I	10/4/10	0 of 18
<i>Building 817-Proximal</i>		
817-PRX-GWTS-E	7/14/10	0 of 18
817-PRX-GWTS-E	8/9/10	0 of 18
817-PRX-GWTS-E	9/13/10	0 of 18
817-PRX-GWTS-E	10/4/10	0 of 18
817-PRX-GWTS-E	11/1/10	0 of 18
817-PRX-GWTS-E	12/6/10	0 of 18
817-PRX-GWTS-I	7/14/10	0 of 18
817-PRX-GWTS-I	10/4/10	0 of 18
<i>Building 817-Source</i>		
817-SRC-GWTS-E	7/14/10	0 of 18
817-SRC-GWTS-E	8/3/10	0 of 18
817-SRC-GWTS-E	9/13/10	0 of 18
817-SRC-GWTS-E	10/4/10	0 of 18
817-SRC-GWTS-E	11/1/10	0 of 18
817-SRC-GWTS-E <sup>b</sup>	–	–
817-SRC-GWTS-I	7/14/10	0 of 18
817-SRC-GWTS-I	10/4/10	0 of 18
<i>Building 829-Source<sup>c</sup></i>		

Notes:

<sup>a</sup> No compliance monitoring conducted during second semester; system offline due to malfunction of extraction pumps.

<sup>b</sup> No samples collected in December due to GWTS shut down for freeze protection.

<sup>c</sup> No compliance monitoring conducted during second semester; system offline for evaluation and rebuild.

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.4-8. High Explosives Process Area Operable Unit nitrate and perchlorate in ground water treatment system influent and effluent.**

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
<i>Building 815-Distal Site Boundry<sup>a</sup></i>			
<i>Building 815-Proximal<sup>b</sup></i>			
<i>Building 815-Source</i>			
815-SRC-GWTS-E	7/14/10	NR	<4
815-SRC-GWTS-E	8/9/10	NR	<4
815-SRC-GWTS-E	9/13/10	NR	<4
815-SRC-GWTS-E	10/4/10	NR	<4
815-SRC-GWTS-E	11/1/10	NR	<4
815-SRC-GWTS-E	12/6/10	NR	<4
815-SRC-GWTS-I	7/14/10	NR	<4
815-SRC-GWTS-I	10/4/10	NR	6.6
<i>Building 817-Proximal</i>			
817-PRX-GWTS-E	7/14/10	NR	<4
817-PRX-GWTS-E	8/9/10	NR	<4
817-PRX-GWTS-E	9/13/10	NR	<4
817-PRX-GWTS-E	10/4/10	NR	<4
817-PRX-GWTS-E	11/1/10	NR	<4
817-PRX-GWTS-E	12/6/10	NR	<4
817-PRX-GWTS-I	7/14/10	NR	20 D
817-PRX-GWTS-I	10/4/10	NR	20 D
<i>Building 817-Source</i>			
817-SRC-GWTS-E	7/14/10	NR	<4
817-SRC-GWTS-E	8/3/10	NR	<4
817-SRC-GWTS-E	9/13/10	NR	<4
817-SRC-GWTS-E	10/4/10	NR	<4
817-SRC-GWTS-E	11/1/10	NR	<4
817-SRC-GWTS-E <sup>c</sup>	-	-	-
817-SRC-GWTS-I	7/14/10	NR	23 D
817-SRC-GWTS-I	10/4/10	NR	23 D
<i>Building 829-Source<sup>d</sup></i>			

**Notes:**

- <sup>a</sup> No nitrate or perchlorate monitoring required.
- <sup>b</sup> No compliance monitoring conducted due to inoperative extraction wells.
- <sup>c</sup> No samples collected in December due to GWTS shut down for freeze protection.
- <sup>d</sup> No compliance monitoring conducted; system offline for evaluation and construction.

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.4-9. High Explosives Process Area Operable Unit high explosive compounds in ground water treatment system influent and effluent.**

Location	Date	1,3,5-TNB	1,3-DNB	TNT	2,4-DNT	2,6-DNT	2-Amino- 4,6- DNT	2-NT	3-NT	4-Amino- 2,6- DNT	4-NT	HMX	NB	RDX
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<i>Building 815-Distal Site Boundry<sup>a</sup></i>														
<i>Building 815-Proximal<sup>b</sup></i>														
<i>Building 815-Source</i>														
815-SRC-GWTS-E	7/14/10	<2 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
815-SRC-GWTS-E	8/9/10	<2 L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	<1
815-SRC-GWTS-E	9/13/10	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.7	<1.4	<0.7 L
815-SRC-GWTS-E <sup>c</sup>	10/4/10	<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	<2.4 D	<1.2 D	<2.4 D	<1.2 D
815-SRC-GWTS-E	11/1/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
815-SRC-GWTS-E	12/6/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
815-SRC-GWTS-I	7/14/10	<1.8	<1.8	<1.8	<1.8	<1.8 L	<1.8	<1.8	<1.8	<1.8	<1.8	<0.89 S	<1.8 L	<0.89 S
815-SRC-GWTS-I <sup>d</sup>	8/10/10	<2 DLIJ	<2 DIJ	<2 DIJ	<2 DIJ	<2 DIJ	<2 DIJ	<2 DIJ	<2 DIJ	<2 DIJ	<2 DIJ	<1 DOIJ	<2 DIJ	47 DIJ
815-SRC-GWTS-I	10/4/10	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	6.3	<1.6	50
<i>Building 817-Proximal</i>														
817-PRX-GWTS-E	7/14/10	<2 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
817-PRX-GWTS-E	8/9/10	<2 L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	<1
817-PRX-GWTS-E	9/13/10	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.73	<1.5	<0.73 L
817-PRX-GWTS-E	10/4/10	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.7	<1.4	<0.7
817-PRX-GWTS-E	11/1/10	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D
817-PRX-GWTS-E	12/6/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
817-PRX-GWTS-I	7/14/10	<1.6 IJ	<1.6 IJ	<1.6 IJ	<1.6 IJ	<1.6 IJL	<1.6 IJ	<1.6 IJ	<1.6 IJ	<1.6 IJ	<1.6 IJ	<0.79 IJ	<1.6 IJL	<0.79 IJ
817-PRX-GWTS-I	10/4/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 D	<2	11 D



**Table 2.4-9 (Cont.). High Explosives Process Area Operable Unit high explosive compounds in ground water 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)
<i>Building 817-Source</i>														
817-SRC-GWTS-E	7/14/10	<2 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
817-SRC-GWTS-E	8/3/10	<2 LO	<2	<2	<2 L	<2	<2	<2	<2	<2	<2	<1	<2	<1 L
817-SRC-GWTS-E	9/13/10	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.74	<1.5	<0.74 L
817-SRC-GWTS-E	10/4/10	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<0.88	<1.8	<0.88
817-SRC-GWTS-E	11/1/10	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D
817-SRC-GWTS-E <sup>e</sup>														
817-SRC-GWTS-I	7/14/10	<2	<2	<2	<2 L	<2	<2	<2	<2	<2	<2	16	<2 L	51
817-SRC-GWTS-I	10/4/10	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	8.9 D	<2 D	20 DJ	<2 D	47 D
<i>Building 829-Source<sup>f</sup></i>														

**Notes:**

- <sup>a</sup> No nitrate or perchlorate monitoring required.
- <sup>b</sup> No compliance monitoring conducted due to inoperative extraction wells.
- <sup>c</sup> Due to samples extraction problems at CAL, PQLs were raised slightly above normal.
- <sup>d</sup> Influent resample due to suspect results on samples collected on 7/14/10.
- <sup>e</sup> No samples collected in December due to GWTS shut down for freeze protection.
- <sup>f</sup> No compliance monitoring conducted; system offline for evaluation and construction.  
See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.4-10. High Explosives Process Area Operable Unit treatment facility sampling and analysis plan.**

<b>Sample location</b>	<b>Sample identification</b>	<b>Parameter</b>	<b>Frequency</b>
<b>815-SRC GWTS</b>			
<b>Influent Port</b>	<b>815-SRC-I</b>	<b>VOCs</b>	<b>Quarterly</b>
		<b>HE Compounds</b>	<b>Quarterly</b>
		<b>Perchlorate</b>	<b>Quarterly</b>
<b>Effluent Port</b>	<b>815-SRC-E</b>	<b>VOCs</b>	<b>Monthly</b>
		<b>HE Compounds</b>	<b>Monthly</b>
		<b>Perchlorate</b>	<b>Monthly</b>
		<b>pH</b>	<b>Monthly</b>
<b>815-PRX GWTS</b>			
<b>Influent Port</b>	<b>815-PRX-I</b>	<b>VOCs</b>	<b>Quarterly</b>
		<b>Perchlorate</b>	<b>Quarterly</b>
<b>Effluent Port</b>	<b>815-PRX-E</b>	<b>VOCs</b>	<b>Monthly</b>
		<b>HE Compounds</b>	<b>Quarterly</b>
		<b>Perchlorate</b>	<b>Monthly</b>
		<b>pH</b>	<b>Monthly</b>
<b>815-DSB GWTS</b>			
<b>Influent Port</b>	<b>815-DSB-I</b>	<b>VOCs</b>	<b>Quarterly</b>
<b>Effluent Port</b>	<b>815-DSB-E</b>	<b>VOCs</b>	<b>Monthly</b>
		<b>pH</b>	<b>Monthly</b>
<b>817-SRC GWTS</b>			
<b>Influent Port</b>	<b>W-817-01-817-SRC-I</b>	<b>VOCs</b>	<b>Quarterly</b>
		<b>HE Compounds</b>	<b>Quarterly</b>
		<b>Perchlorate</b>	<b>Quarterly</b>
<b>Effluent Port</b>	<b>817-SRC-E</b>	<b>VOCs</b>	<b>Monthly</b>
		<b>HE Compounds</b>	<b>Monthly</b>
		<b>Perchlorate</b>	<b>Monthly</b>
		<b>pH</b>	<b>Monthly</b>
<b>817-PRX GWTS</b>			
<b>Influent Port</b>	<b>817-PRX-I</b>	<b>VOCs</b>	<b>Quarterly</b>
		<b>HE Compounds</b>	<b>Quarterly</b>
		<b>Perchlorate</b>	<b>Quarterly</b>
<b>Effluent Port</b>	<b>817-PRX-E</b>	<b>VOCs</b>	<b>Monthly</b>
		<b>HE Compounds</b>	<b>Monthly</b>
		<b>Perchlorate</b>	<b>Monthly</b>
		<b>pH</b>	<b>Monthly</b>

**Table 2.4-10 (Cont.). High Explosives Process Area Operable Unit treatment facility sampling and analysis plans.**

<b>Sample location</b>	<b>Sample identification</b>	<b>Parameter</b>	<b>Frequency</b>
<b>829-SRC GWTS</b>			
<b>Influent Port</b>	<b>W-829-06-829-SRC-I</b>	<b>VOCs</b>	<b>Quarterly</b>
		<b>Perchlorate</b>	<b>Quarterly</b>
		<b>Nitrate</b>	<b>Quarterly</b>
<b>Effluent Port</b>	<b>829-SRC-BTU-I</b>	<b>VOCs</b>	<b>Monthly</b>
<b>Effluent Port</b>	<b>829-SRC-E</b>	<b>Perchlorate</b>	<b>Monthly</b>
		<b>Nitrate</b>	<b>Monthly</b>
		<b>pH</b>	<b>Monthly</b>

**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	Completion Interval	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	Completion Interval	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	Tnbs2	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
SPRING14	SPR	Tnbs2	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
SPRING14	SPR	Tnbs2	O	CMP	E601:ALL	1	N	To be sampled in 2011.
SPRING14	SPR	Tnbs2	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
SPRING5	SPR	Tps	A	CMP	E300.0:NO3	1	N	Dry.
SPRING5	SPR	Tps	A	CMP	E300.0:PERC	1	N	Dry.
SPRING5	SPR	Tps	S	CMP	E601:ALL	1	N	Dry.
SPRING5	SPR	Tps	S	CMP	E601:ALL	3	N	Dry.
SPRING5	SPR	Tps	A	CMP	E8330LOW:ALL	1	N	Dry.
W-35B-01	GW	Qal	S	CMP	E300.0:NO3	1	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:NO3	3	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:PERC	1	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:PERC	3	Y	
W-35B-01	GW	Qal	Q	CMP	E601:ALL	1	Y	
W-35B-01	GW	Qal	Q	CMP	E601:ALL	2	Y	
W-35B-01	GW	Qal	Q	CMP	E601:ALL	3	Y	
W-35B-01	GW	Qal	Q	CMP	E601:ALL	4	Y	
W-35B-01	GW	Qal	S	CMP	E8330LOW:ALL	1	Y	
W-35B-01	GW	Qal	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	

Table 2.4-11. (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-35B-04	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
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	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-35C-01	PTMW	Tnsc2	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-35C-01	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-35C-01	PTMW	Tnsc2	S	CMP	E601:ALL	3	Y	
W-35C-01	PTMW	Tnsc2	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-35C-02	PTMW	Tnbs1	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-35C-02	PTMW	Tnbs1	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
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	N	To be sampled in 2011.
W-35C-04	EW	Tnbs2	O	CMP-TF	E300.0:PERC	1	N	To be sampled in 2011.
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	N	To be sampled in 2011.
W-35C-05	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-35C-05	PTMW	Tps	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-35C-05	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-35C-05	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-35C-05	PTMW	Tps	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-35C-06	PTMW	Qal	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-35C-06	PTMW	Qal	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-35C-06	PTMW	Qal	S	CMP	E601:ALL	1	Y	
W-35C-06	PTMW	Qal	S	CMP	E601:ALL	3	Y	
W-35C-06	PTMW	Qal	A	CMP	E8330LOW:ALL	1	Y	
W-35C-07	PTMW	Tnsc2	E	CMP	E300.0:NO3	1	Y	
W-35C-07	PTMW	Tnsc2	E	CMP	E300.0:PERC	1	Y	
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	Y	
W-35C-08	PTMW	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-35C-08	PTMW	Tnsc2	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-35C-08	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-35C-08	PTMW	Tnsc2	S	CMP	E601:ALL	3	Y	
W-35C-08	PTMW	Tnsc2	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-4A	PTMW	Tnbs2	E	CMP	E300.0:NO3	1	N	Inoperable pump.
W-4A	PTMW	Tnbs2	E	CMP	E300.0:PERC	1	N	Inoperable pump.
W-4A	PTMW	Tnbs2	S	CMP	E601:ALL	1	N	Inoperable pump.
W-4A	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-4A	PTMW	Tnbs2	E	CMP	E8330LOW:ALL	1	N	Inoperable pump.
W-4AS	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-4AS	PTMW	Tps	E	CMP	E300.0:PERC	1	Y	
W-4AS	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-4AS	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-4AS	PTMW	Tps	E	CMP	E8330LOW:ALL	1	Y	
W-4B	PTMW	Tnbs2	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-4B	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
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	N	To be sampled in 2011.
W-4C	GW	Tnsc1	S	CMP	E300.0:NO3	1	Y	
W-4C	GW	Tnsc1	S	CMP	E300.0:NO3	3	Y	
W-4C	GW	Tnsc1	S	CMP	E300.0:PERC	1	Y	
W-4C	GW	Tnsc1	S	CMP	E300.0:PERC	3	Y	
W-4C	GW	Tnsc1	Q	CMP	E601:ALL	1	Y	
W-4C	GW	Tnsc1	Q	CMP	E601:ALL	2	Y	
W-4C	GW	Tnsc1	Q	CMP	E601:ALL	3	Y	
W-4C	GW	Tnsc1	Q	CMP	E601:ALL	4	Y	
W-6BD	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-6BD	PTMW	Tps	E	CMP	E300.0:PERC	1	Y	
W-6BD	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-6BD	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-6BD	PTMW	Tps	E	CMP	E8330LOW:ALL	1	Y	
W-6BS	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-6BS	PTMW	Tps	E	CMP	E300.0:PERC	1	Y	
W-6BS	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-6BS	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-6BS	PTMW	Tps	E	CMP	E8330LOW:ALL	1	Y	
W-6CD	PTMW	Tnbs2	E	CMP	E300.0:NO3	1	Y	
W-6CD	PTMW	Tnbs2	E	CMP	E300.0:PERC	1	Y	
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	Y	
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	Tps	A	CMP	E300.0:NO3	1	Y	
W-6CS	PTMW	Tps	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-6CS	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-6CS	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-6CS	PTMW	Tps	A	CMP	E8330LOW:ALL	1	Y	
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	N	To be sampled in 2011.
W-6ER	EW	Tnbs2	O	CMP-TF	E300.0:PERC	1	N	To be sampled in 2011.
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	N	To be sampled in 2011.
W-6ES	PTMW	Qal	E	CMP	E300.0:NO3	1	Y	
W-6ES	PTMW	Qal	E	CMP	E300.0:PERC	1	Y	
W-6ES	PTMW	Qal	S	CMP	E601:ALL	1	Y	
W-6ES	PTMW	Qal	S	CMP	E601:ALL	3	Y	
W-6ES	PTMW	Qal	A	CMP	E8330LOW:ALL	1	Y	
W-6F	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-6F	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-6F	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-6F	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-6F	PTMW	Tnbs2	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	N	To be sampled in 2011.
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	Tps	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-6I	PTMW	Tps	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-6I	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-6I	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-6I	PTMW	Tps	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
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	



Table 2.4-11. (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	
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	Y	
W-6K	PTMW	Tnbs2	E	CMP	E300.0:PERC	1	Y	
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	Y	
W-6L	PTMW	Tnbs2	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-6L	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
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	N	To be sampled in 2011.
W-806-06A	PTMW	Tnsc1	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-806-06A	PTMW	Tnsc1	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-806-06A	PTMW	Tnsc1	O	CMP	E601:ALL	1	N	To be sampled in 2011.
W-806-06A	PTMW	Tnsc1	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-806-07	PTMW	Tnbs2	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-806-07	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-806-07	PTMW	Tnbs2	O	CMP	E601:ALL	1	N	To be sampled in 2011.
W-806-07	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-808-01	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-808-01	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-808-01	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-808-01	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-808-01	PTMW	Tps	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-808-02	PTMW	Tnsc2	A	CMP	E300.0:NO3	1	N	Dry.
W-808-02	PTMW	Tnsc2	A	CMP	E300.0:PERC	1	N	Dry.
W-808-02	PTMW	Tnsc2	S	CMP	E601:ALL	1	N	Dry.
W-808-02	PTMW	Tnsc2	S	CMP	E601:ALL	3	N	Dry.
W-808-02	PTMW	Tnsc2	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-808-03	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-808-03	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-808-03	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
W-808-03	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
W-808-03	PTMW	Tnbs1	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-809-01	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-809-01	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-809-01	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-809-01	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-809-01	PTMW	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	DIS	E300.0:PERC	1	Y	
W-809-02	PTMW	Tnbs2	A	DIS	E300.0:PERC	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	
W-809-03	PTMW	Tnbs2	A	DIS	E8330LOW:ALL	3	Y	
W-809-04	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-809-04	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-809-04	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-809-04	PTMW	Tps	S	CMP	E601:ALL	3	N	Insufficient water.
W-809-04	PTMW	Tps	A	CMP	E8330LOW:ALL	1	Y	
W-810-01	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-810-01	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-810-01	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
W-810-01	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
W-810-01	PTMW	Tnbs1	A	CMP	E8330LOW:ALL	1	Y	
W-814-01	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-814-01	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-814-01	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-814-01	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-814-01	PTMW	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	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-814-03	PTMW	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-814-03	PTMW	Tps	S	CMP	E601:ALL	1	N	Dry.
W-814-03	PTMW	Tps	S	CMP	E601:ALL	3	N	Dry.
W-814-03	PTMW	Tps	A	CMP	E8330LOW:ALL	1	N	Dry.
W-814-04	GW	Tnsc1	S	CMP	E300.0:NO3	1	Y	
W-814-04	GW	Tnsc1	S	CMP	E300.0:NO3	3	Y	
W-814-04	GW	Tnsc1	S	CMP	E300.0:PERC	1	Y	
W-814-04	GW	Tnsc1	S	CMP	E300.0:PERC	3	Y	
W-814-04	GW	Tnsc1	Q	CMP	E601:ALL	1	Y	
W-814-04	GW	Tnsc1	Q	CMP	E601:ALL	2	Y	
W-814-04	GW	Tnsc1	Q	CMP	E601:ALL	3	Y	
W-814-04	GW	Tnsc1	Q	CMP	E601:ALL	4	N	Inoperable pump.
W-814-2138	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-814-2138	PTMW	Tpsg	A	CMP	E300.0:PERC	1	Y	
W-814-2138	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-814-2138	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-814-2138	PTMW	Tpsg	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-815-01	PTMW	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-01	PTMW	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-01	PTMW	Tps	S	CMP	E601:ALL	1	N	Dry.
W-815-01	PTMW	Tps	S	CMP	E601:ALL	3	N	Dry.
W-815-01	PTMW	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	
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	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-03	PTMW	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-03	PTMW	Tps	S	CMP	E601:ALL	1	N	Dry.
W-815-03	PTMW	Tps	S	CMP	E601:ALL	3	N	Dry.
W-815-03	PTMW	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	Tps	A	CMP	E300.0:NO3	1	Y	
W-815-05	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-815-05	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-815-05	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-815-05	PTMW	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	Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-815-08	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-815-08	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
W-815-08	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
W-815-08	PTMW	Tnbs1	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-815-1928	PTMW	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-1928	PTMW	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-1928	PTMW	Tps	S	CMP	E601:ALL	1	N	Dry.
W-815-1928	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-815-1928	PTMW	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	
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	N	To be sampled in 2011.
W-815-2217	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
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	N	To be sampled in 2011.
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	
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	

Table 2.4-11. (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	Tps	A	CMP	E300.0:NO3	1	Y	
W-817-03A	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-817-03A	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-817-03A	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-817-03A	PTMW	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	Tnsc1	A	CMP	E300.0:NO3	1	Y	
W-817-05	PTMW	Tnsc1	A	CMP	E300.0:PERC	1	Y	
W-817-05	PTMW	Tnsc1	S	CMP	E601:ALL	1	Y	
W-817-05	PTMW	Tnsc1	S	CMP	E601:ALL	3	Y	
W-817-05	PTMW	Tnsc1	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	A	CMP-TF	E300.0:NO3	1	Y	
W-817-2318	EW	Tpsg	A	CMP-TF	E300.0:PERC	1	Y	
W-817-2318	EW	Tpsg	A	DIS-TF	E300.0:PERC	3	Y	
W-817-2318	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
W-817-2318	EW	Tpsg	S	DIS-TF	E601:ALL	2	Y	
W-817-2318	EW	Tpsg	S	CMP-TF	E601:ALL	3	Y	
W-817-2318	EW	Tpsg	S	DIS-TF	E601:ALL	4	Y	
W-817-2318	EW	Tpsg	A	CMP-TF	E8330LOW:ALL	1	Y	
W-817-2318	EW	Tpsg	A	DIS-TF	E8330LOW:ALL	3	Y	
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	N	To be sampled in 2011.
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	

Table 2.4-11. (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	N	To be sampled in 2011.
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	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	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	N	Inoperable pump.
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-818-09	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	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	N	Inoperable pump.
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-818-11	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-818-11	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
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	Tnsc1	A	CMP	E300.0:NO3	1	Y	
W-819-02	PTMW	Tnsc1	A	CMP	E300.0:PERC	1	Y	
W-819-02	PTMW	Tnsc1	S	CMP	E601:ALL	1	Y	
W-819-02	PTMW	Tnsc1	S	CMP	E601:ALL	3	Y	
W-819-02	PTMW	Tnsc1	A	CMP	E8330LOW:ALL	1	Y	
W-823-01	PTMW	Tps	A	CMP	E300.0:NO3	1	Y	
W-823-01	PTMW	Tps	A	CMP	E300.0:PERC	1	Y	
W-823-01	PTMW	Tps	S	CMP	E601:ALL	1	Y	
W-823-01	PTMW	Tps	S	CMP	E601:ALL	3	Y	
W-823-01	PTMW	Tps	A	CMP	E8330LOW:ALL	1	Y	
W-823-01	PTMW	Tps	A	DIS	EM8015:DIESEL	1	Y	
W-823-02	PTMW	Tnbs2	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-823-02	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
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	N	To be sampled in 2011.
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	Y	
W-823-03	PTMW	Tnbs2	S	CMP	E601: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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-823-03	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-823-03	PTMW	Tnbs2	E	CMP	E8330LOW:ALL	1	Y	
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	To be sampled in 2011.
W-827-01	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-827-01	PTMW	Tnbs2	O	CMP	E601:ALL	1	N	To be sampled in 2011.
W-827-01	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-827-02	PTMW	Tnsc1	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-827-02	PTMW	Tnsc1	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-827-02	PTMW	Tnsc1	O	CMP	E601:ALL	1	N	To be sampled in 2011.
W-827-02	PTMW	Tnsc1	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-827-03	PTMW	Tnsc1	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-827-03	PTMW	Tnsc1	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-827-03	PTMW	Tnsc1	O	CMP	E601:ALL	1	N	To be sampled in 2011.
W-827-03	PTMW	Tnsc1	O	CMP	E8330LOW:ALL	1	N	To be sampled in 2011.
W-827-05	PTMW	Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-827-05	PTMW	Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-827-05	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
W-827-05	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
W-827-05	PTMW	Tnbs1	A	CMP	E8330LOW:ALL	1	Y	
W-829-06	EW	Tnsc1	Q	CMP-TF	E300.0:NO3	1	N	Facility offline
W-829-06	EW	Tnsc1	Q	CMP-TF	E300.0:NO3	2	Y	
W-829-06	EW	Tnsc1	Q	CMP-TF	E300.0:NO3	3	N	Facility offline
W-829-06	EW	Tnsc1	Q	CMP-TF	E300.0:NO3	4	N	Facility offline
W-829-06	EW	Tnsc1	Q	CMP-TF	E300.0:PERC	1	N	Facility offline
W-829-06	EW	Tnsc1	Q	CMP-TF	E300.0:PERC	2	Y	
W-829-06	EW	Tnsc1	Q	CMP-TF	E300.0:PERC	3	N	Facility offline
W-829-06	EW	Tnsc1	Q	CMP-TF	E300.0:PERC	4	N	Facility offline
W-829-06	EW	Tnsc1	Q	CMP-TF	E601:ALL	1	N	Facility offline
W-829-06	EW	Tnsc1	Q	CMP-TF	E601:ALL	2	Y	
W-829-06	EW	Tnsc1	Q	CMP-TF	E601:ALL	3	N	Facility offline
W-829-06	EW	Tnsc1	Q	CMP-TF	E601:ALL	4	N	Facility offline
W-829-06	EW	Tnsc1	A	CMP-TF	E8330LOW:ALL	2	Y	
W-829-15	DMW	Tnbs1	A	WGMG	E300.0:PERC	2	Y	
W-829-15	DMW	Tnbs1	A	WGMG	E624:ALL	2	Y	
W-829-15	DMW	Tnbs1	A	WGMG	E8330:R+H	2	Y	
W-829-15	DMW	Tnbs1	A	WGMG	E8330:TNT	2	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E300.0:PERC	1	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E300.0:PERC	2	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E624:ALL	1	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E624: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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-829-1938	DMW	Tnbs1	Q	WGMG	E624:ALL	3	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E624:ALL	4	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E8330:R+H	1	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E8330:R+H	2	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E8330:R+H	3	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E8330:R+H	4	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E8330:TNT	1	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E8330:TNT	2	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E8330:TNT	3	Y	
W-829-1938	DMW	Tnbs1	Q	WGMG	E8330:TNT	4	Y	
W-829-1940	PTMW	Tnsc1	A	CMP	E300.0:NO3	1	Y	
W-829-1940	PTMW	Tnsc1	A	CMP	E300.0:PERC	1	Y	
W-829-1940	PTMW	Tnsc1	S	CMP	E601:ALL	1	Y	
W-829-1940	PTMW	Tnsc1	S	CMP	E601:ALL	3	Y	
W-829-1940	PTMW	Tnsc1	A	CMP	E8330LOW:ALL	1	Y	
W-829-22	DMW	Tnbs1	A	WGMG	E300.0:PERC	2	Y	
W-829-22	DMW	Tnbs1	A	WGMG	E624:ALL	2	Y	
W-829-22	DMW	Tnbs1	A	WGMG	E8330:R+H	2	Y	
W-829-22	DMW	Tnbs1	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	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	2	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	2	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	2	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	3	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	3	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	3	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	4	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	4	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	4	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	1	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	2	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	2	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	2	N	Inoperable pump.
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	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	4	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	4	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	4	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	1	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E601:ALL	2	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	2	N	Inoperable pump.



Table 2.4-11. (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
WELL18	WS	Tnbs1	M	CMP	E601:ALL	2	N	Inoperable pump.
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	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	4	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	4	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	4	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	1	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	2	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	2	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	2	N	Inoperable pump.
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	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	4	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	4	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	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	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	3	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: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	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	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	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	

**Table 2.4-11. (Cont.). High Explosives Process Area Operable Unit ground and surface water sampling and analysis plan.**

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	

**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) 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, 2010 through December 31, 2010.**

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	0.86	1.1	18	9.4	NA
	August	NA	1.2	1.5	23	14	NA
	September	NA	0.97	1.2	18	11	NA
	October	NA	0.85	1.3	19	12	NA
	November	NA	1.0	1.5	21	14	NA
	December	NA	0.75	0.96	12	8.3	NA
<b>Total</b>		NA	5.7	7.5	110	68	NA

**Notes:**

\*Nitrate re-injected into the Tnbs, HSU undergoes in-situ biotransformation to benign N<sub>2</sub> gas by anaerobic denitrifying bacteria.

**Table 2.4-13. Building 815-Proximal (815-PRX) mass removed, July 1, 2010 through December 31, 2010.**

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	0	0	0	NA	NA
	August	NA	0	0	0	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
<b>Total</b>		NA	0	0	0	NA	NA

**Notes:**

\*Nitrate re-injected into the Tnbs, HSU undergoes in-situ biotransformation to benign N<sub>2</sub> gas by anaerobic denitrifying bacteria.

**Table 2.4-14. Building 815-Distal Site Boundary (815-DSB) mass removed, July 1, 2010 through December 31, 2010.**

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	6.6	NA	NA	NA	NA
	August	NA	7.3	NA	NA	NA	NA
	September	NA	5.0	NA	NA	NA	NA
	October	NA	5.2	NA	NA	NA	NA
	November	NA	5.3	NA	NA	NA	NA
	December	NA	4.4	NA	NA	NA	NA
<b>Total</b>		NA	34	NA	NA	NA	NA

**Table 2.4-15. Building 817-Source (817-SRC) mass removed, July 1, 2010 through December 31, 2010.**

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	0.014	0.050	0.032	NA
	August	NA	0	0.0055	0.019	0.012	NA
	September	NA	0	0.011	0.039	0.024	NA
	October	NA	0	0.0089	0.031	0.018	NA
	November	NA	0	0.0074	0.026	0.015	NA
	December	NA	0	0	0	0	NA
<b>Total</b>		NA	0	0.047	0.17	0.10	NA

**Notes:**

\*Nitrate re-injected into the Tnbs<sub>2</sub> HSU undergoes in-situ biotransformation to benign N<sub>2</sub> gas by anaerobic denitrifying bacteria.

**Table 2.4-16. Building 817-Proximal (817-PRX) mass removed, July 1, 2010 through December 31, 2010.**

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	2.0	4.3	21	1.6	NA
	August	NA	3.3	5.8	26	2.1	NA
	September	NA	2.2	4.5	19	1.6	NA
	October	NA	1.8	4.7	20	1.7	NA
	November	NA	2.1	5.7	24	2.1	NA
	December	NA	1.3	4.0	16	1.6	NA
<b>Total</b>		NA	13	29	130	11	NA

**Notes:**

\*Nitrate re-injected into the Tnbs, HSU undergoes in-situ biotransformation to benign N<sub>2</sub> gas by anaerobic denitrifying bacteria.

**Table 2.4-17. Building 829-Source (829-SRC) mass removed, July 1, 2010 through December 31, 2010.**

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	0	0	NA	NA
	August	NA	0	0	0	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
<b>Total</b>		NA	0	0	0	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K1-01C	DMW	Tnbs1	Q	WGMG	AS:UIISO	1	Y	
K1-01C	DMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	AS:UIISO	3	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	AS:UIISO	4	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E300.0:NO3	1	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E300.0:NO3	2	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E300.0:NO3	3	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E300.0:NO3	4	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E300.0:PERC	1	Y	
K1-01C	DMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E906:ALL	1	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E906:ALL	2	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E906:ALL	3	Y	
K1-01C	DMW	Tnbs1	Q	WGMG	E906:ALL	4	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	AS:UIISO	1	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	AS:UIISO	2	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	AS:UIISO	3	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	AS:UIISO	4	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E300.0:NO3	1	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E300.0:NO3	2	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E300.0:NO3	3	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E300.0:NO3	4	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E906:ALL	1	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E906:ALL	2	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E906:ALL	3	Y	
K1-02B	DMW	Tnbs0	Q	WGMG	E906:ALL	4	Y	
K1-04	DMW	Tnbs1/Tnbs0	Q	WGMG	AS:UIISO	1	Y	
K1-04	DMW	Tnbs1/Tnbs0	Q	WGMG	AS:UIISO	2	Y	
K1-04	DMW	Tnbs1/Tnbs0	Q	WGMG	AS:UIISO	3	Y	
K1-04	DMW	Tnbs1/Tnbs0	Q	WGMG	AS:UIISO	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	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	Q	WGMG	AS:UIISO	1	Y	
K1-05	DMW	Tnbs1	Q	WGMG	AS:UIISO	2	Y	
K1-05	DMW	Tnbs1	Q	WGMG	AS:UIISO	3	Y	
K1-05	DMW	Tnbs1	Q	WGMG	AS:UIISO	4	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E300.0:NO3	1	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E300.0:NO3	2	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E300.0:NO3	3	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E300.0:NO3	4	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E300.0:PERC	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K1-05	DMW	Tnbs1	Q	WGMG	E300.0:PERC	2	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E906:ALL	1	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E906:ALL	2	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E906:ALL	3	Y	
K1-05	DMW	Tnbs1	Q	WGMG	E906:ALL	4	Y	
K1-06	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
K1-06	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
K1-06	PTMW	Tnbs1	Q	WGMG	E300.0:PERC	1	Y	
K1-06	PTMW	Tnbs1	Q	WGMG	E300.0:PERC	2	Y	
K1-06	PTMW	Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
K1-06	PTMW	Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
K1-06	PTMW	Tnbs1	Q	WGMG	E906:ALL	1	Y	
K1-06	PTMW	Tnbs1	Q	WGMG	E906:ALL	2	Y	
K1-06	PTMW	Tnbs1	Q	WGMG	E906:ALL	3	Y	
K1-06	PTMW	Tnbs1	Q	WGMG	E906:ALL	4	Y	
K1-07	DMW	Tnbs1	Q	WGMG	AS:UIISO	1	Y	
K1-07	DMW	Tnbs1	Q	WGMG	AS:UIISO	2	Y	
K1-07	DMW	Tnbs1	Q	WGMG	AS:UIISO	3	Y	
K1-07	DMW	Tnbs1	Q	WGMG	AS:UIISO	4	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E300.0:NO3	1	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E300.0:NO3	2	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E300.0:NO3	3	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E300.0:NO3	4	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E300.0:PERC	1	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E300.0:PERC	2	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E906:ALL	1	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E906:ALL	2	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E906:ALL	3	Y	
K1-07	DMW	Tnbs1	Q	WGMG	E906:ALL	4	Y	
K1-07	DMW	Tnbs1	A	DIS	MS:UIISO	2	Y	
K1-08	DMW	Tnbs1	Q	WGMG	AS:UIISO	1	Y	
K1-08	DMW	Tnbs1	Q	WGMG	AS:UIISO	2	Y	
K1-08	DMW	Tnbs1	Q	WGMG	AS:UIISO	3	Y	
K1-08	DMW	Tnbs1	Q	WGMG	AS:UIISO	4	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E300.0:NO3	1	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E300.0:NO3	2	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E300.0:NO3	3	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E300.0:NO3	4	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E300.0:PERC	1	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E300.0:PERC	2	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E906:ALL	1	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E906:ALL	2	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E906:ALL	3	Y	
K1-08	DMW	Tnbs1	Q	WGMG	E906:ALL	4	Y	
K1-09	DMW	Tnbs1	Q	WGMG	AS:UIISO	1	Y	
K1-09	DMW	Tnbs1	Q	WGMG	AS:UIISO	2	Y	
K1-09	DMW	Tnbs1	Q	WGMG	AS:UIISO	3	Y	
K1-09	DMW	Tnbs1	Q	WGMG	AS:UIISO	4	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E300.0:NO3	1	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E300.0:NO3	2	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E300.0:NO3	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K1-09	DMW	Tnbs1	Q	WGMG	E300.0:NO3	4	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E300.0:PERC	1	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E300.0:PERC	2	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E906:ALL	1	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E906:ALL	2	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E906:ALL	3	Y	
K1-09	DMW	Tnbs1	Q	WGMG	E906:ALL	4	Y	
K2-03	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
K2-03	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
K2-03	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
K2-03	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
K2-03	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
K2-03	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
K2-04D	PTMW	Tnbs1	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
K2-04D	PTMW	Tnbs1	E	CMP	E300.0:NO3	2	Y	
K2-04D	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
K2-04D	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
K2-04D	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
K2-04D	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
K2-04S	PTMW	Tnbs1	E	CMP	AS:UIISO	2	Y	
K2-04S	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
K2-04S	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
K2-04S	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
K2-04S	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
K2-04S	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-05	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-05	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-05	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-05	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-05	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-05	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-05A	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-05A	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-05A	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-05A	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-05A	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-05A	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-06	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-06	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-06	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-06	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-06	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-06	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-06A	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-06A	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-06A	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-06A	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-06A	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-06A	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-06A	PTMW	Tnbs1	A	DIS	MS:UIISO	2	Y	
NC2-09	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-09	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-09	PTMW	Tnbs1	A	CMP	E300.0:PERC	2	Y	
NC2-09	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-09	PTMW	Tnbs1	S	CMP	E906: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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC2-10	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-10	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-10	PTMW	Tnbs1	A	CMP	E300.0:PERC	2	Y	
NC2-10	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-10	PTMW	Tnbs1	S	CMP	E906:ALL	4	N	Inoperable pump.
NC2-11D	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-11D	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-11D	PTMW	Tnbs1	S	WGMG	E300.0:PERC	2	Y	
NC2-11D	PTMW	Tnbs1	S	WGMG	E300.0:PERC	4	Y	
NC2-11D	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-11D	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-11D	PTMW	Tnbs1	A	DIS	MS:UIISO	2	Y	
NC2-11I	PTMW	Tnbs1	A	CMP	AS:UIISO	2	N	Inoperable pump.
NC2-11I	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	N	Inoperable pump.
NC2-11I	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	N	Inoperable pump.
NC2-11I	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	N	Inoperable pump.
NC2-11I	PTMW	Tnbs1	S	CMP	E906:ALL	2	N	Inoperable pump.
NC2-11I	PTMW	Tnbs1	S	CMP	E906:ALL	4	N	Inoperable pump.
NC2-11S	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-11S	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-11S	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-11S	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-11S	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-11S	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-12D	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-12D	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-12D	PTMW	Tnbs1	A	CMP	E300.0:PERC	2	Y	
NC2-12D	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-12D	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-12D	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-12I	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-12I	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-12I	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-12I	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-12I	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-12I	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-12S	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-12S	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-12S	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-12S	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-12S	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-12S	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-13	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-13	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-13	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-13	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-13	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-13	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-14S	PTMW	Tnbs1	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
NC2-14S	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC2-14S	PTMW	Tnbs1	S	CMP	E300.0:PERC	1	Y	
NC2-14S	PTMW	Tnbs1	S	CMP	E300.0:PERC	3	Y	
NC2-14S	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-14S	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-15	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-15	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-15	PTMW	Tnbs1	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC2-15	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-15	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-16	PTMW	Tnbs1	E	CMP	AS:UIISO	2	Y	
NC2-16	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC2-16	PTMW	Tnbs1	S	CMP	E300.0:PERC	1	Y	
NC2-16	PTMW	Tnbs1	S	CMP	E300.0:PERC	3	Y	
NC2-16	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-16	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-17	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC2-17	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC2-17	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-17	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-17	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-17	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-18	PTMW	Tnbs1	S	CMP	AS:UIISO	2	Y	
NC2-18	PTMW	Tnbs1	S	CMP	AS:UIISO	4	Y	
NC2-18	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC2-18	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-18	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-18	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-18	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-19	PTMW	Tnbs1	E	CMP	AS:UIISO	2	Y	
NC2-19	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC2-19	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC2-19	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC2-19	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC2-19	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC2-20	PTMW	Tnbs0	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
NC2-20	PTMW	Tnbs0	E	CMP	E300.0:NO3	2	Y	
NC2-20	PTMW	Tnbs0	A	CMP	E300.0:PERC	2	Y	
NC2-20	PTMW	Tnbs0	A	CMP	E906:ALL	2	Y	
NC2-21	PTMW	Tnbs1	E	CMP	AS:UIISO	2	Y	
NC2-21	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC2-21	PTMW	Tnbs1	A	CMP	E300.0:PERC	2	Y	
NC2-21	PTMW	Tnbs1	A	CMP	E906:ALL	2	Y	
NC7-10	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC7-10	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC7-10	PTMW	Tnbs1	S	DIS	E300.0:PERC	1	Y	
NC7-10	PTMW	Tnbs1	S	DIS	E300.0:PERC	3	Y	
NC7-10	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-10	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-10	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-10	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-10	PTMW	Tnbs1	A	DIS	MS:UIISO	2	Y	
NC7-11	PTMW	Qal/Tnbs1	A	CMP	AS:UIISO	2	Y	
NC7-11	PTMW	Qal/Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC7-11	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-11	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-11	PTMW	Qal/Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-11	PTMW	Qal/Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-11	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-11	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-14	PTMW	Qal/Tnbs1	A	CMP	AS:UIISO	2	N	Insufficient water.
NC7-14	PTMW	Qal/Tnbs1	A	CMP	E300.0:NO3	2	N	Insufficient water.
NC7-14	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	2	N	Insufficient water.
NC7-14	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	4	N	Dry.
NC7-14	PTMW	Qal/Tnbs1	S	DIS	E8330LOW:ALL	2	N	Insufficient water.

Table 2.5-1. (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC7-14	PTMW	Qal/Tnbs1	S	DIS	E8330LOW:ALL	4	N	Dry.
NC7-14	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	2	N	Insufficient water.
NC7-14	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	4	N	Dry.
NC7-15	PTMW	Tnbs1	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
NC7-15	PTMW	Tnbs1	E	CMP	E300.0:NO3	2	Y	
NC7-15	PTMW	Tnbs1	A	CMP	E300.0:PERC	2	Y	
NC7-15	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-15	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-15	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-15	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-19	PTMW	Qal/Tnbs1	E	CMP	AS:UIISO	2	Y	
NC7-19	PTMW	Qal/Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC7-19	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-19	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-19	PTMW	Qal/Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-19	PTMW	Qal/Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-19	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-19	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-27	PTMW	Tnsc0	A	CMP	AS:UIISO	2	Y	
NC7-27	PTMW	Tnsc0	A	CMP	E300.0:NO3	2	Y	
NC7-27	PTMW	Tnsc0	S	CMP	E300.0:PERC	2	Y	
NC7-27	PTMW	Tnsc0	S	CMP	E300.0:PERC	4	Y	
NC7-27	PTMW	Tnsc0	S	DIS	E8330LOW:ALL	2	Y	
NC7-27	PTMW	Tnsc0	S	DIS	E8330LOW:ALL	4	Y	
NC7-27	PTMW	Tnsc0	S	CMP	E906:ALL	2	Y	
NC7-27	PTMW	Tnsc0	S	CMP	E906:ALL	4	Y	
NC7-28	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC7-28	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC7-28	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-28	PTMW	Tnbs1	S	DIS	E300.0:PERC	3	Y	
NC7-28	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-28	PTMW	Tnbs1	E	DIS	E8082A:ALL	2	Y	
NC7-28	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-28	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-28	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-28	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-28	PTMW	Tnbs1	Q	DIS	MS:UIISO	2	Y	
NC7-28	PTMW	Tnbs1	Q	DIS	MS:UIISO	3	Y	
NC7-28	PTMW	Tnbs1	Q	DIS	MS:UIISO	4	Y	
NC7-29	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC7-29	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC7-29	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-29	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-29	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-29	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-43	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC7-43	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC7-43	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-43	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-43	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-43	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-43	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-43	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-44	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC7-44	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC7-44	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-44	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-44	PTMW	Tnbs1	E	DIS	E8082A: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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC7-44	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-44	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-44	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-44	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-46	PTMW	Tnbs1	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
NC7-46	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC7-46	PTMW	Tnbs1	A	CMP	E300.0:PERC	2	Y	
NC7-46	PTMW	Tnbs1	A	CMP	E906:ALL	2	Y	
NC7-54	PTMW	Qal	A	CMP	AS:UIISO	2	Y	
NC7-54	PTMW	Qal	A	CMP	E300.0:NO3	2	Y	
NC7-54	PTMW	Qal	S	CMP	E300.0:PERC	2	Y	
NC7-54	PTMW	Qal	S	CMP	E300.0:PERC	4	N	Insufficient water.
NC7-54	PTMW	Qal	S	DIS	E8330LOW:ALL	2	Y	
NC7-54	PTMW	Qal	S	DIS	E8330LOW:ALL	4	N	Insufficient water.
NC7-54	PTMW	Qal	S	CMP	E906:ALL	2	Y	
NC7-54	PTMW	Qal	S	CMP	E906:ALL	4	N	Insufficient water.
NC7-54	PTMW	Qal	A	DIS	MS:UIISO	2	Y	
NC7-55	PTMW	Tnbs1	A	CMP	AS:UIISO	2	N	Dry.
NC7-55	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC7-55	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	N	Dry.
NC7-55	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	N	Dry.
NC7-55	PTMW	Tnbs1	S	CMP	E906:ALL	2	N	Dry.
NC7-55	PTMW	Tnbs1	S	CMP	E906:ALL	4	N	Dry.
NC7-55	PTMW	Tnbs1	A	DIS	MS:UIISO	4	N	Dry.
NC7-56	PTMW	Qal/Tnbs1	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
NC7-56	PTMW	Qal/Tnbs1	E	CMP	E300.0:NO3	2	Y	
NC7-56	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-56	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-56	PTMW	Qal/Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-56	PTMW	Qal/Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-56	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-56	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-57	PTMW	Qal	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
NC7-57	PTMW	Qal	E	CMP	E300.0:NO3	2	N	Dry.
NC7-57	PTMW	Qal	S	CMP	E300.0:PERC	2	N	Dry.
NC7-57	PTMW	Qal	S	CMP	E300.0:PERC	4	N	Dry.
NC7-57	PTMW	Qal	S	CMP	E906:ALL	2	N	Dry.
NC7-57	PTMW	Qal	S	CMP	E906:ALL	4	N	Dry.
NC7-58	PTMW	Qal	E	CMP	AS:UIISO	2	Y	
NC7-58	PTMW	Qal	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC7-58	PTMW	Qal	S	CMP	E300.0:PERC	2	Y	
NC7-58	PTMW	Qal	S	CMP	E300.0:PERC	4	Y	
NC7-58	PTMW	Qal	S	CMP	E906:ALL	2	Y	
NC7-58	PTMW	Qal	S	CMP	E906:ALL	4	Y	
NC7-59	PTMW	Qal/Tnbs1	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
NC7-59	PTMW	Qal/Tnbs1	E	CMP	E300.0:NO3	2	Y	
NC7-59	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-59	PTMW	Qal/Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-59	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-59	PTMW	Qal/Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-60	PTMW	Tnsc0	E	CMP	AS:UIISO	2	Y	
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	

Table 2.5-1. (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC7-61	PTMW	Tnbs0	A	CMP	AS:UIISO	2	Y	
NC7-61	PTMW	Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-61	PTMW	Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
NC7-61	PTMW	Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
NC7-61	PTMW	Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
NC7-61	PTMW	Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
NC7-61	PTMW	Tnbs0	O	DIS	E8082A:ALL	2	Y	To be sampled in 2011.
NC7-61	PTMW	Tnbs0	S	DIS	E8330LOW:ALL	2	Y	
NC7-61	PTMW	Tnbs0	S	DIS	E8330LOW:ALL	4	Y	
NC7-61	PTMW	Tnbs0	S	WGMG	E906:ALL	2	Y	
NC7-61	PTMW	Tnbs0	S	WGMG	E906:ALL	4	Y	
NC7-61	PTMW	Tnbs0	A	DIS	MS:UIISO	2	Y	
NC7-61	PTMW	Tnbs0	A	DIS	MS:UIISO	4	Y	
NC7-62	PTMW	Tnbs1	E	CMP	AS:UIISO	2	Y	
NC7-62	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC7-62	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-62	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-62	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-62	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-69	PTMW	Tmss	A	CMP	AS:UIISO	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	CMP	E906:ALL	2	Y	
NC7-69	PTMW	Tmss	S	CMP	E906:ALL	4	Y	
NC7-70	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC7-70	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC7-70	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-70	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-70	PTMW	Tnbs1	O	CMP	E8082A:ALL	2	Y	To be sampled in 2011.
NC7-70	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-70	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-70	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-70	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-70	PTMW	Tnbs1	A	DIS	MS:UIISO	2	Y	
NC7-71	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC7-71	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
NC7-71	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-71	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-71	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-71	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-71	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-71	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-71	PTMW	Tnbs1	A	DIS	MS:UIISO	2	Y	
NC7-71	PTMW	Tnbs1	A	DIS	MS:UIISO	4	Y	
NC7-72	PTMW	Tnbs1	E	CMP	AS:UIISO	2	Y	
NC7-72	PTMW	Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC7-72	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-72	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
NC7-72	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-72	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-72	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-72	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
NC7-73	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
NC7-73	PTMW	Tnbs1	E	CMP	E300.0:NO3	2	Y	
NC7-73	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
NC7-73	PTMW	Tnbs1	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC7-73	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
NC7-73	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
NC7-73	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
NC7-73	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
SPRING24	SPR	Tnbs1/Tnbs0	E	CMP	AS:UIISO	2	N	Dry.
SPRING24	SPR	Tnbs1/Tnbs0	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
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	Tnbs1	A	CMP	AS:UIISO	2	Y	
W-850-05	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-850-05	PTMW	Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-850-05	PTMW	Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-850-05	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
W-850-05	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
W-850-05	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
W-850-05	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
W-850-05	PTMW	Tnbs1	A	DIS	MS:UIISO	4	Y	
W-850-2145	PTMW	Tnbs1/Tnbs0	E	CMP	AS:UIISO	2	Y	
W-850-2145	PTMW	Tnbs1/Tnbs0	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
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	Tnbs0	E	CMP	AS:UIISO	2	Y	
W-850-2312	PTMW	Tnbs0	E	CMP	E300.0:NO3	2	Y	
W-850-2312	PTMW	Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-850-2312	PTMW	Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2312	PTMW	Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2312	PTMW	Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2313	PTMW	Tnbs0	A	CMP	AS:UIISO	2	Y	
W-850-2313	PTMW	Tnbs0	E	CMP	E300.0:NO3	2	Y	
W-850-2313	PTMW	Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-850-2313	PTMW	Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2313	PTMW	Tnbs0	S	DIS	E8330LOW:ALL	2	Y	
W-850-2313	PTMW	Tnbs0	S	DIS	E8330LOW:ALL	4	Y	
W-850-2313	PTMW	Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2313	PTMW	Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2313	PTMW	Tnbs0	A	DIS	MS:UIISO	2	Y	
W-850-2314	PTMW	Tnbs0	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
W-850-2314	PTMW	Tnbs0	A	CMP	E300.0:NO3	2	N	Inoperable pump.
W-850-2314	PTMW	Tnbs0	S	CMP	E300.0:PERC	2	N	Inoperable pump.
W-850-2314	PTMW	Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2314	PTMW	Tnbs0	S	DIS	E8330LOW:ALL	2	Y	
W-850-2314	PTMW	Tnbs0	S	DIS	E8330LOW:ALL	4	Y	
W-850-2314	PTMW	Tnbs0	S	CMP	E906:ALL	2	N	Inoperable pump.
W-850-2314	PTMW	Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2315	PTMW	Tnbs0	A	CMP	AS:UIISO	2	Y	
W-850-2315	PTMW	Tnbs0	A	CMP	E300.0:NO3	2	Y	
W-850-2315	PTMW	Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-850-2315	PTMW	Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2315	PTMW	Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2315	PTMW	Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2316	PTMW	Tnbs0	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
W-850-2316	PTMW	Tnbs0	E	CMP	E300.0:NO3	2	Y	
W-850-2316	PTMW	Tnbs0	S	CMP	E300.0:PERC	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-850-2316	PTMW	Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2316	PTMW	Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2316	PTMW	Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2416	PTMW	Tnsc0	A	CMP	AS:UIISO	2	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	S	DIS	E8330LOW:ALL	2	Y	
W-850-2416	PTMW	Tnsc0	S	DIS	E8330LOW: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	A	DIS	MS:UIISO	2	Y	
W-850-2417	PTMW	Tnbs1	A	CMP	AS:UIISO	2	Y	
W-850-2417	PTMW	Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-850-2417	PTMW	Tnbs1	S	CMP	E300.0:PERC	1	Y	
W-850-2417	PTMW	Tnbs1	S	CMP	E300.0:PERC	3	Y	
W-850-2417	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
W-850-2417	PTMW	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
W-850-2417	PTMW	Tnbs1	S	CMP	E906:ALL	2	Y	
W-850-2417	PTMW	Tnbs1	S	CMP	E906:ALL	4	Y	
W-850-2417	PTMW	Tnbs1	Q	DIS	MS:UIISO	2	Y	
W-850-2417	PTMW	Tnbs1	Q	DIS	MS:UIISO	3	Y	
W-850-2417	PTMW	Tnbs1	Q	DIS	MS:UIISO	4	Y	
W-865-02	PTMW	Tnbs1/Tnbs0	S	DIS	E300.0:NO3	1	Y	
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	Tnbs0-Tnsc0	A	CMP	AS:UIISO	2	Y	
W-865-1802	PTMW	Tnbs0-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-865-1802	PTMW	Tnbs0-Tnsc0	A	CMP	E300.0:PERC	2	Y	
W-865-1802	PTMW	Tnbs0-Tnsc0	S	DIS	E601:ALL	1	Y	
W-865-1802	PTMW	Tnbs0-Tnsc0	S	DIS	E601:ALL	3	Y	
W-865-1802	PTMW	Tnbs0-Tnsc0	S	CMP	E906:ALL	2	Y	
W-865-1802	PTMW	Tnbs0-Tnsc0	S	CMP	E906:ALL	4	Y	
W-865-1803	PTMW	Tnbs0-Tnsc0	E	CMP	AS:UIISO	2	Y	
W-865-1803	PTMW	Tnbs0-Tnsc0	E	CMP	E300.0:NO3	2	Y	
W-865-1803	PTMW	Tnbs0-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-865-1803	PTMW	Tnbs0-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-865-1803	PTMW	Tnbs0-Tnsc0	S	CMP	E906:ALL	2	Y	
W-865-1803	PTMW	Tnbs0-Tnsc0	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	

Table 2.5-1. (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	S	CMP	E906:ALL	3	Y	
W-865-2005	PTMW	Tnbs1/Tnbs0	Q	WGMG	E906:ALL	4	Y	
W-865-2121	PTMW	Tnbs1/Tnbs0	S	CMP	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	
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	N	Sample inadvertently left off sampling plan.
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	N	Sample inadvertently left off sampling plan.
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	N	Sample inadvertently left off sampling plan.
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	S	DIS	E906:ALL	4	Y	
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	E	CMP	AS:UISO	2	Y	
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	



Table 2.5-1. (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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/Tnbs1-cong	A	CMP	AS:UIISO	2	Y	
W-PIT1-2204	PTMW	Qal/Tnbs1-cong	A	CMP	E300.0:NO3	2	Y	
W-PIT1-2204	PTMW	Qal/Tnbs1-cong	S	CMP	E300.0:PERC	2	Y	
W-PIT1-2204	PTMW	Qal/Tnbs1-cong	S	CMP	E300.0:PERC	4	Y	
W-PIT1-2204	PTMW	Qal/Tnbs1-cong	S	CMP	E906:ALL	2	Y	
W-PIT1-2204	PTMW	Qal/Tnbs1-cong	S	CMP	E906:ALL	4	Y	
W-PIT1-2209	GW	Tnbs1	S	CMP	AS:UIISO	2	Y	
W-PIT1-2209	GW	Tnbs1	S	CMP	AS:UIISO	4	Y	
W-PIT1-2209	GW	Tnbs1	S	CMP	E300.0:NO3	2	Y	
W-PIT1-2209	GW	Tnbs1	S	CMP	E300.0:NO3	4	Y	
W-PIT1-2209	GW	Tnbs1	Q	WGMG	E300.0:PERC	1	Y	
W-PIT1-2209	GW	Tnbs1	Q	WGMG	E300.0:PERC	2	Y	
W-PIT1-2209	GW	Tnbs1	Q	WGMG	E300.0:PERC	3	Y	
W-PIT1-2209	GW	Tnbs1	Q	WGMG	E300.0:PERC	4	Y	
W-PIT1-2209	GW	Tnbs1	S	DIS	E601:ALL	2	Y	
W-PIT1-2209	GW	Tnbs1	S	DIS	E601:ALL	4	Y	
W-PIT1-2209	GW	Tnbs1	Q	WGMG	E906:ALL	1	Y	
W-PIT1-2209	GW	Tnbs1	Q	WGMG	E906:ALL	2	Y	
W-PIT1-2209	GW	Tnbs1	Q	WGMG	E906:ALL	3	Y	
W-PIT1-2209	GW	Tnbs1	Q	WGMG	E906:ALL	4	Y	
W-PIT1-2225	GW	Tnbs1/Tnbs0	S	CMP	AS:UIISO	2	Y	
W-PIT1-2225	GW	Tnbs1/Tnbs0	S	CMP	AS:UIISO	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:UIISO	1	Y	
W-PIT1-2326	DMW	Tnbs1/Tnbs0	Q	WGMG	AS:UIISO	2	Y	
W-PIT1-2326	DMW	Tnbs1/Tnbs0	Q	WGMG	AS:UIISO	3	Y	
W-PIT1-2326	DMW	Tnbs1/Tnbs0	Q	WGMG	AS:UIISO	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	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-PIT7-16	PTMW	Tnsc0	A	CMP	AS:UIISO	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	

**Table 2.5-1. (Cont.). Building 850 Area of Operable Unit 5 ground and surface water sampling and analysis plan.**

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	A	CMP	AS:UIISO	2	Y	
W8SPRNG	SPR	Tnbs1	A	CMP	E300.0:NO3	2	Y	
W8SPRNG	SPR	Tnbs1	S	CMP	E300.0:PERC	2	Y	
W8SPRNG	SPR	Tnbs1	S	CMP	E300.0:PERC	4	Y	
W8SPRNG	SPR	Tnbs1	S	DIS	E8330LOW:ALL	2	Y	
W8SPRNG	SPR	Tnbs1	S	DIS	E8330LOW:ALL	4	Y	
W8SPRNG	SPR	Tnbs1	S	CMP	E906:ALL	2	Y	
W8SPRNG	SPR	Tnbs1	S	CMP	E906:ALL	4	Y	

**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 specified in Waste Discharge Requirements for the Pit 1 Landfill.
- 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 (AS:UIISO or MS:UIISO).
- 6) 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, 2010 through December 31, 2010.**

<b>Treatment facility</b>	<b>Month</b>	<b>SVTS Operational hours</b>	<b>GWTS Operational hours</b>	<b>Volume of vapor extracted (thousands of ft<sup>3</sup>)</b>	<b>Volume of ground water discharged (gal)</b>
<b>PIT7-SRC</b>	<b>July</b>	NA	686	NA	9,923
	<b>August</b>	NA	796	NA	9,695
	<b>September</b>	NA	714	NA	8,076
	<b>October</b>	NA	674	NA	6,395
	<b>November</b>	NA	759	NA	7,865
	<b>December</b>	NA	660	NA	5,048
<b>Total</b>		NA	4,289	NA	47,002

**Table 2.5-3. Pit 7-Source (PIT7-SRC) volatile organic compounds (VOCs) in ground water 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-GWTS-E	7/13/10	<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	<0.5
PIT7-SRC-GWTS-E	8/3/10	<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	<0.5
PIT7-SRC-GWTS-E	9/14/10	<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	<0.5
PIT7-SRC-GWTS-E	10/12/10	<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	<0.5
PIT7-SRC-GWTS-E	11/2/10	<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	<0.5
PIT7-SRC-GWTS-E	12/6/10	<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	<0.5
PIT7-SRC-GWTS-I	7/13/10	3.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5
PIT7-SRC-GWTS-I	10/12/10	6.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.5-3 (Cont.). Analyte detected but not reported in main table.**

Location	Date	Detection frequency
PIT7-SRC-GWTS-E	7/13/10	0 of 18
PIT7-SRC-GWTS-E	8/3/10	0 of 18
PIT7-SRC-GWTS-E	9/14/10	0 of 18
PIT7-SRC-GWTS-E	10/12/10	0 of 18
PIT7-SRC-GWTS-E	11/2/10	0 of 18
PIT7-SRC-GWTS-E	12/6/10	0 of 18
PIT7-SRC-GWTS-I	7/13/10	0 of 18
PIT7-SRC-GWTS-I	10/12/10	0 of 18

Notes:

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.5-4. Pit 7-Source (PIT7-SRC) nitrate and perchlorate in ground water treatment system influent and effluent.**

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate ( $\mu$ g/L)
PIT7-SRC-GWTS-E	7/13/10	<0.5	<4
PIT7-SRC-GWTS-E <sup>a</sup>	7/19/10	<0.5	NS
PIT7-SRC-GWTS-E	8/3/10	<0.5	<4
PIT7-SRC-GWTS-E	9/14/10	<0.5	<4
PIT7-SRC-GWTS-E	10/12/10	<0.5	<4
PIT7-SRC-GWTS-E	11/2/10	<0.5	<4
PIT7-SRC-GWTS-E	12/6/10	<0.5	<4
PIT7-SRC-GWTS-I	7/13/10	38	11
PIT7-SRC-GWTS-I	10/12/10	32	10

## Notes:

- <sup>a</sup> Effluent resample for nitrate due to contract laboratory missing the holding time on previous sample.  
See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.5-5. Pit 7-Source (PIT7-SRC) total uranium in ground water treatment system influent and effluent.**

Location	Date	Total Uranium (pCi/L)
PIT7-SRC-GWTS-E	7/13/10	<0.3 O
PIT7-SRC-GWTS-E	8/3/10	0.312 ± 0.0894
PIT7-SRC-GWTS-E	9/14/10	<0.3
PIT7-SRC-GWTS-E	10/12/10	<0.3
PIT7-SRC-GWTS-E	11/2/10	<0.3
PIT7-SRC-GWTS-E	12/6/10	<0.3
PIT7-SRC-GWTS-I	7/13/10	14.8 ± 1.20 LO
PIT7-SRC-GWTS-I	10/12/10	11.8 ± 1.18

**Notes:**

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.5-6. Pit 7-Source (PIT7-SRC) tritium in ground water treatment system influent and effluent.**

<b>Location</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
PIT7-SRC-GWTS-E	7/13/10	34,200 ± 6,640 O
PIT7-SRC-GWTS-E	8/3/10	51,400 ± 10,000
PIT7-SRC-GWTS-E	9/14/10	52,900 ± 10,300
PIT7-SRC-GWTS-E	10/12/10	52,300 ± 10,200
PIT7-SRC-GWTS-E	11/2/10	52,400 ± 10,200
PIT7-SRC-GWTS-E	12/6/10	50,100 ± 9,740
PIT7-SRC-GWTS-I	7/13/10	40,900 ± 7,950 O
PIT7-SRC-GWTS-I	10/12/10	43,800 ± 8,510

**Notes:**

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.5-7. Pit 7-Source (PIT7-SRC) treatment facility sampling and analysis plan.**

Sample location	Sample identification	Parameter	Frequency
<i>PIT7-SRC GWTS</i>			
Influent Port	PIT7-SRC-I	VOCs	Quarterly
		Uranium	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		Tritium <sup>a</sup>	Quarterly
Effluent Port	PIT7-SRC-E	VOCs	Monthly
		Uranium	Monthly
		Perchlorate	Monthly
		Nitrate	Monthly
		Tritium <sup>a</sup>	Monthly
		pH	Monthly

**Notes:**

One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.

<sup>a</sup> Although tritium is not treated/removed by the PIT7-SRC GWTS, tritium activities will be monitored to determine levels that are being discharged to the infiltration trench.

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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	AS:UIISO	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	E200.7:LI	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	E300.0:NO3	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	E300.0:PERC	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	E340.2:ALL	1	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	E340.2:ALL	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	E601:ALL	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	E8082A:ALL	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	S	CMP	E906:ALL	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	S	CMP	E906:ALL	4	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	DIS	MS:UIISO	2	Y	
K7-01	DMW	Qal/WBR;Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K7-03	DMW	Tnbs1/Tnbs0	A	CMP	AS:UIISO	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	N	Sample inadvertently left off sampling plan.
K7-03	DMW	Tnbs1/Tnbs0	A	DIS	MS:UIISO	2	Y	
K7-03	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	A	CMP	AS:UIISO	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	A	CMP	E200.7:LI	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	A	CMP	E300.0:NO3	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	S	CMP	E300.0:PERC	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	S	CMP	E300.0:PERC	4	Y	
K7-06	DMW	Qal/WBR;Tnbs0	A	CMP	E340.2:ALL	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	A	CMP	E601:ALL	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	A	CMP	E8082A:ALL	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	S	CMP	E906:ALL	2	Y	
K7-06	DMW	Qal/WBR;Tnbs0	S	CMP	E906:ALL	4	Y	
K7-06	DMW	Qal/WBR;Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K7-07	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
K7-07	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	Y	
K7-07	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
K7-07	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
K7-07	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
K7-09	DMW	Tnsc0	A	CMP	AS:UIISO	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	
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	

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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K7-09	DMW	Tnsc0	A	CMP	T26METALS:ALL	2	Y	
K7-10	DMW	Tnbs1/Tnbs0	A	CMP	AS:UIISO	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:UIISO	2	Y	
NC7-12	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	Y	
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:UIISO	2	Y	
NC7-16	PTMW	Qal/WBR	A	DIS	AS:UIISO	1	Y	
NC7-16	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
NC7-16	PTMW	Qal/WBR	A	DIS	E300.0:NO3	1	Y	
NC7-16	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-16	PTMW	Qal/WBR	A	DIS	E300.0:PERC	1	Y	
NC7-16	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-16	PTMW	Qal/WBR	A	DIS	E601:ALL	1	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:UIISO	1	Y	
NC7-16	PTMW	Qal/WBR	Q	DIS	MS:UIISO	2	Y	
NC7-16	PTMW	Qal/WBR	Q	DIS	MS:UIISO	3	Y	
NC7-16	PTMW	Qal/WBR	Q	DIS	MS:UIISO	4	Y	
NC7-17	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
NC7-17	PTMW	Qal/WBR	A	DIS	E200.7:SI	1	Y	
NC7-17	PTMW	Qal/WBR	A	DIS	E300.0:NO3	1	Y	
NC7-17	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-17	PTMW	Qal/WBR	A	DIS	E300.0:PERC	1	Y	
NC7-17	PTMW	Qal/WBR	E	CMP	E300.0:PERC	2	Y	
NC7-17	PTMW	Qal/WBR	A	DIS	E601:ALL	1	Y	
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	1	Y	
NC7-18	PTMW	Qal/WBR	A	CMP	AS:UIISO	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	S	CMP	E906:ALL	2	Y	
NC7-18	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-20	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
NC7-20	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.

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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC7-20	PTMW	Qal/WBR	A	CMP	E300.0:PERC	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	DIS	AS:UIISO	1	Y	
NC7-21	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
NC7-21	PTMW	Qal/WBR	A	DIS	E300.0:NO3	1	Y	
NC7-21	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-21	PTMW	Qal/WBR	A	DIS	E300.0:PERC	1	Y	
NC7-21	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-21	PTMW	Qal/WBR	A	DIS	E601:ALL	1	Y	
NC7-21	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-21	PTMW	Qal/WBR	S	DIS	E906:ALL	1	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:UIISO	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;Tnbs0	A	DIS	AS:UIISO	1	N	Dry.
NC7-24	PTMW	Qal/WBR;Tnbs0	A	CMP	AS:UIISO	2	N	Dry.
NC7-24	PTMW	Qal/WBR	A	DIS	E300.0:NO3	1	N	Dry.
NC7-24	PTMW	Qal/WBR;Tnbs0	A	CMP	E300.0:NO3	2	N	Dry.
NC7-24	PTMW	Qal/WBR;Tnbs0	A	DIS	E300.0:PERC	1	N	Dry.
NC7-24	PTMW	Qal/WBR;Tnbs0	A	CMP	E300.0:PERC	2	N	Dry.
NC7-24	PTMW	Qal/WBR;Tnbs0	S	CMP	E906:ALL	2	N	Dry.
NC7-24	PTMW	Qal/WBR;Tnbs0	S	CMP	E906:ALL	4	N	Dry.
NC7-25	EW	Tnbs1/Tnbs0	A	CMP-TF	AS:UIISO	1	Y	
NC7-25	EW	Tnbs1/Tnbs0	A	CMP-TF	AS:UIISO	2	Y	
NC7-25	EW	Tnbs1/Tnbs0	A	DIS-TF	E300.0:NO3	1	Y	
NC7-25	EW	Tnbs1/Tnbs0	A	CMP-TF	E300.0:NO3	2	Y	
NC7-25	EW	Tnbs1/Tnbs0	A	DIS-TF	E300.0:PERC	1	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	DIS-TF	E601:ALL	1	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	DIS-TF	E906:ALL	1	Y	
NC7-25	EW	Tnbs1/Tnbs0	S	CMP-TF	E906:ALL	2	Y	
NC7-25	EW	Tnbs1/Tnbs0	S	DIS-TF	E906:ALL	3	Y	
NC7-25	EW	Tnbs1/Tnbs0	S	CMP-TF	E906:ALL	4	Y	
NC7-25	EW	Tnbs1/Tnbs0	A	DIS-TF	MS:UIISO	1	Y	
NC7-25	EW	Tnbs1/Tnbs0	A	DIS-TF	MS:UIISO	2	Y	
NC7-25	EW	Tnbs1/Tnbs0	A	DIS-TF	MS:UIISO	4	Y	
NC7-26	DMW	Tnbs1/Tnbs0	A	DIS	AS:UIISO	1	Y	
NC7-26	DMW	Tnbs1/Tnbs0	A	CMP	AS:UIISO	2	Y	
NC7-26	DMW	Tnbs1/Tnbs0	A	CMP	E200.7:LI	2	Y	
NC7-26	DMW	Tnbs1/Tnbs0	A	DIS	E300.0:NO3	1	Y	
NC7-26	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-26	DMW	Tnbs1/Tnbs0	A	DIS	E300.0:PERC	1	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	

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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC7-26	DMW	Tnbs1/Tnbs0	A	CMP	E340.2:ALL	2	Y	
NC7-26	DMW	Tnbs1/Tnbs0	A	DIS	E601:ALL	1	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	DIS	E906:ALL	1	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:UIISO	1	Y	
NC7-26	DMW	Tnbs1/Tnbs0	A	DIS	MS:UIISO	2	Y	
NC7-26	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	Y	
NC7-34	PTMW	Qal/WBR	A	DIS	AS:UIISO	1	Y	
NC7-34	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
NC7-34	PTMW	Qal/WBR	A	DIS	E300.0:NO3	1	Y	
NC7-34	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-34	PTMW	Qal/WBR	A	DIS	E300.0:PERC	1	Y	
NC7-34	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-34	PTMW	Qal/WBR	A	DIS	E601:ALL	1	Y	
NC7-34	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-34	PTMW	Qal/WBR	S	DIS	E906:ALL	1	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	Qal/WBR	A	DIS	AS:UIISO	1	Y	
NC7-36	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
NC7-36	PTMW	Qal/WBR	A	DIS	E300.0:NO3	1	Y	
NC7-36	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-36	PTMW	Qal/WBR	A	DIS	E300.0:PERC	1	Y	
NC7-36	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-36	PTMW	Qal/WBR	A	DIS	E601:ALL	1	Y	
NC7-36	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-36	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-36	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-37	PTMW	Qal/WBR	A	DIS	AS:UIISO	1	N	Dry.
NC7-37	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	N	Dry.
NC7-37	PTMW	Qal/WBR	A	DIS	E300.0:NO3	1	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	DIS	E601:ALL	1	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	N	Dry.
NC7-40	PTMW	Qal/WBR	A	DIS	AS:UIISO	1	Y	
NC7-40	PTMW	Qal/WBR	A	CMP	AS:UIISO	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	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:UIISO	1	Y	
NC7-40	PTMW	Qal/WBR	Q	DIS	MS:UIISO	2	Y	
NC7-40	PTMW	Qal/WBR	Q	DIS	MS:UIISO	3	Y	
NC7-40	PTMW	Qal/WBR	Q	DIS	MS:UIISO	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC7-47	DMW	Tnbs1/Tnbs0	A	CMP	AS:UIISO	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:UIISO	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:UIISO	2	Y	
NC7-48	DMW	Qal/WBR	A	CMP	T26METALS:ALL	2	Y	
NC7-49A	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
NC7-49A	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	Y	
NC7-49A	PTMW	Qal/WBR	E	CMP	E300.0:PERC	2	Y	
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	DIS	AS:UIISO	1	Y	
NC7-51	PTMW	Qal/WBR	A	CMP	AS:UIISO	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	DIS	E601:ALL	1	Y	
NC7-51	PTMW	Qal/WBR	A	CMP	E601:ALL	2	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:UIISO	1	Y	
NC7-51	PTMW	Qal/WBR	Q	DIS	MS:UIISO	2	Y	
NC7-51	PTMW	Qal/WBR	Q	DIS	MS:UIISO	3	Y	
NC7-51	PTMW	Qal/WBR	Q	DIS	MS:UIISO	4	Y	
NC7-52	PTMW	Tnbs1/Tnbs0	A	CMP	AS:UIISO	2	Y	
NC7-52	PTMW	Tnbs1/Tnbs0	A	DIS	E300.0:NO3	1	Y	
NC7-52	PTMW	Tnbs1/Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-52	PTMW	Tnbs1/Tnbs0	A	DIS	E300.0:PERC	1	Y	
NC7-52	PTMW	Tnbs1/Tnbs0	A	CMP	E300.0:PERC	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:UIISO	2	Y	
NC7-53	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
NC7-53	PTMW	Qal/WBR	O	CMP	E300.0:PERC	2	N	To be sampled in 2011.
NC7-53	PTMW	Qal/WBR	O	DIS	E906:ALL	2	N	To be sampled in 2011.
NC7-63	EW	Qal/WBR	A	DIS-TF	AS:UIISO	1	Y	
NC7-63	EW	Qal/WBR	A	CMP-TF	AS:UIISO	3	N	Insufficient water.

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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC7-63	EW	Qal/WBR	A	DIS-TF	E300.0:NO3	1	Y	
NC7-63	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	1	Y	
NC7-63	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	A	DIS-TF	E601:ALL	1	Y	
NC7-63	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	A	DIS-TF	E601:ALL	4	N	Insufficient water.
NC7-63	EW	Qal/WBR	S	DIS-TF	E906:ALL	1	Y	
NC7-63	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	S	DIS-TF	E906:ALL	3	N	Insufficient water.
NC7-63	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	N	Insufficient water.
NC7-63	EW	Qal/WBR	A	DIS-TF	MS:UIISO	1	Y	
NC7-63	EW	Qal/WBR	A	DIS-TF	MS:UIISO	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	A	DIS-TF	MS:UIISO	4	N	Insufficient water.
NC7-64	EW	Qal/WBR	A	DIS-TF	AS:UIISO	1	Y	
NC7-64	EW	Qal/WBR	A	CMP-TF	AS:UIISO	2	Y	
NC7-64	EW	Qal/WBR	A	DIS-TF	E300.0:NO3	1	Y	
NC7-64	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	Y	
NC7-64	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	1	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	DIS-TF	E601:ALL	1	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	DIS-TF	E906:ALL	1	Y	
NC7-64	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	Y	
NC7-64	EW	Qal/WBR	S	DIS-TF	E906:ALL	3	Y	
NC7-64	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	Y	
NC7-64	EW	Qal/WBR	A	DIS-TF	MS:UIISO	1	Y	
NC7-64	EW	Qal/WBR	A	DIS-TF	MS:UIISO	2	Y	
NC7-64	EW	Qal/WBR	A	DIS-TF	MS:UIISO	3	Y	
NC7-64	EW	Qal/WBR	A	DIS-TF	MS:UIISO	4	Y	
NC7-65	PTMW	Tnsc0	A	CMP	AS:UIISO	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:UIISO	2	Y	
NC7-67	PTMW	Tnsc0	A	CMP	AS:UIISO	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:UIISO	1	Y	
NC7-68	PTMW	Tnbs1/Tnbs0	A	DIS	AS:UIISO	2	Y	
NC7-68	PTMW	Tnbs1/Tnbs0	A	DIS	E300.0:NO3	1	Y	
NC7-68	PTMW	Tnbs1/Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-68	PTMW	Tnbs1/Tnbs0	A	DIS	E300.0:PERC	1	Y	
NC7-68	PTMW	Tnbs1/Tnbs0	A	CMP	E300.0:PERC	2	Y	
NC7-68	PTMW	Tnbs1/Tnbs0	S	DIS	E906:ALL	1	Y	
NC7-68	PTMW	Tnbs1/Tnbs0	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
NC7-68	PTMW	Tnbs1/Tnbs0	S	CMP	E906:ALL	4	Y	
NC7-75	PTMW	Tnsc0	A	CMP	AS:UIISO	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	S	CMP	E906:ALL	1	Y	
NC7-75	PTMW	Tnsc0	S	CMP	E906:ALL	3	Y	
NC7-75	PTMW	Tnsc0	S	DIS	E906:ALL	4	Y	
NC7-76	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
NC7-76	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
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	Y	
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	
W-865-1804	PTMW	Tnbs1/Tnbs0	S	CMP	E906:ALL	3	Y	
W-PIT3-01	PTMW	Qal/WBR	A	CMP	AS:UIISO	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	DIS	MS:UIISO	2	N	Dry.
W-PIT3-02	PTMW	Qal/WBR	A	CMP	AS:UIISO	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:UIISO	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:UIISO	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:UIISO	2	Y	
W-PIT7-02	PTMW	Qal/WBR	A	CMP	E300.0:NO3	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	DIS	AS:UIISO	1	Y	
W-PIT7-03	PTMW	Qal/WBR	A	CMP	AS:UIISO	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	A	DIS	E601:ALL	1	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:UIISO	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	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:UIISO	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	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:UIISO	2	N	Dry.
W-PIT7-12	PTMW	Tnbs1/Tnbs0	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
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	
W-PIT7-12	PTMW	Tnbs1/Tnbs0	A	DIS	E300.0:PERC	4	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:UIISO	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	S	CMP	E906:ALL	2	Y	
W-PIT7-13	PTMW	Tnbs1/Tnbs0	S	CMP	E906:ALL	4	Y	
W-PIT7-14	PTMW	Tnsc0	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
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:UIISO	2	Y	
W-PIT7-15	PTMW	Tnbs1/Tnbs0	E	CMP	AS:UIISO	2	Y	
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:UIISO	2	Y	
W-PIT7-1860	PTMW	Tnbs1/Tnbs0	E	DIS	AS:UIISO	2	Y	
W-PIT7-1860	PTMW	Tnbs1/Tnbs0	E	CMP	E300.0:PERC	2	Y	
W-PIT7-1860	PTMW	Tnbs1/Tnbs0	E	CMP	E906:ALL	2	Y	
W-PIT7-1861	PTMW	Qal/WBR	O	CMP	AS:UIISO	2	N	To be sampled in 2011.
W-PIT7-1861	PTMW	Qal/WBR	O	CMP	E300.0:PERC	2	N	To be sampled in 2011.
W-PIT7-1861	PTMW	Qal/WBR	O	CMP	E906:ALL	2	N	To be sampled in 2011.
W-PIT7-1918	PTMW	Qal/WBR	S	DIS	AS:UIISO	1	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
W-PIT7-1918	PTMW	Qal/WBR	S	DIS	AS:UIISO	4	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	DIS	E300.0:NO3	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	1	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	DIS	E300.0:PERC	1	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	DIS	E601:ALL	1	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	DIS	E906:ALL	1	Y	
W-PIT7-1918	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
W-PIT7-1918	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
W-PIT7-1918	PTMW	Qal/WBR	Q	DIS	MS:UIISO	1	Y	
W-PIT7-1918	PTMW	Qal/WBR	Q	DIS	MS:UIISO	2	Y	
W-PIT7-1918	PTMW	Qal/WBR	Q	DIS	MS:UIISO	3	Y	
W-PIT7-1918	PTMW	Qal/WBR	Q	DIS	MS:UIISO	4	Y	
W-PIT7-2141	PTMW	Tnbs1/Tnbs0	E	CMP	AS:UIISO	2	Y	
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:UIISO	2	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	CMP-TF	AS:UIISO	1	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	CMP-TF	AS:UIISO	2	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	DIS-TF	E300.0:NO3	1	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	CMP-TF	E300.0:NO3	2	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	DIS-TF	E300.0:PERC	1	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	CMP-TF	E300.0:PERC	2	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	DIS-TF	E300.0:PERC	4	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	DIS-TF	E601:ALL	1	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	CMP-TF	E601:ALL	2	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	DIS-TF	E601:ALL	4	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	S	DIS-TF	E906:ALL	1	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	S	CMP-TF	E906:ALL	2	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	S	DIS-TF	E906:ALL	3	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	S	CMP-TF	E906:ALL	4	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	DIS-TF	MS:UIISO	1	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	DIS-TF	MS:UIISO	2	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	DIS-TF	MS:UIISO	3	Y	
W-PIT7-2305	EW	Qal/WBR; Tnbs0	A	DIS-TF	MS:UIISO	4	Y	
W-PIT7-2306	EW	Qal/WBR	A	CMP-TF	AS:UIISO	1	Y	
W-PIT7-2306	EW	Qal/WBR	A	CMP-TF	AS:UIISO	2	Y	
W-PIT7-2306	EW	Qal/WBR	A	DIS-TF	E300.0:NO3	1	Y	
W-PIT7-2306	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	Y	
W-PIT7-2306	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	1	Y	
W-PIT7-2306	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	Y	
W-PIT7-2306	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	4	Y	
W-PIT7-2306	EW	Qal/WBR	A	DIS-TF	E601:ALL	1	Y	
W-PIT7-2306	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	Y	
W-PIT7-2306	EW	Qal/WBR	A	DIS-TF	E601:ALL	4	Y	
W-PIT7-2306	EW	Qal/WBR	S	DIS-TF	E906:ALL	1	Y	
W-PIT7-2306	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	Y	
W-PIT7-2306	EW	Qal/WBR	S	DIS-TF	E906:ALL	3	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-PIT7-2306	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	Y	
W-PIT7-2306	EW	Qal/WBR	A	DIS-TF	MS:UIISO	1	Y	
W-PIT7-2306	EW	Qal/WBR	A	DIS-TF	MS:UIISO	2	Y	
W-PIT7-2306	EW	Qal/WBR	A	DIS-TF	MS:UIISO	3	Y	
W-PIT7-2306	EW	Qal/WBR	A	DIS-TF	MS:UIISO	4	Y	
W-PIT7-2307	EW	Qal/WBR	A	CMP-TF	AS:UIISO	1	Y	
W-PIT7-2307	EW	Qal/WBR	A	CMP-TF	AS:UIISO	2	Y	
W-PIT7-2307	EW	Qal/WBR	A	DIS-TF	E300.0:NO3	1	Y	
W-PIT7-2307	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	Y	
W-PIT7-2307	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	1	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	DIS-TF	E601:ALL	1	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	DIS-TF	E906:ALL	1	Y	
W-PIT7-2307	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	Y	
W-PIT7-2307	EW	Qal/WBR	S	DIS-TF	E906:ALL	3	Y	
W-PIT7-2307	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	Y	
W-PIT7-2307	EW	Qal/WBR	A	DIS-TF	MS:UIISO	1	Y	
W-PIT7-2307	EW	Qal/WBR	A	DIS-TF	MS:UIISO	2	Y	
W-PIT7-2307	EW	Qal/WBR	A	DIS-TF	MS:UIISO	3	Y	
W-PIT7-2307	EW	Qal/WBR	A	DIS-TF	MS:UIISO	4	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	DIS	AS:UIISO	1	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	CMP	AS:UIISO	2	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	DIS	E300.0:NO3	1	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	DIS	E300.0:PERC	1	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	DIS	E601:ALL	1	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
W-PIT7-2309	PTMW	Qal/WBR	S	DIS	E906:ALL	1	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:UIISO	1	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	DIS	MS:UIISO	2	Y	

## 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:UIISO and/or MS:UIISO).
- 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 E200.7:Li) sampled annually.
- 13) CMP Detection monitoring analytes: uranium isotopes (AS:UIISO or MS:UIISO) 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, 2010 through December 31, 2010.**

<b>Treatment facility</b>	<b>Month</b>	<b>SVTS VOC mass removed (g)</b>	<b>GWTS VOC mass removed (g)</b>	<b>Perchlorate mass removed (g)</b>	<b>Nitrate mass removed (kg)</b>	<b>Total Uranium mass removed (g)</b>
<b>PIT7-SRC</b>	<b>July</b>	NA	0.26	0.44	1.4	0.92
	<b>August</b>	NA	0.25	0.43	1.3	0.92
	<b>September</b>	NA	0.21	0.35	1.1	0.76
	<b>October</b>	NA	0.13	0.22	0.87	0.56
	<b>November</b>	NA	0.16	0.28	1.1	0.64
	<b>December</b>	NA	0.11	0.18	0.69	0.37
<b>Total</b>		NA	1.1	1.9	6.4	4.2

**Table 2.6-1. Building 854-Source (854-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
854-SRC	July	385	685	1,069	167,211
	August	554	798	1,531	179,504
	September	544	714	1,515	148,120
	October	672	671	1,880	131,248
	November	469	797	1,320	146,703
	December	0	666	0	116,008
<b>Total</b>		<b>2,624</b>	<b>4,331</b>	<b>7,315</b>	<b>888,794</b>

**Table 2.6-2. Building 854-Proximal (854-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
854-PRX	July	NA	696	NA	58,783
	August	NA	771	NA	47,746
	September	NA	714	NA	42,881
	October	NA	672	NA	39,082
	November	NA	485	NA	27,792
	December	NA	0	NA	0
<b>Total</b>		<b>NA</b>	<b>3,338</b>	<b>NA</b>	<b>216,284</b>

**Table 2.6-3. Building 854-Distal (854-DIS) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

<b>Treatment facility</b>	<b>Month</b>	<b>SVTS Operational hours</b>	<b>GWTS Operational hours</b>	<b>Volume of vapor extracted (thousands of ft<sup>3</sup>)</b>	<b>Volume of ground water discharged (gal)</b>
<b>854-DIS</b>	<b>July</b>	NA	21	NA	1,047
	<b>August</b>	NA	26	NA	1,271
	<b>September</b>	NA	24	NA	1,116
	<b>October</b>	NA	20	NA	980
	<b>November</b>	NA	16	NA	861
	<b>December</b>	NA	0	NA	0
<b>Total</b>		NA	107	NA	5,275

**Table 2.6-4. Building 854 Operable Unit volatile organic compounds (VOCs) in ground water 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)
<i>Building 854-Distal</i>															
854-DIS-GWTS-E	7/7/10	<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	<0.5
854-DIS-GWTS-E	8/2/10	<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	<0.5
854-DIS-GWTS-E	9/14/10	<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	<0.5
854-DIS-GWTS-E	10/5/10	<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	<0.5
854-DIS-GWTS-E	11/1/10	<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	<0.5
854-DIS-GWTS-E <sup>a</sup>															
854-DIS-GWTS-I	7/29/10	26	<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
854-DIS-GWTS-I	10/5/10	31	<0.5	0.58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<i>Building 854-Proximal</i>															
854-PRX-GWTS-E	7/6/10	<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	<0.5
854-PRX-GWTS-E	8/2/10	<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	<0.5
854-PRX-GWTS-E	9/13/10	<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	<0.5
854-PRX-GWTS-E	10/5/10	<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	<0.5
854-PRX-GWTS-E	11/1/10	<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	<0.5
854-PRX-GWTS-E <sup>a</sup>															
854-PRX-GWTS-I	7/19/10	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
854-PRX-GWTS-I	10/5/10	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
<i>Building 854-Source</i>															
854-SRC-GWTS-E	7/6/10	<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	<0.5
854-SRC-GWTS-E	8/2/10	<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	<0.5
854-SRC-GWTS-E	9/13/10	<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	<0.5

**Table 2.6-4. (Cont). Building 854 Operable Unit volatile organic compounds (VOCs) in ground water 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)
<i>Building 854-Source (continued)</i>															
854-SRC-GWTS-E	10/5/10	<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	<0.5
854-SRC-GWTS-E	11/1/10	<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	<0.5
854-SRC-GWTS-E	12/6/10	<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	<0.5
854-SRC-GWTS-I	7/19/10	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
854-SRC-GWTS-I	10/5/10	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

## Notes:

- <sup>a</sup> 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 2.6-4 (Cont.). Analyte detected but not reported in main table.**

<b>Location</b>	<b>Date</b>	<b>Detection frequency</b>
<i>Building 854-Distal</i>		
854-DIS-GWTS-E	7/7/10	0 of 18
854-DIS-GWTS-E	8/2/10	0 of 18
854-DIS-GWTS-E	9/14/10	0 of 18
854-DIS-GWTS-E	10/5/10	0 of 18
854-DIS-GWTS-E	11/1/10	0 of 18
854-DIS-GWTS-E <sup>a</sup>	–	–
854-DIS-GWTS-I	7/29/10	0 of 18
854-DIS-GWTS-I	10/5/10	0 of 18
<i>Building 854-Proximal</i>		
854-PRX-GWTS-E	7/6/10	0 of 18
854-PRX-GWTS-E	8/2/10	0 of 18
854-PRX-GWTS-E	9/13/10	0 of 18
854-PRX-GWTS-E	10/5/10	0 of 18
854-PRX-GWTS-E	11/1/10	0 of 18
854-PRX-GWTS-E <sup>a</sup>	–	–
854-PRX-GWTS-I	7/19/10	0 of 18
854-PRX-GWTS-I	10/5/10	0 of 18
<i>Building 854-Source</i>		
854-SRC-GWTS-E	7/6/10	0 of 18
854-SRC-GWTS-E	8/2/10	0 of 18
854-SRC-GWTS-E	9/13/10	0 of 18
854-SRC-GWTS-E	10/5/10	0 of 18
854-SRC-GWTS-E	11/1/10	0 of 18
854-SRC-GWTS-E	12/6/10	0 of 18
854-SRC-GWTS-I	7/19/10	0 of 18
854-SRC-GWTS-I	10/5/10	0 of 18

**Notes:**

<sup>a</sup> 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 2.6-5. Building 854 Operable Unit nitrate and perchlorate in ground water treatment system influent and effluent.**

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
<i>Building 854-Distal</i>			
854-DIS-GWTS-E	7/7/10	1.3	<4
854-DIS-GWTS-E	8/2/10	0.86	<4
854-DIS-GWTS-E	9/14/10	0.93	<4
854-DIS-GWTS-E	10/5/10	1.0	<4
854-DIS-GWTS-E	11/1/10	1.6	<4
854-DIS-GWTS-E <sup>a</sup>	–	–	–
854-DIS-GWTS-I	7/29/10	25	5.8
854-DIS-GWTS-I	10/5/10	24	5.2
<i>Building 854-Proximal</i>			
854-PRX-GWTS-E	7/6/10	<0.5	<4
854-PRX-GWTS-E	8/2/10	<0.5	<4
854-PRX-GWTS-E	9/13/10	<0.5	<4
854-PRX-GWTS-E	10/5/10	<0.5	<4
854-PRX-GWTS-E	11/1/10	<0.5	<4
854-PRX-GWTS-E <sup>a</sup>	–	–	–
854-PRX-GWTS-I	7/19/10	44	11
854-PRX-GWTS-I	10/5/10	43	10
<i>Building 854-Source</i>			
854-SRC-GWTS-E	7/6/10	NR	<4
854-SRC-GWTS-E	8/2/10	NR	<4
854-SRC-GWTS-E	9/13/10	NR	<4
854-SRC-GWTS-E	10/5/10	NR	<4
854-SRC-GWTS-E	11/1/10	NR	<4
854-SRC-GWTS-E	12/6/10	NR	<4
854-SRC-GWTS-I	7/19/10	NR	<4
854-SRC-GWTS-I	10/5/10	NR	<4

## Notes:

- <sup>a</sup> 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 2.6-6. Building 854 Operable Unit treatment facility sampling and analysis plan.**

Sample location	Sample identification	Parameter	Frequency
<b>854-SRC GWTS</b>			
Influent Port	854-SRC-I	VOCs	Quarterly
		Perchlorate	Quarterly
Effluent Port	854-SRC-E	VOCs	Monthly
		Perchlorate	Monthly
		pH	Monthly
<b>854-SRC SVTS</b>			
Influent Port	W-854-1834-854-SRC-VI	No Monitoring Requirements	
Effluent Port	854-SRC-E	VOCs	Weekly <sup>a</sup>
Intermediate GAC	854-SRC-VCF3I	VOCs	Weekly <sup>a</sup>
<b>854-PRX GWTS</b>			
Influent Port	W-854-03-854-PRX-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
Effluent Port	854-PRX-BTU-I	VOCs	Monthly
Effluent Port	854-PRX-E	Perchlorate	Monthly
		Nitrate	Monthly
		pH	Monthly
<b>854-DIS GWTS</b>			
Influent Port	W-854-2139-854-DIS-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
Effluent Port	854-DIS-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.

<sup>a</sup> Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.

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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
SPRING10	SPR	Qls	A	CMP	E300.0:NO3	2	Y	
SPRING10	SPR	Qls	S	CMP	E300.0:PERC	2	Y	
SPRING10	SPR	Qls	S	CMP	E300.0:PERC	4	Y	
SPRING10	SPR	Qls	S	CMP	E601:ALL	1	Y	
SPRING10	SPR	Qls	S	CMP	E601:ALL	3	Y	
SPRING11	SPR	Qls-Tnbs1	A	CMP	E300.0:NO3	2	Y	
SPRING11	SPR	Qls-Tnbs1	S	CMP	E300.0:PERC	2	Y	
SPRING11	SPR	Qls-Tnbs1	S	CMP	E300.0:PERC	4	Y	
SPRING11	SPR	Qls-Tnbs1	S	CMP	E601:ALL	1	Y	
SPRING11	SPR	Qls-Tnbs1	S	CMP	E601:ALL	3	Y	
W-854-01	PTWM	Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-854-01	PTWM	Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-854-01	PTWM	Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-854-01	PTWM	Tnbs1	S	CMP	E601:ALL	2	Y	
W-854-01	PTWM	Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-02	EW	Tnbs1	A	CMP-TF	E300.0:NO3	3	Y	
W-854-02	EW	Tnbs1	S	DIS-TF	E300.0:PERC	1	Y	
W-854-02	EW	Tnbs1	S	CMP-TF	E300.0:PERC	2	Y	
W-854-02	EW	Tnbs1	S	DIS-TF	E300.0:PERC	3	Y	
W-854-02	EW	Tnbs1	S	CMP-TF	E300.0:PERC	4	Y	
W-854-02	EW	Tnbs1	S	DIS-TF	E601:ALL	1	Y	
W-854-02	EW	Tnbs1	S	CMP-TF	E601:ALL	2	Y	
W-854-02	EW	Tnbs1	S	DIS-TF	E601:ALL	3	Y	
W-854-02	EW	Tnbs1	S	CMP-TF	E601:ALL	4	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E300.0:NO3	1	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E300.0:NO3	2	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E300.0:NO3	3	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E300.0:NO3	4	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E300.0:PERC	1	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E300.0:PERC	2	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E300.0:PERC	3	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E300.0:PERC	4	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E601:ALL	1	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E601:ALL	2	Y	
W-854-03	EW	Tnbs1	Q	CMP-TF	E601:ALL	3	Y	
W-854-03	EW	Tnbs1	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	N	Inoperable pump.
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	N	Inoperable pump.
W-854-06	PTWM	Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-06	PTWM	Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-06	PTWM	Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-06	PTWM	Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-06	PTWM	Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-07	PTWM	Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-854-07	PTWM	Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-854-07	PTWM	Tnbs1	S	CMP	E300.0:PERC	4	Y	

Table 2.6-7. (Cont.). Building 854 Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-854-07	PTWM	Tnbs1	S	CMP	E601:ALL	2	Y	
W-854-07	PTWM	Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-08	PTWM	Tnbs1	A	CMP	E300.0:NO3	2	N	Inoperable pump.
W-854-08	PTWM	Tnbs1	S	CMP	E300.0:PERC	2	N	Inoperable pump.
W-854-08	PTWM	Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-854-08	PTWM	Tnbs1	S	CMP	E601:ALL	2	N	Inoperable pump.
W-854-08	PTWM	Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-09	PTWM	Tnsbs0	A	CMP	E300.0:NO3	2	Y	
W-854-09	PTWM	Tnsbs0	S	CMP	E300.0:PERC	2	Y	
W-854-09	PTWM	Tnsbs0	S	CMP	E300.0:PERC	4	Y	
W-854-09	PTWM	Tnsbs0	S	CMP	E601:ALL	2	Y	
W-854-09	PTWM	Tnsbs0	S	CMP	E601:ALL	4	Y	
W-854-10	PTWM	Tnsbs0	A	CMP	E300.0:NO3	2	Y	
W-854-10	PTWM	Tnsbs0	S	CMP	E300.0:PERC	2	Y	
W-854-10	PTWM	Tnsbs0	S	CMP	E300.0:PERC	4	Y	
W-854-10	PTWM	Tnsbs0	S	CMP	E601:ALL	2	Y	
W-854-10	PTWM	Tnsbs0	S	CMP	E601:ALL	4	Y	
W-854-11	PTWM	Tnbs1	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-854-11	PTWM	Tnbs1	S	CMP	E300.0:PERC	2	N	Insufficient water.
W-854-11	PTWM	Tnbs1	S	CMP	E300.0:PERC	4	N	Dry.
W-854-11	PTWM	Tnbs1	S	CMP	E601:ALL	2	N	Insufficient water.
W-854-11	PTWM	Tnbs1	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	Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-13	PTWM	Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-13	PTWM	Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-13	PTWM	Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-13	PTWM	Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-14	PTWM	Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-854-14	PTWM	Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-854-14	PTWM	Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-854-14	PTWM	Tnbs1	S	CMP	E601:ALL	2	Y	
W-854-14	PTWM	Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-15	PTWM	Qls	A	CMP	E300.0:NO3	2	Y	
W-854-15	PTWM	Qls	S	CMP	E300.0:PERC	2	Y	
W-854-15	PTWM	Qls	S	CMP	E300.0:PERC	4	Y	
W-854-15	PTWM	Qls	S	CMP	E601:ALL	2	Y	
W-854-15	PTWM	Qls	S	CMP	E601:ALL	4	Y	
W-854-17	EW	Tnsbs0-Tnsc0	A	CMP-TF	E300.0:NO3	3	Y	
W-854-17	EW	Tnsbs0-Tnsc0	S	DIS-TF	E300.0:PERC	1	Y	
W-854-17	EW	Tnsbs0-Tnsc0	S	CMP-TF	E300.0:PERC	2	Y	
W-854-17	EW	Tnsbs0-Tnsc0	S	DIS-TF	E300.0:PERC	3	Y	
W-854-17	EW	Tnsbs0-Tnsc0	S	CMP-TF	E300.0:PERC	4	Y	
W-854-17	EW	Tnsbs0-Tnsc0	S	DIS-TF	E601:ALL	1	Y	
W-854-17	EW	Tnsbs0-Tnsc0	S	CMP-TF	E601:ALL	2	Y	
W-854-17	EW	Tnsbs0-Tnsc0	S	DIS-TF	E601:ALL	3	Y	
W-854-17	EW	Tnsbs0-Tnsc0	S	CMP-TF	E601:ALL	4	Y	
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	

Table 2.6-7. (Cont.). Building 854 Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	Qal-Tnbs1	A	CMP	E300.0:NO3	2	N	Dry.
W-854-1706	PTWM	Qal-Tnbs1	S	CMP	E300.0:PERC	2	N	Dry.
W-854-1706	PTWM	Qal-Tnbs1	S	CMP	E300.0:PERC	4	N	Dry.
W-854-1706	PTWM	Qal-Tnbs1	S	CMP	E601:ALL	2	N	Dry.
W-854-1706	PTWM	Qal-Tnbs1	S	CMP	E601:ALL	4	N	Dry.
W-854-1707	PTWM	Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-1707	PTWM	Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-1707	PTWM	Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-1707	PTWM	Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-1707	PTWM	Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-1731	PTWM	Tmss	A	CMP	E300.0:NO3	2	Y	
W-854-1731	PTWM	Tmss	S	CMP	E300.0:PERC	2	Y	
W-854-1731	PTWM	Tmss	S	CMP	E300.0:PERC	4	Y	
W-854-1731	PTWM	Tmss	S	CMP	E601:ALL	2	Y	
W-854-1731	PTWM	Tmss	S	CMP	E601:ALL	4	Y	
W-854-1822	PTWM	Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-854-1822	PTWM	Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-854-1822	PTWM	Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-854-1822	PTWM	Tnbs1	S	CMP	E601:ALL	2	Y	
W-854-1822	PTWM	Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-1823	PTWM	Tnsbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-1823	PTWM	Tnsbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-1823	PTWM	Tnsbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-1823	PTWM	Tnsbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-1823	PTWM	Tnsbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-18A	EW	Tnbs1	A	CMP-TF	E300.0:NO3	3	Y	
W-854-18A	EW	Tnbs1	S	DIS-TF	E300.0:PERC	1	Y	
W-854-18A	EW	Tnbs1	S	CMP-TF	E300.0:PERC	2	Y	
W-854-18A	EW	Tnbs1	S	DIS-TF	E300.0:PERC	3	Y	
W-854-18A	EW	Tnbs1	S	CMP-TF	E300.0:PERC	4	Y	
W-854-18A	EW	Tnbs1	S	DIS-TF	E601:ALL	1	Y	
W-854-18A	EW	Tnbs1	S	CMP-TF	E601:ALL	2	Y	
W-854-18A	EW	Tnbs1	S	DIS-TF	E601:ALL	3	Y	
W-854-18A	EW	Tnbs1	S	CMP-TF	E601:ALL	4	Y	
W-854-19	PTWM	Qls	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
W-854-19	PTWM	Qls	O	CMP	E300.0:PERC	2	N	To be sampled in 2011.
W-854-19	PTWM	Qls	O	CMP	E601:ALL	2	N	To be sampled in 2011.
W-854-1902	PTWM	Tnsbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-1902	PTWM	Tnsbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-1902	PTWM	Tnsbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-1902	PTWM	Tnsbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-1902	PTWM	Tnsbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-2115	PTWM	Tnsbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-2115	PTWM	Tnsbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-2115	PTWM	Tnsbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-2115	PTWM	Tnsbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-2115	PTWM	Tnsbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E300.0:NO3	1	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E300.0:NO3	2	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E300.0:NO3	3	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E300.0:NO3	4	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E300.0:PERC	1	Y	

**Table 2.6-7. (Cont.). Building 854 Operable Unit ground and surface water sampling and analysis plan.**

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E300.0:PERC	2	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E300.0:PERC	3	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E300.0:PERC	4	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E601:ALL	1	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E601:ALL	2	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E601:ALL	3	Y	
W-854-2139	EW	Tnsbs1-Tnsc0	Q	CMP-TF	E601:ALL	4	Y	
W-854-2218	EW	Tnbs1	A	CMP-TF	E300.0:NO3	3	Y	
W-854-2218	EW	Tnbs1	S	DIS-TF	E300.0:PERC	1	Y	
W-854-2218	EW	Tnbs1	S	CMP-TF	E300.0:PERC	2	Y	
W-854-2218	EW	Tnbs1	S	DIS-TF	E300.0:PERC	3	Y	
W-854-2218	EW	Tnbs1	S	CMP-TF	E300.0:PERC	4	Y	
W-854-2218	EW	Tnbs1	S	DIS-TF	E601:ALL	1	Y	
W-854-2218	EW	Tnbs1	S	CMP-TF	E601:ALL	2	Y	
W-854-2218	EW	Tnbs1	S	DIS-TF	E601:ALL	3	Y	
W-854-2218	EW	Tnbs1	S	CMP-TF	E601:ALL	4	Y	
W-854-45	PTWM	Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-854-45	PTWM	Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-854-45	PTWM	Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-854-45	PTWM	Tnbs1	S	CMP	E601:ALL	2	Y	
W-854-45	PTWM	Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-F2	PTWM	Qls-Tnbs1	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
W-854-F2	PTWM	Qls-Tnbs1	O	CMP	E300.0:PERC	2	N	To be sampled in 2011.
W-854-F2	PTWM	Qls-Tnbs1	O	CMP	E601:ALL	2	N	To be sampled in 2011.

**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, 2010 through December 31, 2010.**

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	75	39	0.89	29	NA	NA
	August	100	28	0.97	33	NA	NA
	September	99	24	0.87	27	NA	NA
	October	16	20	0.69	24	NA	NA
	November	11	23	0.82	27	NA	NA
	December	0	19	0.69	21	NA	NA
<b>Total</b>		<b>300</b>	<b>150</b>	<b>4.9</b>	<b>160</b>	<b>NA</b>	<b>NA</b>

**Table 2.6-9. Building 854-Proximal (854-PRX) mass removed, July 1, 2010 through December 31, 2010.**

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	5.3	2.4	9.8	NA	NA
	August	NA	4.3	2.0	8.0	NA	NA
	September	NA	3.9	1.8	7.1	NA	NA
	October	NA	3.0	1.5	6.4	NA	NA
	November	NA	2.1	1.1	4.5	NA	NA
	December	NA	0	0	0	NA	NA
<b>Total</b>		<b>NA</b>	<b>19</b>	<b>8.8</b>	<b>36</b>	<b>NA</b>	<b>NA</b>

**Table 2.6-10. Building 854-Distal (854-DIS) mass removed, July 1, 2010 through December 31, 2010.**

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	0.10	0.023	0.099	NA	NA
	August	NA	0.13	0.028	0.12	NA	NA
	September	NA	0.11	0.025	0.11	NA	NA
	October	NA	0.12	0.019	0.089	NA	NA
	November	NA	0.10	0.017	0.078	NA	NA
	December	NA	0	0	0	NA	NA
<b>Total</b>		NA	0.57	0.11	0.49	NA	NA



**Table 2.7-1. Building 832-Source (832-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
832-SRC	July	44	284	6	5,957
	August	744	744	126	17,304
	September	672	672	118	13,248
	October	696	696	147	12,481
	November	504	504	134	7,860
	December	0	0	0	0
<b>Total</b>		<b>2,660</b>	<b>2,900</b>	<b>531</b>	<b>56,850</b>

**Table 2.7-2. Building 830-Source (830-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft <sup>3</sup> )	Volume of ground water discharged (gal)
830-SRC	July	347	540	472	211,017
	August	598	500	784	266,286
	September	671	447	1,153	183,721
	October	674	436	1,288	180,211
	November	811	461	1,529	207,964
	December	211	216	384	116,779
<b>Total</b>		<b>3,312</b>	<b>2,600</b>	<b>5,610</b>	<b>1,165,978</b>

**Table 2.7-3. Building 830-Distal South (830-DISS) volumes of ground water and soil vapor extracted and discharged, July 1, 2010 through December 31, 2010.**

<b>Treatment facility</b>	<b>Month</b>	<b>SVTS Operational hours</b>	<b>GWTS Operational hours</b>	<b>Volume of vapor extracted (thousands of ft<sup>3</sup>)</b>	<b>Volume of ground water discharged (gal)</b>
<b>830-DISS</b>	<b>July</b>	NA	168	NA	33,012
	<b>August</b>	NA	264	NA	34,091
	<b>September</b>	NA	504	NA	56,443
	<b>October</b>	NA	408	NA	77,744
	<b>November</b>	NA	456	NA	84,806
	<b>December</b>	NA	480	NA	76,491
<b>Total</b>		NA	2,280	NA	362,587

**Table 2.7-4. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground water treatment system influent and effluent.**

Location	Date	TCE (µg/L)	PCE (µg/L)	trans-		Carbon	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)
				cis-1,2- DCE (µg/L)	1,2- DCE (µg/L)	tetra- chloride (µg/L)									
<i>Building 830-Distal South<sup>a</sup></i>															
<i>Building 830-Source</i>															
830-SRC-GWTS-E	7/12/10	<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	<0.5
830-SRC-GWTS-E	8/2/10	<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	<0.5
830-SRC-GWTS-E	9/8/10	<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	<0.5
830-SRC-GWTS-E	10/5/10	<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	<0.5
830-SRC-GWTS-E	11/1/10	<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	<0.5
830-SRC-GWTS-E	12/6/10	<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	<0.5
830-SRC-GWTS-I	7/12/10	350 D	3.6	<0.5	<0.5	<0.5	<0.5	<0.5	0.73	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-I	10/5/10	1,400 D	1.7	1	<0.5	<0.5	0.79	<0.5	0.51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<i>Building 832-Source</i>															
832-SRC-GWTS-E	7/6/10	<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	<0.5
832-SRC-GWTS-E	8/2/10	<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	<0.5
832-SRC-GWTS-E	9/8/10	<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	<0.5
832-SRC-GWTS-E	10/5/10	<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	<0.5
832-SRC-GWTS-E	11/1/10	<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	<0.5
832-SRC-GWTS-E <sup>b</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
832-SRC-GWTS-I	8/2/10	130 D	<0.5	4	<0.5	<0.5	0.67	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-I	10/5/10	140 D	<0.5	4.5	<0.5	<0.5	0.61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

## Notes:

<sup>a</sup> No influent or effluent monitoring conducted due to VOC treatment at CGSA GWTS.

<sup>b</sup> No compliance monitoring conducted in December due to shut down of GWTS for freeze protection.

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.7-4 (Cont.). Analyte detected but not reported in main table.**

<b>Location</b>	<b>Date</b>	<b>Detection frequency</b>	<b>1,2-DCE (Total) (<math>\mu\text{g/l}</math>)</b>
<i>Building 830-Distal South<sup>a</sup></i>			
<i>Building 830-Source</i>			
830-SRC-GWTS-E	7/12/10	0 of 18	–
830-SRC-GWTS-E	8/2/10	0 of 18	–
830-SRC-GWTS-E	9/8/10	0 of 18	–
830-SRC-GWTS-E	10/5/10	0 of 18	–
830-SRC-GWTS-E	11/1/10	0 of 18	–
830-SRC-GWTS-E	12/6/10	0 of 18	–
830-SRC-GWTS-I	7/12/10	0 of 18	–
830-SRC-GWTS-I	10/5/10	1 of 18	1
<i>Building 832-Source</i>			
832-SRC-GWTS-E	7/6/10	0 of 18	–
832-SRC-GWTS-E	8/2/10	0 of 18	–
832-SRC-GWTS-E	9/8/10	0 of 18	–
832-SRC-GWTS-E	10/5/10	0 of 18	–
832-SRC-GWTS-E	11/1/10	0 of 18	–
832-SRC-GWTS-E <sup>b</sup>	–	–	–
832-SRC-GWTS-I	8/2/10	1 of 18	4
832-SRC-GWTS-I	10/5/10	1 of 18	4.5

**Notes:**

<sup>a</sup> No influent or effluent monitoring conducted due to VOC treatment at CGSA GWTS.

<sup>b</sup> No effluent monitoring conducted in December due to shutdown for freeze protection.

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.7-5. Building 832 Canyon Operable Unit perchlorate in ground water treatment system influent and effluent.**

Location	Date	Perchlorate ( $\mu\text{g/L}$ )
<i>Building 830-Distal South</i>		
830-DISS-GWTS-E	7/12/10	<4
830-DISS-GWTS-E	8/2/10	<4
830-DISS-GWTS-E	9/13/10	<4
830-DISS-GWTS-E	10/5/10	<4
830-DISS-GWTS-E	11/1/10	<4
830-DISS-GWTS-E	12/6/10	<4
830-DISS-GWTS-I	7/12/10	4.5
830-DISS-GWTS-I	10/5/10	<4
<i>Building 830-Source</i>		
830-SRC-GWTS-E	7/12/10	<4
830-SRC-GWTS-E	8/2/10	<4
830-SRC-GWTS-E	9/8/10	<4
830-SRC-GWTS-E	10/5/10	<4
830-SRC-GWTS-E	11/1/10	<4
830-SRC-GWTS-E	12/6/10	<4
830-SRC-GWTS-I	7/12/10	<4
830-SRC-GWTS-I <sup>a</sup>	07/12/10 DUP	<4
830-SRC-GWTS-I	10/5/10	5.1
<i>Building 832-Source</i>		
832-SRC-GWTS-E	7/6/10	<4
832-SRC-GWTS-E	8/2/10	<4
832-SRC-GWTS-E	9/8/10	<4
832-SRC-GWTS-E	10/5/10	<4
832-SRC-GWTS-E	11/1/10	<4
832-SRC-GWTS-E <sup>b</sup>	–	–
832-SRC-GWTS-I	8/2/10	6.6
832-SRC-GWTS-I <sup>a</sup>	8/2/10 DUP	5.5
832-SRC-GWTS-I	10/5/10	5.7

## Notes:

<sup>a</sup> Duplicate sample submitted for QA/QC.

<sup>b</sup> No compliance monitoring conducted in December due to shut down of GWTS for freeze protection.  
See Acronyms and Abbreviations in the Tables section of this report for definitions.

**Table 2.7-6. Building 832 Canyon Operable Unit treatment facility sampling and analysis plan.**

Sample location	Sample identification	Parameter	Frequency
<b>832-SRC GWTS</b>			
Influent Port	832-SRC-I	VOCs	Quarterly
		Perchlorate	Quarterly
Effluent Port	832-SRC-E	VOCs	Monthly
		Perchlorate	Monthly
		pH	Monthly
<b>832-SRC SVTS</b>			
Influent Port	832-SRC-VI	No Monitoring Requirements	
Effluent Port	832-SRC-VE	VOCs	Weekly <sup>a</sup>
Intermediate GAC	832-SRC-VCF3I	VOCs	Weekly <sup>a</sup>
<b>830-SRC GWTS</b>			
Influent Port <sup>b</sup>	830-SRC-I	VOCs	Quarterly
		Perchlorate	Quarterly
	830-SRC-I2	VOCs	Quarterly
Effluent Port	830-SRC-E	VOCs	Monthly
		Perchlorate	Monthly
		pH	Monthly
<b>830-SRC SVTS</b>			
Influent Port	830-SRC-VI	No Monitoring Requirements	
Effluent Port	830-SRC-VE	VOCs	Weekly <sup>a</sup>
Intermediate GAC	830-SRC-VCF3I	VOCs	Weekly <sup>a</sup>
<b>830-DISS GWTS</b>			
Influent Port	830-DISS-I	Perchlorate	Quarterly
Effluent Port	830-DISS-E	Perchlorate	Monthly
		pH	Monthly

**Notes:**

One duplicate and one blank (given fictitious labels) shall be taken for every 12 samples.

<sup>a</sup> Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.

<sup>b</sup> Influent split into two different separate streams with two sampling ports (-I & -I2) where the -I2 port represents the influent stream from wells with no perchlorate contamination. This stream bypasses the ion-exchange columns.

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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
SPRING3	SPR	Qal	A	CMP	E300.0:NO3	1	Y	
SPRING3	SPR	Qal	A	CMP	E300.0:PERC	1	Y	
SPRING3	SPR	Qal	S	CMP	E601:ALL	1	Y	
SPRING3	SPR	Qal	S	CMP	E601:ALL	3	Y	
SPRING4	SPR	Tps	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
SPRING4	SPR	Tps	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
SPRING4	SPR	Tps	O	CMP	E601:ALL	1	N	To be sampled in 2011.
SVI-830-031	PTMW	Tnsc1	A	CMP	E300.0:NO3	1	Y	
SVI-830-031	PTMW	Tnsc1	A	CMP	E300.0:PERC	1	Y	
SVI-830-031	PTMW	Tnsc1	S	CMP	E601:ALL	1	Y	
SVI-830-031	PTMW	Tnsc1	S	CMP	E601:ALL	3	N	Insufficient water.
SVI-830-032	PTMW	Tnsc1	A	CMP	E300.0:NO3	1	Y	
SVI-830-032	PTMW	Tnsc1	A	CMP	E300.0:PERC	1	Y	
SVI-830-032	PTMW	Tnsc1	S	CMP	E601:ALL	1	Y	
SVI-830-032	PTMW	Tnsc1	S	CMP	E601:ALL	3	Y	
SVI-830-033	PTMW	Tnsc1	A	CMP	E300.0:NO3	1	Y	
SVI-830-033	PTMW	Tnsc1	A	CMP	E300.0:PERC	1	Y	
SVI-830-033	PTMW	Tnsc1	S	CMP	E601:ALL	1	Y	
SVI-830-033	PTMW	Tnsc1	S	CMP	E601:ALL	3	N	Insufficient water.
SVI-830-035	PTMW	Tnsc1	A	CMP	E300.0:NO3	1	Y	
SVI-830-035	PTMW	Tnsc1	A	CMP	E300.0:PERC	1	Y	
SVI-830-035	PTMW	Tnsc1	S	CMP	E601:ALL	1	Y	
SVI-830-035	PTMW	Tnsc1	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-830-04A	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-830-05	PTMW	Tnbs2-Tnsc1c	A	CMP	E300.0:NO3	1	Y	
W-830-05	PTMW	Tnbs2-Tnsc1c	A	CMP	E300.0:PERC	1	Y	
W-830-05	PTMW	Tnbs2-Tnsc1c	S	CMP	E601:ALL	1	Y	
W-830-05	PTMW	Tnbs2-Tnsc1c	S	CMP	E601:ALL	3	Y	
W-830-07	PTMW	Tnsc1	A	CMP	E300.0:NO3	1	N	Dry.
W-830-07	PTMW	Tnsc1	A	CMP	E300.0:PERC	1	N	Dry.
W-830-07	PTMW	Tnsc1	S	CMP	E601:ALL	1	N	Dry.
W-830-07	PTMW	Tnsc1	S	CMP	E601:ALL	3	N	Dry.
W-830-09	PTMW	Upper Tnbs1	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-830-09	PTMW	Upper Tnbs1	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-830-09	PTMW	Upper Tnbs1	S	CMP	E601:ALL	1	Y	
W-830-09	PTMW	Upper Tnbs1	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-830-10	PTMW	Tnsc1b	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-830-11	PTMW	Tnsc1c	S	CMP	E601:ALL	3	Y	
W-830-12	GW	Lower Tnbs1	S	CMP	E300.0:NO3	1	N	Inoperable pump.
W-830-12	GW	Lower Tnbs1	S	CMP	E300.0:NO3	3	Y	
W-830-12	GW	Lower Tnbs1	S	CMP	E300.0:PERC	1	N	Inoperable pump.
W-830-12	GW	Lower Tnbs1	S	CMP	E300.0:PERC	3	Y	
W-830-12	GW	Lower Tnbs1	Q	CMP	E601:ALL	1	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-830-12	GW	Lower Tnbs1	Q	CMP	E601:ALL	2	N	Inoperable pump.
W-830-12	GW	Lower Tnbs1	Q	CMP	E601:ALL	3	Y	
W-830-12	GW	Lower Tnbs1	Q	CMP	E601:ALL	4	Y	
W-830-13	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-830-13	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-830-13	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-830-13	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-830-13	PTMW	Tnbs2	E	CMP	E8330LOW:ALL	1	Y	
W-830-14	PTMW	Tnsc1b	E	CMP	E300.0:NO3	1	Y	
W-830-14	PTMW	Tnsc1b	E	CMP	E300.0:PERC	1	Y	
W-830-14	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-14	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-830-15	GW	Upper Tnbs1	S	CMP	E300.0:NO3	1	Y	
W-830-15	GW	Upper Tnbs1	S	CMP	E300.0:NO3	3	Y	
W-830-15	GW	Upper Tnbs1	S	CMP	E300.0:PERC	1	Y	
W-830-15	GW	Upper Tnbs1	S	CMP	E300.0:PERC	3	Y	
W-830-15	GW	Upper Tnbs1	Q	CMP	E601:ALL	1	Y	
W-830-15	GW	Upper Tnbs1	Q	CMP	E601:ALL	2	Y	
W-830-15	GW	Upper Tnbs1	Q	CMP	E601:ALL	3	Y	
W-830-15	GW	Upper Tnbs1	Q	CMP	E601:ALL	4	Y	
W-830-16	PTMW	Tnsc1b	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-830-16	PTMW	Tnsc1b	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-830-16	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-16	PTMW	Tnsc1b	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-830-17	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-830-1730	GW	Tnsc1b	S	CMP	E300.0:NO3	1	Y	
W-830-1730	GW	Tnsc1b	S	CMP	E300.0:NO3	3	Y	
W-830-1730	GW	Tnsc1b	S	CMP	E300.0:PERC	1	Y	
W-830-1730	GW	Tnsc1b	S	CMP	E300.0:PERC	3	Y	
W-830-1730	GW	Tnsc1b	Q	CMP	E601:ALL	1	Y	
W-830-1730	GW	Tnsc1b	Q	CMP	E601:ALL	2	Y	
W-830-1730	GW	Tnsc1b	Q	CMP	E601:ALL	3	Y	
W-830-1730	GW	Tnsc1b	Q	CMP	E601:ALL	4	Y	
W-830-18	PTMW	Upper Tnbs1	E	CMP	E300.0:NO3	1	Y	
W-830-18	PTMW	Upper Tnbs1	E	CMP	E300.0:PERC	1	Y	
W-830-18	PTMW	Upper Tnbs1	S	CMP	E601:ALL	1	Y	
W-830-18	PTMW	Upper Tnbs1	S	CMP	E601:ALL	3	Y	
W-830-1807	EW	Qal/Tnsc1	A	CMP-TF	E300.0:NO3	1	Y	
W-830-1807	EW	Qal/Tnsc1	A	CMP-TF	E300.0:PERC	1	Y	
W-830-1807	EW	Qal/Tnsc1	A	DIS-TF	E300.0:PERC	3	Y	
W-830-1807	EW	Qal/Tnsc1	S	CMP-TF	E601:ALL	1	Y	
W-830-1807	EW	Qal/Tnsc1	S	DIS-TF	E601:ALL	2	Y	
W-830-1807	EW	Qal/Tnsc1	S	CMP-TF	E601:ALL	3	Y	
W-830-1807	EW	Qal/Tnsc1	S	DIS-TF	E601:ALL	4	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-830-1829	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-830-1830	PTMW	Tnsc1b	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-830-1830	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	Y	
W-830-1830	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-1830	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-830-1831	PTMW	Tnsc1b	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-830-1831	PTMW	Tnsc1b	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-830-1831	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-1831	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-830-1832	PTMW	Upper Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-830-1832	PTMW	Upper Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-830-1832	PTMW	Upper Tnbs1	S	CMP	E601:ALL	1	Y	
W-830-1832	PTMW	Upper Tnbs1	S	CMP	E601:ALL	3	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	A	DIS-TF	E300.0:PERC	3	Y	
W-830-19	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-830-19	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-830-19	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-830-19	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-830-20	PTMW	Upper Tnbs1	E	CMP	E300.0:NO3	1	Y	
W-830-20	PTMW	Upper Tnbs1	E	CMP	E300.0:PERC	1	Y	
W-830-20	PTMW	Upper Tnbs1	S	CMP	E601:ALL	1	Y	
W-830-20	PTMW	Upper Tnbs1	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-830-21	PTMW	Tnsc1b	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-830-22	PTMW	Tnsc1a	S	CMP	E601:ALL	3	Y	
W-830-2213	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	N	Dry.
W-830-2213	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	N	Dry.
W-830-2213	PTMW	Tnsc1b	S	CMP	E601:ALL	1	N	Dry.
W-830-2213	PTMW	Tnsc1b	S	CMP	E601:ALL	3	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	A	DIS-TF	E300.0:PERC	3	Y	
W-830-2214	EW	Tnsc1a	S	CMP-TF	E601:ALL	1	Y	
W-830-2214	EW	Tnsc1a	S	DIS-TF	E601:ALL	2	Y	
W-830-2214	EW	Tnsc1a	S	CMP-TF	E601:ALL	3	Y	
W-830-2214	EW	Tnsc1a	S	DIS-TF	E601:ALL	4	Y	
W-830-2215	EW	Upper Tnbs1	A	CMP-TF	E300.0:NO3	1	Y	
W-830-2215	EW	Upper Tnbs1	A	CMP-TF	E300.0:PERC	1	Y	
W-830-2215	EW	Upper Tnbs1	S	CMP-TF	E601:ALL	1	Y	
W-830-2215	EW	Upper Tnbs1	S	DIS-TF	E601:ALL	2	Y	
W-830-2215	EW	Upper Tnbs1	S	CMP-TF	E601:ALL	3	Y	
W-830-2215	EW	Upper Tnbs1	S	DIS-TF	E601:ALL	4	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	A	DIS-TF	E300.0:PERC	3	Y	
W-830-2216	EW	Tnbs2	S	CMP-TF	E601:ALL	1	Y	
W-830-2216	EW	Tnbs2	S	DIS-TF	E601:ALL	2	N	Insufficient water.

Table 2.7-7. (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-830-2216	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	
W-830-2216	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	
W-830-2216	EW	Tnbs2	O	CMP-TF	E8330LOW:ALL	3	N	To be sampled in 2011.
W-830-2311	PTMW	Tnsc1a	A	CMP	E300.0:NO3	1	Y	
W-830-2311	PTMW	Tnsc1a	A	CMP	E300.0:PERC	1	Y	
W-830-2311	PTMW	Tnsc1a	S	CMP	E601:ALL	1	Y	
W-830-2311	PTMW	Tnsc1a	S	CMP	E601:ALL	3	N	Inoperable pump.
W-830-2311	PTMW	Tnsc1a	A	DIS	E624:ALL	2	Y	
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-830-25	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-830-26	PTMW	Upper Tnbs1	E	CMP	E300.0:NO3	1	N	Dry.
W-830-26	PTMW	Upper Tnbs1	E	CMP	E300.0:PERC	1	N	Dry.
W-830-26	PTMW	Upper Tnbs1	S	CMP	E601:ALL	1	N	Dry.
W-830-26	PTMW	Upper Tnbs1	S	CMP	E601:ALL	3	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-830-27	PTMW	Tnsc1a	S	CMP	E601:ALL	3	Y	
W-830-28	PTMW	Upper Tnbs1	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-830-28	PTMW	Upper Tnbs1	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-830-28	PTMW	Upper Tnbs1	S	CMP	E601:ALL	1	Y	
W-830-28	PTMW	Upper Tnbs1	S	CMP	E601:ALL	3	Y	
W-830-29	PTMW	Lower Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-830-29	PTMW	Lower Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-830-29	PTMW	Lower Tnbs1	S	CMP	E601:ALL	1	Y	
W-830-29	PTMW	Lower Tnbs1	S	CMP	E601:ALL	3	Y	
W-830-30	PTMW	Qal/Tnsc1	A	CMP	E300.0:NO3	1	Y	
W-830-30	PTMW	Qal/Tnsc1	A	CMP	E300.0:PERC	1	Y	
W-830-30	PTMW	Qal/Tnsc1	S	CMP	E601:ALL	1	Y	
W-830-30	PTMW	Qal/Tnsc1	S	CMP	E601:ALL	3	Y	
W-830-34	PTMW	Qal/Tnsc1	A	CMP	E300.0:NO3	1	Y	
W-830-34	PTMW	Qal/Tnsc1	A	CMP	E300.0:PERC	1	Y	
W-830-34	PTMW	Qal/Tnsc1	S	CMP	E601:ALL	1	Y	
W-830-34	PTMW	Qal/Tnsc1	S	CMP	E601:ALL	3	Y	
W-830-34	PTMW	Qal/Tnsc1	E	CMP	E8330LOW:ALL	1	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	A	DIS-TF	E300.0:PERC	3	Y	
W-830-49	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-830-49	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-830-49	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-830-49	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-830-50	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	Y	
W-830-50	PTMW	Tnsc1b	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-830-50	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-50	PTMW	Tnsc1b	S	CMP	E601:ALL	3	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	A	DIS-TF	E300.0:PERC	3	Y	
W-830-51	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	

**Table 2.7-7. (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.**

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-830-51	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-830-51	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-830-51	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
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	A	DIS-TF	E300.0:PERC	3	Y	
W-830-52	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-830-52	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-830-52	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-830-52	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-830-53	EW	Tnsc1b	A	CMP-TF	E300.0:NO3	1	Y	
W-830-53	EW	Tnsc1b	A	CMP-TF	E300.0:PERC	1	Y	
W-830-53	EW	Tnsc1b	A	DIS-TF	E300.0:PERC	3	Y	
W-830-53	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-830-53	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-830-53	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-830-53	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-830-54	PTMW	Tnsc1c	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-830-54	PTMW	Tnsc1c	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-830-54	PTMW	Tnsc1c	S	CMP	E601:ALL	1	Y	
W-830-54	PTMW	Tnsc1c	S	CMP	E601:ALL	3	Y	
W-830-55	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	Y	
W-830-55	PTMW	Tnsc1b	E	CMP	E300.0:PERC	1	Y	
W-830-55	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-55	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	N	To be sampled in 2011.
W-830-56	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-56	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-830-57	EW	Upper Tnbs1	A	CMP-TF	E300.0:NO3	1	Y	
W-830-57	EW	Upper Tnbs1	A	CMP-TF	E300.0:PERC	1	Y	
W-830-57	EW	Upper Tnbs1	S	CMP-TF	E601:ALL	1	Y	
W-830-57	EW	Upper Tnbs1	S	DIS-TF	E601:ALL	2	Y	
W-830-57	EW	Upper Tnbs1	S	CMP-TF	E601:ALL	3	Y	
W-830-57	EW	Upper Tnbs1	S	DIS-TF	E601:ALL	4	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-830-58	PTMW	Tnsc1b	S	CMP	E601:ALL	3	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	A	DIS-TF	E300.0:PERC	3	Y	
W-830-59	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-830-59	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-830-59	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-830-59	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-830-60	EW	Upper Tnbs1	A	CMP-TF	E300.0:NO3	1	Y	
W-830-60	EW	Upper Tnbs1	A	CMP-TF	E300.0:PERC	1	Y	
W-830-60	EW	Upper Tnbs1	S	CMP-TF	E601:ALL	1	Y	
W-830-60	EW	Upper Tnbs1	S	DIS-TF	E601:ALL	2	Y	
W-830-60	EW	Upper Tnbs1	S	CMP-TF	E601:ALL	3	Y	
W-830-60	EW	Upper Tnbs1	S	DIS-TF	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-831-01	PTMW	Lower Tnbs1	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-831-01	PTMW	Lower Tnbs1	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-831-01	PTMW	Lower Tnbs1	O	CMP	E601:ALL	1	N	To be sampled in 2011.
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	A	DIS-TF	E300.0:PERC	3	Y	
W-832-01	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-832-01	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-832-01	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-832-01	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-832-06	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	Y	
W-832-06	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	Y	
W-832-06	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-832-06	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-832-09	PTMW	Lower Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-832-09	PTMW	Lower Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-832-09	PTMW	Lower Tnbs1	S	CMP	E601:ALL	1	Y	
W-832-09	PTMW	Lower Tnbs1	S	CMP	E601:ALL	3	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	A	DIS-TF	E300.0:PERC	3	Y	
W-832-10	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-832-10	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-832-10	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-832-10	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	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	A	DIS-TF	E300.0:PERC	3	Y	
W-832-11	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-832-11	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-832-11	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-832-11	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-832-12	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	
W-832-12	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	
W-832-12	EW	Qal/fill	A	DIS-TF	E300.0:PERC	3	Y	
W-832-12	EW	Qal/fill	S	CMP-TF	E601:ALL	1	Y	
W-832-12	EW	Qal/fill	S	DIS-TF	E601:ALL	2	Y	
W-832-12	EW	Qal/fill	S	CMP-TF	E601:ALL	3	Y	
W-832-12	EW	Qal/fill	S	DIS-TF	E601:ALL	4	Y	
W-832-13	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	
W-832-13	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	
W-832-13	EW	Qal/fill	S	CMP-TF	E601:ALL	1	Y	
W-832-13	EW	Qal/fill	S	CMP-TF	E601:ALL	3	Y	
W-832-14	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	
W-832-14	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	
W-832-14	EW	Qal/fill	S	CMP-TF	E601:ALL	1	Y	
W-832-14	EW	Qal/fill	S	CMP-TF	E601:ALL	3	Y	
W-832-15	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	
W-832-15	EW	Qal/fill	A	DIS-TF	E300.0:NO3	3	Y	
W-832-15	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	
W-832-15	EW	Qal/fill	A	DIS-TF	E300.0:PERC	3	Y	
W-832-15	EW	Qal/fill	S	CMP-TF	E601:ALL	1	Y	

Table 2.7-7. (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-832-15	EW	Qal/fill	S	DIS-TF	E601:ALL	2	Y	
W-832-15	EW	Qal/fill	S	CMP-TF	E601:ALL	3	Y	
W-832-15	EW	Qal/fill	S	DIS-TF	E601:ALL	4	Y	
W-832-15	EW	Qal/fill	E	CMP-TF	E8330LOW:ALL	2	Y	
W-832-16	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	
W-832-16	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	
W-832-16	EW	Qal/fill	S	CMP-TF	E601:ALL	1	Y	
W-832-16	EW	Qal/fill	S	CMP-TF	E601:ALL	3	N	Dry.
W-832-17	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	
W-832-17	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	
W-832-17	EW	Qal/fill	S	CMP-TF	E601:ALL	1	Y	
W-832-17	EW	Qal/fill	S	CMP-TF	E601:ALL	3	Y	
W-832-18	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	
W-832-18	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	
W-832-18	EW	Qal/fill	S	CMP-TF	E601:ALL	1	Y	
W-832-18	EW	Qal/fill	S	CMP-TF	E601:ALL	3	N	Dry.
W-832-19	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	Y	
W-832-19	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	Y	
W-832-19	PTMW	Qal/fill	S	CMP	E601:ALL	1	Y	
W-832-19	PTMW	Qal/fill	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-832-1927	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-832-20	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	
W-832-20	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	
W-832-20	EW	Qal/fill	S	CMP-TF	E601:ALL	1	Y	
W-832-20	EW	Qal/fill	S	CMP-TF	E601:ALL	3	Y	
W-832-21	PTMW	Qal/fill	A	CMP	E300.0:NO3	1	Y	
W-832-21	PTMW	Qal/fill	A	CMP	E300.0:PERC	1	Y	
W-832-21	PTMW	Qal/fill	S	CMP	E601:ALL	1	Y	
W-832-21	PTMW	Qal/fill	S	CMP	E601:ALL	3	N	Dry.
W-832-21	PTMW	Qal/fill	A	DIS	EM8015:DIESEL	1	Y	
W-832-2112	GW	Upper Tnbs1	S	CMP	E300.0:NO3	1	Y	
W-832-2112	GW	Upper Tnbs1	S	CMP	E300.0:NO3	3	Y	
W-832-2112	GW	Upper Tnbs1	S	CMP	E300.0:PERC	1	Y	
W-832-2112	GW	Upper Tnbs1	S	CMP	E300.0:PERC	3	Y	
W-832-2112	GW	Upper Tnbs1	Q	CMP	E601:ALL	1	Y	
W-832-2112	GW	Upper Tnbs1	Q	CMP	E601:ALL	2	Y	
W-832-2112	GW	Upper Tnbs1	Q	CMP	E601:ALL	3	Y	
W-832-2112	GW	Upper Tnbs1	Q	CMP	E601:ALL	4	Y	
W-832-22	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	N	Dry.
W-832-22	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	N	Dry.
W-832-22	EW	Qal/fill	S	CMP-TF	E601:ALL	1	N	Dry.
W-832-22	EW	Qal/fill	S	CMP-TF	E601:ALL	3	N	Dry.
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-832-23	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-832-24	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	Y	
W-832-24	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	Y	
W-832-24	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	

Table 2.7-7. (Cont.). Building 832 Canyon Operable Unit ground and surface water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-832-24	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-832-25	EW	Tnsc1b	A	CMP-TF	E300.0:NO3	1	Y	
W-832-25	EW	Tnsc1b	A	CMP-TF	E300.0:PERC	1	Y	
W-832-25	EW	Tnsc1b	A	DIS-TF	E300.0:PERC	3	Y	
W-832-25	EW	Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-832-25	EW	Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-832-25	EW	Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-832-25	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-832-SC1	PTMW	Qal	A	CMP	E300.0:NO3	1	Y	
W-832-SC1	PTMW	Qal	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-832-SC1	PTMW	Qal	S	CMP	E601:ALL	1	Y	
W-832-SC1	PTMW	Qal	S	CMP	E601:ALL	3	N	Dry.
W-832-SC2	PTMW	Qal	A	CMP	E300.0:NO3	1	N	Dry.
W-832-SC2	PTMW	Qal	E	CMP	E300.0:PERC	1	N	Dry.
W-832-SC2	PTMW	Qal	S	CMP	E601:ALL	1	N	Dry.
W-832-SC2	PTMW	Qal	S	CMP	E601:ALL	3	N	Insufficient water.
W-832-SC3	PTMW	Qal	A	CMP	E300.0:NO3	1	Y	
W-832-SC3	PTMW	Qal	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-832-SC3	PTMW	Qal	S	CMP	E601:ALL	1	Y	
W-832-SC3	PTMW	Qal	S	CMP	E601:ALL	3	Y	
W-832-SC4	PTMW	Qal	A	CMP	E300.0:NO3	1	Y	
W-832-SC4	PTMW	Qal	E	CMP	E300.0:PERC	1	Y	
W-832-SC4	PTMW	Qal	S	CMP	E601:ALL	1	Y	
W-832-SC4	PTMW	Qal	S	CMP	E601:ALL	3	Y	
W-870-01	PTMW	Qal	A	CMP	E300.0:NO3	1	Y	
W-870-01	PTMW	Qal	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-870-01	PTMW	Qal	S	CMP	E601:ALL	1	Y	
W-870-01	PTMW	Qal	S	CMP	E601:ALL	3	N	Dry.
W-870-02	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-870-02	PTMW	Tnbs2	E	CMP	E300.0:PERC	1	Y	
W-870-02	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-870-02	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-880-01	GW	Tnbs2	S	CMP	E300.0:NO3	1	Y	
W-880-01	GW	Tnbs2	S	CMP	E300.0:NO3	3	Y	
W-880-01	GW	Tnbs2	S	CMP	E300.0:PERC	1	Y	
W-880-01	GW	Tnbs2	S	CMP	E300.0:PERC	3	Y	
W-880-01	GW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-880-01	GW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-880-01	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
W-880-01	GW	Tnbs2	Q	CMP	E624:ALL	4	Y	
W-880-01	GW	Tnbs2	S	CMP	E8330LOW:ALL	1	Y	
W-880-01	GW	Tnbs2	S	CMP	E8330LOW:ALL	3	Y	
W-880-02	GW	Qal	S	CMP	E300.0:NO3	1	Y	
W-880-02	GW	Qal	S	CMP	E300.0:NO3	3	Y	
W-880-02	GW	Qal	S	CMP	E300.0:PERC	1	Y	
W-880-02	GW	Qal	S	CMP	E300.0:PERC	3	Y	
W-880-02	GW	Qal	Q	CMP	E601:ALL	1	Y	
W-880-02	GW	Qal	Q	CMP	E601:ALL	2	Y	
W-880-02	GW	Qal	Q	CMP	E601:ALL	3	Y	
W-880-02	GW	Qal	Q	CMP	E624:ALL	4	Y	
W-880-02	GW	Qal	S	CMP	E8330LOW:ALL	1	Y	
W-880-02	GW	Qal	S	CMP	E8330LOW: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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-880-03	GW	Tnsc1	S	CMP	E300.0:NO3	1	N	Inoperable pump.
W-880-03	GW	Tnsc1	S	CMP	E300.0:NO3	3	Y	
W-880-03	GW	Tnsc1	S	CMP	E300.0:PERC	1	N	Inoperable pump.
W-880-03	GW	Tnsc1	S	CMP	E300.0:PERC	3	Y	
W-880-03	GW	Tnsc1	Q	CMP	E601:ALL	1	Y	
W-880-03	GW	Tnsc1	Q	CMP	E601:ALL	2	Y	
W-880-03	GW	Tnsc1	Q	CMP	E601:ALL	3	Y	
W-880-03	GW	Tnsc1	Q	CMP	E624:ALL	4	Y	
W-880-03	GW	Tnsc1	S	CMP	E8330LOW:ALL	1	N	Inoperable pump.
W-880-03	GW	Tnsc1	S	CMP	E8330LOW:ALL	3	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 (E8330).
- 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, 2010 through December 31, 2010.**

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	0.29	1.7	0.12	2.1	NA	NA
	August	2.9	3.0	0.37	6.6	NA	NA
	September	2.7	2.6	0.28	5.0	NA	NA
	October	0.98	3.7	0.26	4.7	NA	NA
	November	0.90	2.7	0.17	2.9	NA	NA
	December	0	0	0	0	NA	NA
<b>Total</b>		<b>7.7</b>	<b>14</b>	<b>1.2</b>	<b>21</b>	<b>NA</b>	<b>NA</b>

**Table 2.7-9. Building 830-Source (830-SRC) mass removed, July 1, 2010 through December 31, 2010.**

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	2.7	120	0.15	14	NA	NA
	August	42	170	0.43	20	NA	NA
	September	110	160	0.48	17	NA	NA
	October	160	130	0.41	16	NA	NA
	November	210	110	0.31	16	NA	NA
	December	54	15	0.013	5.0	NA	NA
<b>Total</b>		<b>580</b>	<b>700</b>	<b>1.8</b>	<b>88</b>	<b>NA</b>	<b>NA</b>



**Table 2.7-10. Building 830-Distal South (830-DISS) mass removed, July 1, 2010 through December 31, 2010.**

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	2.5	0.36	9.8	NA	NA
	August	NA	2.5	0.28	10	NA	NA
	September	NA	4.3	0.077	16	NA	NA
	October	NA	7.6	0.49	23	NA	NA
	November	NA	8.9	0.81	25	NA	NA
	December	NA	8.4	0.0047	23	NA	NA
<b>Total</b>		NA	34	2.0	110	NA	NA

Table 2.8-1. Building 801 and Pit 8 Landfill area ground water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K8-01	PTMW	Upper Tnbs1	A	CMP	AS:UISO	2	Y	
K8-01	PTMW	Upper Tnbs1	A	CMP	E300.0:NO3	2	Y	
K8-01	PTMW	Upper Tnbs1	S	CMP	E300.0:PERC	2	Y	
K8-01	PTMW	Upper Tnbs1	S	CMP	E300.0:PERC	4	Y	
K8-01	PTMW	Upper Tnbs1	S	CMP	E601:ALL	2	Y	
K8-01	PTMW	Upper Tnbs1	S	CMP	E601:ALL	4	Y	
K8-01	PTMW	Upper Tnbs1	S	CMP	E906:ALL	2	Y	
K8-01	PTMW	Upper Tnbs1	S	CMP	E906:ALL	4	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	A	CMP	E200.7:LI	2	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	A	CMP	E340.2:ALL	2	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	A	CMP	E601:ALL	2	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	A	CMP	E8330LOW:ALL	2	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	A	DIS	MS:UISO	2	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	A	CMP	T26METALS:ALL	2	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	Q	CMP	E300.0:PERC	1	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	Q	CMP	E300.0:PERC	2	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	Q	CMP	E300.0:PERC	3	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	Q	CMP	E300.0:PERC	4	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	Q	CMP	E906:ALL	1	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	Q	CMP	E906:ALL	2	N	Sample inadvertently left off sampling plan.
K8-02B	DMW	Tnsc1/Upper Tnbs1	Q	CMP	E906:ALL	3	N	Sample inadvertently left off sampling plan.
K8-02B	DMW	Tnsc1/Upper Tnbs1	Q	CMP	E906:ALL	4	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	S	CMP	AS:UISO	2	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	S	CMP	AS:UISO	4	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	S	CMP	E300.0:NO3	2	Y	
K8-02B	DMW	Tnsc1/Upper Tnbs1	S	CMP	E300.0:NO3	4	Y	
K8-03B	PTMW	Upper Tnbs1	A	CMP	AS:UISO	2	Y	
K8-03B	PTMW	Upper Tnbs1	A	CMP	E300.0:NO3	2	Y	
K8-03B	PTMW	Upper Tnbs1	S	CMP	E300.0:PERC	2	Y	
K8-03B	PTMW	Upper Tnbs1	S	CMP	E300.0:PERC	4	Y	
K8-03B	PTMW	Upper Tnbs1	S	CMP	E601:ALL	2	Y	
K8-03B	PTMW	Upper Tnbs1	S	CMP	E601:ALL	4	Y	
K8-03B	PTMW	Upper Tnbs1	S	CMP	E906:ALL	2	Y	
K8-03B	PTMW	Upper Tnbs1	S	CMP	E906:ALL	4	Y	
K8-04	DMW	Upper Tnbs1	A	CMP	AS:UISO	2	Y	
K8-04	DMW	Upper Tnbs1	A	CMP	E200.7:LI	2	Y	
K8-04	DMW	Upper Tnbs1	A	CMP	E300.0:NO3	2	Y	
K8-04	DMW	Upper Tnbs1	A	CMP	E340.2:ALL	2	Y	
K8-04	DMW	Upper Tnbs1	A	CMP	E601:ALL	2	Y	
K8-04	DMW	Upper Tnbs1	A	CMP	E8330LOW:ALL	2	Y	
K8-04	DMW	Upper Tnbs1	A	DIS	MS:UISO	2	Y	
K8-04	DMW	Upper Tnbs1	A	CMP	T26METALS:ALL	2	Y	
K8-04	DMW	Upper Tnbs1	S	CMP	E300.0:PERC	2	Y	
K8-04	DMW	Upper Tnbs1	S	CMP	E300.0:PERC	4	Y	
K8-04	DMW	Upper Tnbs1	S	CMP	E906:ALL	2	Y	
K8-04	DMW	Upper Tnbs1	S	CMP	E906:ALL	4	Y	
K8-05	DMW	Tnbs2	O	CMP	AS:UISO	2	N	To be sampled in 2011.
K8-05	DMW	Tnbs2	O	CMP	E200.7:LI	2	N	To be sampled in 2011.
K8-05	DMW	Tnbs2	O	CMP	E300.0:NO3	2	N	To be sampled in 2011.
K8-05	DMW	Tnbs2	O	CMP	E300.0:PERC	2	N	To be sampled in 2011.
K8-05	DMW	Tnbs2	O	CMP	E340.2:ALL	2	N	To be sampled in 2011.
K8-05	DMW	Tnbs2	O	CMP	E601:ALL	2	N	To be sampled in 2011.
K8-05	DMW	Tnbs2	O	CMP	E8330LOW:ALL	2	N	To be sampled in 2011.
K8-05	DMW	Tnbs2	O	CMP	E906:ALL	2	N	To be sampled in 2011.
K8-05	DMW	Tnbs2	O	DIS	MS:UISO	2	N	To be sampled in 2011.
K8-05	DMW	Tnbs2	O	CMP	T26METALS:ALL	2	N	To be sampled in 2011.

Notes appear on the following page.

**Table 2.8-1. (Cont.). Building 801 and Pit 8 Landfill area ground water sampling and analysis plan.**

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**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 E200.7:Li) sampled annually.
- 8) CMP Detection monitoring analytes: uranium isotopes (AS:UIISO or MS:UIISO) 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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-833-03	PTMW	Tps	A	CMP	E601:ALL	1	N	Dry.
W-833-12	PTMW	Tps	A	CMP	E601:ALL	1	Y	
W-833-18	PTMW	Tps	A	CMP	E601:ALL	1	N	Dry.
W-833-22	PTMW	Tps	A	CMP	E601:ALL	1	N	Dry.
W-833-28	PTMW	Tps	A	CMP	E601:ALL	1	N	Insufficient water.
W-833-30	PTMW	Lower Tnbs1	S	CMP	E601:ALL	1	Y	
W-833-30	PTMW	Lower Tnbs1	S	CMP	E601:ALL	3	Y	
W-833-33	PTMW	Tps	A	CMP	E601:ALL	1	Y	
W-833-34	PTMW	Tps	A	CMP	E601:ALL	1	N	Dry.
W-833-43	PTMW	Tps	A	CMP	E601:ALL	1	N	Dry.
W-840-01	PTMW	Lower Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-840-01	PTMW	Lower Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-840-01	PTMW	Lower Tnbs1	A	CMP	E601:ALL	1	Y	
W-841-01	PTMW	Upper Tnbs1	O	CMP	E300.0:NO3	1	N	To be sampled in 2011.
W-841-01	PTMW	Upper Tnbs1	O	CMP	E300.0:PERC	1	N	To be sampled in 2011.
W-841-01	PTMW	Upper Tnbs1	A	CMP	E601:ALL	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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K9-01	DMW	Tmss	A	CMP	AS:UISO	2	Y	
K9-01	DMW	Tmss	A	CMP	E200.7:LI	2	Y	
K9-01	DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-01	DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-01	DMW	Tmss	A	CMP	E340.2:ALL	2	Y	
K9-01	DMW	Tmss	A	CMP	E601:ALL	2	Y	
K9-01	DMW	Tmss	A	CMP	E8330LOW:ALL	2	Y	
K9-01	DMW	Tmss	A	CMP	E906:ALL	2	Y	
K9-01	DMW	Tmss	A	DIS	MS:UISO	2	Y	
K9-01	DMW	Tmss	A	CMP	T26METALS:ALL	2	Y	
K9-02	DMW	Tmss	A	CMP	AS:UISO	2	Y	
K9-02	DMW	Tmss	A	CMP	E200.7:LI	2	Y	
K9-02	DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-02	DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-02	DMW	Tmss	A	CMP	E340.2:ALL	2	Y	
K9-02	DMW	Tmss	A	CMP	E601:ALL	2	Y	
K9-02	DMW	Tmss	A	CMP	E8330LOW:ALL	2	Y	
K9-02	DMW	Tmss	A	CMP	E906:ALL	2	Y	
K9-02	DMW	Tmss	A	DIS	MS:UISO	2	Y	
K9-02	DMW	Tmss	A	CMP	T26METALS:ALL	2	Y	
K9-03	DMW	Tmss	A	CMP	AS:UISO	2	Y	
K9-03	DMW	Tmss	A	CMP	E200.7:LI	2	Y	
K9-03	DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-03	DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-03	DMW	Tmss	A	CMP	E340.2:ALL	2	Y	
K9-03	DMW	Tmss	A	CMP	E601:ALL	2	Y	
K9-03	DMW	Tmss	A	CMP	E8330LOW:ALL	2	Y	
K9-03	DMW	Tmss	A	CMP	E906:ALL	2	Y	
K9-03	DMW	Tmss	A	DIS	MS:UISO	2	Y	
K9-03	DMW	Tmss	A	CMP	T26METALS:ALL	2	Y	
K9-04	DMW	Tmss	A	CMP	AS:UISO	2	N	Inoperable pump.
K9-04	DMW	Tmss	A	CMP	E200.7:LI	2	N	Inoperable pump.
K9-04	DMW	Tmss	A	CMP	E300.0:NO3	2	N	Inoperable pump.
K9-04	DMW	Tmss	A	CMP	E300.0:PERC	2	N	Inoperable pump.
K9-04	DMW	Tmss	A	CMP	E340.2:ALL	2	N	Inoperable pump.
K9-04	DMW	Tmss	A	CMP	E601:ALL	2	N	Inoperable pump.
K9-04	DMW	Tmss	A	CMP	E8330LOW:ALL	2	N	Inoperable pump.
K9-04	DMW	Tmss	A	CMP	E906:ALL	2	N	Inoperable pump.
K9-04	DMW	Tmss	A	DIS	MS:UISO	2	N	Inoperable pump.
K9-04	DMW	Tmss	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 E200.7:Li) sampled annually.
- 9) CMP Detection monitoring analytes: uranium isotopes (AS:UISO or MS: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 Tables 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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
W-851-05	PTMW	Tmss	S	CMP	AS:UIISO	2	Y	
W-851-05	PTMW	Tmss	S	CMP	AS:UIISO	4	Y	
W-851-05	PTMW	Tmss	O	CMP	E601:ALL	2	N	To be sampled in 2011.
W-851-05	PTMW	Tmss	A	DIS	MS:UIISO	2	Y	
W-851-06	PTMW	Tmss	S	CMP	AS:UIISO	2	Y	
W-851-06	PTMW	Tmss	S	CMP	AS:UIISO	4	Y	
W-851-06	PTMW	Tmss	A	DIS	MS:UIISO	2	Y	
W-851-07	PTMW	Tmss	S	CMP	AS:UIISO	2	Y	
W-851-07	PTMW	Tmss	S	CMP	AS:UIISO	4	Y	
W-851-07	PTMW	Tmss	A	DIS	MS:UIISO	2	Y	
W-851-08	PTMW	Tmss	S	CMP	AS:UIISO	2	Y	
W-851-08	PTMW	Tmss	S	CMP	AS:UIISO	4	Y	
W-851-08	PTMW	Tmss	A	DIS	MS:UIISO	2	Y	

**Notes:**

- 1) Building 851 primary COC: uranium (AS:UIISO or MS:UIISO).
- 2) Contaminants of Concern in the Vadose Zone not detected in Ground Water: VOCs (E601).
- 3) See Acronyms and Abbreviations in the Tables 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	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
K2-01C	DMW	Tnbs1/Tnbs0	A	CMP	AS:UIISO	2	Y	
K2-01C	DMW	Tnbs1/Tnbs0	A	CMP	E200.7:LI	2	Y	
K2-01C	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:NO3	2	Y	
K2-01C	DMW	Tnbs1/Tnbs0	S	CMP	E300.0:PERC	2	Y	
K2-01C	DMW	Tnbs1/Tnbs0	S	CMP	E300.0:PERC	4	Y	
K2-01C	DMW	Tnbs1/Tnbs0	A	CMP	E340.2:ALL	2	Y	
K2-01C	DMW	Tnbs1/Tnbs0	A	CMP	E601:ALL	2	Y	
K2-01C	DMW	Tnbs1/Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K2-01C	DMW	Tnbs1/Tnbs0	S	CMP	E906:ALL	1	Y	
K2-01C	DMW	Tnbs1/Tnbs0	S	CMP	E906:ALL	2	Y	
K2-01C	DMW	Tnbs1/Tnbs0	S	CMP	E906:ALL	3	Y	
K2-01C	DMW	Tnbs1/Tnbs0	S	CMP	E906:ALL	4	Y	
K2-01C	DMW	Tnbs1/Tnbs0	A	DIS	MS:UIISO	2	Y	
K2-01C	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	Y	
NC2-08	DMW	Tnbs1/Tnbs0	A	CMP	AS:UIISO	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:UIISO	2	Y	
NC2-08	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	Y	
W-PIT2-1934	DMW	Tnbs1/Tnbs0	A	CMP	AS:UIISO	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:UIISO	2	Y	
W-PIT2-1934	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	Y	
W-PIT2-1935	DMW	Tnbs1/Tnbs0	A	CMP	AS:UIISO	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:UIISO	2	Y	
W-PIT2-1935	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	Y	
W-PIT2-2226	GW	Tnbs1/Tnbs0	S	CMP	AS:UIISO	2	Y	
W-PIT2-2226	GW	Tnbs1/Tnbs0	S	CMP	AS:UIISO	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	

Table 3.1-1. (Cont.). Pit 2 Landfill area ground water sampling and analysis plan.

Sample Location	Location Type	Completion Interval	Sampling Frequency	Sample Driver	Requested Analysis	Sampling Quarter	Sampled Y/N	Comment
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	
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	Y	
W-PIT2-2302	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
W-PIT2-2302	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
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 E200.7:Li) sampled annually.
- 8) CMP Detection monitoring analytes: uranium isotopes (AS:UISO or MS: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	$4.9 \times 10^{-5}$	$9.6 \times 10^{-2}$	Based on a TCE concentration of 19,550 µg/L (06-Oct-2010) in well W-834-D4
	Indoor – JEM	PCE	$1.6 \times 10^{-6}$	$1.2 \times 10^{-1}$	Based on a PCE concentration of 150 µg/L (06-Oct-2010) in well W-834-D13
<b>Cumulative risk and hazard index</b>			<b><math>5.1 \times 10^{-5}</math></b>	<b><math>2.2 \times 10^{-1}</math></b>	<b>Institutional controls in place, building only used for storage.</b>
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 (9-Mar-2010) in well SVI-830-031
	Indoor – JEM	TCE	$4.4 \times 10^{-6}$	$8.5 \times 10^{-3}$	Based on a TCE concentration of 1,100 µg/L (8-Mar-2010) in well SVI-830-032
<b>Cumulative risk and hazard index</b>			<b><math>5.0 \times 10^{-6}</math></b>	<b><math>9.7 \times 10^{-3}</math></b>	<b>Institutional controls in place.</b>
Building 833	Indoor – JEM	TCE	$2.6 \times 10^{-7}$	$5.0 \times 10^{-4}$	Based on a TCE concentration of 110 µg/L (18-Feb-2010) 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 (18-Feb-2010) in well W-833-33
<b>Cumulative risk and hazard index</b>			<b><math>2.7 \times 10^{-7}</math></b>	<b><math>5.3 \times 10^{-4}</math></b>	<b>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.</b>

**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 4.1-2. 2010 Well 8 Spring Risk Reevaluation.**

<b>Spring</b>	<b>2010 Maximum Tritium Activity</b>	<b>Sample Date</b>	<b>Tritium Inhalation Tap Water Preliminary Remediation Goal*</b>	<b>Status</b>
<b>Well 8 Spring</b>	<b>16,800 ± 3270 pCi/L</b>	<b>6/9/10</b>	<b>188 pCi/L</b>	<b>Continue annual evaluation. Land use controls in place.</b>

\*August 2010

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**Appendix A**

**Results of Influent and Effluent pH Monitoring**

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# **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 2010.

**A-1. Results of influent and effluent pH, and effluent dissolved oxygen monitoring,  
July through December 2010.**

<b>Sample Location</b>	<b>Sample Date</b>	<b>Effluent pH Result</b>
<i>GSA OU</i>		
CGSA GWTS	07/12/2010	7.2
CGSA GWTS	08/03/2010	7.2
CGSA GWTS	09/13/2010	7.0
CGSA GWTS	10/11/2010	7.2
CGSA GWTS	11/01/2010	7.2
CGSA GWTS	12/06/2010	7.1
<i>Building 834 OU</i>		
834 GWTS	07/13/2010	7.2
834 GWTS	08/02/2010	7.2
834 GWTS	09/01/2010	7.8
834 GWTS	10/05/2010	7.0
834 GWTS	11/01/2010	7.8
834 GWTS	12/31/2010	NM
<i>HEPA OU</i>		
815-SRC GWTS	07/14/2010	7.5
815-SRC GWTS	08/09/2010	7.3
815-SRC GWTS	09/13/2010	7.7
815-SRC GWTS	10/04/2010	7.5
815-SRC GWTS	11/01/2010	7.5
815-SRC GWTS	12/06/2010	7.8
815-PRX GWTS	07/31/2010	NM
815-PRX GWTS	08/31/2010	NM
815-PRX GWTS	09/30/2010	NM
815-PRX GWTS	10/31/2010	NM
815-PRX GWTS	11/30/2010	NM
815-PRX GWTS	12/31/2010	NM
815-DSB GWTS	07/12/2010	7.0
815-DSB GWTS	08/02/2010	7.0

**A-1. Results of influent and effluent pH, and effluent dissolved oxygen monitoring,  
July through December 2010.**

<b>Sample Location</b>	<b>Sample Date</b>	<b>Effluent pH Result</b>
815-DSB GWTS	09/13/2010	7.0
815-DSB GWTS	10/05/2010	7.0
815-DSB GWTS	11/01/2010	7.0
815-DSB GWTS	12/06/2010	7.0
817-SRC GWTS	07/14/2010	7.8
817-SRC GWTS	08/03/2010	7.7
817-SRC GWTS	09/13/2010	7.8
817-SRC GWTS	09/28/2010	7.8
817-SRC GWTS	11/01/2010	8.3
817-SRC GWTS	12/31/2010	NM
817-PRX GWTS	07/14/2010	7.6
817-PRX GWTS	08/09/2010	7.5
817-PRX GWTS	09/13/2010	7.7
817-PRX GWTS	10/04/2010	7.6
817-PRX GWTS	11/01/2010	7.9
817-PRX GWTS	12/06/2010	7.6
829-SRC GWTS	07/31/2010	NM
829-SRC GWTS	08/31/2010	NM
829-SRC GWTS	09/30/2010	NM
829-SRC GWTS	10/31/2010	NM
829-SRC GWTS	11/30/2010	NM
829-SRC GWTS	12/31/2010	NM

*Building 850/Pit 7 Complex OU*

PIT7-SRC GWTS	07/13/2010	7.0
PIT7-SRC GWTS	08/03/2010	7.0
PIT7-SRC GWTS	09/14/2010	7.0
PIT7-SRC GWTS	10/12/2010	7.0
PIT7-SRC GWTS	11/02/2010	7.0
PIT7-SRC GWTS	12/06/2010	7.0

**A-1. Results of influent and effluent pH, and effluent dissolved oxygen monitoring,  
July through December 2010.**

<b>Sample Location</b>	<b>Sample Date</b>	<b>Effluent pH Result</b>
<i>Building 854 OU</i>		
854-SRC GWTS	07/06/2010	7.0
854-SRC GWTS	08/02/2010	7.0
854-SRC GWTS	09/13/2010	7.0
854-SRC GWTS	10/05/2010	7.0
854-SRC GWTS	11/01/2010	7.0
854-SRC GWTS	12/06/2010	7.0
854-PRX GWTS	07/06/2010	7.0
854-PRX GWTS	08/02/2010	7.0
854-PRX GWTS	09/13/2010	7.0
854-PRX GWTS	10/05/2010	7.0
854-PRX GWTS	11/01/2010	7.0
854-PRX GWTS	12/31/2010	NM
854-DIS GWTS	07/07/2010	7.0
854-DIS GWTS	08/02/2010	7.0
854-DIS GWTS	09/14/2010	7.0
854-DIS GWTS	10/05/2010	7.0
854-DIS GWTS	11/01/2010	7.0
854-DIS GWTS	12/31/2010	NM
<i>832 Canyon OU</i>		
832-SRC GWTS	07/01/2010	7.0
832-SRC GWTS	08/02/2010	7.1
832-SRC GWTS	09/08/2010	7.4
832-SRC GWTS	10/05/2010	7.5
832-SRC GWTS	11/01/2010	7.5
832-SRC GWTS	12/31/2010	NM
830-SRC GWTS	07/12/2010	7.7
830-SRC GWTS	08/02/2010	7.1
830-SRC GWTS	09/08/2010	7.2

**A-1. Results of influent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2010.**

<b>Sample Location</b>	<b>Sample Date</b>	<b>Effluent pH Result</b>
830-SRC GWTS	10/05/2010	7.8
830-SRC GWTS	11/01/2010	7.6
830-SRC GWTS	12/06/2010	7.2
830-DISS GWTS	07/12/2010	7.0
830-DISS GWTS	08/02/2010	7.0
830-DISS GWTS	09/13/2010	7.0
830-DISS GWTS	10/05/2010	7.0
830-DISS GWTS	11/01/2010	7.0
830-DISS GWTS	12/06/2010	7.0

**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



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**Appendix B**  
**Analytical Results for Routine Monitoring**  
**During 2010**

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## Appendix B

### Analytical Results for Routine Monitoring During 2010

- Table B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.
- Table B-2.1. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.
- Table B-2.2. Building 834 Operable Unit nitrate and perchlorate in ground water.
- Table B-2.3. Building 834 Operable Unit tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) in ground water.
- Table B-2.4. Building 834 Operable Unit diesel range organic compounds in ground water.
- Table B-2.5. Building 834 Operable Unit metals in ground water.
- Table B-2.6. Building 834 Operable Unit general minerals in ground water.
- Table B-3.1. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.
- Table B-3.2. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.
- Table B-3.3. Pit 6 Landfill Operable Unit tritium in ground water.
- Table B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.
- Table B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.
- Table B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.
- Table B-4.4. High Explosives Process Area Operable Unit diesel range organic compounds in ground water.
- Table B-5.1. Building 850 area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.
- Table B-5.2. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground and surface water.
- Table B-5.3. Building 850 area in Operable Unit 5 metals in ground water.
- Table B-5.4. Building 850 area in Operable Unit 5 polychlorinated biphenyl compounds in ground water.
- Table B-5.5. Building 850 area in Operable Unit 5 uranium isotopes by mass spectrometry in ground and surface water.
- Table B-5.6. Building 850 area in Operable Unit 5 uranium isotopes by alpha spectrometry in ground water and surface water.

- Table B-5.7. Building 850 area in Operable Unit 5 tritium in ground and surface water.
- Table B-5.8. Building 850 area in Operable Unit 5 high explosive compounds in ground water and surface water.
- Table B-5.9. Pit 2 Landfill volatile organic compounds (VOCs) in ground water.
- Table B-5.10. Pit 2 Landfill uranium isotopes by mass spectrometry and alpha spectrometry in ground water.
- Table B-5.11. Pit 2 Landfill nitrate and perchlorate in ground water.
- Table B-5.12. Pit 2 Landfill high explosive compounds in ground water.
- Table B-5.13. Pit 2 Landfill tritium in ground water.
- Table B-5.14. Pit 2 Landfill fluoride in ground water.
- Table B-5.15. Pit 2 Landfill metals in ground water.
- Table B-5.16. Pit 7 Landfill in Operable Unit 5 volatile organic compounds (VOCs) in ground water.
- Table B-5.17. Pit 7 Landfill in Operable Unit 5 nitrate and perchlorate in ground and surface water.
- Table B-5.18. Pit 7 Landfill in Operable Unit 5 metals and silica in ground water.
- Table B-5.19. Pit 7 Landfill in Operable Unit 5 polychlorinated biphenyl compounds in ground water.
- Table B-5.20. Pit 7 Landfill in Operable Unit 5 fluoride in ground water.
- Table B-5.21. Pit 7 Landfill in Operable Unit 5 uranium isotopes by mass spectrometry in ground water.
- Table B-5.22. Pit 7 Landfill in Operable Unit 5 uranium isotopes by alpha spectrometry in ground water.
- Table B-5.23. Pit 7 Landfill in Operable Unit 5 tritium in ground and surface water.
- Table B-5.24. Pit 7 Landfill in Operable Unit 5 high explosive compounds in ground water.
- Table B-5.25. Pit 7 Landfill in Operable Unit 5 general minerals in ground water.
- Table B-5.26. Pit 7 Landfill in Operable Unit 5 orthophosphate in ground water.
- Table B-6.1. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.
- Table B-6.2. Building 854 Operable Unit nitrate and perchlorate in ground and surface water.
- Table B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.
- Table B-7.2. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.
- Table B-7.3. Building 832 Canyon Operable Unit high explosive compounds in ground water.
- Table B-7.4. Building 832 Canyon Operable Unit diesel range organic compounds in ground water.

- Table B-8.1. Building 851 Firing Table uranium isotopes by mass spectrometry in ground water.
- Table B-8.2. Building 851 Firing Table uranium isotopes by alpha spectrometry in ground water.
- Table B-8.3. Building 845 Firing Table and Pit 9 Landfill tritium in ground water.
- Table B-8.4. Building 845 Firing Table and Pit 9 Landfill metals in ground water.
- Table B-8.5. Building 845 Firing Table and Pit 9 Landfill volatile organic compounds (VOCs) in ground water.
- Table B-8.6. Building 845 Firing Table and Pit 9 Landfill high explosive compounds in ground water.
- Table B-8.7. Building 845 Firing Table and Pit 9 Landfill nitrate and perchlorate in ground water.
- Table B-8.8. Building 845 Firing Table and Pit 9 Landfill fluoride in ground water.
- Table B-8.9. Building 845 Firing Table and Pit 9 Landfill uranium isotopes by mass spectrometry in ground water.
- Table B-8.10. Building 845 Firing Table and Pit 9 Landfill uranium isotopes by alpha spectrometry in ground water.
- Table B-8.11. Building 833 volatile organic compounds (VOCs) in ground water.
- Table B-8.12. Building 833 nitrate and perchlorate in ground water.
- Table B-8.13. Building 801 Firing Table and Pit 8 Landfill tritium in ground water.
- Table B-8.14. Building 801 Firing Table and Pit 8 Landfill metals in ground water.
- Table B-8.15. Building 801 Firing Table and Pit 8 Landfill volatile organic compounds (VOCs) in ground water.
- Table B-8.16. Building 801 Firing Table and Pit 8 Landfill high explosive compounds in ground water.
- Table B-8.17. Building 801 Firing Table and Pit 8 Landfill nitrate and perchlorate in ground water.
- Table B-8.18. Building 801 Firing Table and Pit 8 Landfill fluoride in ground water.
- Table B-8.19. Building 845 Firing Table and Pit 9 Landfill uranium isotopes by mass spectrometry in ground water.
- Table B-8.20. Building 845 Firing Table and Pit 9 Landfill uranium isotopes by alpha spectrometry in ground water.



B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon							Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)		
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
CON1	06/16/10 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	7/20/10	E601	<0.5	<0.5	<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	07/20/10 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	8/11/10	E601	<0.5	<0.5	<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	08/11/10 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	9/14/10	E601	<0.5	<0.5	<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	09/14/10 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	10/14/10	E601	<0.5	<0.5	<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	10/14/10 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	11/16/10	E601	<0.5	<0.5	<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	11/16/10 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	12/13/10	E601	<0.5	<0.5	<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	12/13/10 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	1/13/10	E601	<0.5	<0.5	<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	2/22/10	E601	<0.5	<0.5	<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	3/11/10	E601	<0.5	<0.5	<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	4/19/10	E601	<0.5	<0.5	<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	5/18/10	E601	<0.5	<0.5	<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	6/16/10	E601	<0.5	<0.5	<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	7/20/10	E601	<0.5	<0.5	<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	8/11/10	E601	<0.5	<0.5	<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	9/14/10	E601	<0.5	<0.5	<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	10/14/10	E601	<0.5	<0.5	<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	11/16/10	E601	<0.5	<0.5	<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	12/13/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-24P-03	6/23/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
W-25D-01	5/27/10	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
W-25D-02	5/27/10	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
W-25M-01	5/27/10	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
W-25M-02	5/26/10	E601	<0.5	<0.5	<0.5	<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	05/26/10 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	5/26/10	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
W-25N-01	6/2/10	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-01	06/02/10 DUP	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-25N-01	12/6/10	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-25N-04	5/25/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
W-25N-05	5/26/10	E601	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	<0.5
W-25N-06	5/26/10	E601	0.78	<0.5	<0.5	<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	05/26/10 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



B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-26R-03	12/6/10	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-26R-03	12/06/10 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-26R-04	6/3/10	E601	4.6	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-04	12/15/10	E601	3.8	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-05	4/19/10	E601	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6 F	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-05	10/25/10	E601	<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
W-26R-06	5/25/10	E601	3.2	0.63	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-06	12/15/10	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-26R-07	5/25/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-08	5/25/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
W-26R-11	4/19/10	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-26R-11	10/25/10	E601	0.69 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
W-35A-01	6/10/10	E601	59	4.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	0.58	<0.5	<0.5
W-35A-01	06/10/10 DUP	E601	52	3.3	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	0.54	<0.5	<0.5
W-35A-02	6/10/10	E601	<0.5	<0.5	<0.5	<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	12/16/10	E601	<0.5	<0.5	<0.5	<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	6/9/10	E601	<0.5	<0.5	<0.5	<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	11/29/10	E601	<0.5	<0.5	<0.5	<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	4/26/10	E601	<0.5	<0.5	<0.5	<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	11/1/10	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	11/1/10	E601	<0.5	<0.5	<0.5	<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	6/10/10	E601	<0.5	<0.5	<0.5	<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	12/20/10	E601	<0.5	<0.5	<0.5	<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	6/9/10	E601	<0.5	<0.5	<0.5	<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	11/29/10	E601	<0.5	<0.5	<0.5	<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	6/10/10	E601	<0.5	<0.5	<0.5	<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	12/16/10	E601	<0.5	<0.5	<0.5	<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	2/24/10	E601	<0.5	<0.5	<0.5	<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	6/15/10	E601	<0.5	<0.5	<0.5	<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	8/19/10	E601	<0.5	<0.5	<0.5	<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	12/16/10	E601	<0.5	<0.5	<0.5	<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	6/15/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5
W-35A-09	12/16/10	E601	<0.5	<0.5	<0.5	<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	6/15/10	E601	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5	<0.5
W-35A-10	06/15/10 DUP	E601	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11	<0.5	<0.5
W-35A-10	12/16/10	E601	6.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.5	<0.5	<0.5
W-35A-10	12/16/10 DUP	E601	6.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.5	<0.5	<0.5
W-35A-11	6/9/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-11	11/29/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon									Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)			
W-35A-12	6/9/10	E601	<0.5	<0.5	<0.5	<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	06/09/10 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-12	11/29/10	E601	<0.5	<0.5	<0.5	<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	6/9/10	E601	<0.5	<0.5	<0.5	<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	11/29/10	E601	<0.5	<0.5	<0.5	<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	2/24/10	E601	<0.5	<0.5	<0.5	<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	6/10/10	E601	<0.5	<0.5	<0.5	<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	06/10/10 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-14	8/19/10	E601	<0.5	<0.5	<0.5	<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	12/16/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7A	6/8/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7A	12/9/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7B	6/8/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7B	12/13/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7B	12/13/10 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-7D	5/25/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
W-7DS	4/21/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7E	4/21/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7E	10/27/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7ES	4/21/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7ES	10/27/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7F	6/8/10	E601	27	0.85	0.78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7F	12/8/10	E601	4.8	<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-7G	6/9/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7G	12/9/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7G	12/09/10 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7H	6/3/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7H	12/8/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7I	6/15/10	E601	1,800 D	140 D	79	0.54	<0.5	0.52	1	1.6	21	<0.5	1.1	<0.5	<0.5	<0.5
W-7I	8/3/10	E601	1,300 D	100	55	1.1	<0.5	<0.5	0.74	0.84	18	<0.5	0.54	<0.5	<0.5	<0.5
W-7I	10/11/10	E601	400 D	46	29	0.89	<0.5	<0.5	<0.5	0.5	3.6	<0.5	<0.5	<0.5	<0.5	<0.5
W-7J	6/3/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7J	12/8/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7K	6/8/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7K	12/7/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7L	6/7/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7L	12/13/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7M	6/7/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7M	12/14/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon											Vinyl chloride (µg/L)
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)	
W-7N	6/7/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7N	12/14/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7O	3/17/10	E601	54	4.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.81	<0.5	<0.5	<0.5	<0.5	<0.5
W-7O	4/6/10	E601	55 LO	4.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.92	<0.5	<0.5	<0.5	<0.5	<0.5
W-7O	8/3/10	E601	45	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
W-7O	10/11/10	E601	61	4.7	<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-7P	2/18/10	E601	9.8	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
W-7P	4/6/10	E601	10 LO	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
W-7P	8/3/10	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-7PS	4/21/10	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-7PS	04/21/10 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
W-7PS	10/26/10	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-7PS	10/26/10 DUP	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-7Q	6/8/10	E601	17	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
W-7Q	12/8/10	E601	22	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
W-7Q	12/08/10 DUP	E601	29 L	2.9	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7R	2/3/10	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-7R	4/6/10	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-7R	8/3/10	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-7R	10/11/10	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-7S	6/8/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7S	12/7/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7T	6/8/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7T	12/7/10	E601	<0.5	<0.5	<0.5	<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	6/16/10	E601	<0.5	<0.5	<0.5	<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	12/2/10	E601	<0.5	<0.5	<0.5	<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	12/2/10	E601	<0.5	<0.5	<0.5	<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	6/16/10	E601	<0.5	<0.5	<0.5	<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	12/6/10	E601	<0.5	<0.5	<0.5	<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	6/17/10	E601	<0.5	<0.5	<0.5	<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	12/2/10	E601	<0.5	<0.5	<0.5	<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	6/17/10	E601	3.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.7	<0.5	<0.5
W-873-02	12/6/10	E601	5.3	<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-873-03	6/17/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-03	12/2/10	E601	<0.5	<0.5	<0.5	<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	6/17/10	E601	<0.5	<0.5	<0.5	<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	12/6/10	E601	<0.5	<0.5	<0.5	<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	6/17/10	E601	4.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.56	<0.5	<0.5
W-873-06	12/6/10	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

B-1.1. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon								Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-873-07	2/3/10	E601	6.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.7	<0.5	<0.5
W-873-07	5/11/10	E601	5.7	<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	8/3/10	E601	9.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6	<0.5	<0.5
W-873-07	10/11/10	E601	6	<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-CGSA-1733	6/3/10	E601	8	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-1733	12/9/10	E601	10	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
W-CGSA-1735	6/3/10	E601	<0.5	<0.5	<0.5	<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	6/3/10	E601	4.1	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
W-CGSA-1736	11/22/10	E601	4.6	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	6/3/10	E601	<0.5	<0.5	<0.5	<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	11/22/10	E601	<0.5	<0.5	<0.5	<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	6/3/10	E601	2.6	<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-CGSA-1739	12/9/10	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-875-01	6/17/10	E601	1.7	<0.5	4.8	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-01	12/7/10	E601	1.8	<0.5	4.4	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-02	6/21/10	E601	<0.5	<0.5	<0.5	<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	12/7/10	E601	<0.5	<0.5	<0.5	<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	6/21/10	E601	<0.5	<0.5	<0.5	<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	12/7/10	E601	<0.5	<0.5	<0.5	<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	6/21/10	E601	<0.5	<0.5	0.95	<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	12/7/10	E601	<0.5	<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
W-875-05	6/17/10	E601	<0.5	<0.5	<0.5	<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	12/7/10	E601	<0.5	<0.5	<0.5	<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	6/21/10	E601	<0.5	<0.5	<0.5	<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	12/7/10	E601	<0.5	<0.5	<0.5	<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	2/3/10	E601	780 D	74	20	<0.5	<0.5	<0.5	<0.5	0.64	12	<0.5	0.73	<0.5	<0.5	<0.5
W-875-07	4/6/10	E601	560 D	82	17	<0.5	<0.5	<0.5	<0.5	<0.5	8	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-07	8/3/10	E601	460 D	68	18	<0.5	<0.5	<0.5	<0.5	<0.5	6.3	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-07	10/11/10	E601	530 D	72	17	<0.5	<0.5	<0.5	<0.5	<0.5	6.4	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	2/3/10	E601	230 D	1.9	27	2.6	<0.5	<0.5	<0.5	<0.5	4.8	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	4/6/10	E601	240 D	11	18	1.5	<0.5	<0.5	<0.5	<0.5	3.9	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	8/3/10	E601	260 D	4.8	21	1.6	<0.5	<0.5	<0.5	<0.5	5.4	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	10/11/10	E601	67	3.5	5.8	0.66	<0.5	<0.5	<0.5	<0.5	0.74	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-15	3/17/10	E601	37	2.8	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-876-01	6/15/10	E601	5.6	<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-876-01	12/6/10	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-879-01	6/15/10	E601	<0.5	<0.5	<0.5	<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	12/8/10	E601	<0.5	<0.5	<0.5	<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	6/16/10	E601	29	<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

B-1.1. 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		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)
							tetrachloride (µg/L)	Chloroform (µg/L)								
W-889-01	12/8/10	E601	26	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene
				(total) (µg/L)
CDF1	1/13/10	E502.2	0 of 46	-
CDF1	1/13/10	E601	0 of 18	-
CDF1	01/13/10 DUP	E502.2	0 of 45	-
CDF1	01/13/10 DUP	E601	0 of 18	-
CDF1	2/22/10	E601	0 of 18	-
CDF1	02/22/10 DUP	E601	0 of 18	-
CDF1	3/11/10	E601	0 of 18	-
CDF1	03/11/10 DUP	E601	0 of 18	-
CDF1	4/27/10	E601	0 of 18	-
CDF1	04/27/10 DUP	E601	0 of 18	-
CDF1	5/18/10	E601	0 of 18	-
CDF1	05/18/10 DUP	E601	0 of 18	-
CDF1	6/16/10	E601	0 of 18	-
CDF1	06/16/10 DUP	E601	0 of 18	-
CDF1	7/20/10	E601	0 of 18	-
CDF1	07/20/10 DUP	E601	0 of 18	-
CDF1	8/11/10	E601	0 of 18	-
CDF1	08/11/10 DUP	E601	0 of 18	-
CDF1	9/14/10	E601	0 of 18	-
CDF1	09/14/10 DUP	E601	0 of 18	-
CDF1	10/14/10	E601	0 of 18	-
CDF1	10/14/10 DUP	E601	0 of 18	-
CDF1	11/16/10	E601	0 of 18	-
CDF1	11/16/10 DUP	E601	0 of 18	-
CDF1	12/13/10	E601	0 of 18	-
CDF1	12/13/10 DUP	E601	0 of 18	-
CON1	1/13/10	E502.2	0 of 46	-
CON1	1/13/10	E601	0 of 18	-
CON1	01/13/10 DUP	E502.2	0 of 45	-
CON1	01/13/10 DUP	E601	0 of 18	-
CON1	2/18/10	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro- ethene (total) (µg/L)
CON1	02/18/10 DUP	E601	0 of 18	-
CON1	3/11/10	E601	0 of 18	-
CON1	03/11/10 DUP	E601	0 of 18	-
CON1	4/19/10	E601	0 of 18	-
CON1	04/19/10 DUP	E601	0 of 18	-
CON1	5/18/10	E601	0 of 18	-
CON1	05/18/10 DUP	E601	0 of 18	-
CON1	6/16/10	E601	0 of 18	-
CON1	06/16/10 DUP	E601	0 of 18	-
CON1	7/20/10	E601	0 of 18	-
CON1	07/20/10 DUP	E601	0 of 18	-
CON1	8/11/10	E601	0 of 18	-
CON1	08/11/10 DUP	E601	0 of 18	-
CON1	9/14/10	E601	0 of 18	-
CON1	09/14/10 DUP	E601	0 of 18	-
CON1	10/14/10	E601	0 of 18	-
CON1	10/14/10 DUP	E601	0 of 18	-
CON1	11/16/10	E601	0 of 18	-
CON1	11/16/10 DUP	E601	0 of 18	-
CON1	12/13/10	E601	0 of 18	-
CON1	12/13/10 DUP	E601	0 of 18	-
CON2	1/13/10	E601	0 of 18	-
CON2	2/22/10	E601	0 of 18	-
CON2	3/11/10	E601	0 of 18	-
CON2	4/19/10	E601	0 of 18	-
CON2	5/18/10	E601	0 of 18	-
CON2	6/16/10	E601	0 of 18	-
CON2	7/20/10	E601	0 of 18	-
CON2	8/11/10	E601	0 of 18	-
CON2	9/14/10	E601	0 of 18	-
CON2	10/14/10	E601	0 of 18	-
CON2	11/16/10	E601	0 of 18	-
CON2	12/13/10	E601	0 of 18	-
W-24P-03	6/23/10	E601	0 of 18	-
W-25D-01	5/27/10	E601	0 of 18	-
W-25D-02	5/27/10	E601	0 of 18	-
W-25M-01	5/27/10	E601	0 of 18	-
W-25M-02	5/26/10	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
W-25M-02	05/26/10 DUP	E601	0 of 18	-
W-25M-03	5/26/10	E601	0 of 18	-
W-25N-01	6/2/10	E601	0 of 18	-
W-25N-01	06/02/10 DUP	E601	0 of 18	-
W-25N-01	12/6/10	E601	0 of 18	-
W-25N-04	5/25/10	E601	0 of 18	-
W-25N-05	5/26/10	E601	0 of 18	-
W-25N-06	5/26/10	E601	0 of 18	-
W-25N-06	05/26/10 DUP	E601	0 of 18	-
W-25N-07	2/24/10	E601	0 of 18	-
W-25N-07	5/24/10	E601	0 of 18	-
W-25N-07	8/5/10	E601	0 of 18	-
W-25N-07	11/11/10	E601	0 of 18	-
W-25N-08	6/2/10	E601	0 of 18	-
W-25N-09	6/2/10	E601	0 of 18	-
W-25N-10	3/31/10	E601	0 of 18	-
W-25N-10	5/24/10	E601	0 of 18	-
W-25N-10	8/5/10	E601	0 of 18	-
W-25N-10	11/11/10	E601	0 of 18	-
W-25N-11	2/24/10	E601	0 of 18	-
W-25N-11	5/24/10	E601	0 of 18	-
W-25N-11	8/5/10	E601	0 of 18	-
W-25N-11	11/11/10	E601	0 of 18	-
W-25N-12	2/24/10	E601	0 of 18	-
W-25N-12	5/24/10	E601	0 of 18	-
W-25N-12	8/5/10	E601	0 of 18	-
W-25N-12	11/11/10	E601	0 of 18	-
W-25N-13	2/24/10	E601	0 of 18	-
W-25N-13	5/24/10	E601	0 of 18	-
W-25N-13	8/5/10	E601	0 of 18	-
W-25N-13	11/11/10	E601	0 of 18	-
W-25N-18	5/26/10	E601	0 of 18	-
W-25N-20	4/19/10	E601	0 of 18	-
W-25N-21	6/2/10	E601	0 of 18	-
W-25N-22	5/25/10	E601	0 of 18	-
W-25N-23	5/25/10	E601	0 of 18	-
W-25N-23	12/15/10	E601	0 of 18	-
W-25N-24	6/2/10	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro- ethene (total) (µg/L)
W-25N-24	12/6/10	E601	0 of 18	-
W-25N-25	6/3/10	E601	0 of 18	-
W-25N-26	5/26/10	E601	0 of 18	-
W-25N-28	5/26/10	E601	0 of 18	-
W-26R-01	4/19/10	E601	0 of 18	-
W-26R-01	04/19/10 DUP	E601	0 of 18	-
W-26R-01	10/25/10	E601	0 of 18	-
W-26R-01	10/25/10 DUP	E601	0 of 18	-
W-26R-02	5/25/10	E601	0 of 18	-
W-26R-03	6/2/10	E601	0 of 18	-
W-26R-03	12/6/10	E601	0 of 18	-
W-26R-03	12/06/10 DUP	E601	0 of 18	-
W-26R-04	6/3/10	E601	0 of 18	-
W-26R-04	12/15/10	E601	0 of 18	-
W-26R-05	4/19/10	E601	0 of 18	-
W-26R-05	10/25/10	E601	0 of 18	-
W-26R-06	5/25/10	E601	0 of 18	-
W-26R-06	12/15/10	E601	0 of 18	-
W-26R-07	5/25/10	E601	0 of 18	-
W-26R-08	5/25/10	E601	0 of 18	-
W-26R-11	4/19/10	E601	0 of 18	-
W-26R-11	10/25/10	E601	0 of 18	-
W-35A-01	6/10/10	E601	0 of 18	-
W-35A-01	06/10/10 DUP	E601	0 of 18	-
W-35A-02	6/10/10	E601	0 of 18	-
W-35A-02	12/16/10	E601	0 of 18	-
W-35A-03	6/9/10	E601	0 of 18	-
W-35A-03	11/29/10	E601	0 of 18	-
W-35A-04	4/26/10	E601	0 of 18	-
W-35A-04	11/1/10	E502.2	0 of 46	-
W-35A-04	11/1/10	E601	0 of 18	-
W-35A-05	6/10/10	E601	0 of 18	-
W-35A-05	12/20/10	E601	0 of 18	-
W-35A-06	6/9/10	E601	0 of 18	-
W-35A-06	11/29/10	E601	0 of 18	-
W-35A-07	6/10/10	E601	0 of 18	-
W-35A-07	12/16/10	E601	0 of 18	-
W-35A-08	2/24/10	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro- ethene (total) (µg/L)
W-35A-08	6/15/10	E601	0 of 18	-
W-35A-08	8/19/10	E601	0 of 18	-
W-35A-08	12/16/10	E601	0 of 18	-
W-35A-09	6/15/10	E601	0 of 18	-
W-35A-09	12/16/10	E601	0 of 18	-
W-35A-10	6/15/10	E601	0 of 18	-
W-35A-10	06/15/10 DUP	E601	0 of 18	-
W-35A-10	12/16/10	E601	0 of 18	-
W-35A-10	12/16/10 DUP	E601	0 of 18	-
W-35A-11	6/9/10	E601	0 of 18	-
W-35A-11	11/29/10	E601	0 of 18	-
W-35A-12	6/9/10	E601	0 of 18	-
W-35A-12	06/09/10 DUP	E601	0 of 18	-
W-35A-12	11/29/10	E601	0 of 18	-
W-35A-13	6/9/10	E601	0 of 18	-
W-35A-13	11/29/10	E601	0 of 18	-
W-35A-14	2/24/10	E601	0 of 18	-
W-35A-14	6/10/10	E601	0 of 18	-
W-35A-14	06/10/10 DUP	E601	0 of 18	-
W-35A-14	8/19/10	E601	0 of 18	-
W-35A-14	12/16/10	E601	0 of 18	-
W-7A	6/8/10	E601	0 of 18	-
W-7A	12/9/10	E601	0 of 18	-
W-7B	6/8/10	E601	0 of 18	-
W-7B	12/13/10	E601	0 of 18	-
W-7B	12/13/10 DUP	E601	0 of 18	-
W-7D	5/25/10	E601	0 of 18	-
W-7DS	4/21/10	E601	0 of 18	-
W-7E	4/21/10	E601	0 of 18	-
W-7E	10/27/10	E601	0 of 18	-
W-7ES	4/21/10	E601	0 of 18	-
W-7ES	10/27/10	E601	0 of 18	-
W-7F	6/8/10	E601	0 of 18	-
W-7F	12/8/10	E601	0 of 18	-
W-7G	6/9/10	E601	0 of 18	-
W-7G	12/9/10	E601	0 of 18	-
W-7G	12/09/10 DUP	E601	0 of 18	-
W-7H	6/3/10	E601	0 of 18	-



Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro- ethene (total) (µg/L)
W-7H	12/8/10	E601	0 of 18	-
W-7I	6/15/10	E601	1 of 18	79
W-7I	8/3/10	E601	1 of 18	56
W-7I	10/11/10	E601	1 of 18	30
W-7J	6/3/10	E601	0 of 18	-
W-7J	12/8/10	E601	0 of 18	-
W-7K	6/8/10	E601	0 of 18	-
W-7K	12/7/10	E601	0 of 18	-
W-7L	6/7/10	E601	0 of 18	-
W-7L	12/13/10	E601	0 of 18	-
W-7M	6/7/10	E601	0 of 18	-
W-7M	12/14/10	E601	0 of 18	-
W-7N	6/7/10	E601	0 of 18	-
W-7N	12/14/10	E601	0 of 18	-
W-7O	3/17/10	E601	0 of 18	-
W-7O	4/6/10	E601	0 of 18	-
W-7O	8/3/10	E601	0 of 18	-
W-7O	10/11/10	E601	0 of 18	-
W-7P	2/18/10	E601	0 of 18	-
W-7P	4/6/10	E601	0 of 18	-
W-7P	8/3/10	E601	0 of 18	-
W-7PS	4/21/10	E601	0 of 18	-
W-7PS	04/21/10 DUP	E601	0 of 18	-
W-7PS	10/26/10	E601	0 of 18	-
W-7PS	10/26/10 DUP	E601	0 of 18	-
W-7Q	6/8/10	E601	0 of 18	-
W-7Q	12/8/10	E601	0 of 18	-
W-7Q	12/08/10 DUP	E601	0 of 18	-
W-7R	2/3/10	E601	0 of 18	-
W-7R	4/6/10	E601	0 of 18	-
W-7R	8/3/10	E601	0 of 18	-
W-7R	10/11/10	E601	0 of 18	-
W-7S	6/8/10	E601	0 of 18	-
W-7S	12/7/10	E601	0 of 18	-
W-7T	6/8/10	E601	0 of 18	-
W-7T	12/7/10	E601	0 of 18	-
W-843-01	6/16/10	E601	0 of 18	-
W-843-01	12/2/10	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro- ethene (total) (µg/L)
W-843-02	12/2/10	E601	0 of 18	-
W-872-01	6/16/10	E601	0 of 18	-
W-872-01	12/6/10	E601	0 of 18	-
W-873-01	6/17/10	E601	0 of 18	-
W-873-01	12/2/10	E601	0 of 18	-
W-873-02	6/17/10	E601	0 of 18	-
W-873-02	12/6/10	E601	0 of 18	-
W-873-03	6/17/10	E601	0 of 18	-
W-873-03	12/2/10	E601	0 of 18	-
W-873-04	6/17/10	E601	0 of 18	-
W-873-04	12/6/10	E601	0 of 18	-
W-873-06	6/17/10	E601	0 of 18	-
W-873-06	12/6/10	E601	0 of 18	-
W-873-07	2/3/10	E601	0 of 18	-
W-873-07	5/11/10	E601	0 of 18	-
W-873-07	8/3/10	E601	0 of 18	-
W-873-07	10/11/10	E601	0 of 18	-
W-CGSA-1733	6/3/10	E601	0 of 18	-
W-CGSA-1733	12/9/10	E601	0 of 18	-
W-CGSA-1735	6/3/10	E601	0 of 18	-
W-CGSA-1736	6/3/10	E601	0 of 18	-
W-CGSA-1736	11/22/10	E601	0 of 18	-
W-CGSA-1737	6/3/10	E601	0 of 18	-
W-CGSA-1737	11/22/10	E601	0 of 18	-
W-CGSA-1739	6/3/10	E601	0 of 18	-
W-CGSA-1739	12/9/10	E601	0 of 18	-
W-875-01	6/17/10	E601	1 of 18	6.5
W-875-01	12/7/10	E601	1 of 18	5.9
W-875-02	6/21/10	E601	0 of 18	-
W-875-02	12/7/10	E601	0 of 18	-
W-875-03	6/21/10	E601	0 of 18	-
W-875-03	12/7/10	E601	0 of 18	-
W-875-04	6/21/10	E601	0 of 18	-
W-875-04	12/7/10	E601	1 of 18	1.5
W-875-05	6/17/10	E601	0 of 18	-
W-875-05	12/7/10	E601	0 of 18	-
W-875-06	6/21/10	E601	0 of 18	-
W-875-06	12/7/10	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro- ethene (total) (µg/L)
W-875-07	2/3/10	E601	1 of 18	20
W-875-07	4/6/10	E601	1 of 18	17
W-875-07	8/3/10	E601	1 of 18	18
W-875-07	10/11/10	E601	1 of 18	17
W-875-08	2/3/10	E601	1 of 18	30
W-875-08	4/6/10	E601	1 of 18	19
W-875-08	8/3/10	E601	1 of 18	22
W-875-08	10/11/10	E601	1 of 18	6.4
W-875-15	3/17/10	E601	1 of 18	1.8
W-876-01	6/15/10	E601	0 of 18	-
W-876-01	12/6/10	E601	0 of 18	-
W-879-01	6/15/10	E601	0 of 18	-
W-879-01	12/8/10	E601	0 of 18	-
W-889-01	6/16/10	E601	1 of 18	1.2
W-889-01	12/8/10	E601	1 of 18	1.1

B-2.1. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-834-1709	1/25/10	E601	10,000 D	49 D	490 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-1709	7/28/10	E601	290 D	3.4	71	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-1711	1/25/10	E601	970 D	1.1	0.78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-1711	7/28/10	E601	1,200 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	5.1 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-834-1824	2/9/10	E601	1.5	<0.5	6.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2
W-834-1824	8/18/10	E601	38	<0.5	71	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.4
W-834-1824	08/18/10 DUP	E601	6.5	<0.5	27	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.7
W-834-1825	3/9/10	E601	<0.5	<0.5	53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	40
W-834-1825	8/18/10	E601	3.3	<0.5	4.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.1
W-834-1833	2/9/10	E601	4,600 D	<10 D	110 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	3/9/10	E601	3,500 D	15	1,400 D	<25 D	<0.5	2	<0.5	<0.5	1.4	<0.5	1.6	<0.5	<0.5	<0.5
W-834-1833	8/18/10	E601	7,400 D	<25 D	94 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-2001	2/9/10	E601	190 D	3.8	820 D	<25 D	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-2001	4/15/10	E624	1,500 D	10 D	1,700 D	<50 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
W-834-2001	8/17/10	E601	400 D	9.4	240 D	<25 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-2001	10/6/10	E624	950 D	17	630 D	<50 D	<1	<1	<1	<1	1.3	<1	<1	<1	<1	<1
W-834-2113	2/9/10	E601	6,900 D	15	24	1.2	1	1.4	<0.5	<0.5	2.9	<0.5	3.1	<0.5	<0.5	<0.5
W-834-2113	8/3/10	E601	20,400 DL	<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	2/9/10	E601	8,000 D	49	31	<0.5	1.3	2.7	<0.5	<0.5	1.9	<0.5	2.5	<0.5	<0.5	<0.5
W-834-2117	8/3/10	E601	6,640 DL	<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	2/11/10	E601	140 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	8/5/10	E601	113 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	2/9/10	E601	11,000 D	21	29	0.7	1.9	3.3	<0.5	<0.5	2.6	<0.5	2.4	2	<0.5	<0.5
W-834-2119	8/3/10	E601	16,000 DL	<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	1/25/10	E601	180,000 D	950 D	1,700 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	7/28/10	E601	180,000 D	940 D	670 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	07/28/10 DUP	E601	177,000 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	<1,000 D	<1,000 D	<1,000 D
W-834-B2	2/9/10	E601	720 D	16	350 D	<5 D	<0.5	<0.5	<0.5	<0.5	0.51	<0.5	0.61	<0.5	<0.5	<0.5
W-834-B2	4/15/10	E601	2,000 D	97 D	1,500 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-B2	8/17/10	E601	1,700 D	17 D	520 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-B2	10/6/10	E601	1,500 D	14 D	600 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	2/9/10	E601	460 D	<5 D	5,000 D	<50 D	<5 D	<5 D	<5 D	<5 D	15 D	<5 D	<5 D	<5 D	<5 D	11 D
W-834-B3	4/15/10	E601	410 D	<2.5 D	1,300 D	<50 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	3.8 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-834-B3	8/17/10	E601	710 D	<5 D	2,500 D	<25 D	<5 D	<5 D	<5 D	<5 D	6.9 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-B3	10/6/10	E601	780 D	<5 D	2,800 D	<25 D	<5 D	<5 D	<5 D	<5 D	7.4 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-B4	7/28/10	E601	4,300 D	<25 D	7,600 D	<100 D	<25 D	<25 D	<25 D	<25 D	28 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-C4	1/25/10	E601	9.6	<0.5	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-C4	7/28/10	E601	57	<0.5	41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-2.1. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-834-C5	1/25/10	E601	30,000 D	85 D	9,400 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-C5	7/28/10	E601	24,000 D	110 D	11,000 D	<250 D	<25 D	<25 D	<25 D	<25 D	<25 D	60 D	<25 D	<25 D	<25 D	<25 D
W-834-C5	07/28/10 DUP	E601	33,600 D	<500 D	20,000 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-D3	1/26/10	E601	<5 D	<5 D	3,100 D	<25 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	130 D
W-834-D3	01/26/10 DUP	E601	6	<0.5	4,000 D	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	89 D
W-834-D3	7/29/10	E601	24 D	<5 D	1,600 D	<50 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	46 D
W-834-D4	2/9/10	E601	7,300 D	<25 D	12,000 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-D4	4/15/10	E601	15,000 D	70 D	4,400 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	8/17/10	E601	9,300 D	51 D	7,200 D	<100 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D4	10/6/10	E601	7,900 D	50 D	12,000 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-D5	2/9/10	E601	610 D	<2.5 D	1,800 D	<25 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	3.3 D	<2.5 D	<2.5 D	<2.5 D	15 D
W-834-D5	8/17/10	E601	1,000 D	<2.5 D	1,300 D	<25 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	3 D	<2.5 D	<2.5 D	<2.5 D	7.2 D
W-834-D6	2/9/10	E601	570 D	1.1	330 D	<25 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.71	<0.5	<0.5
W-834-D6	4/15/10	E601	2,300 D	6 D	590 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-D6	8/17/10	E601	650 D	1.8	310 D	<25 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.91	<0.5	<0.5
W-834-D6	10/6/10	E601	2,000 D	3.8 D	510 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	8.6 D	<2.5 D
W-834-D7	2/9/10	E601	750 D	6.6	130 D	<25 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-D7	4/15/10	E601	1,200 D	3.2	180 D	<12 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5
W-834-D7	8/17/10	E601	3,700 D	11 D	270 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-D7	10/6/10	E601	4,500 D	13 D	240 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	7/29/10	E601	1,400 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-834-D12	2/9/10	E601	100 D	<0.5	49	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-D12	4/14/10	E601	3,300 D	20	140 D	<25 D	0.68	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	0.51	2.4	<0.5
W-834-D12	8/17/10	E601	300 D	1.2	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-D12	10/6/10	E601	250 D	1.2	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-D13	2/9/10	E601	16,000 D	130 D	230 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	4/15/10	E601	16,000 D	120 D	230 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	8/17/10	E601	14,000 D	110 D	430 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	10/6/10	E601	18,000 D	150 D	640 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-D14	1/26/10	E601	6,900 D	18 D	510 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-D15	7/29/10	E601	15,000 D	17 D	370 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-D18	1/27/10	E601	240 D	0.74	300 D	<5 D	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	<0.5	1
W-834-D18	7/29/10	E601	59	<0.5	54	<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	07/29/10 DUP	E601	98	<0.5	100	<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	8/2/10	E601	75	<0.5	<0.5	<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	2/9/10	E601	59	<0.5	<0.5	<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	4/15/10	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-J1	8/17/10	E601	69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-2.1. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon								Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-834-J1	10/6/10	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	1/27/10	E601	95 D	<0.5	100 D	<5 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J2	8/2/10	E601	110 D	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-K1A	8/2/10	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-834-M1	1/27/10	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	8/2/10	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-S1	2/9/10	E601	2,200 D	52 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	4/15/10	E601	3,500 D	91 D	180 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	8/17/10	E601	2,500 D	93 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	10/6/10	E601	2,900 D	98 D	180 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	2/9/10	E601	950 D	<2.5 D	3.2 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-S12A	4/15/10	E601	1,700 D	<2.5 D	4.2 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-S12A	8/17/10	E601	1,100 D	<2.5 D	5.4 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-S12A	10/6/10	E601	1,200 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-S13	2/9/10	E601	230 D	0.75	10	<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	4/15/10	E601	340 D	1	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.51	<0.5	<0.5	<0.5
W-834-S13	8/17/10	E601	240 D	0.82	11	<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	10/6/10	E601	210 D	0.72	10	<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	2/8/10	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	02/08/10 DUP	E601	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
W-834-S4	8/2/10	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-S8	2/8/10	E601	6,000 D	76 D	75 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-S8	8/3/10	E601	2,900 D	56 D	53 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	08/03/10 DUP	E601	3,930 DL	65 D	92 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	2/8/10	E601	2,900 D	6.1 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	02/08/10 DUP	E601	3,100 D	5.7 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	8/3/10	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-834-T1	2/8/10	E601	<0.5	<0.5	<0.5	<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	6/10/10	E601	<0.5	<0.5	<0.5	<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	06/10/10 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	8/4/10	E601	<0.5	<0.5	<0.5	<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	11/29/10	E601	<0.5	<0.5	<0.5	<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	11/29/10 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	2/16/10	E601	100	<0.5	790 D	<5 D	<0.5	<0.5	<0.5	<0.5	0.58	1.8	<0.5	<0.5	<0.5	260 D
W-834-T2	3/9/10	E601	230 D	0.7	930 D	<10 D	<0.5	<0.5	<0.5	<0.5	2.8	<0.5	<0.5	<0.5	<0.5	120 D
W-834-T2	8/4/10	E601	300 D	1.3	640 D	<5 D	<0.5	<0.5	<0.5	<0.5	0.51	1.9	<0.5	<0.5	<0.5	370 D
W-834-T2	8/18/10	E601	530 D	1.6	1,600 D	<25 D	<0.5	<0.5	<0.5	<0.5	0.52	4.3	<0.5	<0.5	<0.5	370 D
W-834-T2A	2/10/10	E601	11,000 D	<25 D	74 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D

B-2.1. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-834-T2A	8/4/10	E601	8,500 D	25	45	0.59	0.89	3.2	<0.5	<0.5	2.2	<0.5	2.1	0.65	<0.5	<0.5
W-834-T2D	2/10/10	E601	7,800 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-834-T2D	02/10/10 DUP	E601	7,500 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-834-T2D	8/5/10	E601	7,500 D	12 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	2/16/10	E601	<0.5	<0.5	<0.5	<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	6/10/10	E601	<0.5	<0.5	<0.5	<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	8/4/10	E601	<0.5	<0.5	<0.5	<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	11/29/10	E601	<0.5	<0.5	<0.5	<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	2/16/10	E601	<0.5	<0.5	<0.5	<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	8/4/10	E601	<0.5	<0.5	<0.5	<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	2/16/10	E624	44,000 D	250 D	2,600 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D
W-834-U1	02/16/10 DUP	E624	59,000 DHL	<500 DH	4,000 DH	<500 DH	<500 DH	<500 DH	<500 DH	<500 DH	<500 DH	<500 DH	<500 DH	<500 DH	<1,000 DH	<500 DH
W-834-U1	8/3/10	E624	27,000 D	140 D	2,300 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-	
				ethene (total) (µg/L)	Chloroethane (µg/L)
W-834-1709	1/25/10	E601	1 of 18	490 D	-
W-834-1709	7/28/10	E601	1 of 18	71	-
W-834-1711	1/25/10	E601	0 of 18	-	-
W-834-1711	7/28/10	E601	0 of 18	-	-
W-834-1824	2/9/10	E601	1 of 18	6.6	-
W-834-1824	8/18/10	E601	1 of 18	71	-
W-834-1824	08/18/10 DUP	E601	1 of 18	27	-
W-834-1825	3/9/10	E601	1 of 18	54	-
W-834-1825	8/18/10	E601	1 of 18	4.7	-
W-834-1833	2/9/10	E601	1 of 18	110 D	-
W-834-1833	3/9/10	E601	1 of 18	1,400 D	-
W-834-1833	8/18/10	E601	1 of 18	94 D	-
W-834-2001	2/9/10	E601	1 of 18	820 D	-
W-834-2001	4/15/10	E624	1 of 30	1,700 D	-
W-834-2001	8/17/10	E601	1 of 18	240 D	-
W-834-2001	10/6/10	E624	1 of 30	630 D	-
W-834-2113	2/9/10	E601	1 of 18	25	-
W-834-2113	8/3/10	E601	0 of 18	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-834-2117	2/9/10	E601	1 of 18	31	-
W-834-2117	8/3/10	E601	0 of 18	-	-
W-834-2118	2/11/10	E601	0 of 18	-	-
W-834-2118	8/5/10	E601	0 of 18	-	-
W-834-2119	2/9/10	E601	1 of 18	29	-
W-834-2119	8/3/10	E601	0 of 18	-	-
W-834-A1	1/25/10	E601	1 of 18	1,700 D	-
W-834-A1	7/28/10	E601	1 of 18	670 D	-
W-834-A1	07/28/10 DUP	E601	0 of 18	-	-
W-834-B2	2/9/10	E601	1 of 18	350 D	-
W-834-B2	4/15/10	E601	1 of 18	1,500 D	-
W-834-B2	8/17/10	E601	1 of 18	520 D	-
W-834-B2	10/6/10	E601	1 of 18	600 D	-
W-834-B3	2/9/10	E601	1 of 18	5,000 D	-
W-834-B3	4/15/10	E601	1 of 18	1,300 D	-
W-834-B3	8/17/10	E601	1 of 18	2,500 D	-
W-834-B3	10/6/10	E601	1 of 18	2,800 D	-
W-834-B4	7/28/10	E601	1 of 18	7,600 D	-
W-834-C4	1/25/10	E601	1 of 18	6	-
W-834-C4	7/28/10	E601	1 of 18	41	-
W-834-C5	1/25/10	E601	1 of 18	9,400 D	-
W-834-C5	7/28/10	E601	1 of 18	11,000 D	-
W-834-C5	07/28/10 DUP	E601	1 of 18	20,000 D	-
W-834-D3	1/26/10	E601	1 of 18	3,100 D	-
W-834-D3	01/26/10 DUP	E601	1 of 18	4,000	-
W-834-D3	7/29/10	E601	1 of 18	1,600 D	-
W-834-D4	2/9/10	E601	1 of 18	12,000 D	-
W-834-D4	4/15/10	E601	1 of 18	4,400 D	-
W-834-D4	8/17/10	E601	1 of 18	7,200 D	-
W-834-D4	10/6/10	E601	1 of 18	12,000 D	-
W-834-D5	2/9/10	E601	1 of 18	1,800 D	-
W-834-D5	8/17/10	E601	1 of 18	1,300 D	-
W-834-D6	2/9/10	E601	1 of 18	330 D	-
W-834-D6	4/15/10	E601	1 of 18	590 D	-
W-834-D6	8/17/10	E601	1 of 18	310 D	-
W-834-D6	10/6/10	E601	1 of 18	510 D	-
W-834-D7	2/9/10	E601	1 of 18	130 D	-



Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-834-D7	4/15/10	E601	1 of 18	180 D	-
W-834-D7	8/17/10	E601	1 of 18	270 D	-
W-834-D7	10/6/10	E601	1 of 18	240 D	-
W-834-D10	7/29/10	E601	0 of 18	-	-
W-834-D12	2/9/10	E601	1 of 18	49	-
W-834-D12	4/14/10	E601	1 of 18	140 D	-
W-834-D12	8/17/10	E601	1 of 18	37	-
W-834-D12	10/6/10	E601	1 of 18	28	-
W-834-D13	2/9/10	E601	1 of 18	230 D	-
W-834-D13	4/15/10	E601	1 of 18	230 D	-
W-834-D13	8/17/10	E601	1 of 18	430 D	-
W-834-D13	10/6/10	E601	1 of 18	640 D	-
W-834-D14	1/26/10	E601	1 of 18	510 D	-
W-834-D15	7/29/10	E601	1 of 18	370 D	-
W-834-D18	1/27/10	E601	1 of 18	300 D	-
W-834-D18	7/29/10	E601	1 of 18	54	-
W-834-D18	07/29/10 DUP	E601	1 of 18	100	-
W-834-H2	8/2/10	E601	0 of 18	-	-
W-834-J1	2/9/10	E601	0 of 18	-	-
W-834-J1	4/15/10	E601	0 of 18	-	-
W-834-J1	8/17/10	E601	0 of 18	-	-
W-834-J1	10/6/10	E601	0 of 18	-	-
W-834-J2	1/27/10	E601	1 of 18	100 D	-
W-834-J2	8/2/10	E601	1 of 18	1.9	-
W-834-K1A	8/2/10	E601	0 of 18	-	-
W-834-M1	1/27/10	E601	0 of 18	-	-
W-834-M1	8/2/10	E601	0 of 18	-	-
W-834-S1	2/9/10	E601	1 of 18	140 D	-
W-834-S1	4/15/10	E601	1 of 18	180 D	-
W-834-S1	8/17/10	E601	1 of 18	140 D	-
W-834-S1	10/6/10	E601	1 of 18	180 D	-
W-834-S12A	2/9/10	E601	0 of 18	-	-
W-834-S12A	4/15/10	E601	0 of 18	-	-
W-834-S12A	8/17/10	E601	1 of 18	5.4 D	-
W-834-S12A	10/6/10	E601	0 of 18	-	-
W-834-S13	2/9/10	E601	1 of 18	10	-
W-834-S13	4/15/10	E601	1 of 18	14	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-834-S13	8/17/10	E601	1 of 18	11	-
W-834-S13	10/6/10	E601	1 of 18	10	-
W-834-S4	2/8/10	E601	0 of 18	-	-
W-834-S4	02/08/10 DUP	E601	0 of 18	-	-
W-834-S4	8/2/10	E601	0 of 18	-	-
W-834-S8	2/8/10	E601	1 of 18	75 D	-
W-834-S8	8/3/10	E601	1 of 18	53 D	-
W-834-S8	08/03/10 DUP	E601	0 of 18	-	-
W-834-S9	2/8/10	E601	0 of 18	-	-
W-834-S9	02/08/10 DUP	E601	0 of 18	-	-
W-834-S9	8/3/10	E601	0 of 18	-	-
W-834-T1	2/8/10	E601	0 of 18	-	-
W-834-T1	6/10/10	E601	0 of 18	-	-
W-834-T1	06/10/10 DUP	E601	0 of 18	-	-
W-834-T1	8/4/10	E601	0 of 18	-	-
W-834-T1	11/29/10	E601	0 of 18	-	-
W-834-T1	11/29/10 DUP	E601	0 of 18	-	-
W-834-T2	2/16/10	E601	2 of 18	790 D	4.1
W-834-T2	3/9/10	E601	2 of 18	930 D	8.4
W-834-T2	8/4/10	E601	2 of 18	640 D	19 L
W-834-T2	8/18/10	E601	2 of 18	1,600 D	28
W-834-T2A	2/10/10	E601	1 of 18	74 D	-
W-834-T2A	8/4/10	E601	1 of 18	46	-
W-834-T2D	2/10/10	E601	0 of 18	-	-
W-834-T2D	02/10/10 DUP	E601	0 of 18	-	-
W-834-T2D	8/5/10	E601	0 of 18	-	-
W-834-T3	2/16/10	E601	0 of 18	-	-
W-834-T3	6/10/10	E601	0 of 18	-	-
W-834-T3	8/4/10	E601	0 of 18	-	-
W-834-T3	11/29/10	E601	0 of 18	-	-
W-834-T5	2/16/10	E601	0 of 18	-	-
W-834-T5	8/4/10	E601	0 of 18	-	-
W-834-U1	2/16/10	E624	1 of 30	2,600 D	-
W-834-U1	02/16/10 DUP	E624	1 of 30	4,000 DH	-
W-834-U1	8/3/10	E624	1 of 30	2,300 D	-

## B-2.2. Building 834 Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-834-1709	1/25/10	6.7	-
W-834-1824	2/9/10	<10 D	-
W-834-1833	2/9/10	41	-
W-834-2001	2/9/10	34	-
W-834-2113	2/9/10	96 DL	-
W-834-2117	2/9/10	55 DL	-
W-834-2118	2/11/10	130 DL	4
W-834-2118	8/5/10	-	5.4
W-834-2119	2/9/10	80 DL	-
W-834-A1	1/25/10	0.84	-
W-834-B2	2/9/10	43	-
W-834-B3	2/9/10	8.8	-
W-834-C4	1/25/10	33	-
W-834-C5	1/25/10	74	-
W-834-D3	1/26/10	<0.5	-
W-834-D3	01/26/10 DUP	<0.5	-
W-834-D4	2/9/10	<0.5	-
W-834-D5	2/9/10	<0.5	-
W-834-D6	2/9/10	29	-
W-834-D7	2/9/10	99 D	-
W-834-D12	2/9/10	120 D	-
W-834-D13	2/9/10	19	-
W-834-D14	1/26/10	26	-
W-834-D18	1/27/10	58	-
W-834-J1	2/9/10	140 D	-
W-834-J2	1/27/10	53	-
W-834-M1	1/27/10	290 D	-
W-834-S1	2/9/10	110 D	-
W-834-S12A	2/9/10	110 D	-
W-834-S13	2/9/10	100 D	-
W-834-S4	2/8/10	170 D	-
W-834-S4	02/08/10 DUP	130 DL	-
W-834-S8	2/8/10	150 D	-
W-834-S9	2/8/10	86	-
W-834-S9	02/08/10 DUP	90 D	-
W-834-T1	2/8/10	0.8	-
W-834-T1	8/4/10	<0.5	-
W-834-T2	2/16/10	<0.5	-
W-834-T2A	2/10/10	62	-

## B-2.2. Building 834 Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-834-T2D	2/10/10	110 D	-
W-834-T2D	02/10/10 DUP	110 D	-
W-834-T3	2/16/10	<0.5	-
W-834-T3	8/4/10	<0.5	-
W-834-T5	2/16/10	94 D	-
W-834-U1	2/16/10	<0.5	-
W-834-U1	02/16/10 DUP	<0.5	-

B-2.3. Building 834 Operable Unit tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) in ground water.

Location	Date	TBOS/TKEBS ( $\mu\text{g/L}$ )
W-834-1709	1/25/10	63 D
W-834-1711	7/28/10	22 D
W-834-1824	2/9/10	<10 DIJ
W-834-1833	2/9/10	<10 D
W-834-2001	2/9/10	<10
W-834-2001	8/17/10	<100 D
W-834-2113	2/9/10	<10
W-834-2119	2/9/10	<10
W-834-A1	1/25/10	<10 D
W-834-B2	2/9/10	<10
W-834-B2	8/17/10	<100 D
W-834-B3	2/9/10	<10
W-834-B3	8/17/10	<100 D
W-834-C4	1/25/10	<10 D
W-834-C5	1/25/10	<10
W-834-D3	1/26/10	96,000 DIJ
W-834-D3	01/26/10 DUP	140,000 D
W-834-D4	2/9/10	280 D
W-834-D4	8/17/10	<10
W-834-D5	2/9/10	12
W-834-D6	2/9/10	<10
W-834-D6	8/17/10	<10
W-834-D7	2/9/10	<10
W-834-D7	8/17/10	78
W-834-D12	2/9/10	86
W-834-D12	8/17/10	<10
W-834-D13	2/9/10	<10
W-834-D13	8/17/10	<10
W-834-D14	1/26/10	110 DIJ
W-834-D18	1/27/10	<11 D
W-834-J1	2/9/10	<10
W-834-J2	1/27/10	<10 D
W-834-M1	1/27/10	<10
W-834-S1	2/9/10	<10
W-834-S12A	2/9/10	IR
W-834-S13	2/9/10	<10
W-834-S9	2/8/10	<11 D
W-834-S9	02/08/10 DUP	<11 D

B-2.3. Building 834 Operable Unit tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) in ground water.

Location	Date	TBOS/TKEBS ( $\mu\text{g/L}$ )
W-834-T1	2/8/10	<10 D
W-834-T1	8/4/10	<10
W-834-T2A	2/10/10	<10
W-834-T2D	2/10/10	<10 D
W-834-T2D	02/10/10 DUP	<10 D
W-834-T3	2/16/10	<10 D
W-834-T3	8/4/10	<10 D
W-834-T5	2/16/10	<10 D
W-834-U1	2/16/10	<10 D
W-834-U1	02/16/10 DUP	<10 O

## B-2.4. Building 834 Operable Unit diesel range organic compounds in ground water.

Location	Date	Diesel Range		
		Diesel Fuel (µg/L)	Organics (C12-C24) (µg/L)	Oil (µg/L)
W-834-2001	2/9/10	2,400	-	-
W-834-2001	8/17/10	39,000 D	-	-
W-834-A1	1/25/10	-	<220 D	-
W-834-S9	2/8/10	-	<200 D	-
W-834-S9	02/08/10 DUP	-	<200 D	-
W-834-U1	2/16/10	<200	-	-
W-834-U1	02/16/10 DUP	<50 O	-	<200

## B-2.5. Building 834 Operable Unit metals in ground water.

Location	Date	Arsenic (mg/L)	Chromium (mg/L)	Manganese (mg/L)	Selenium (mg/L)
W-834-1824	2/9/10	<0.25 D	0.15 D	0.44 D	<0.25 D
W-834-2117	2/9/10	<0.05	<0.01	<0.01	<0.05
W-834-2118	2/11/10	<0.05	<0.01	0.1	<0.05
W-834-2119	2/9/10	<0.05	<0.01	<0.01	<0.05
W-834-T2	2/16/10	<0.05	0.01	0.77	<0.05



## B-2.6. Building 834 Operable Unit general minerals in ground water.

Constituents of concern	W-834-1824	W-834-2117	W-834-2118	W-834-2119	W-834-T2
	2/9/10	2/9/10	2/11/10	2/9/10	2/16/10
Total Alkalinity (as CaCO <sub>3</sub> ) (mg/L)	11,000	370	140	190	1,100
Aluminum (mg/L)	1.2 D	<0.2	<0.2	<0.2	<0.2
Bicarbonate Alk (as CaCO <sub>3</sub> ) (mg/L)	11,000 D	370 D	140 D	190 D	1,100 D
Calcium (mg/L)	13 D	18	45 L	26	57
Carbonate Alk (as CaCO <sub>3</sub> ) (mg/L)	<160 D	<8.2 D	<8.2 D	<8.2 D	<8.2 D
Chloride (mg/L)	150 D	130 D	360	240	110 D
Copper (mg/L)	<0.25 D	<0.05	<0.05	<0.05	<0.05
Fluoride (mg/L)	5,800 D	1.6 D	1.1	1.3	0.75 D
Hydroxide Alk (as CaCO <sub>3</sub> ) (mg/L)	<160 D	<8.2 D	<8.2 D	<8.2 D	<8.2 D
Iron (mg/L)	32 D	<0.05	<0.05	<0.05	<0.05
Magnesium (mg/L)	7.2 D	14	39	22	61
Manganese (mg/L)	0.61 D	<0.03	0.098	<0.03	0.97
Nickel (mg/L)	<0.5 D	<0.1	<0.1	<0.1	<0.1
Nitrate (as N) (mg/L)	<25 D	14	36 D	23 D	<1 D
Nitrate (as NO <sub>3</sub> ) (mg/L)	<0.44 H	63 H	160 H	100 H	<1 H
Nitrite (as N) (mg/L)	<0.5	<0.5	<0.5	<0.5	<0.5
pH (Units)	7.38	8.04	7.99 H	8.12	7.79 H
Ortho-Phosphate (mg/L)	<0.05	0.12	0.092	0.23	0.19 L
Total Phosphorus (as P) (mg/L)	5.7 D	0.05	0.087 H	0.24	0.064 H
Potassium (mg/L)	11 D	8.3	9.7	9.1	13
Sodium (mg/L)	11,000 D	260	240 L	220	380
Total dissolved solids (TDS) (mg/L)	67,000 DH	770 DH	1,000 DH	1,200 DH	1,400 DH
Specific Conductance (µmhos/cm)	25,600	1,340	1,650 H	1,330	2,130 H
Sulfate (mg/L)	<50 D	62 D	58	52	2 D
Surfactants (mg/L)	<0.5	<0.5	<0.5	<0.5	<0.5
Total Hardness (as CaCO <sub>3</sub> ) (mg/L)	62	100	270	160	390
Zinc (mg/L)	<0.25 D	<0.05	<0.05	<0.05	<0.05







B-3.1. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon									Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)			
EP6-07	1/13/10	E601	<0.5	<0.5	<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	7/7/10	E601	<0.5	<0.5	<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	1/21/10	E8260	<0.5 S	<0.5 S	<0.5 S	<0.5 S	<0.5 S	1.6 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
EP6-09	02/25/10 DUP	E8260	4.1	<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
EP6-09	02/25/10 REX	E8260	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
EP6-09	03/04/10 DUP	E8260	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	03/04/10 REX	E8260	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
EP6-09	4/14/10	E8260	6.1	<0.5	<0.5 E	<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	7/6/10	E8260	8.9	<0.5	<0.5	<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	07/06/10 DUP	E8260	9.2	<0.5	<0.5	<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	10/6/10	E8260	7.9	<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
W-PIT6-1819	1/12/10	E601	<0.5	<0.5	<0.5	<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	4/7/10	E601	<0.5	<0.5	<0.5	<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	7/6/10	E601	<0.5	<0.5	<0.5	<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	10/6/10	E601	<0.5	<0.5	<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	1/14/10	E601	<0.5	<0.5	<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	7/7/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01S	1/19/10	E8260	<0.5	<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
K6-01S	4/6/10	E8260	<0.5 E	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01S	7/6/10	E8260	<0.5	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01S	10/7/10	E8260	<0.5	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-03	1/12/10	E601	<0.5	<0.5	<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	7/6/10	E601	<0.5	<0.5	<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	1/12/10	E601	<0.5	<0.5	<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	7/7/10	E601	<0.5	<0.5	<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	1/14/10	E601	<0.5	<0.5	<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	7/8/10	E601	<0.5	<0.5	<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	1/13/10	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
K6-16	01/13/10 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
K6-16	7/8/10	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
K6-16	07/08/10 DUP	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
K6-17	1/12/10	E601	<0.5	<0.5	<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	01/12/10 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	4/7/10	E601	<0.5	<0.5	<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	04/07/10 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	7/7/10	E601	<0.5	<0.5	<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	10/6/10	E601	<0.5	<0.5	<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	10/06/10 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	1/13/10	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

B-3.1. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
K6-18	01/13/10 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
K6-18	7/8/10	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
K6-19	1/19/10	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	01/19/10 DUP	E8260	3	<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	4/6/10	E8260	2.7	<0.5	<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
K6-19	7/6/10	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	07/06/10 DUP	E8260	3.3	<0.5 J	<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	10/6/10	E8260	1.7	<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
K6-19	10/06/10 DUP	E8260	3.1	<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	1/14/10	E601	<0.5	<0.5	<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	4/7/10	E601	<0.5	<0.5	<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	7/7/10	E601	<0.5	<0.5	<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	10/6/10	E601	<0.5	<0.5	<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	1/14/10	E601	<0.5	<0.5	<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	7/6/10	E601	<0.5	<0.5	<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	7/8/10	E601	<0.5	<0.5	<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	1/13/10	E601	<0.5	<0.5	<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	7/8/10	E601	<0.5	<0.5	<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	1/13/10	E601	<0.5	<0.5	<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	7/8/10	E601	<0.5	<0.5	<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	1/13/10	E601	<0.5	<0.5	<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	7/8/10	E601	<0.5	<0.5	<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	1/12/10	E601	<0.5	<0.5	<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	9/14/10	E601	<0.5	<0.5	<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	1/12/10	E601	<0.5	<0.5	<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	4/7/10	E601	<0.5	<0.5	<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	7/6/10	E601	<0.5	<0.5	<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	10/6/10	E601	<0.5	<0.5	<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	1/14/10	E601	<0.5	<0.5	<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	7/7/10	E601	<0.5	<0.5	<0.5	<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	3/23/10	E601	<0.5	<0.5	<0.5	<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	9/9/10	E601	<0.5	<0.5	<0.5	<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	3/22/10	E601	<0.5	<0.5	<0.5	<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	3/22/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes 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	1/11/10	E601	0 of 18	-	-	-	-	-
CARNRW1	1/11/10	E624	0 of 30	-	-	-	-	-
CARNRW1	01/11/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	01/11/10 DUP	E624	0 of 30	-	-	-	-	-
CARNRW1	2/1/10	E601	0 of 18	-	-	-	-	-
CARNRW1	02/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	3/1/10	E601	0 of 18	-	-	-	-	-
CARNRW1	03/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	4/1/10	E601	0 of 18	-	-	-	-	-
CARNRW1	4/1/10	E624	0 of 30	-	-	-	-	-
CARNRW1	04/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	04/01/10 DUP	E624	0 of 30	-	-	-	-	-
CARNRW1	5/5/10	E601	0 of 18	-	-	-	-	-
CARNRW1	05/05/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	6/1/10	E601	0 of 18	-	-	-	-	-
CARNRW1	06/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	8/11/10	E601	0 of 18	-	-	-	-	-
CARNRW1	8/11/10	E624	0 of 30	-	-	-	-	-
CARNRW1	08/11/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	08/11/10 DUP	E624	0 of 30	-	-	-	-	-
CARNRW1	9/1/10	E601	0 of 18	-	-	-	-	-
CARNRW1	09/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	10/5/10	E601	0 of 18	-	-	-	-	-
CARNRW1	10/5/10	E624	0 of 30	-	-	-	-	-
CARNRW1	10/05/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	10/05/10 DUP	E624	0 of 30	-	-	-	-	-
CARNRW1	11/1/10	E601	0 of 18	-	-	-	-	-
CARNRW1	11/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW1	12/2/10	E601	0 of 18	-	-	-	-	-
CARNRW1	12/02/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW2	1/11/10	E502.2	0 of 46	-	-	-	-	-
CARNRW2	1/11/10	E601	0 of 18	-	-	-	-	-
CARNRW2	01/11/10 DUP	E502.2	0 of 45	-	-	-	-	-
CARNRW2	01/11/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW2	2/3/10	E601	0 of 18	-	-	-	-	-
CARNRW2	02/03/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW2	3/2/10	E601	0 of 18	-	-	-	-	-
CARNRW2	03/02/10 DUP	E601	0 of 18	-	-	-	-	-

Analytes 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	4/1/10	E502.2	3 of 46	-	-	0.84	19	3.4
CARNRW2	4/1/10	E601	0 of 18	-	-	-	-	-
CARNRW2	04/01/10 DUP	E502.2	3 of 45	-	-	1.1	19	4.1
CARNRW2	04/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW2	5/5/10	E601	3 of 18	-	-	0.52	13	1.7
CARNRW2	05/05/10 DUP	E601	2 of 18	-	-	-	15	1.9
CARNRW2	6/1/10	E601	0 of 18	-	-	-	-	-
CARNRW2	06/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW2	7/1/10	E502.2	3 of 46	-	-	0.53	4.5	1.8
CARNRW2	7/1/10	E601	2 of 18	-	-	-	5.9	1.7
CARNRW2	07/01/10 DUP	E502.2	3 of 45	-	-	0.9	7.6	2.4
CARNRW2	07/01/10 DUP	E601	3 of 18	-	-	1	7.5	2.4
CARNRW2	8/3/10	E601	0 of 18	-	-	-	-	-
CARNRW2	08/03/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW2	9/1/10	E601	0 of 18	-	-	-	-	-
CARNRW2	09/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW2	10/5/10	E502.2	0 of 46	-	-	-	-	-
CARNRW2	10/5/10	E601	0 of 18	-	-	-	-	-
CARNRW2	10/05/10 DUP	E502.2	0 of 45	-	-	-	-	-
CARNRW2	10/05/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW2	11/1/10	E601	0 of 18	-	-	-	-	-
CARNRW2	11/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW2	12/2/10	E601	0 of 18	-	-	-	-	-
CARNRW2	12/02/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	1/11/10	E601	0 of 18	-	-	-	-	-
CARNRW3	01/11/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	2/1/10	E601	0 of 18	-	-	-	-	-
CARNRW3	02/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	3/1/10	E601	0 of 18	-	-	-	-	-
CARNRW3	03/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	4/1/10	E601	0 of 18	-	-	-	-	-
CARNRW3	04/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	5/5/10	E601	0 of 18	-	-	-	-	-
CARNRW3	05/05/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	6/1/10	E601	0 of 18	-	-	-	-	-
CARNRW3	06/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	7/1/10	E601	0 of 18	-	-	-	-	-
CARNRW3	07/01/10 DUP	E601	0 of 18	-	-	-	-	-



Analytes 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)
CARNRW3	8/3/10	E601	0 of 18	-	-	-	-	-
CARNRW3	08/03/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	9/1/10	E601	0 of 18	-	-	-	-	-
CARNRW3	09/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	10/5/10	E601	0 of 18	-	-	-	-	-
CARNRW3	10/05/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	11/1/10	E601	0 of 18	-	-	-	-	-
CARNRW3	11/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW3	12/2/10	E601	0 of 18	-	-	-	-	-
CARNRW3	12/02/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	1/11/10	E601	0 of 18	-	-	-	-	-
CARNRW4	01/11/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	2/1/10	E601	0 of 18	-	-	-	-	-
CARNRW4	02/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	3/1/10	E601	0 of 18	-	-	-	-	-
CARNRW4	03/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	4/1/10	E601	0 of 18	-	-	-	-	-
CARNRW4	04/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	5/5/10	E601	0 of 18	-	-	-	-	-
CARNRW4	05/05/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	6/1/10	E601	0 of 18	-	-	-	-	-
CARNRW4	06/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	7/1/10	E601	0 of 18	-	-	-	-	-
CARNRW4	07/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	8/3/10	E601	0 of 18	-	-	-	-	-
CARNRW4	08/03/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	9/1/10	E601	0 of 18	-	-	-	-	-
CARNRW4	09/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	10/5/10	E601	0 of 18	-	-	-	-	-
CARNRW4	10/05/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	11/1/10	E601	0 of 18	-	-	-	-	-
CARNRW4	11/01/10 DUP	E601	0 of 18	-	-	-	-	-
CARNRW4	12/2/10	E601	0 of 18	-	-	-	-	-
CARNRW4	12/02/10 DUP	E601	0 of 18	-	-	-	-	-
BC6-10	1/14/10	E601	0 of 18	-	-	-	-	-
BC6-10	7/7/10	E601	0 of 18	-	-	-	-	-
EP6-06	1/25/10	E8260	0 of 36	-	-	-	-	-
EP6-06	4/6/10	E8260	0 of 36	-	-	-	-	-

Analytes 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)
EP6-06	04/06/10 DUP	E8260	0 of 36	-	-	-	-	-
EP6-06	7/6/10	E8260	0 of 36	-	-	-	-	-
EP6-06	10/6/10	E8260	0 of 36	-	-	-	-	-
EP6-07	1/13/10	E601	0 of 18	-	-	-	-	-
EP6-07	7/7/10	E601	0 of 18	-	-	-	-	-
EP6-09	1/21/10	E8260	1 of 36	-	79 S	-	-	-
EP6-09	02/25/10 DUP	E8260	0 of 31	-	-	-	-	-
EP6-09	02/25/10 REX	E8260	1 of 36	-	78	-	-	-
EP6-09	03/04/10 DUP	E8260	0 of 31	-	-	-	-	-
EP6-09	03/04/10 REX	E8260	1 of 36	-	72	-	-	-
EP6-09	4/14/10	E8260	0 of 36	-	-	-	-	-
EP6-09	7/6/10	E8260	1 of 36	-	30	-	-	-
EP6-09	07/06/10 DUP	E8260	1 of 36	-	43	-	-	-
EP6-09	10/6/10	E8260	1 of 36	-	13	-	-	-
W-PIT6-1819	1/12/10	E601	0 of 18	-	-	-	-	-
W-PIT6-1819	4/7/10	E601	0 of 18	-	-	-	-	-
W-PIT6-1819	7/6/10	E601	0 of 18	-	-	-	-	-
W-PIT6-1819	10/6/10	E601	0 of 18	-	-	-	-	-
K6-01	1/14/10	E601	0 of 18	-	-	-	-	-
K6-01	7/7/10	E601	0 of 18	-	-	-	-	-
K6-01S	1/19/10	E8260	1 of 36	2.5	-	-	-	-
K6-01S	4/6/10	E8260	1 of 36	2.3	-	-	-	-
K6-01S	7/6/10	E8260	1 of 36	2.3	-	-	-	-
K6-01S	10/7/10	E8260	1 of 36	2.3	-	-	-	-
K6-03	1/12/10	E601	0 of 18	-	-	-	-	-
K6-03	7/6/10	E601	0 of 18	-	-	-	-	-
K6-04	1/12/10	E601	0 of 18	-	-	-	-	-
K6-04	7/7/10	E601	0 of 18	-	-	-	-	-
K6-14	1/14/10	E601	0 of 18	-	-	-	-	-
K6-14	7/8/10	E601	0 of 18	-	-	-	-	-
K6-16	1/13/10	E601	0 of 18	-	-	-	-	-
K6-16	01/13/10 DUP	E601	0 of 18	-	-	-	-	-
K6-16	7/8/10	E601	0 of 18	-	-	-	-	-
K6-16	07/08/10 DUP	E601	0 of 18	-	-	-	-	-
K6-17	1/12/10	E601	0 of 18	-	-	-	-	-
K6-17	01/12/10 DUP	E601	0 of 18	-	-	-	-	-
K6-17	4/7/10	E601	0 of 18	-	-	-	-	-
K6-17	04/07/10 DUP	E601	0 of 18	-	-	-	-	-

Analytes 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	7/7/10	E601	0 of 18	-	-	-	-	-
K6-17	10/6/10	E601	0 of 18	-	-	-	-	-
K6-17	10/06/10 DUP	E601	0 of 18	-	-	-	-	-
K6-18	1/13/10	E601	0 of 18	-	-	-	-	-
K6-18	01/13/10 DUP	E601	0 of 18	-	-	-	-	-
K6-18	7/8/10	E601	0 of 18	-	-	-	-	-
K6-19	1/19/10	E8260	0 of 36	-	-	-	-	-
K6-19	01/19/10 DUP	E8260	0 of 36	-	-	-	-	-
K6-19	4/6/10	E8260	0 of 36	-	-	-	-	-
K6-19	7/6/10	E8260	0 of 36	-	-	-	-	-
K6-19	07/06/10 DUP	E8260	0 of 31	-	-	-	-	-
K6-19	10/6/10	E8260	0 of 36	-	-	-	-	-
K6-19	10/06/10 DUP	E8260	0 of 36	-	-	-	-	-
K6-22	1/14/10	E601	0 of 18	-	-	-	-	-
K6-22	4/7/10	E601	0 of 18	-	-	-	-	-
K6-22	7/7/10	E601	0 of 18	-	-	-	-	-
K6-22	10/6/10	E601	0 of 18	-	-	-	-	-
K6-23	1/14/10	E601	0 of 18	-	-	-	-	-
K6-23	7/6/10	E601	0 of 18	-	-	-	-	-
K6-24	7/8/10	E601	0 of 18	-	-	-	-	-
K6-25	1/13/10	E601	0 of 18	-	-	-	-	-
K6-25	7/8/10	E601	0 of 18	-	-	-	-	-
K6-26	1/13/10	E601	0 of 18	-	-	-	-	-
K6-26	7/8/10	E601	0 of 18	-	-	-	-	-
K6-27	1/13/10	E601	0 of 18	-	-	-	-	-
K6-27	7/8/10	E601	0 of 18	-	-	-	-	-
K6-33	1/12/10	E601	0 of 18	-	-	-	-	-
K6-33	9/14/10	E601	0 of 18	-	-	-	-	-
K6-34	1/12/10	E601	0 of 18	-	-	-	-	-
K6-34	4/7/10	E601	0 of 18	-	-	-	-	-
K6-34	7/6/10	E601	0 of 18	-	-	-	-	-
K6-34	10/6/10	E601	0 of 18	-	-	-	-	-
K6-35	1/14/10	E601	0 of 18	-	-	-	-	-
K6-35	7/7/10	E601	0 of 18	-	-	-	-	-
W-33C-01	3/23/10	E601	0 of 18	-	-	-	-	-
W-33C-01	9/9/10	E601	0 of 18	-	-	-	-	-
W-34-01	3/22/10	E601	0 of 18	-	-	-	-	-
W-34-02	3/22/10	E601	0 of 18	-	-	-	-	-

## B-3.2. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
CARNRW1	1/11/10	<0.5	<4
CARNRW1	01/11/10 DUP	<0.5	<4
CARNRW1	2/1/10	<0.5	<4
CARNRW1	02/01/10 DUP	<0.5 L	<4
CARNRW1	3/1/10	<0.5	<4
CARNRW1	03/01/10 DUP	<0.5 L	<4 L
CARNRW1	4/1/10	<0.5	<4
CARNRW1	04/01/10 DUP	<0.5	<4
CARNRW1	5/5/10	<0.5	<4
CARNRW1	05/05/10 DUP	<0.5	<4
CARNRW1	6/1/10	<0.5	<4
CARNRW1	06/01/10 DUP	<0.5 O	<4
CARNRW1	8/11/10	<0.5	<4
CARNRW1	08/11/10 DUP	<0.5	<4
CARNRW1	9/1/10	<0.5	<4
CARNRW1	09/01/10 DUP	<0.5	<4
CARNRW1	10/5/10	<0.5	<4
CARNRW1	10/05/10 DUP	<0.5 L	<4
CARNRW1	11/1/10	<0.5	<4
CARNRW1	11/01/10 DUP	<0.5 L	<4
CARNRW1	12/2/10	<0.5	<4
CARNRW1	12/02/10 DUP	<0.5	<4
CARNRW2	1/11/10	<0.5	<4
CARNRW2	01/11/10 DUP	<0.5	<4
CARNRW2	2/3/10	<0.5	<4
CARNRW2	02/03/10 DUP	<0.5	<4
CARNRW2	3/2/10	<0.5	<4
CARNRW2	03/02/10 DUP	<0.5	<4 L
CARNRW2	4/1/10	<0.5	<4
CARNRW2	04/01/10 DUP	<0.5	<4
CARNRW2	5/5/10	0.77	<4
CARNRW2	05/05/10 DUP	0.67	<4
CARNRW2	6/1/10	0.75	<4
CARNRW2	06/01/10 DUP	0.5 O	<4
CARNRW2	7/1/10	1	<4
CARNRW2	07/01/10 DUP	0.75	<2
CARNRW2	8/3/10	1.2	<4
CARNRW2	08/03/10 DUP	0.89	<4
CARNRW2	9/1/10	<0.5	<4
CARNRW2	09/01/10 DUP	<0.5	<4

## B-3.2. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
CARNRW2	10/5/10	0.63	<4
CARNRW2	10/05/10 DUP	0.6 L	<4
CARNRW2	11/1/10	<0.5	<4
CARNRW2	11/01/10 DUP	<0.5 L	<4
CARNRW2	12/2/10	1.2	<4
CARNRW2	12/02/10 DUP	0.68	<4
CARNRW3	1/11/10	<0.5	<4
CARNRW3	01/11/10 DUP	<0.5	<4
CARNRW3	2/1/10	<0.5	<4
CARNRW3	02/01/10 DUP	<0.5 L	<4
CARNRW3	3/1/10	<0.5	<4
CARNRW3	03/01/10 DUP	<0.5 L	<4 L
CARNRW3	4/1/10	<0.5	<4
CARNRW3	04/01/10 DUP	<0.5	<4
CARNRW3	5/5/10	<0.5	<4
CARNRW3	05/05/10 DUP	<0.5	<4
CARNRW3	6/1/10	<0.5	<4
CARNRW3	06/01/10 DUP	<0.5 O	<4
CARNRW3	7/1/10	<0.5	<4
CARNRW3	07/01/10 DUP	<0.5	<2
CARNRW3	8/3/10	<0.5	<4
CARNRW3	08/03/10 DUP	<0.5	<4
CARNRW3	9/1/10	<0.5	<4
CARNRW3	09/01/10 DUP	<0.5	<4
CARNRW3	10/5/10	<0.5	<4
CARNRW3	10/05/10 DUP	<0.5 L	<4
CARNRW3	11/1/10	<0.5	<4
CARNRW3	11/01/10 DUP	<0.5 L	<4
CARNRW3	12/2/10	<0.5	<4
CARNRW3	12/02/10 DUP	<0.5	<4
CARNRW4	1/11/10	<0.5	<4
CARNRW4	01/11/10 DUP	<0.5	<4
CARNRW4	2/1/10	8.7	<4
CARNRW4	02/01/10 DUP	7.9 L	<4
CARNRW4	3/1/10	9.5	<4
CARNRW4	03/01/10 DUP	7.8 L	<4 L
CARNRW4	4/1/10	5.1	<4
CARNRW4	04/01/10 DUP	4.5	<4
CARNRW4	5/5/10	1.7	<4
CARNRW4	05/05/10 DUP	1.4	<4

## B-3.2. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
CARNRW4	6/1/10	0.74	<4
CARNRW4	06/01/10 DUP	0.56 O	<4
CARNRW4	7/1/10	0.5	<4
CARNRW4	07/01/10 DUP	<0.5	<2
CARNRW4	8/3/10	<0.5	<4
CARNRW4	08/03/10 DUP	<0.5	<4
CARNRW4	9/1/10	<0.5	<4
CARNRW4	09/01/10 DUP	<0.5	<4
CARNRW4	10/5/10	<0.5	<4
CARNRW4	10/05/10 DUP	<0.5 L	<4
CARNRW4	11/1/10	<0.5	<4
CARNRW4	11/01/10 DUP	<0.5 L	<4
CARNRW4	12/2/10	<0.5	<4
CARNRW4	12/02/10 DUP	<0.5	<4
BC6-10	1/14/10	0.58	<4 L
EP6-06	1/25/10	<0.5 E	<4
EP6-06	4/6/10	<0.5 E	<4
EP6-06	04/06/10 DUP	<0.5	<4
EP6-06	7/6/10	<0.5	<4
EP6-06	10/6/10	<0.5	<4
EP6-07	1/13/10	<0.5	<4 O
EP6-09	1/21/10	<0.5 E	<4
EP6-09	4/14/10	<0.5	<4
EP6-09	7/6/10	<0.5 E	<4
EP6-09	07/06/10 DUP	1.5	<4
EP6-09	10/6/10	<0.5	<4
W-PIT6-1819	1/12/10	<0.5	<4
W-PIT6-1819	7/6/10	<0.5	<4
K6-01	1/14/10	<0.5	<4 L
K6-01S	1/19/10	<1 D	<4 O
K6-01S	4/6/10	<1 D	<4
K6-01S	7/6/10	<2.5 D	<4
K6-01S	10/7/10	<1 D	<4
K6-03	1/12/10	<0.5	<4
K6-04	1/12/10	5.2	<4
K6-14	1/14/10	<1 D	<4
K6-16	1/13/10	7.8	<4 L
K6-16	01/13/10 DUP	9.9 D	<4 O
K6-17	1/12/10	<0.5	<4
K6-17	01/12/10 DUP	<0.5	<4

## B-3.2. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
K6-17	7/7/10	<0.5	<4
K6-18	1/13/10	22 D	<4 L
K6-18	01/13/10 DUP	26 D	<4 L
K6-19	1/19/10	<0.5	<4 O
K6-19	01/19/10 DUP	<0.5	<4 O
K6-19	4/6/10	<0.5 E	<4
K6-19	7/6/10	<0.5 E	<4
K6-19	07/06/10 DUP	<0.5	<4
K6-19	10/6/10	<0.5	<4 E
K6-19	10/06/10 DUP	<0.5	<4 E
K6-22	1/14/10	<1 D	<4
K6-22	7/7/10	<0.5	<4
K6-23	1/14/10	150 D	<4
K6-25	1/13/10	<0.5	<4 L
K6-26	1/13/10	<0.5	<4 O
K6-27	1/13/10	<0.5	<4 L
K6-33	1/12/10	<0.5	<4
K6-34	1/12/10	<0.5	<4
K6-34	7/6/10	<0.5	<4
K6-35	1/14/10	<0.5	<4 L
W-33C-01	3/23/10	4.2 D	<4
W-34-01	3/22/10	<0.5	<4
W-34-02	3/22/10	<0.5	<4

## B-3.3. Pit 6 Landfill Operable Unit tritium in ground water.

Location	Date	Tritium (pCi/L)
CARNRW1	1/11/10	<100
CARNRW1	01/11/10 DUP	<100
CARNRW1	2/1/10	<100
CARNRW1	02/01/10 DUP	<100
CARNRW1	3/1/10	<100
CARNRW1	03/01/10 DUP	<100
CARNRW1	4/1/10	<100
CARNRW1	04/01/10 DUP	<100
CARNRW1	5/5/10	<100
CARNRW1	05/05/10 DUP	<100
CARNRW1	6/1/10	<100 L
CARNRW1	06/01/10 DUP	<100
CARNRW1	8/11/10	<100
CARNRW1	08/11/10 DUP	<100
CARNRW1	9/1/10	<100
CARNRW1	09/01/10 DUP	<100
CARNRW1	10/5/10	<100
CARNRW1	10/05/10 DUP	<100
CARNRW1	11/1/10	<100
CARNRW1	11/01/10 DUP	<100
CARNRW1	12/2/10	<100
CARNRW1	12/02/10 DUP	<100
CARNRW2	1/11/10	<100
CARNRW2	01/11/10 DUP	<100
CARNRW2	2/3/10	<100
CARNRW2	02/03/10 DUP	<100
CARNRW2	3/2/10	<100
CARNRW2	03/02/10 DUP	<100
CARNRW2	4/1/10	<100
CARNRW2	04/01/10 DUP	<100
CARNRW2	5/5/10	<100
CARNRW2	05/05/10 DUP	<100
CARNRW2	6/1/10	<100 L
CARNRW2	06/01/10 DUP	<100
CARNRW2	7/1/10	<100
CARNRW2	07/01/10 DUP	<100
CARNRW2	8/3/10	<100
CARNRW2	08/03/10 DUP	<100
CARNRW2	9/1/10	<100
CARNRW2	09/01/10 DUP	<100



## B-3.3. Pit 6 Landfill Operable Unit tritium in ground water.

Location	Date	Tritium (pCi/L)
CARNRW2	10/5/10	<100
CARNRW2	10/05/10 DUP	<100
CARNRW2	11/1/10	<100
CARNRW2	11/01/10 DUP	<100
CARNRW2	12/2/10	<100
CARNRW2	12/02/10 DUP	<100
CARNRW3	1/11/10	<100
CARNRW3	01/11/10 DUP	<100
CARNRW3	2/1/10	<100
CARNRW3	02/01/10 DUP	<100
CARNRW3	3/1/10	<100
CARNRW3	03/01/10 DUP	<100
CARNRW3	4/1/10	<100
CARNRW3	04/01/10 DUP	<100
CARNRW3	5/5/10	<100
CARNRW3	05/05/10 DUP	<100
CARNRW3	6/1/10	<100 L
CARNRW3	06/01/10 DUP	<100
CARNRW3	7/1/10	<100
CARNRW3	07/01/10 DUP	<100
CARNRW3	8/3/10	<100
CARNRW3	08/03/10 DUP	<100
CARNRW3	9/1/10	<100
CARNRW3	09/01/10 DUP	<100
CARNRW3	10/5/10	<100
CARNRW3	10/05/10 DUP	<100
CARNRW3	11/1/10	<100
CARNRW3	11/01/10 DUP	<100
CARNRW3	12/2/10	<100
CARNRW3	12/02/10 DUP	<100
CARNRW4	1/11/10	<100
CARNRW4	01/11/10 DUP	<100
CARNRW4	2/1/10	<100
CARNRW4	02/01/10 DUP	<100
CARNRW4	3/1/10	<100
CARNRW4	03/01/10 DUP	<100
CARNRW4	4/1/10	<100
CARNRW4	04/01/10 DUP	<100
CARNRW4	5/5/10	<100
CARNRW4	05/05/10 DUP	<100

## B-3.3. Pit 6 Landfill Operable Unit tritium in ground water.

Location	Date	Tritium (pCi/L)
CARNRW4	6/1/10	<100 L
CARNRW4	06/01/10 DUP	<100
CARNRW4	7/1/10	<100
CARNRW4	07/01/10 DUP	<100
CARNRW4	8/3/10	<100
CARNRW4	08/03/10 DUP	<100
CARNRW4	9/1/10	<100
CARNRW4	09/01/10 DUP	<100
CARNRW4	10/5/10	<100
CARNRW4	10/05/10 DUP	<100
CARNRW4	11/1/10	<100
CARNRW4	11/01/10 DUP	<100
CARNRW4	12/2/10	<100
CARNRW4	12/02/10 DUP	<100
BC6-10	1/14/10	<100
BC6-10	7/7/10	<100 O
EP6-06	1/25/10	<100
EP6-06	4/6/10	<100
EP6-06	04/06/10 DUP	<100
EP6-06	7/6/10	<100
EP6-06	10/6/10	<100
EP6-07	1/13/10	<100
EP6-07	7/7/10	<100 O
EP6-09	1/21/10	192 ± 69.3 S
EP6-09	03/04/10 REX	<100
EP6-09	03/11/10 REX	<100
EP6-09	4/14/10	<100
EP6-09	7/6/10	<100
EP6-09	07/06/10 DUP	<100
EP6-09	10/6/10	<100
W-PIT6-1819	1/12/10	139 ± 59.9
W-PIT6-1819	4/7/10	100 ± 73.0
W-PIT6-1819	7/6/10	167 ± 70.4 O
W-PIT6-1819	10/6/10	162 ± 65.3
K6-01	1/14/10	<100
K6-01	7/7/10	<100 O
K6-01S	1/19/10	108 ± 57.7
K6-01S	4/6/10	132 ± 69.1
K6-01S	7/6/10	<100
K6-01S	10/7/10	<100

## B-3.3. Pit 6 Landfill Operable Unit tritium in ground water.

Location	Date	Tritium (pCi/L)
K6-03	1/12/10	<100
K6-03	7/6/10	<100 O
K6-04	1/12/10	<100
K6-04	7/7/10	<100 O
K6-14	1/14/10	<100
K6-14	7/8/10	<100 O
K6-16	1/13/10	<100
K6-16	01/13/10 DUP	<100
K6-16	7/8/10	<100 O
K6-16	07/08/10 DUP	<100 O
K6-17	1/12/10	<100
K6-17	01/12/10 DUP	<100
K6-17	4/7/10	<100
K6-17	04/07/10 DUP	<100
K6-17	7/7/10	<100 O
K6-17	10/6/10	<100
K6-17	10/06/10 DUP	<100
K6-18	1/13/10	265 ± 80.7
K6-18	01/13/10 DUP	170 ± 64.8
K6-18	7/8/10	162 ± 64.0 O
K6-19	1/19/10	241 ± 77.2
K6-19	01/19/10 DUP	240 ± 76.7
K6-19	4/6/10	214 ± 81.5
K6-19	7/6/10	284 ± 88.1
K6-19	07/06/10 DUP	<100
K6-19	10/6/10	211 ± 73.4
K6-19	10/06/10 DUP	237 ± 77.4
K6-22	1/14/10	<100
K6-22	4/7/10	<100
K6-22	7/7/10	<100 O
K6-22	10/6/10	<100
K6-23	1/14/10	<100
K6-23	7/6/10	<100 O
K6-24	7/8/10	303 ± 87.9 O
K6-25	1/13/10	<100
K6-25	7/8/10	<100 O
K6-26	1/13/10	<100
K6-26	7/8/10	<100 O
K6-27	1/13/10	<100
K6-27	7/8/10	<100 O

## B-3.3. Pit 6 Landfill Operable Unit tritium in ground water.

Location	Date	Tritium (pCi/L)
K6-33	1/12/10	292 ± 84.2
K6-33	9/14/10	160 ± 65.8
K6-34	1/12/10	<100
K6-34	4/7/10	<100
K6-34	7/6/10	<100 O
K6-34	10/6/10	<100
K6-35	1/14/10	<100
K6-35	7/7/10	<100 O
W-33C-01	3/23/10	<100
W-33C-01	9/9/10	<100
W-34-01	3/22/10	<100
W-34-02	3/22/10	<100



B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon							Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)		
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-35B-02	8/9/10	E601	<0.5	<0.5	<0.5	<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	11/10/10	E601	<0.5	<0.5	<0.5	<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	3/8/10	E601	<0.5	<0.5	<0.5	<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	5/20/10	E601	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O
W-35B-03	8/9/10	E601	<0.5	<0.5	<0.5	<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	11/10/10	E601	<0.5	<0.5	<0.5	<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	3/8/10	E601	<0.5	<0.5	<0.5	<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	5/20/10	E601	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O
W-35B-04	8/9/10	E601	<0.5	<0.5	<0.5	<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	11/10/10	E601	<0.5	<0.5	<0.5	<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	3/8/10	E601	<0.5	<0.5	<0.5	<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	5/20/10	E601	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O	<0.5 O
W-35B-05	8/9/10	E601	<0.5	<0.5	<0.5	<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	11/10/10	E601	<0.5	<0.5	<0.5	<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	3/15/10	E601	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-35C-01	8/18/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-02	3/17/10	E601	<0.5	<0.5	<0.5	<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	8/16/10	E601	<0.5	<0.5	<0.5	<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	2/9/10	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-35C-04	4/7/10	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-35C-04	8/2/10	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	10/5/10	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-05	3/1/10	E601	<0.5	<0.5	<0.5	<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	8/9/10	E601	<0.5	<0.5	<0.5	<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	3/1/10	E601	<0.5	<0.5	<0.5	<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	8/9/10	E601	<0.5	<0.5	<0.5	<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	3/16/10	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-35C-07	8/9/10	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	8/9/10	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-35C-08	3/16/10	E601	<0.5	<0.5	<0.5	<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	8/9/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4A	9/8/10	E601	9.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4A	09/08/10 DUP	E601	9.3	<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	3/22/10	E601	2.7	<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-4AS	9/8/10	E601	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4B	3/16/10	E601	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-4B	8/25/10	E601	2.6	<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-4C	3/16/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon									Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)			
W-4C	6/15/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	8/25/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	11/17/10 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-6BD	3/17/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BD	8/10/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BS	3/8/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BS	8/10/10	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-6BS	08/10/10 DUP	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-6CD	3/10/10	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-6CD	8/16/10	E601	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CI	3/10/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CI	8/16/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CS	3/10/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CS	8/16/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6EI	3/2/10	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-6EI	8/25/10	E601	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6ER	2/9/10	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-6ER	4/7/10	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-6ER	8/2/10	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-6ER	10/5/10	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-6ES	3/2/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6ES	8/25/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6F	3/10/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6F	8/17/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6G	3/10/10	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-6G	8/17/10	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-6H	3/15/10	E601	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-6H	6/15/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6H	8/18/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6H	11/10/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6I	3/15/10	E601	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-6I	8/18/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	3/15/10	E601	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-6J	6/15/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	8/18/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	11/10/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6K	3/2/10	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	03/02/10 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-6K	8/10/10	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

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon							Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)		
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-6L	3/2/10	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-6L	8/10/10	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-808-01	2/24/10	E601	<0.5	<0.5	<0.5	<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	8/25/10	E601	<0.5	<0.5	<0.5	<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	2/24/10	E601	<0.5	<0.5	<0.5	<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	8/25/10	E601	<0.5	<0.5	<0.5	<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	2/24/10	E601	2.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-01	8/26/10	E601	2.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	1.8	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-01	08/26/10 DUP	E601	1.7	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-02	2/24/10	E601	<0.5	<0.5	<0.5	<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	8/26/10	E601	<0.5	<0.5	<0.5	<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	2/24/10	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-809-03	8/26/10	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	2/24/10	E601	<0.5	<0.5	<0.5	<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	2/25/10	E601	<0.5	<0.5	<0.5	<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	8/25/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-01	3/2/10	E601	1.7	<0.5	1	<0.5	1.2	0.6	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-01	03/02/10 DUP	E601	2.2	<0.5	1.2	<0.5	0.71	0.69	<0.5	0.58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-01	9/7/10	E601	2.6	<0.5	1.5	<0.5	0.9	0.9	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-04	3/1/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-04	6/15/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-04	8/19/10	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-2138	3/2/10	E601	5.9	<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-814-2138	9/7/10	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-815-02	1/13/10	E601	5.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.69	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-02	4/12/10	E601	5.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.68	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-02	8/9/10	E601	5.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.68	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-02	10/4/10	E601	5.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-04	1/13/10	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-815-04	4/12/10	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-815-04	8/9/10	E601	3.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.59	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-04	10/4/10	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-815-05	2/25/10	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-815-05	8/31/10	E601	<0.5	<0.5	<0.5	<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	3/15/10	E601	20 L	<0.5	<0.5	<0.5 L	<0.5 L	0.6 L	<0.5 L	<0.5	0.7	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-815-06	03/15/10 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-815-06	8/24/10	E601	19	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-07	3/15/10	E601	22 L	<0.5	<0.5	<0.5 L	<0.5 L	0.7 L	<0.5 L	<0.5	0.6	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-815-07	8/24/10	E601	23	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5



## B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon									Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)			
W-815-08	2/25/10	E601	<0.5	<0.5	<0.5	<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	8/31/10	E601	<0.5	<0.5	<0.5	<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	8/26/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2110	3/15/10	E601	2.8	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-815-2110	6/15/10	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	06/15/10 DUP	E601	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	8/17/10	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-815-2110	11/10/10	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	11/10/10	E601	2.6	<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	3/15/10	E601	2.1	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-815-2111	6/15/10	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	8/17/10	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	11/10/10	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-815-2217	3/17/10	E601	<0.5	<0.5	<0.5	<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	8/16/10	E601	<0.5	<0.5	<0.5	<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	10/6/10	E624	1.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-817-01	2/10/10	E601	<0.5	<0.5	<0.5	<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	4/13/10	E601	<0.5	<0.5	<0.5	<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	04/13/10 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-817-01	7/14/10	E601	<0.5	<0.5	<0.5	<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	10/4/10	E601	<0.5	<0.5	<0.5	<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	2/9/10	E601	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
W-817-03	4/13/10	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	8/9/10	E601	8.8	<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-817-03	10/4/10	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-817-03A	3/1/10	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-817-03A	9/1/10	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-817-04	3/1/10	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-817-04	03/01/10 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-817-04	9/1/10	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-817-04	09/01/10 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-817-05	3/2/10	E601	<0.5	<0.5	<0.5	<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	9/7/10	E601	<0.5	<0.5	<0.5	<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	3/1/10	E601	<0.5	<0.5	<0.5	<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	9/1/10	E601	<0.5	<0.5	<0.5	<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	2/9/10	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-817-2318	4/13/10	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-817-2318	8/9/10	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-817-2318	10/4/10	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

## B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon											Vinyl chloride (µg/L)
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)	
W-817-2609	9/28/10	E624	9.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-818-01	3/15/10	E601	25 L	<0.5	<0.5	<0.5 L	<0.5 L	0.8 L	<0.5 L	<0.5	0.7	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-818-01	8/24/10	E601	25	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-03	3/16/10	E601	9.8	<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-818-03	9/7/10	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-818-04	3/2/10	E601	<0.5	<0.5	<0.5	<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	8/23/10	E601	<0.5	<0.5	<0.5	<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	3/16/10	E601	9.7	<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-818-06	03/16/10 DUP	E601	9.7	<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-818-06	8/23/10	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-818-07	3/2/10	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-818-07	8/23/10	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-818-08	2/3/10	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-818-08	4/13/10	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-818-08	11/1/10	E601	39	<0.5	<0.5	<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	2/3/10	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-818-09	4/13/10	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	11/1/10	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-818-11	3/15/10	E601	59 L	<0.5	<0.5	<0.5 L	<0.5 L	0.8 L	<0.5 L	<0.5	1.1	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-818-11	03/15/10 DUP	E601	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.74	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-11	8/24/10	E601	60	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-11	08/24/10 DUP	E601	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.68	<0.5	<0.5	<0.5	<0.5	<0.5
W-819-02	3/2/10	E601	<0.5	<0.5	<0.5	<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	8/19/10	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-01	3/15/10	E601	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-823-01	8/18/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-02	3/15/10	E601	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-823-02	8/18/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-02	12/1/10	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 J	<0.5
W-823-03	3/15/10	E601	0.8	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-823-03	8/18/10	E601	0.7 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-13	3/15/10	E601	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-823-13	8/18/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-827-05	3/16/10	E601	<0.5	<0.5	<0.5	<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	9/8/10	E601	<0.5	<0.5	<0.5	<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	5/17/10	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-829-06	05/17/10 DUP	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-829-06	11/1/10	E601	30	<0.5	6.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-829-08	5/18/10	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

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)				
W-829-08	9/7/10	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	<0.5
W-829-08	11/1/10	E601	6.4	<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	<0.5
W-829-15	4/15/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-15	04/15/10 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	1/14/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	01/14/10 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	4/15/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	7/15/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	07/15/10 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	10/21/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	10/21/10 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1940	3/16/10	E601	<0.5	<0.5	<0.5	<0.5	<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	9/7/10	E601	<0.5	<0.5	<0.5	<0.5	<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	4/15/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
WELL18	1/12/10	E601	<0.5	<0.5	<0.5	<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	01/12/10 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	<0.5
WELL18	2/18/10	E601	<0.5	<0.5	<0.5	<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	02/18/10 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	<0.5
WELL18	6/17/10	E601	<0.5	<0.5	<0.5	<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	06/17/10 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	<0.5
WELL18	7/22/10	E601	<0.5	<0.5	<0.5	<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	07/22/10 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	<0.5
WELL18	8/17/10	E601	<0.5	<0.5	<0.5	<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	08/17/10 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	<0.5
WELL18	9/21/10	E601	<0.5	<0.5	<0.5	<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	09/21/10 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	<0.5
WELL18	10/13/10	E601	<0.5	<0.5	<0.5	<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	10/13/10 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	11/17/10	E601	<0.5	<0.5	<0.5	<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	11/17/10 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	<0.5
WELL18	12/15/10	E601	<0.5	<0.5	<0.5	<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	12/15/10 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	<0.5
WELL20	1/12/10	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	<0.5
WELL20	01/12/10 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H	<0.5 H
WELL20	2/18/10	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	<0.5
WELL20	02/18/10 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5
WELL20	3/16/10	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	<0.5
WELL20	03/16/10 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	<0.5
WELL20	4/21/10	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	<0.5

B-4.1. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)				
WELL20	04/21/10 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
WELL20	5/19/10	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	<0.5
WELL20	05/19/10 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	<0.5	<1	<0.5
WELL20	6/17/10	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	<0.5
WELL20	06/17/10 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	<0.5	<1	<0.5
WELL20	7/22/10	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	<0.5
WELL20	07/22/10 DUP	E502.2	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<0.5 H	<1 H	<0.5 H
WELL20	8/17/10	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	<0.5
WELL20	08/17/10 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	<0.5	<1	<0.5
WELL20	9/21/10	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	<0.5
WELL20	09/21/10 DUP	E502.2	<0.5	<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 L	<1	<0.5
WELL20	10/13/10	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	<0.5
WELL20	10/13/10 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	<0.5	<1	<0.5
WELL20	11/17/10	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	<0.5
WELL20	11/17/10 DUP	E502.2	<0.5 B	<0.5 B	<0.5	<0.5 B	<0.5 B	<0.5 B	<0.5 B	<0.5 B	<0.5 B	<0.5 B	<0.5 B	<0.5	<0.5	<1	<0.5
WELL20	12/15/10	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	<0.5
WELL20	12/15/10 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	<0.5	<1	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloroethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Carbon disulfide (µg/L)	Methylene chloride (µg/L)
GALLO1	1/12/10	E502.2	0 of 46	-	-	-	-
GALLO1	1/12/10	E601	0 of 18	-	-	-	-
GALLO1	01/12/10 DUP	E502.2	0 of 45	-	-	-	-
GALLO1	01/12/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	2/18/10	E601	0 of 18	-	-	-	-
GALLO1	02/18/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	3/11/10	E601	0 of 18	-	-	-	-
GALLO1	03/11/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	4/12/10	E502.2	0 of 46	-	-	-	-
GALLO1	4/12/10	E601	0 of 18	-	-	-	-
GALLO1	04/12/10 DUP	E502.2	0 of 45	-	-	-	-
GALLO1	04/12/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	5/19/10	E601	0 of 18	-	-	-	-
GALLO1	05/19/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	6/16/10	E601	0 of 18	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Carbon disulfide (µg/L)	Methylene chloride (µg/L)
GALLO1	06/16/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	7/14/10	E502.2	0 of 46	-	-	-	-
GALLO1	7/14/10	E601	0 of 18	-	-	-	-
GALLO1	07/14/10 DUP	E502.2	0 of 45	-	-	-	-
GALLO1	07/14/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	8/12/10	E601	0 of 18	-	-	-	-
GALLO1	08/12/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	9/16/10	E601	0 of 18	-	-	-	-
GALLO1	09/16/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	10/13/10	E601	0 of 18	-	-	-	-
GALLO1	10/13/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	10/14/10	E502.2	0 of 46	-	-	-	-
GALLO1	10/14/10 DUP	E502.2	0 of 45	-	-	-	-
GALLO1	11/17/10	E601	0 of 18	-	-	-	-
GALLO1	11/17/10 DUP	E601	0 of 18	-	-	-	-
GALLO1	12/21/10	E601	0 of 18	-	-	-	-
GALLO1	12/21/10 DUP	E601	0 of 18	-	-	-	-
W-35B-01	3/8/10	E601	0 of 18	-	-	-	-
W-35B-01	5/20/10	E601	0 of 18	-	-	-	-
W-35B-01	8/9/10	E601	0 of 18	-	-	-	-
W-35B-01	11/10/10	E601	0 of 18	-	-	-	-
W-35B-02	3/8/10	E601	0 of 18	-	-	-	-
W-35B-02	5/20/10	E601	0 of 18	-	-	-	-
W-35B-02	8/9/10	E601	0 of 18	-	-	-	-
W-35B-02	11/10/10	E601	0 of 18	-	-	-	-
W-35B-03	3/8/10	E601	0 of 18	-	-	-	-
W-35B-03	5/20/10	E601	0 of 18	-	-	-	-
W-35B-03	8/9/10	E601	0 of 18	-	-	-	-
W-35B-03	11/10/10	E601	0 of 18	-	-	-	-
W-35B-04	3/8/10	E601	0 of 18	-	-	-	-
W-35B-04	5/20/10	E601	0 of 18	-	-	-	-
W-35B-04	8/9/10	E601	0 of 18	-	-	-	-
W-35B-04	11/10/10	E601	0 of 18	-	-	-	-
W-35B-05	3/8/10	E601	0 of 18	-	-	-	-
W-35B-05	5/20/10	E601	0 of 18	-	-	-	-
W-35B-05	8/9/10	E601	0 of 18	-	-	-	-
W-35B-05	11/10/10	E601	0 of 18	-	-	-	-
W-35C-01	3/15/10	E601	0 of 18	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Carbon disulfide (µg/L)	Methylene chloride (µg/L)
W-35C-01	8/18/10	E601	0 of 18	-	-	-	-
W-35C-02	3/17/10	E601	0 of 18	-	-	-	-
W-35C-02	8/16/10	E601	0 of 18	-	-	-	-
W-35C-04	2/9/10	E601	0 of 18	-	-	-	-
W-35C-04	4/7/10	E601	0 of 18	-	-	-	-
W-35C-04	8/2/10	E601	0 of 18	-	-	-	-
W-35C-04	10/5/10	E601	0 of 18	-	-	-	-
W-35C-05	3/1/10	E601	0 of 18	-	-	-	-
W-35C-05	8/9/10	E601	0 of 18	-	-	-	-
W-35C-06	3/1/10	E601	0 of 18	-	-	-	-
W-35C-06	8/9/10	E601	0 of 18	-	-	-	-
W-35C-07	3/16/10	E601	1 of 18	-	-	-	0.5
W-35C-07	8/9/10	E601	0 of 18	-	-	-	-
W-35C-07	8/9/10	E601	0 of 18	-	-	-	-
W-35C-08	3/16/10	E601	0 of 18	-	-	-	-
W-35C-08	8/9/10	E601	0 of 18	-	-	-	-
W-4A	9/8/10	E601	0 of 18	-	-	-	-
W-4A	09/08/10 DUP	E601	0 of 18	-	-	-	-
W-4AS	3/22/10	E601	0 of 18	-	-	-	-
W-4AS	9/8/10	E601	0 of 18	-	-	-	-
W-4B	3/16/10	E601	0 of 18	-	-	-	-
W-4B	8/25/10	E601	0 of 18	-	-	-	-
W-4C	3/16/10	E601	0 of 18	-	-	-	-
W-4C	6/15/10	E601	0 of 18	-	-	-	-
W-4C	8/25/10	E601	0 of 18	-	-	-	-
W-4C	11/17/10 DUP	E601	0 of 18	-	-	-	-
W-6BD	3/17/10	E601	0 of 18	-	-	-	-
W-6BD	8/10/10	E601	0 of 18	-	-	-	-
W-6BS	3/8/10	E601	0 of 18	-	-	-	-
W-6BS	8/10/10	E601	0 of 18	-	-	-	-
W-6BS	08/10/10 DUP	E601	0 of 18	-	-	-	-
W-6CD	3/10/10	E601	0 of 18	-	-	-	-
W-6CD	8/16/10	E601	0 of 18	-	-	-	-
W-6CI	3/10/10	E601	0 of 18	-	-	-	-
W-6CI	8/16/10	E601	0 of 18	-	-	-	-
W-6CS	3/10/10	E601	0 of 18	-	-	-	-
W-6CS	8/16/10	E601	0 of 18	-	-	-	-
W-6EI	3/2/10	E601	0 of 18	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Carbon disulfide (µg/L)	Methylene chloride (µg/L)
W-6EI	8/25/10	E601	0 of 18	-	-	-	-
W-6ER	2/9/10	E601	0 of 18	-	-	-	-
W-6ER	4/7/10	E601	0 of 18	-	-	-	-
W-6ER	8/2/10	E601	0 of 18	-	-	-	-
W-6ER	10/5/10	E601	0 of 18	-	-	-	-
W-6ES	3/2/10	E601	0 of 18	-	-	-	-
W-6ES	8/25/10	E601	0 of 18	-	-	-	-
W-6F	3/10/10	E601	0 of 18	-	-	-	-
W-6F	8/17/10	E601	0 of 18	-	-	-	-
W-6G	3/10/10	E601	0 of 18	-	-	-	-
W-6G	8/17/10	E601	0 of 18	-	-	-	-
W-6H	3/15/10	E601	0 of 18	-	-	-	-
W-6H	6/15/10	E601	0 of 18	-	-	-	-
W-6H	8/18/10	E601	0 of 18	-	-	-	-
W-6H	11/10/10	E601	0 of 18	-	-	-	-
W-6I	3/15/10	E601	0 of 18	-	-	-	-
W-6I	8/18/10	E601	0 of 18	-	-	-	-
W-6J	3/15/10	E601	0 of 18	-	-	-	-
W-6J	6/15/10	E601	0 of 18	-	-	-	-
W-6J	8/18/10	E601	0 of 18	-	-	-	-
W-6J	11/10/10	E601	0 of 18	-	-	-	-
W-6K	3/2/10	E601	0 of 18	-	-	-	-
W-6K	03/02/10 DUP	E601	0 of 18	-	-	-	-
W-6K	8/10/10	E601	0 of 18	-	-	-	-
W-6L	3/2/10	E601	0 of 18	-	-	-	-
W-6L	8/10/10	E601	0 of 18	-	-	-	-
W-808-01	2/24/10	E601	0 of 18	-	-	-	-
W-808-01	8/25/10	E601	0 of 18	-	-	-	-
W-808-03	2/24/10	E601	0 of 18	-	-	-	-
W-808-03	8/25/10	E601	0 of 18	-	-	-	-
W-809-01	2/24/10	E601	0 of 18	-	-	-	-
W-809-01	8/26/10	E601	0 of 18	-	-	-	-
W-809-01	08/26/10 DUP	E601	0 of 18	-	-	-	-
W-809-02	2/24/10	E601	0 of 18	-	-	-	-
W-809-02	8/26/10	E601	0 of 18	-	-	-	-
W-809-03	2/24/10	E601	0 of 18	-	-	-	-
W-809-03	8/26/10	E601	0 of 18	-	-	-	-
W-809-04	2/24/10	E601	0 of 18	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Carbon disulfide (µg/L)	Methylene chloride (µg/L)
W-810-01	2/25/10	E601	0 of 18	-	-	-	-
W-810-01	8/25/10	E601	0 of 18	-	-	-	-
W-814-01	3/2/10	E601	0 of 18	-	-	-	-
W-814-01	03/02/10 DUP	E601	1 of 18	1.2	-	-	-
W-814-01	9/7/10	E601	1 of 18	1.5	-	-	-
W-814-04	3/1/10	E601	0 of 18	-	-	-	-
W-814-04	6/15/10	E601	0 of 18	-	-	-	-
W-814-04	8/19/10	E601	0 of 18	-	-	-	-
W-814-2138	3/2/10	E601	0 of 18	-	-	-	-
W-814-2138	9/7/10	E601	0 of 18	-	-	-	-
W-815-02	1/13/10	E601	0 of 18	-	-	-	-
W-815-02	4/12/10	E601	0 of 18	-	-	-	-
W-815-02	8/9/10	E601	0 of 18	-	-	-	-
W-815-02	10/4/10	E601	0 of 18	-	-	-	-
W-815-04	1/13/10	E601	0 of 18	-	-	-	-
W-815-04	4/12/10	E601	0 of 18	-	-	-	-
W-815-04	8/9/10	E601	0 of 18	-	-	-	-
W-815-04	10/4/10	E601	0 of 18	-	-	-	-
W-815-05	2/25/10	E601	0 of 18	-	-	-	-
W-815-05	8/31/10	E601	0 of 18	-	-	-	-
W-815-06	3/15/10	E601	0 of 18	-	-	-	-
W-815-06	03/15/10 DUP	E601	0 of 18	-	-	-	-
W-815-06	8/24/10	E601	0 of 18	-	-	-	-
W-815-07	3/15/10	E601	0 of 18	-	-	-	-
W-815-07	8/24/10	E601	0 of 18	-	-	-	-
W-815-08	2/25/10	E601	0 of 18	-	-	-	-
W-815-08	8/31/10	E601	0 of 18	-	-	-	-
W-815-1928	8/26/10	E601	1 of 18	-	1.9	-	-
W-815-2110	3/15/10	E601	0 of 18	-	-	-	-
W-815-2110	6/15/10	E601	0 of 18	-	-	-	-
W-815-2110	06/15/10 DUP	E601	0 of 18	-	-	-	-
W-815-2110	8/17/10	E601	0 of 18	-	-	-	-
W-815-2110	11/10/10	E601	0 of 18	-	-	-	-
W-815-2110	11/10/10	E601	0 of 18	-	-	-	-
W-815-2111	3/15/10	E601	0 of 18	-	-	-	-
W-815-2111	6/15/10	E601	0 of 18	-	-	-	-
W-815-2111	8/17/10	E601	0 of 18	-	-	-	-
W-815-2111	11/10/10	E601	0 of 18	-	-	-	-



Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Carbon disulfide (µg/L)	Methylene chloride (µg/L)
W-815-2217	3/17/10	E601	0 of 18	-	-	-	-
W-815-2217	8/16/10	E601	0 of 18	-	-	-	-
W-815-2608	10/6/10	E624	0 of 30	-	-	-	-
W-817-01	2/10/10	E601	0 of 18	-	-	-	-
W-817-01	4/13/10	E601	0 of 18	-	-	-	-
W-817-01	04/13/10 DUP	E601	0 of 18	-	-	-	-
W-817-01	7/14/10	E601	0 of 18	-	-	-	-
W-817-01	10/4/10	E601	0 of 18	-	-	-	-
W-817-03	2/9/10	E601	0 of 18	-	-	-	-
W-817-03	4/13/10	E601	0 of 18	-	-	-	-
W-817-03	8/9/10	E601	0 of 18	-	-	-	-
W-817-03	10/4/10	E601	0 of 18	-	-	-	-
W-817-03A	3/1/10	E601	0 of 18	-	-	-	-
W-817-03A	9/1/10	E601	0 of 18	-	-	-	-
W-817-04	3/1/10	E601	0 of 18	-	-	-	-
W-817-04	03/01/10 DUP	E601	0 of 18	-	-	-	-
W-817-04	9/1/10	E601	0 of 18	-	-	-	-
W-817-04	09/01/10 DUP	E601	0 of 18	-	-	-	-
W-817-05	3/2/10	E601	0 of 18	-	-	-	-
W-817-05	9/7/10	E601	0 of 18	-	-	-	-
W-817-07	3/1/10	E601	0 of 18	-	-	-	-
W-817-07	9/1/10	E601	0 of 18	-	-	-	-
W-817-2318	2/9/10	E601	0 of 18	-	-	-	-
W-817-2318	4/13/10	E601	0 of 18	-	-	-	-
W-817-2318	8/9/10	E601	0 of 18	-	-	-	-
W-817-2318	10/4/10	E601	0 of 18	-	-	-	-
W-817-2609	9/28/10	E624	1 of 30	-	-	2	-
W-818-01	3/15/10	E601	0 of 18	-	-	-	-
W-818-01	8/24/10	E601	0 of 18	-	-	-	-
W-818-03	3/16/10	E601	0 of 18	-	-	-	-
W-818-03	9/7/10	E601	0 of 18	-	-	-	-
W-818-04	3/2/10	E601	0 of 18	-	-	-	-
W-818-04	8/23/10	E601	0 of 18	-	-	-	-
W-818-06	3/16/10	E601	0 of 18	-	-	-	-
W-818-06	03/16/10 DUP	E601	0 of 18	-	-	-	-
W-818-06	8/23/10	E601	0 of 18	-	-	-	-
W-818-07	3/2/10	E601	0 of 18	-	-	-	-
W-818-07	8/23/10	E601	0 of 18	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Carbon disulfide (µg/L)	Methylene chloride (µg/L)
W-818-08	2/3/10	E601	0 of 18	-	-	-	-
W-818-08	4/13/10	E601	0 of 18	-	-	-	-
W-818-08	11/1/10	E601	0 of 18	-	-	-	-
W-818-09	2/3/10	E601	0 of 18	-	-	-	-
W-818-09	4/13/10	E601	0 of 18	-	-	-	-
W-818-09	11/1/10	E601	0 of 18	-	-	-	-
W-818-11	3/15/10	E601	0 of 18	-	-	-	-
W-818-11	03/15/10 DUP	E601	0 of 18	-	-	-	-
W-818-11	8/24/10	E601	0 of 18	-	-	-	-
W-818-11	08/24/10 DUP	E601	0 of 18	-	-	-	-
W-819-02	3/2/10	E601	0 of 18	-	-	-	-
W-819-02	8/19/10	E601	0 of 18	-	-	-	-
W-823-01	3/15/10	E601	0 of 18	-	-	-	-
W-823-01	8/18/10	E601	0 of 18	-	-	-	-
W-823-02	3/15/10	E601	0 of 18	-	-	-	-
W-823-02	8/18/10	E601	0 of 18	-	-	-	-
W-823-02	12/1/10	E8260	0 of 36	-	-	-	-
W-823-03	3/15/10	E601	0 of 18	-	-	-	-
W-823-03	8/18/10	E601	0 of 18	-	-	-	-
W-823-13	3/15/10	E601	0 of 18	-	-	-	-
W-823-13	8/18/10	E601	0 of 18	-	-	-	-
W-827-05	3/16/10	E601	0 of 18	-	-	-	-
W-827-05	9/8/10	E601	0 of 18	-	-	-	-
W-829-06	5/17/10	E601	0 of 18	-	-	-	-
W-829-06	05/17/10 DUP	E601	0 of 18	-	-	-	-
W-829-06	11/1/10	E601	1 of 18	6.6	-	-	-
W-829-08	5/18/10	E601	0 of 18	-	-	-	-
W-829-08	9/7/10	E601	0 of 18	-	-	-	-
W-829-08	11/1/10	E601	0 of 18	-	-	-	-
W-829-15	4/15/10	E624	0 of 30	-	-	-	-
W-829-15	04/15/10 DUP	E624	0 of 30	-	-	-	-
W-829-1938	1/14/10	E624	0 of 30	-	-	-	-
W-829-1938	01/14/10 DUP	E624	0 of 30	-	-	-	-
W-829-1938	4/15/10	E624	1 of 30	-	-	-	1.2
W-829-1938	7/15/10	E624	0 of 30	-	-	-	-
W-829-1938	07/15/10 DUP	E624	0 of 30	-	-	-	-
W-829-1938	10/21/10	E624	0 of 30	-	-	-	-
W-829-1938	10/21/10 DUP	E624	0 of 30	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Carbon disulfide (µg/L)	Methylene chloride (µg/L)
W-829-1940	3/16/10	E601	0 of 18	-	-	-	-
W-829-1940	9/7/10	E601	0 of 18	-	-	-	-
W-829-22	4/15/10	E624	0 of 30	-	-	-	-
WELL18	1/12/10	E601	0 of 18	-	-	-	-
WELL18	01/12/10 DUP	E601	0 of 18	-	-	-	-
WELL18	2/18/10	E601	0 of 18	-	-	-	-
WELL18	02/18/10 DUP	E601	0 of 18	-	-	-	-
WELL18	6/17/10	E601	0 of 18	-	-	-	-
WELL18	06/17/10 DUP	E601	0 of 18	-	-	-	-
WELL18	7/22/10	E601	0 of 18	-	-	-	-
WELL18	07/22/10 DUP	E601	0 of 18	-	-	-	-
WELL18	8/17/10	E601	0 of 18	-	-	-	-
WELL18	08/17/10 DUP	E601	0 of 18	-	-	-	-
WELL18	9/21/10	E601	0 of 18	-	-	-	-
WELL18	09/21/10 DUP	E601	0 of 18	-	-	-	-
WELL18	10/13/10	E601	0 of 18	-	-	-	-
WELL18	10/13/10 DUP	E601	0 of 18	-	-	-	-
WELL18	11/17/10	E601	0 of 18	-	-	-	-
WELL18	11/17/10 DUP	E601	0 of 18	-	-	-	-
WELL18	12/15/10	E601	0 of 18	-	-	-	-
WELL18	12/15/10 DUP	E601	0 of 18	-	-	-	-
WELL20	1/12/10	E502.2	0 of 46	-	-	-	-
WELL20	01/12/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	2/18/10	E502.2	0 of 46	-	-	-	-
WELL20	02/18/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	3/16/10	E502.2	0 of 46	-	-	-	-
WELL20	03/16/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	4/21/10	E502.2	0 of 46	-	-	-	-
WELL20	04/21/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	5/19/10	E502.2	0 of 46	-	-	-	-
WELL20	05/19/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	6/17/10	E502.2	0 of 46	-	-	-	-
WELL20	06/17/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	7/22/10	E502.2	0 of 46	-	-	-	-
WELL20	07/22/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	8/17/10	E502.2	0 of 46	-	-	-	-
WELL20	08/17/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	9/21/10	E502.2	0 of 46	-	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Carbon disulfide (µg/L)	Methylene chloride (µg/L)
WELL20	09/21/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	10/13/10	E502.2	0 of 46	-	-	-	-
WELL20	10/13/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	11/17/10	E502.2	0 of 46	-	-	-	-
WELL20	11/17/10 DUP	E502.2	0 of 45	-	-	-	-
WELL20	12/15/10	E502.2	0 of 46	-	-	-	-
WELL20	12/15/10 DUP	E502.2	0 of 45	-	-	-	-

## B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
GALLO1	1/12/10	<0.5	<4
GALLO1	01/12/10 DUP	<0.5	<4
GALLO1	2/18/10	<0.5	<4
GALLO1	02/18/10 DUP	<0.5	<4
GALLO1	3/11/10	<0.5	<4
GALLO1	03/11/10 DUP	<0.5	<4
GALLO1	4/12/10	<0.5	<4
GALLO1	04/12/10 DUP	<0.5	<4
GALLO1	5/19/10	<0.5	<4
GALLO1	05/19/10 DUP	<0.5	<4
GALLO1	6/16/10	<0.5	<4
GALLO1	06/16/10 DUP	<0.5	<4
GALLO1	7/14/10	<0.5	<4
GALLO1	07/14/10 DUP	<0.5	<4
GALLO1	8/12/10	<0.5	<4
GALLO1	08/12/10 DUP	<0.5 L	<4
GALLO1	9/16/10	<0.5	<4
GALLO1	09/16/10 DUP	<0.5	<4
GALLO1	10/13/10	<0.5	<4
GALLO1	10/13/10 DUP	<0.5	<4
GALLO1	11/17/10	<0.5	<4
GALLO1	11/17/10 DUP	<0.5 L	<4
GALLO1	12/21/10	<0.5	<4
GALLO1	12/21/10 DUP	<0.5	<4
W-35B-01	3/8/10	<0.5	<4
W-35B-01	8/9/10	<0.5	<4
W-35B-02	3/8/10	14	<4
W-35B-02	8/9/10	10	<4
W-35B-03	3/8/10	5	<4
W-35B-03	8/9/10	4.5 D	<4
W-35B-04	3/8/10	1.1	<4
W-35B-04	8/9/10	0.8	<4
W-35B-05	3/8/10	0.96	<4
W-35B-05	8/9/10	0.79	<4
W-35C-01	3/15/10	<0.5	-
W-35C-05	3/1/10	3.2 L	-
W-35C-07	3/16/10	<0.5 L	<4
W-35C-08	3/16/10	0.99 L	<4
W-4AS	3/22/10	1	<4
W-4C	3/16/10	<0.5 L	<4

## B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-4C	8/25/10	<0.5	<4
W-6BD	3/17/10	0.59	<4
W-6BS	3/8/10	13	<4
W-6CD	3/10/10	<0.5	<4
W-6CI	3/10/10	<0.5	<4
W-6CS	3/10/10	570 D	<4
W-6EI	3/2/10	<0.5	<4 L
W-6ES	3/2/10	9.7	<4 L
W-6F	3/10/10	0.91	<4
W-6G	3/10/10	15	-
W-6H	3/15/10	<0.5	<4
W-6H	8/18/10	<0.5	<4
W-6J	3/15/10	<0.5	<4
W-6J	8/18/10	<0.5	<4
W-6K	3/2/10	14	<4 L
W-6K	03/02/10 DUP	14	<4
W-808-01	2/24/10	79 DL	<4
W-808-03	2/24/10	<0.5 L	<4
W-809-01	2/24/10	84 DL	<4
W-809-02	2/24/10	75 DL	8
W-809-02	8/26/10	-	9.4
W-809-03	2/24/10	83 DL	5.9
W-809-03	8/26/10	-	8.2
W-809-04	2/24/10	0.63 L	<4
W-810-01	2/25/10	<0.5	<4
W-814-01	3/2/10	57 D	4.3 L
W-814-01	03/02/10 DUP	65	5.6
W-814-04	3/1/10	<0.5 L	<4 L
W-814-04	8/19/10	<0.5	<4
W-814-2138	3/2/10	75 D	<4 L
W-815-02	1/13/10	98	9.1 O
W-815-02	8/9/10	-	7.9
W-815-04	1/13/10	100	<4
W-815-04	8/9/10	-	4.2
W-815-05	2/25/10	74 D	4.8
W-815-06	3/15/10	76 D	6
W-815-06	03/15/10 DUP	91 D	7.9
W-815-07	3/15/10	75 D	4.7
W-815-08	2/25/10	<0.5	<4
W-815-2110	3/15/10	<0.5	<4

## B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-815-2110	8/17/10	1.2	<4
W-815-2111	3/15/10	<0.5	<4
W-815-2111	8/17/10	<0.5	<4
W-815-2608	10/6/10	-	<4
W-817-01	2/10/10	-	29 D
W-817-01	4/13/10	-	26 D
W-817-01	04/13/10 DUP	-	25 D
W-817-01	7/14/10	-	23 D
W-817-01	10/4/10	-	23 D
W-817-03	2/9/10	97 D	23 D
W-817-03	8/9/10	-	25 D
W-817-03A	3/1/10	66 DL	4.7 L
W-817-04	3/1/10	96 D	18
W-817-04	03/01/10 DUP	94 D	18
W-817-05	3/2/10	1.3	<4 L
W-817-07	3/1/10	82 DL	11 L
W-817-2318	2/9/10	150 D	14
W-817-2318	8/9/10	-	13
W-817-2609	9/28/10	-	12.8
W-818-01	3/15/10	77 D	5.2
W-818-03	3/16/10	40 DL	<4
W-818-04	3/2/10	<0.5	<4 L
W-818-06	3/16/10	17 L	<4
W-818-06	03/16/10 DUP	18 DL	<4
W-818-07	3/2/10	<0.5	<4 L
W-818-08	2/3/10	83	8.1
W-818-09	2/3/10	90 D	7.8
W-818-11	3/15/10	72 D	4.8
W-818-11	03/15/10 DUP	81	7.6
W-819-02	3/2/10	<0.5	<4 L
W-823-01	3/15/10	17 D	<4
W-823-03	3/15/10	19 D	<4
W-823-13	3/15/10	39 D	<4
W-827-05	3/16/10	<0.5	<4
W-829-06	5/17/10	78 D	8.4
W-829-06	05/17/10 DUP	80 D	7.9
W-829-06	11/1/10	66 D	7.7
W-829-08	5/18/10	<1 D	<4
W-829-08	9/7/10	7.4 DH	<4
W-829-08	11/1/10	4.4 D	<4

## B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-829-15	4/15/10	-	<4
W-829-15	04/15/10 DUP	-	<4
W-829-1938	1/14/10	-	<4
W-829-1938	01/14/10 DUP	-	<4
W-829-1938	4/15/10	-	<4
W-829-1938	7/15/10	-	<4
W-829-1938	07/15/10 DUP	-	<4
W-829-1938	10/21/10	-	<4
W-829-1938	10/21/10 DUP	-	<4
W-829-1940	3/16/10	49 D	<4
W-829-22	4/15/10	-	<4
WELL18	1/12/10	<0.5	<4
WELL18	01/12/10 DUP	<0.5	<4
WELL18	2/18/10	<0.5	<4
WELL18	02/18/10 DUP	<0.5	<4
WELL18	6/17/10	<0.5	<4
WELL18	06/17/10 DUP	<0.5	<4
WELL18	7/22/10	<0.5	<4 L
WELL18	07/22/10 DUP	<0.5	<4
WELL18	8/17/10	<0.5	<4
WELL18	08/17/10 DUP	<0.5	<4
WELL18	9/21/10	<0.5	<4
WELL18	09/21/10 DUP	<0.5	<4
WELL18	10/13/10	<0.5	<4
WELL18	10/13/10 DUP	<0.5	<4
WELL18	11/17/10	<0.5	<4
WELL18	11/17/10 DUP	<0.5 L	<4
WELL18	12/15/10	<0.5	<4
WELL18	12/15/10 DUP	<0.5	<4
WELL20	1/12/10	<0.5	<4
WELL20	01/12/10 DUP	<0.5	<4
WELL20	2/18/10	<0.5	<4
WELL20	02/18/10 DUP	<0.5	<4
WELL20	3/16/10	<0.5	<4
WELL20	03/16/10 DUP	<0.5 L	<4
WELL20	4/21/10	<0.5	<4
WELL20	04/21/10 DUP	<0.5	<4
WELL20	5/19/10	<0.5	<4
WELL20	05/19/10 DUP	<0.5	<4
WELL20	6/17/10	<0.5	<4



## B-4.2. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
WELL20	06/17/10 DUP	<0.5	<4
WELL20	7/22/10	<0.5	<4 L
WELL20	07/22/10 DUP	<0.5	<4
WELL20	8/17/10	<0.5	<4
WELL20	08/17/10 DUP	<0.5	<4
WELL20	9/21/10	<0.5	<4
WELL20	09/21/10 DUP	<0.5	<4
WELL20	10/13/10	<0.5	<4
WELL20	10/13/10 DUP	<0.5	<4
WELL20	11/17/10	<0.5	<4
WELL20	11/17/10 DUP	<0.5 L	<4
WELL20	12/15/10	<0.5	<4
WELL20	12/15/10 DUP	<0.5	<4

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-	1,3-Dinitro-	2,4-Dinitro-	2,6-Dinitro-	2-Amino-4,6-	2-Nitro-	3-Nitro-	4-Amino-2,6-	4-Nitro-	HMX (µg/L)	Nitro-	RDX (µg/L)
		Trinitro- benzene (µg/L)	benzene (µg/L)	2,4,6-TNT (µg/L)	toluene (µg/L)	toluene (µg/L)	Dinitro- toluene (µg/L)	toluene (µg/L)	toluene (µg/L)	Dinitro- toluene (µg/L)		toluene (µg/L)	
GALLO1	1/12/10	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<1 IJ	<2 IJ	<1 IJ
GALLO1	01/12/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	2/18/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	02/18/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	3/11/10	<2 OIJ	<2 OIJ	<2 OIJ	<2 OIJ	<2 OIJ	<2 OIJ	<2 OIJ	<2 OIJ	<2 OIJ	<1 IJ	<2 OIJ	<1 IJ
GALLO1	03/11/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	4/12/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	04/12/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	5/19/10	<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 DO	<2.2 D	<1.1 DO
GALLO1	05/19/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	6/16/10	<2 DL	<2 D	<2 D	<2 D	<2 D	<2 DL	<2 D	<2 D	<2 D	<1 D	<2 D	<1 DL
GALLO1	06/16/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	7/14/10	<1.5	<1.5	<1.5	<1.5 L	<1.5	<1.5	<1.5	<1.5	<1.5	<0.75	<1.5 L	<0.75
GALLO1	07/14/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	8/12/10	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.77 O	<1.5	<0.77
GALLO1	08/12/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	9/16/10	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.73	<1.5	<0.73
GALLO1	09/16/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	10/13/10	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<0.67	<1.3	<0.67
GALLO1	10/13/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	11/17/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	11/17/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
GALLO1	12/21/10	<2 O	<2 O	<2 O	<2 O	<2	<2 O	<2	<2	<2	<1 O	<2 O	<1 O
GALLO1	12/21/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-01	3/8/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-01	8/9/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-02	3/8/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-02	8/9/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-03	3/8/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-03	8/9/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-04	3/8/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-04	8/9/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-05	3/8/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35B-05	8/9/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35C-02	3/17/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35C-06	3/1/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-35C-07	3/16/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-	1,3-Dinitro-	2,4,6-TNT	2,4-Dinitro-	2,6-Dinitro-	2-Amino-4,6-	2-Nitro-	3-Nitro-	4-Amino-2,6-	4-Nitro-	HMX (µg/L)	Nitro-	RDX (µg/L)
		Trinitro-	benzene		toluene	toluene	Dinitro-	toluene	toluene	Dinitro-	toluene		benzene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
W-4AS	3/22/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6BD	3/17/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6BS	3/8/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6CD	3/10/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6CI	3/10/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6CS	3/10/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6EI	3/2/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6ES	3/2/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6F	3/10/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6G	3/10/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6H	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6H	8/18/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6J	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6J	8/18/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6K	3/2/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-6K	03/02/10 DUP	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<1.3 D	<2.7 D	<1.3 D
W-809-01	2/24/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-809-02	2/24/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-809-03	2/24/10	<2	<2	<2	<2	<2	<2	<2	<2	13	<2	11	<2	110 D
W-809-03	8/26/10	<2	<2	<2	<2	<2	<2	<2	<2	9.7 D	<2	6.2	<2	104 D
W-809-04	2/24/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.8	<2	<1
W-810-01	2/25/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-814-01	3/2/10	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<1 IJ	<2 IJ	<1 IJ
W-814-01	03/02/10 DUP	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<1 IJ	<2 IJ	<1 IJ
W-814-2138	3/2/10	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<1 IJ	<2 IJ	<1 IJ
W-815-02	1/13/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	8.4	<2	55
W-815-02	8/9/10	<2 L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	68
W-815-04	1/13/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	6.7	<2	44
W-815-04	8/9/10	<2 L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	49
W-815-05	2/25/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-815-06	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	3
W-815-06	03/15/10 DUP	<2.4 D	<2.4 DO	<2.4 DO	<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 DO	9.2 DO
W-815-07	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-815-08	2/25/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-815-2110	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-815-2110	8/17/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-815-2111	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-	1,3-Dinitro-	2,4-Dinitro-	2,6-Dinitro-	2-Amino-4,6-	2-Nitro-	3-Nitro-	4-Amino-2,6-	4-Nitro-	HMX (µg/L)	Nitro-	RDX (µg/L)
		Trinitro- benzene (µg/L)	benzene (µg/L)	2,4,6-TNT (µg/L)	toluene (µg/L)	toluene (µg/L)	Dinitro- toluene (µg/L)	toluene (µg/L)	toluene (µg/L)	Dinitro- toluene (µg/L)		toluene (µg/L)	
W-815-2111	8/17/10	<2 J	<2 J	<2 J	<2 J	<2 J	<2 J	<2 J	<2 J	<2 J	<1 J	<2 J	<1 J
W-815-2608	10/6/10	<1	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
W-817-01	2/10/10	<2.4 DO	<2.4 DO	<2.4 D	<2.4 D	<2.4 D	<2.4 D	<2.4 D	<2.4 D	<2.4 D	19 D	<2.4 DO	52 D
W-817-01	4/13/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	21	<2	49
W-817-01	04/13/10 DUP	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	19 D	<2 D	50 D
W-817-01	7/14/10	<2	<2	<2	<2 L	<2	<2	<2	<2	<2	16	<2 L	51
W-817-01	10/4/10	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	8.9 D	20 DJ	<2 D	47 D
W-817-03	2/9/10	<2 O	<2 O	<2	<2	<2	<2	<2	<2	<2	<1	<2 O	9.5
W-817-03	8/9/10	<2 L	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	9.7
W-817-03A	3/1/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-817-04	3/1/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	9.3
W-817-04	03/01/10 DUP	<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	11 D
W-817-05	3/2/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-817-07	3/1/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-817-2318	2/9/10	<2 DO	<2 DO	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 DO	<1 D
W-817-2318	8/9/10	<2 L	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	<1
W-817-2609	9/28/10	<1	<5	<5	<5	<5	<5	<5	<5	<5	<1	<5	<1
W-818-01	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-818-04	3/2/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-818-07	3/2/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-818-08	2/3/10	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D
W-818-09	2/3/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-818-11	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	13
W-818-11	03/15/10 DUP	<2.7 D	<2.7 DO	<2.7 DO	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<1.3 D	<2.7 DO	18 DO
W-819-02	3/2/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-823-01	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-823-03	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-823-13	3/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-827-05	3/16/10	<2.6 D	<2.6 DO	<2.6 DO	<2.6 D	<2.6 D	<2.6 D	<2.6 D	<2.6 D	<2.6 D	<1.3 D	<2.6 DO	<1.3 DO
W-829-06	5/17/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-829-06	05/17/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-829-15	4/15/10	-	-	<5 J	<5	<5	-	-	-	-	<1 J	<5	<1 J
W-829-15	04/15/10 DUP	-	-	<5 J	<5	<5	-	-	-	-	<1 J	<5	<1 J
W-829-1938	1/14/10	-	-	<5 O	<5	<5	-	-	-	-	<1	<5	<1
W-829-1938	01/14/10 DUP	-	-	<5 O	<5	<5	-	-	-	-	<1	<5	<1
W-829-1938	4/15/10	-	-	<5 J	<5 D	<5 D	-	-	-	-	<1 J	<5 D	<1 J
W-829-1938	7/15/10	-	-	<5 O	<5	<5	-	-	-	-	<1 O	<5	<1 O

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-	1,3-Dinitro-	2,4-Dinitro-	2,6-Dinitro-	2-Amino-4,6-	2-Nitro-	3-Nitro-	4-Amino-2,6-	4-Nitro-	HMX (µg/L)	Nitro-	RDX (µg/L)
		Trinitro-	benzene	toluene	toluene	Dinitro-	toluene	toluene	Dinitro-	toluene		benzene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		(µg/L)	
W-829-1938	07/15/10 DUP	-	-	<5 O	<5	<5	-	-	-	-	<1 O	<5	<1 O
W-829-1938	10/21/10	-	-	<5 O	<5 D	<5 D	-	-	-	-	<1	<5 D	<1
W-829-1938	10/21/10 DUP	-	-	<5 O	<5	<5	-	-	-	-	<1	<5	<1
W-829-1940	3/16/10	<2.6 D	<2.6 DO	<2.6 DO	<2.6 D	<2.6 D	<2.6 D	<2.6 D	<2.6 D	<2.6 D	<1.3 D	<2.6 DO	<1.3 DO
W-829-22	4/15/10	-	-	<5 J	<5 D	<5 D	-	-	-	-	<1 J	<5 D	<1 J
WELL18	1/12/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	01/12/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	2/18/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	02/18/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	6/17/10	<2 L	<2	<2	<2	<2	<2 L	<2	<2	<2	<1	<2	<1 L
WELL18	06/17/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	7/22/10	<1.5 L	<1.5 L	<1.5 L	<1.5 L	<1.5	<1.5 L	<1.5	<1.5	<1.5	<0.76 O	<1.5 L	<0.76 O
WELL18	07/22/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	8/17/10	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<0.79	<1.6	<0.79
WELL18	08/17/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	9/21/10	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<0.89	<1.8	<0.89
WELL18	09/21/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	10/13/10	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.74	<1.5	<0.74
WELL18	10/13/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	11/17/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	11/17/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	12/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL18	12/15/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	1/12/10	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<1 IJ	<2 IJ	<1 IJ
WELL20	01/12/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	2/18/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	02/18/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	3/16/10	<2.3 D	<2.3 DO	<2.3 DO	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<2.3 D	<1.2 D	<2.3 DO	<1.2 D
WELL20	03/16/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	4/21/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	04/21/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	5/19/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	<1 O
WELL20	05/19/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	6/17/10	<2.2 DL	<2.2 D	<2.2 D	<2.2 D	<2.2 D	<2.2 DL	<2.2 D	<2.2 D	<2.2 D	<1.1 D	<2.2 D	<1.1 DL
WELL20	06/17/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	7/22/10	<1.6 L	<1.6 L	<1.6 L	<1.6 L	<1.6	<1.6 L	<1.6	<1.6	<1.6	<0.81 O	<1.6 L	<0.81 O
WELL20	07/22/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

B-4.3. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-	1,3-Dinitro-	2,4,6-TNT	2,4-Dinitro-	2,6-Dinitro-	2-Amino-4,6-	2-Nitro-	3-Nitro-	4-Amino-2,6-	4-Nitro-	HMX (µg/L)	Nitro-	RDX (µg/L)
		Trinitro-	benzene	benzene	toluene	toluene	Dinitro-	toluene	toluene	Dinitro-	toluene		benzene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		(µg/L)	
WELL20	8/17/10	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D
WELL20	08/17/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	9/21/10	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<0.8	<1.6	<0.8
WELL20	09/21/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	10/13/10	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.73	<1.5	<0.73
WELL20	10/13/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	11/17/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	11/17/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	12/15/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
WELL20	12/15/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

B-4.4. High Explosives Process Area Operable Unit diesel range organic compounds in ground water.

Location	Date	Diesel Fuel ( $\mu\text{g/L}$ )
W-823-01	3/15/10	<50
W-823-02	3/15/10	<50
W-823-03	3/15/10	<50

B-5.1. Building 850 area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon								Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
K1-01C	2/17/10	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	4/13/10	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	04/13/10 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	7/13/10	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	11/3/10	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	11/03/10 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	2/1/10	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	02/01/10 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	4/7/10	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	7/8/10	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	07/08/10 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	10/12/10	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	1/27/10	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	4/26/10	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	7/7/10	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	10/11/10	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	2/3/10	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	17	<0.5
K1-05	4/7/10	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	7/7/10	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	20	<0.5
K1-05	10/11/10	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	17 U	<0.5
K1-07	1/27/10	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
K1-07	4/7/10	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	7/19/10	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	10/12/10	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
K1-08	2/16/10	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	20	<0.5
K1-08	4/8/10	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	18	<0.5
K1-08	7/8/10	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	20	<0.5
K1-08	10/12/10	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	24	<0.5
K1-09	2/2/10	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	39	<0.5
K1-09	4/8/10	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	45	<0.5
K1-09	7/13/10	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	52	<0.5
K1-09	07/13/10 DUP	E8260	<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	56 D	<2.5 D
K1-09	10/18/10	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	39	<0.5
W-865-02	1/20/10	E601	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	66 D	<0.5
W-865-02	7/14/10	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	98 D	<2.5 D
W-865-1802	2/3/10	E601	<0.5	<0.5	<0.5	<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	7/14/10	E601	<0.5	<0.5	<0.5	<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	2/4/10	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	4.4	<0.5
W-865-2005	02/04/10 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	4.8	<0.5



B-5.1. Building 850 area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon								Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-865-2005	7/14/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	7.8	<0.5
W-865-2005	07/14/10 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	7.8	<0.5
W-865-2121	2/4/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	18	<0.5
W-865-2121	7/15/10	E601	<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
W-865-2133	2/4/10	E601	<0.5	<0.5	<0.5	<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	7/15/10	E601	<0.5	<0.5	<0.5	<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	5/10/10	E601	<0.5	<0.5	<0.5	<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	11/3/10	E601	<0.5	<0.5	<0.5	<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	4/26/10	E601	<0.5	<0.5	<0.5	<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	10/20/10	E601	<0.5	<0.5	<0.5	<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	4/8/10	E601	<0.5	<0.5	<0.5	<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	11/9/10	E601	<0.5	<0.5	<0.5	<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	2/3/10	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	4/13/10	E8260	<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	<0.5
W-PIT1-2326	7/12/10	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	11/9/10	E8260	<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	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
K1-01C	2/17/10	E8260	0 of 36
K1-01C	4/13/10	E8260	0 of 36
K1-01C	04/13/10 DUP	E8260	0 of 36
K1-01C	7/13/10	E8260	0 of 36
K1-01C	11/3/10	E8260	0 of 36
K1-01C	11/03/10 DUP	E8260	0 of 36
K1-02B	2/1/10	E8260	0 of 36
K1-02B	02/01/10 DUP	E8260	0 of 36
K1-02B	4/7/10	E8260	0 of 36
K1-02B	7/8/10	E8260	0 of 36
K1-02B	07/08/10 DUP	E8260	0 of 36
K1-02B	10/12/10	E8260	0 of 36
K1-04	1/27/10	E8260	0 of 36
K1-04	4/26/10	E8260	0 of 36
K1-04	7/7/10	E8260	0 of 36
K1-04	10/11/10	E8260	0 of 36
K1-05	2/3/10	E8260	0 of 36
K1-05	4/7/10	E8260	0 of 36
K1-05	7/7/10	E8260	0 of 36

## Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
K1-05	10/11/10	E8260	0 of 36
K1-07	1/27/10	E8260	0 of 36
K1-07	4/7/10	E8260	0 of 36
K1-07	7/19/10	E8260	0 of 36
K1-07	10/12/10	E8260	0 of 36
K1-08	2/16/10	E8260	0 of 36
K1-08	4/8/10	E8260	0 of 36
K1-08	7/8/10	E8260	0 of 36
K1-08	10/12/10	E8260	0 of 36
K1-09	2/2/10	E8260	0 of 36
K1-09	4/8/10	E8260	0 of 36
K1-09	7/13/10	E8260	0 of 36
K1-09	07/13/10 DUP	E8260	0 of 31
K1-09	10/18/10	E8260	0 of 36
W-865-02	1/20/10	E601	0 of 18
W-865-02	7/14/10	E601	0 of 18
W-865-1802	2/3/10	E601	0 of 18
W-865-1802	7/14/10	E601	0 of 18
W-865-2005	2/4/10	E601	0 of 18
W-865-2005	02/04/10 DUP	E601	0 of 18
W-865-2005	7/14/10	E601	0 of 18
W-865-2005	07/14/10 DUP	E601	0 of 18
W-865-2121	2/4/10	E601	0 of 18
W-865-2121	7/15/10	E601	0 of 18
W-865-2133	2/4/10	E601	0 of 18
W-865-2133	7/15/10	E601	0 of 18
W-865-2224	5/10/10	E601	0 of 18
W-865-2224	11/3/10	E601	0 of 18
W-PIT1-02	4/26/10	E601	0 of 18
W-PIT1-02	10/20/10	E601	0 of 18
W-PIT1-2209	4/8/10	E601	0 of 18
W-PIT1-2209	11/9/10	E601	0 of 18
W-PIT1-2326	2/3/10	E8260	0 of 36
W-PIT1-2326	4/13/10	E8260	0 of 36
W-PIT1-2326	7/12/10	E8260	0 of 36
W-PIT1-2326	11/9/10	E8260	0 of 36

## B-5.2. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
K1-01C	2/17/10	37	<4 EB
K1-01C	4/13/10	37	<4 E
K1-01C	04/13/10 DUP	36	<4 E
K1-01C	04/13/10 DUP	-	<4
K1-01C	7/13/10	37	<4 E
K1-01C	11/3/10	35	<4 E
K1-01C	11/03/10 DUP	35	<4 E
K1-02B	2/1/10	35	6.5
K1-02B	02/01/10 DUP	35	6.9
K1-02B	4/7/10	36	6.9
K1-02B	7/8/10	35	6.8
K1-02B	07/08/10 DUP	35	6.8
K1-02B	10/12/10	34	6.2 B
K1-04	1/27/10	29	<4 E
K1-04	4/26/10	33	<4 E
K1-04	7/7/10	32	<4 E
K1-04	10/11/10	34	<4 E
K1-05	2/3/10	36 FB	<4 E
K1-05	4/7/10	38	<4
K1-05	7/7/10	37	<4 E
K1-05	10/11/10	37	<4 E
K1-06	2/2/10	-	4.9
K1-06	4/7/10	32 D	5.2
K1-06	7/8/10	-	4.3
K1-06	10/12/10	-	6.4
K1-07	1/27/10	32	<4
K1-07	4/7/10	32	<4
K1-07	7/19/10	31	<4
K1-07	10/12/10	30	<4
K1-08	2/16/10	36	<4 EB
K1-08	4/8/10	36	<4
K1-08	7/8/10	37	<4 E
K1-08	10/12/10	34	<4
K1-09	2/2/10	35	<4 E
K1-09	4/8/10	36	<4
K1-09	7/13/10	37	<4 E
K1-09	07/13/10 DUP	28 D	<4
K1-09	10/18/10	34	<4
K2-03	5/12/10	9.2	<4
K2-03	11/4/10	-	11.3

## B-5.2. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
K2-04D	4/14/10	38	4.9
K2-04D	10/27/10	-	<4
K2-04S	4/14/10	-	4.5
K2-04S	04/14/10 DUP	-	4.5
K2-04S	10/27/10	-	5.9
NC2-05	5/18/10	25 DL	<4
NC2-05	11/10/10	-	<4
NC2-05A	5/18/10	33 DL	5.7
NC2-05A	11/10/10	-	15.7
NC2-06	5/18/10	32 DL	5.6
NC2-06	11/10/10	-	9
NC2-06	11/10/10 DUP	-	6.1
NC2-06A	5/18/10	0.52 L	<4
NC2-06A	11/10/10	-	<4
NC2-09	5/14/10	<0.5 H	-
NC2-09	5/17/10	-	<4
NC2-10	6/2/10	46 D	<4
NC2-11D	4/14/10	29	<4 E
NC2-11D	10/19/10	-	<4 E
NC2-11D	10/19/10 DUP	-	4.3
NC2-11S	5/20/10	31 D	4.3
NC2-11S	11/17/10	-	6.1
NC2-12D	4/14/10	27	5.4
NC2-12D	11/17/10	-	4.7
NC2-12I	5/19/10	14	<4
NC2-12I	11/17/10	-	5.1
NC2-12S	5/19/10	48 D	5
NC2-12S	11/17/10	-	<4
NC2-13	5/19/10	31 D	<4
NC2-13	11/11/10	-	<4
NC2-13	11/11/10 DUP	-	<4
NC2-14S	1/21/10	-	<4
NC2-14S	01/21/10 DUP	-	4.8 O
NC2-14S	7/13/10	-	4.4
NC2-15	5/17/10	34	4.5
NC2-15	11/9/10	-	4.5
NC2-16	1/21/10	-	<4
NC2-16	7/13/10	-	<4
NC2-17	5/18/10	35 L	7.3
NC2-17	11/10/10	-	7.1

## B-5.2. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
NC2-18	5/20/10	-	9.1
NC2-18	05/20/10 DUP	-	8.8
NC2-18	10/27/10	-	9
NC2-19	5/19/10	-	<4
NC2-19	11/11/10	-	4.1
NC2-20	5/19/10	36 D	<4
NC2-21	5/19/10	-	<4
NC7-10	1/21/10	-	21
NC7-10	4/20/10	46 DL	-
NC7-10	7/13/10	-	20.7
NC7-11	4/20/10	57 DL	15
NC7-11	10/20/10	-	17.3
NC7-15	4/19/10	31	<4
NC7-19	4/19/10	25 D	<4
NC7-19	10/18/10	-	<4
NC7-27	4/26/10	39 DL	12
NC7-27	10/5/10	-	13
NC7-28	4/21/10	54 D	69
NC7-28	7/13/10	-	64.6
NC7-28	10/19/10	-	72
NC7-29	4/28/10	140 DL	12
NC7-29	10/11/10	-	15.9
NC7-43	4/21/10	26 D	12
NC7-43	10/5/10	-	<4
NC7-44	4/26/10	53 DL	<4
NC7-44	10/21/10	-	<4
NC7-46	4/28/10	-	<4
NC7-54	4/20/10	22 DL	16
NC7-56	5/5/10	30 D	8.8
NC7-56	10/26/10	-	7.9
NC7-58	5/5/10	-	7.1
NC7-58	10/26/10	-	13.1
NC7-59	5/5/10	27 D	9.4
NC7-59	10/26/10	-	9.9
NC7-60	1/11/10	-	<4
NC7-60	4/26/10	<0.5 L	-
NC7-60	7/13/10	-	<4
NC7-61	2/2/10	-	54 D
NC7-61	02/02/10 DUP	-	56 D
NC7-61	4/27/10	58	47 D

## B-5.2. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
NC7-61	7/12/10	-	47 D
NC7-61	07/12/10 DUP	-	46 D
NC7-61	10/18/10	-	50 D
NC7-61	10/18/10 DUP	-	52 D
NC7-62	5/5/10	-	9.1
NC7-62	10/26/10	-	9.5
NC7-69	4/22/10	<0.5	<4
NC7-69	04/22/10 DUP	<0.5	<4
NC7-69	10/21/10	-	10
NC7-70	4/26/10	35 DL	43
NC7-70	10/19/10	-	45.4
NC7-71	4/22/10	<0.5	<4
NC7-71	10/19/10	-	<4
NC7-72	5/5/10	-	10
NC7-72	10/26/10	-	12.7
NC7-73	5/5/10	36 D	8.3
NC7-73	10/26/10	-	5.7
W-850-05	4/22/10	<0.5	<4
W-850-05	10/19/10	-	<4
W-850-2145	5/25/10	-	8
W-850-2145	11/3/10	-	7.6
W-850-2312	5/20/10	1.9	<4
W-850-2312	10/27/10	-	<4
W-850-2313	4/20/10	39	16
W-850-2313	10/20/10	-	17
W-850-2314	10/5/10	-	<4
W-850-2315	4/28/10	85	11
W-850-2315	10/11/10	-	9.8
W-850-2316	5/25/10	0.57	<4
W-850-2316	11/3/10	-	<4
W-850-2416	4/21/10	<0.5	<4
W-850-2416	10/19/10	-	<4
W-850-2417	2/3/10	-	79 D
W-850-2417	4/21/10	54	-
W-850-2417	7/13/10	-	61 D
W-865-02	1/20/10	41	<4 L
W-865-02	7/14/10	34 D	-
W-865-1802	5/12/10	30	<4
W-865-1803	5/6/10	37	<4
W-865-1803	11/3/10	-	<4

## B-5.2. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-865-2005	2/4/10	30 D	<4
W-865-2005	02/04/10 DUP	29 D	<4
W-865-2005	4/13/10	-	<4
W-865-2005	04/13/10 DUP	-	<4
W-865-2005	7/14/10	29 D	<4
W-865-2005	07/14/10 DUP	30 D	<4
W-865-2005	10/18/10	-	<4
W-865-2005	10/18/10 DUP	-	<4
W-865-2121	2/4/10	44 D	<4
W-865-2121	7/15/10	44 D	-
W-865-2133	2/4/10	3.4	<4
W-865-2133	5/10/10	-	<4
W-865-2133	7/15/10	2.7	<4
W-865-2133	11/3/10	-	<4
W-865-2224	5/10/10	-	<4
W-865-2224	11/3/10	1.1	<4
W-PIT1-02	2/4/10	-	4.9
W-PIT1-02	4/26/10	50 DL	5.6
W-PIT1-02	7/12/10	-	5.9
W-PIT1-02	10/20/10	-	5.9
W-PIT1-2204	5/11/10	40	<4
W-PIT1-2204	11/16/10	-	<4
W-PIT1-2209	1/27/10	-	<4 E
W-PIT1-2209	4/8/10	41	<4 E
W-PIT1-2209	7/14/10	-	<4 E
W-PIT1-2209	11/9/10	42	<4 E
W-PIT1-2225	2/17/10	-	<4
W-PIT1-2225	5/26/10	<0.5	<4
W-PIT1-2225	7/20/10	-	<4
W-PIT1-2225	11/16/10	<0.5	<4
W-PIT1-2326	2/3/10	33 FB	6.4
W-PIT1-2326	4/13/10	35	5.9
W-PIT1-2326	7/12/10	35	6.1
W-PIT1-2326	11/9/10	33	5.7
W-PIT1-2620	11/8/10	-	5.4
W-PIT7-16	4/19/10	<0.5	<4
W-PIT7-16	10/18/10	-	<4
W8SPRNG	6/9/10	39 DL	18.5
W8SPRNG	10/20/10	-	19

## B-5.3. 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)
W-865-02	1/20/10	0.0088	<0.02	<0.0005	<0.001	<0.005	<0.0002	<0.002	<0.001
W-865-2005	2/4/10	0.012	0.03	<0.0005	<0.001	<0.005	<0.0002	<0.002	<0.001
W-865-2005	02/04/10 DUP	0.012	<0.02	<0.0005	<0.001	<0.005	<0.0002	0.0023	<0.001
W-865-2121	2/4/10	0.0078	<0.02	<0.0005	<0.001	<0.005	<0.0002	0.0025	<0.001
W-865-2133	2/4/10	0.016	<0.02	<0.0005	0.003	<0.005	<0.0002	<0.002	<0.001
W-PIT1-02	4/26/10	<0.002	0.07	<0.0005	0.01	<0.005	<0.0002	0.0029	<0.001





## B-5.5. Building 850 area in Operable Unit 5 uranium isotopes by mass spectrometry in ground and surface 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)
K1-07	4/7/10	2.90 ± 0.0520	1.90 ± 0.0520	0.0420 ± 0.000350	<0.00036	0.880 ± 0.00230	0.00736 ± 0.0000580
NC2-06A	5/18/10	0.320 ± 0.00940	0.190 ± 0.00930	0.00540 ± 0.0000540	<0.00028	0.130 ± 0.00100	0.00627 ± 0.0000420
NC2-11D	4/14/10	5.00 ± 0.0720	3.10 ± 0.0700	0.0840 ± 0.00100	<0.00035	1.80 ± 0.0140	0.00723 ± 0.0000650
NC7-10	4/20/10	2.90 ± 0.0900	1.70 ± 0.0890	0.0500 ± 0.000660	<0.00092	1.10 ± 0.0120	0.00681 ± 0.0000530
NC7-28	4/21/10	12.0 ± 0.290	2.90 ± 0.290	0.140 ± 0.00130	0.0530 ± 0.0000890	9.00 ± 0.0180	0.00249 ± 0.0000210
NC7-28	7/13/10	10.0 ± 0.190	2.40 ± 0.180	0.120 ± 0.00150	0.0430 ± 0.000160	7.60 ± 0.0630	0.00245 ± 0.0000220
NC7-28	11/2/10	9.50 ± 0.150	2.10 ± 0.140	0.110 ± 0.00160	0.0400 ± 0.0000320	7.20 ± 0.0480	0.00244 ± 0.0000290
NC7-54	4/20/10	3.80 ± 0.0610	2.00 ± 0.0610	0.0680 ± 0.000600	<0.007	1.70 ± 0.0110	0.00606 ± 0.0000380
NC7-61	4/27/10	5.70 ± 0.160	2.60 ± 0.160	0.0810 ± 0.000770	0.0110 ± 0.0000490	3.00 ± 0.0240	0.00416 ± 0.0000220
NC7-61	10/18/10	5.70 ± 0.140	2.60 ± 0.140	0.0820 ± 0.000610	0.0110 ± 0.0000140	3.00 ± 0.0180	0.00430 ± 0.0000190
NC7-61	10/18/10 DUP	5.60 ± 0.0850	2.60 ± 0.0840	0.0820 ± 0.000740	0.0110 ± 0.0000190	3.00 ± 0.0170	0.00431 ± 0.0000290
NC7-70	4/26/10	1.90 ± 0.0250	1.20 ± 0.0250	0.0290 ± 0.000280	<0.007	0.680 ± 0.00260	0.00657 ± 0.0000600
NC7-71	4/22/10	<0.0627	<0.037	0.000490 ± 0.0000130	<0.000048	0.0110 ± 0.000130	0.00698 ± 0.000167
NC7-71	10/19/10	<0.0627	<0.043	0.000600 ± 0.0000260	<0.0002	0.0160 ± 0.000470	0.00589 ± 0.000191
W-850-05	10/19/10	0.100 ± 0.00810	0.0670 ± 0.00800	0.00160 ± 0.0000580	<0.000063	0.0350 ± 0.000700	0.00697 ± 0.000216
W-850-2313	4/20/10	5.00 ± 0.120	2.70 ± 0.120	0.100 ± 0.000950	<0.00042	2.20 ± 0.00610	0.00726 ± 0.0000650
W-850-2416	4/21/10	0.100 ± 0.00570	<0.062	0.00140 ± 0.0000610	<0.000054	0.0440 ± 0.00110	0.00500 ± 0.000176
W-850-2417	4/21/10	10.0 ± 0.260	2.30 ± 0.260	0.120 ± 0.00140	0.0460 ± 0.000240	7.80 ± 0.0510	0.00245 ± 0.0000240
W-850-2417	7/13/10	9.70 ± 0.180	2.30 ± 0.180	0.110 ± 0.000880	0.0420 ± 0.0000930	7.30 ± 0.0460	0.00244 ± 0.0000110
W-850-2417	11/16/10	9.50 ± 0.140	2.20 ± 0.130	0.110 ± 0.00110	0.0420 ± 0.0000590	7.20 ± 0.0440	0.00243 ± 0.0000200

B-5.6. Building 850 area in Operable Unit 5 uranium isotopes by alpha spectrometry in ground water and surface water.

Location	Date	Uranium 234 and Uranium 233 (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 238 (pCi/L)
K1-01C	2/17/10	2.77 ± 0.613	0.148 ± 0.100	1.01 ± 0.288
K1-01C	4/13/10	3.73 ± 0.852 O	<0.1	1.63 ± 0.443
K1-01C	04/13/10 DUP	2.58 ± 0.589 O	0.151 ± 0.102	1.19 ± 0.327
K1-01C	7/13/10	2.68 ± 0.475 LO	<0.1 LO	1.12 ± 0.235
K1-01C	09/09/10 DUP	3.05 ± 0.330	0.107 ± 0.0410	1.63 ± 0.210
K1-01C	09/09/10 REX	2.69 ± 0.524	<0.1	1.13 ± 0.267
K1-01C	11/3/10	2.74 ± 0.510	<0.1	1.18 ± 0.260
K1-01C	11/03/10 DUP	2.62 ± 0.482	<0.1	1.41 ± 0.292
K1-02B	2/1/10	2.21 ± 0.515	<0.1	1.26 ± 0.338
K1-02B	02/01/10 DUP	1.75 ± 0.421	<0.1	1.33 ± 0.343
K1-02B	4/7/10	1.99 ± 0.500	<0.1	1.07 ± 0.318
K1-02B	7/8/10	2.20 ± 0.428 LO	<0.1 LO	1.29 ± 0.281
K1-02B	07/08/10 DUP	2.20 ± 0.396 LO	<0.1 LO	1.28 ± 0.256
K1-02B	10/12/10	2.41 ± 0.577	<0.1	1.31 ± 0.367
K1-04	1/27/10	1.25 ± 0.297	<0.1	0.767 ± 0.209
K1-04	4/26/10	1.32 ± 0.380	<0.1 O	0.549 ± 0.212
K1-04	7/7/10	1.27 ± 0.325 O	<0.1 O	0.556 ± 0.187 O
K1-04	10/11/10	1.35 ± 0.382	<0.1	0.967 ± 0.304
K1-05	2/3/10	1.73 ± 0.424	<0.1	0.964 ± 0.279
K1-05	4/7/10	1.61 ± 0.408	<0.1	1.00 ± 0.290
K1-05	7/7/10	1.48 ± 0.391 O	<0.1 O	0.846 ± 0.267 O
K1-05	10/11/10	1.90 ± 0.458	0.102 ± 0.0832	0.915 ± 0.271
K1-06	4/7/10	5.36 ± 1.21	0.226 ± 0.150	2.62 ± 0.668
K1-07	1/27/10	2.02 ± 0.427	<0.1	0.923 ± 0.233
K1-07	4/7/10	1.61 ± 0.441	<0.1	0.695 ± 0.247
K1-07	7/19/10	1.91 ± 0.367	<0.1	0.913 ± 0.208
K1-07	10/12/10	1.79 ± 0.438	<0.1	0.879 ± 0.264
K1-08	2/16/10	2.28 ± 0.516	<0.1	0.897 ± 0.261
K1-08	4/8/10	2.11 ± 0.414	<0.1	1.15 ± 0.256 O
K1-08	7/8/10	2.19 ± 0.422 LO	<0.1 LO	0.959 ± 0.224
K1-08	10/12/10	2.05 ± 0.546	<0.1	1.18 ± 0.370
K1-09	2/2/10	2.39 ± 0.572	<0.1	1.23 ± 0.350
K1-09	4/8/10	2.33 ± 0.462	<0.1	1.17 ± 0.269 O
K1-09	7/13/10	2.37 ± 0.430 LO	<0.1 LO	1.04 ± 0.224
K1-09	07/13/10 DUP	2.34 ± 0.450	<0.1	1.15 ± 0.250
K1-09	10/18/10	2.11 ± 0.411	0.125 ± 0.0744	1.02 ± 0.236
K2-03	5/12/10	4.93 ± 0.827	0.190 ± 0.0821	2.86 ± 0.508
K2-04S	4/14/10	1.30 ± 0.283	<0.1	0.821 ± 0.202 O

B-5.6. Building 850 area in Operable Unit 5 uranium isotopes by alpha spectrometry in ground water and surface water.

Location	Date	Uranium 234 and Uranium 233 (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 238 (pCi/L)
K2-04S	04/14/10 DUP	1.34 ± 0.283	<0.1	0.989 ± 0.226 O
NC2-05	5/18/10	6.88 ± 1.32	0.131 ± 0.0913	4.74 ± 0.946
NC2-05A	5/18/10	2.14 ± 0.487	0.105 ± 0.0800	1.54 ± 0.379
NC2-06	5/18/10	1.71 ± 0.427	<0.1	0.952 ± 0.280
NC2-06A	5/18/10	0.142 ± 0.0924	<0.1	0.145 ± 0.0936
NC2-09	5/17/10	<0.1	<0.1	<0.1
NC2-10	6/2/10	3.22 ± 0.711	0.143 ± 0.0968 O	1.70 ± 0.426
NC2-11D	4/14/10	3.16 ± 0.603	0.111 ± 0.0716	1.96 ± 0.405 O
NC2-11S	5/20/10	2.75 ± 0.694 O	<0.1 O	1.40 ± 0.413 O
NC2-12D	4/14/10	2.18 ± 0.420	<0.1	1.28 ± 0.274 O
NC2-12I	5/19/10	1.70 ± 0.405	<0.1	1.20 ± 0.313
NC2-12S	5/19/10	2.40 ± 0.537	<0.1	1.37 ± 0.349
NC2-13	5/19/10	3.43 ± 0.729	0.122 ± 0.0902	2.26 ± 0.517
NC2-15	5/17/10	2.25 ± 0.540	0.125 ± 0.0951	1.15 ± 0.328
NC2-16	5/6/10	0.737 ± 0.199	<0.1	0.535 ± 0.161
NC2-17	5/18/10	1.49 ± 0.414	<0.1	1.02 ± 0.318
NC2-18	5/20/10	1.96 ± 0.599 O	<0.1 O	1.90 ± 0.585 O
NC2-18	05/20/10 DUP	1.76 ± 0.493 O	0.103 ± 0.0976 O	1.47 ± 0.435 O
NC2-18	10/27/10	2.20 ± 0.446	<0.1	1.75 ± 0.372
NC2-19	5/19/10	3.75 ± 1.06	0.181 ± 0.163	2.92 ± 0.867
NC2-21	5/19/10	2.51 ± 0.597	<0.1	1.86 ± 0.472
NC7-10	4/20/10	1.62 ± 0.439	<0.1 O	1.24 ± 0.362
NC7-11	4/20/10	2.03 ± 0.553	<0.1 O	0.907 ± 0.312
NC7-19	4/19/10	2.08 ± 0.581	<0.1 O	2.10 ± 0.585
NC7-27	4/26/10	2.00 ± 0.487	<0.1	1.46 ± 0.386
NC7-28	4/21/10	3.09 ± 0.735	<0.1 O	10.4 ± 2.13
NC7-29	4/28/10	9.60 ± 1.95	0.298 ± 0.163	8.14 ± 1.68
NC7-43	4/21/10	1.15 ± 0.382	<0.1 O	1.52 ± 0.462
NC7-44	4/26/10	1.01 ± 0.305	<0.1	0.622 ± 0.222
NC7-54	4/20/10	2.55 ± 0.748	<0.1 O	2.22 ± 0.672
NC7-58	5/5/10	1.96 ± 0.385 O	0.115 ± 0.0648	1.63 ± 0.331 O
NC7-60	4/26/10	0.488 ± 0.188	<0.1	0.301 ± 0.140
NC7-61	4/27/10	2.60 ± 0.613	<0.1	3.37 ± 0.758
NC7-62	5/5/10	2.11 ± 0.415 O	0.102 ± 0.0624	1.86 ± 0.374 O
NC7-69	4/22/10	0.197 ± 0.121	<0.1	<0.1
NC7-69	04/22/10 DUP	<0.1	<0.1	<0.1
NC7-70	4/26/10	1.33 ± 0.375	<0.1	0.672 ± 0.237
NC7-71	4/22/10	<0.1	<0.1	<0.1

B-5.6. Building 850 area in Operable Unit 5 uranium isotopes by alpha spectrometry in ground water and surface water.

Location	Date	Uranium 234 and Uranium 233 (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 238 (pCi/L)
NC7-72	5/5/10	2.48 ± 0.491 O	0.105 ± 0.0670	2.16 ± 0.437 O
NC7-73	5/5/10	2.34 ± 0.442 O	<0.1	2.00 ± 0.389 O
W-850-05	4/22/10	<0.1	<0.1	<0.1
W-850-2145	5/25/10	2.72 ± 0.641 O	0.105 ± 0.0864 O	1.86 ± 0.472 O
W-850-2312	5/20/10	1.05 ± 0.354 O	<0.1 O	0.508 ± 0.222 O
W-850-2313	4/20/10	2.68 ± 0.666	0.191 ± 0.133 O	2.16 ± 0.562
W-850-2315	4/28/10	10.5 ± 2.26	0.438 ± 0.223	7.69 ± 1.70
W-850-2416	4/21/10	<0.1	<0.1 O	0.116 ± 0.100
W-850-2417	4/21/10	2.29 ± 0.606	0.235 ± 0.153 O	8.14 ± 1.77
W-865-1802	5/12/10	1.37 ± 0.298	<0.1	0.700 ± 0.182
W-865-1803	5/6/10	1.89 ± 0.368	<0.1	0.929 ± 0.212
W-865-2133	2/4/10	2.54 ± 0.568	<0.1	2.01 ± 0.472
W-865-2133	7/15/10	2.36 ± 0.424	<0.1	1.75 ± 0.331
W-865-2224	5/10/10	0.412 ± 0.129	<0.1	0.265 ± 0.0988
W-865-2224	11/3/10	0.536 ± 0.150	<0.1	0.283 ± 0.0987
W-PIT1-02	4/26/10	<0.1	<0.1	<0.1
W-PIT1-2204	5/11/10	2.80 ± 0.570	0.111 ± 0.0751	2.75 ± 0.561
W-PIT1-2209	4/8/10	1.86 ± 0.375	<0.1	0.692 ± 0.181 O
W-PIT1-2209	11/9/10	1.98 ± 0.563	<0.1	1.15 ± 0.385
W-PIT1-2225	5/26/10	<0.1 O	<0.1 O	<0.1 O
W-PIT1-2225	11/16/10	<0.1	<0.1	<0.1
W-PIT1-2326	2/3/10	1.75 ± 0.453	<0.1	1.06 ± 0.317
W-PIT1-2326	4/13/10	1.93 ± 0.454 O	<0.1	1.30 ± 0.337
W-PIT1-2326	7/12/10	2.03 ± 0.403 LO	<0.1 LO	1.07 ± 0.247
W-PIT1-2326	07/27/10 REX	1.84 ± 0.398	<0.1	1.22 ± 0.292
W-PIT1-2326	08/04/10 REX	2.16 ± 0.508	0.122 ± 0.0928	1.10 ± 0.310
W-PIT1-2326	09/09/10 DUP	2.04 ± 0.240	<0.1	1.19 ± 0.160
W-PIT1-2326	09/09/10 REX	2.36 ± 0.496	<0.1	1.13 ± 0.283
W-PIT1-2326	11/9/10	2.15 ± 0.560	0.154 ± 0.122	0.919 ± 0.308
W-PIT7-16	4/19/10	0.107 ± 0.0864	<0.1 O	<0.1
W8SPRNG	6/9/10	1.42 ± 0.407	<0.1	1.23 ± 0.367

## B-5.7. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
K1-01C	2/17/10	1010 ± 220
K1-01C	4/13/10	984 ± 214
K1-01C	04/13/10 DUP	956 ± 209
K1-01C	7/13/10	738 ± 166 O
K1-01C	11/3/10	847 ± 218
K1-01C	11/03/10 DUP	849 ± 219
K1-02B	2/1/10	4020 ± 797
K1-02B	02/01/10 DUP	3960 ± 786
K1-02B	4/7/10	4310 ± 855
K1-02B	05/24/10 REX	4230 ± 855 L
K1-02B	06/01/10 REX	3940 ± 782 L
K1-02B	7/8/10	4010 ± 796 O
K1-02B	07/08/10 DUP	4210 ± 835 O
K1-02B	10/12/10	3650 ± 725 L
K1-04	1/27/10	487 ± 120
K1-04	4/26/10	1590 ± 330
K1-04	06/07/10 REX	549 ± 135 L
K1-04	06/15/10 REX	492 ± 124
K1-04	7/7/10	451 ± 116 O
K1-04	10/11/10	390 ± 103 L
K1-05	2/3/10	169 ± 70.4
K1-05	4/7/10	201 ± 80.0
K1-05	7/7/10	229 ± 82.0 O
K1-05	10/11/10	211 ± 73.0
K1-06	2/2/10	3370 ± 672
K1-06	4/7/10	3280 ± 655
K1-06	7/8/10	3190 ± 638 O
K1-06	10/12/10	2990 ± 597 L
K1-07	1/27/10	<100
K1-07	4/7/10	<100
K1-07	7/19/10	<100
K1-07	10/12/10	<100 L
K1-08	2/16/10	181 ± 72.7
K1-08	4/8/10	267 ± 85.2
K1-08	7/8/10	254 ± 83.3 O
K1-08	10/12/10	158 ± 63.5 L
K1-09	2/2/10	286 ± 87.2
K1-09	4/8/10	266 ± 85.2
K1-09	05/11/10 REX	100 ± 87.3
K1-09	05/18/10 REA	250 ± 100

## B-5.7. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
K1-09	05/18/10 REX	R
K1-09	7/13/10	138 ± 62.0 O
K1-09	07/13/10 DUP	254 ± 68.0
K1-09	10/18/10	168 ± 92.8 L
K2-03	5/12/10	<100
K2-03	11/4/10	<100
K2-04D	4/14/10	5220 ± 1030
K2-04D	10/27/10	3860 ± 764
K2-04S	4/14/10	5890 ± 1160
K2-04S	04/14/10 DUP	5820 ± 1140
K2-04S	10/27/10	5360 ± 1050
NC2-05	5/18/10	R
NC2-05	05/18/10 REA	<100
NC2-05	11/10/10	<100
NC2-05A	5/18/10	R
NC2-05A	05/18/10 REA	3460 ± 710
NC2-05A	11/10/10	3440 ± 702
NC2-06	5/18/10	R
NC2-06	05/18/10 REA	6050 ± 1210
NC2-06	11/10/10	4680 ± 942
NC2-06	11/10/10 DUP	5720 ± 880 B
NC2-06A	5/18/10	R
NC2-06A	05/18/10 REA	<100
NC2-06A	11/10/10	<100
NC2-09	5/17/10	R
NC2-09	05/17/10 REA	<100
NC2-09	11/10/10	<100
NC2-10	6/2/10	376 ± 106
NC2-11D	4/14/10	3390 ± 675
NC2-11D	10/19/10	2730 ± 547 L
NC2-11D	10/19/10 DUP	3010 ± 603 L
NC2-11S	5/20/10	3990 ± 808 O
NC2-11S	11/17/10	4240 ± 838
NC2-12D	4/14/10	6320 ± 1240
NC2-12D	11/17/10	5050 ± 996
NC2-12I	5/19/10	R
NC2-12I	05/19/10 REA	6420 ± 1280
NC2-12I	11/17/10	5400 ± 1060
NC2-12S	5/19/10	R
NC2-12S	05/19/10 REA	4710 ± 952

## B-5.7. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
NC2-12S	11/17/10	2370 ± 478
NC2-13	5/19/10	R
NC2-13	05/19/10 REA	3850 ± 785
NC2-13	11/11/10	2940 ± 587
NC2-13	11/11/10 DUP	3210 ± 500 B
NC2-14S	5/12/10	2090 ± 441
NC2-14S	05/12/10 DUP	1720 ± 372
NC2-14S	05/12/10 REA	1540 ± 319 L
NC2-14S	10/27/10	3150 ± 629
NC2-15	5/17/10	R
NC2-15	05/17/10 REA	4540 ± 918
NC2-15	11/9/10	3680 ± 730
NC2-16	5/6/10	923 ± 222
NC2-16	05/06/10 REA	798 ± 179 L
NC2-16	10/27/10	349 ± 96.9
NC2-17	5/18/10	R
NC2-17	05/18/10 REA	10300 ± 2030
NC2-17	11/10/10	8660 ± 1710
NC2-18	5/20/10	8890 ± 1750 O
NC2-18	05/20/10 DUP	10000 ± 1970 O
NC2-18	10/27/10	10200 ± 1990
NC2-19	5/19/10	R
NC2-19	05/19/10 REA	<100
NC2-19	11/11/10	<100
NC2-20	5/19/10	R
NC2-20	05/19/10 REA	<100
NC2-21	5/19/10	R
NC2-21	05/19/10 REA	<100
NC7-10	4/20/10	13400 ± 2620
NC7-10	04/20/10 REA	14700 ± 2860 L
NC7-10	10/20/10	14400 ± 2800 L
NC7-11	4/20/10	8430 ± 1650
NC7-11	04/20/10 REA	9290 ± 1810 L
NC7-11	10/20/10	11700 ± 2280 L
NC7-15	4/19/10	726 ± 167
NC7-15	10/18/10	868 ± 223 L
NC7-19	4/19/10	3760 ± 748
NC7-19	10/18/10	3160 ± 666 L
NC7-27	4/26/10	11300 ± 2210
NC7-27	10/5/10	9740 ± 1900



## B-5.7. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
NC7-28	4/21/10	27600 ± 5370
NC7-28	10/19/10	24700 ± 4830 L
NC7-29	4/28/10	<100
NC7-29	10/11/10	<100 L
NC7-43	4/21/10	17800 ± 3470
NC7-43	04/21/10 REA	14900 ± 2890 L
NC7-43	10/5/10	8050 ± 1570
NC7-44	4/26/10	<100
NC7-44	10/21/10	<100
NC7-46	4/28/10	<100
NC7-54	4/20/10	13600 ± 2650
NC7-56	5/5/10	8050 ± 1580
NC7-56	05/05/10 REA	7380 ± 1450 L
NC7-56	10/26/10	8990 ± 1760
NC7-58	5/5/10	5780 ± 1140
NC7-58	05/05/10 REA	5840 ± 1150 L
NC7-58	10/26/10	6970 ± 1370
NC7-59	5/5/10	8210 ± 1610
NC7-59	05/05/10 REA	7260 ± 1420 L
NC7-59	10/26/10	8530 ± 1670
NC7-60	4/26/10	1360 ± 286
NC7-60	10/5/10	1200 ± 255
NC7-61	4/27/10	29300 ± 5690
NC7-61	10/18/10	23000 ± 4490 L
NC7-61	10/18/10 DUP	23700 ± 4630 L
NC7-62	5/5/10	8510 ± 1670
NC7-62	05/05/10 REA	8020 ± 1570 L
NC7-62	10/26/10	8340 ± 1630
NC7-69	4/22/10	<100
NC7-69	04/22/10 DUP	<100
NC7-69	10/21/10	<100
NC7-70	4/26/10	58400 ± 11400
NC7-70	10/19/10	47000 ± 9150 L
NC7-71	4/22/10	2450 ± 495
NC7-71	04/22/10 REA	2080 ± 423 L
NC7-71	10/19/10	2350 ± 507 L
NC7-72	5/5/10	8430 ± 1650
NC7-72	10/26/10	7960 ± 1560
NC7-73	5/5/10	7100 ± 1390
NC7-73	10/26/10	8370 ± 1640

## B-5.7. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
W-850-05	4/22/10	21500 ± 4180
W-850-05	10/19/10	18900 ± 3700 L
W-850-2145	5/25/10	9610 ± 1890 L
W-850-2145	11/3/10	8790 ± 1750
W-850-2312	5/20/10	2990 ± 615 O
W-850-2312	10/27/10	2140 ± 433
W-850-2313	4/20/10	18100 ± 3520
W-850-2313	10/20/10	17800 ± 3460 L
W-850-2314	10/5/10	998 ± 214
W-850-2315	4/28/10	<100
W-850-2315	10/11/10	<100 L
W-850-2316	5/25/10	11500 ± 2260 L
W-850-2316	11/3/10	9950 ± 1980
W-850-2416	4/21/10	<100
W-850-2416	10/19/10	<100 L
W-850-2417	4/21/10	28400 ± 5520
W-850-2417	10/19/10	23000 ± 4510 L
W-865-02	1/20/10	<100
W-865-02	7/14/10	<100 L
W-865-1802	5/12/10	310 ± 116
W-865-1802	11/4/10	1140 ± 260 S
W-865-1802	11/04/10 REA	319 ± 109
W-865-1803	5/6/10	2810 ± 580
W-865-1803	11/3/10	2630 ± 562
W-865-2005	2/4/10	<100
W-865-2005	02/04/10 DUP	<100
W-865-2005	4/13/10	<100
W-865-2005	04/13/10 DUP	<100
W-865-2005	7/14/10	<100 O
W-865-2005	07/14/10 DUP	<100 O
W-865-2005	10/18/10	<100 L
W-865-2005	10/18/10 DUP	<100 L
W-865-2121	5/10/10	<100
W-865-2121	11/9/10	<100
W-865-2133	2/4/10	<100
W-865-2133	5/10/10	<100
W-865-2133	7/15/10	<100 O
W-865-2133	11/3/10	<100
W-865-2224	2/4/10	<100
W-865-2224	5/10/10	<100

## B-5.7. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
W-865-2224	7/15/10	<100 O
W-865-2224	11/3/10	<100
W-PIT1-02	2/4/10	1290 ± 276
W-PIT1-02	4/26/10	1330 ± 279
W-PIT1-02	7/12/10	1360 ± 283 O
W-PIT1-02	10/20/10	1320 ± 277 L
W-PIT1-2204	5/11/10	<100
W-PIT1-2204	11/16/10	<100
W-PIT1-2209	1/27/10	<100
W-PIT1-2209	4/8/10	<100
W-PIT1-2209	7/14/10	<100 O
W-PIT1-2209	11/9/10	<100
W-PIT1-2225	2/17/10	<100
W-PIT1-2225	5/26/10	<100 L
W-PIT1-2225	7/20/10	<100
W-PIT1-2225	11/16/10	<100
W-PIT1-2326	2/3/10	3250 ± 649
W-PIT1-2326	4/13/10	3220 ± 643
W-PIT1-2326	7/12/10	2420 ± 488 O
W-PIT1-2326	11/9/10	271 ± 103 S
W-PIT1-2326	11/09/10 REA	2760 ± 571
W-PIT7-16	4/19/10	<100
W-PIT7-16	10/18/10	<100 L
W8SPRNG	6/9/10	16800 ± 3270 L
W8SPRNG	10/20/10	15600 ± 3030 L

B-5.8. Building 850 area in Operable Unit 5 high explosive compounds in ground water and surface water.

Location	Date	1,3,5-		2,4,6-TNT	2,4-Dinitro-		2,6-Dinitro-		2-Amino-4,6-		4-Amino-2,6-		HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)
		Trinitro-benzene (µg/L)	1,3-Dinitro-benzene (µg/L)		toluene (µg/L)	toluene (µg/L)	Dinitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	Dinitro-toluene (µg/L)	4-Nitro-toluene (µg/L)				
NC7-10	4/20/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2	<2	<1
NC7-10	10/20/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.6	<2	<1
NC7-11	4/20/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1	<2	<1
NC7-11	10/20/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.2	<2	<1
NC7-15	4/19/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-15	10/18/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-19	4/19/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-19	10/18/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-27	4/26/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-27	10/5/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-28	4/21/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	10	<2	1.1
NC7-28	10/19/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	12	<2	3.7
NC7-43	4/21/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-43	10/5/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-44	4/26/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-44	10/21/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-54	4/20/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.2	<2	<1
NC7-56	5/5/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-56	10/26/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-60	4/26/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-60	10/5/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-61	4/27/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	7.7	<2	6.3
NC7-61	10/18/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	4.9	<2	6.4
NC7-61	10/18/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	4.6	<2	4.5
NC7-69	4/22/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-69	04/22/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-69	10/21/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-70	4/26/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-70	10/19/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-71	4/22/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-71	10/19/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-72	5/5/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-72	10/26/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-73	5/5/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-73	10/26/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-850-05	4/22/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-850-05	10/19/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

B-5.8. Building 850 area in Operable Unit 5 high explosive compounds in ground water and surface water.

Location	Date	1,3,5-	1,3-Dinitro-	2,4,6-TNT	2,4-Dinitro-	2,6-Dinitro-	2-Amino-4,6-	2-Nitro-	3-Nitro-	4-Amino-2,6-	4-Nitro-	HMX (µg/L)	Nitro-	RDX (µg/L)
		Trinitro-	benzene		toluene	toluene	Dinitro-	toluene	Dinitro-	toluene	Dinitro-		toluene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		(µg/L)	
W-850-2313	4/20/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-850-2313	10/20/10	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.71	<1.4	<0.71
W-850-2314	10/5/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-850-2416	4/21/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-850-2416	10/19/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	2.7
W-850-2417	4/21/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	11	<2	9.3
W-850-2417	10/19/10	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	8.6	<1.5	7.4
W-PIT7-16	4/19/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-PIT7-16	10/18/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W8SPRNG	6/9/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W8SPRNG	10/20/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2	<2	<1

B-5.9. Pit 2 Landfill volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
K2-01C	5/12/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC2-08	5/12/10	E601	<0.5	<0.5	<0.5	<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	5/11/10	E601	<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
W-PIT2-1935	5/11/10	E601	<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
W-PIT2-1935	05/11/10 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

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
K2-01C	5/12/10	E601	0 of 18
NC2-08	5/12/10	E601	0 of 18
W-PIT2-1934	5/11/10	E601	0 of 18
W-PIT2-1935	5/11/10	E601	0 of 18
W-PIT2-1935	05/11/10 DUP	E601	0 of 18

## B-5.10. Pit 2 Landfill uranium isotopes by mass spectrometry and alpha spectrometry in ground water.

Location	Date	Uranium (pCi/L)	Uranium 234 and		Uranium 235 and		Uranium 236 by mass (pCi/L)	Uranium 238 (pCi/L)	Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
			Uranium 233 (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 236 (pCi/L)	Uranium 235 by mass (pCi/L)				
K2-01C	5/12/10	7.50 ± 0.140	3.83 ± 0.713	3.90 ± 0.130	0.192 ± 0.0939	0.140 ± 0.00210	<0.007	3.56 ± 0.670	3.40 ± 0.0430	0.00644 ± 0.0000550
NC2-08	5/12/10	4.00 ± 0.0580	2.26 ± 0.446	2.40 ± 0.0580	0.119 ± 0.0698	0.0700 ± 0.000680	<0.00029	1.67 ± 0.350	1.50 ± 0.00480	0.00720 ± 0.0000650
W-PIT2-1934	5/11/10	4.10 ± 0.0810	2.75 ± 0.527	2.40 ± 0.0800	<0.1	0.0650 ± 0.000440	<0.007	1.80 ± 0.371	1.60 ± 0.00750	0.00616 ± 0.0000310
W-PIT2-1935	5/11/10	0.990 ± 0.00810	<0.1	0.630 ± 0.00790	<0.1	0.0160 ± 0.000130	<0.000067	<0.1	0.350 ± 0.00140	0.00719 ± 0.0000510
W-PIT2-1935	05/11/10 DUP	-	0.410 ± 0.150	-	<0.1	-	-	0.136 ± 0.0830	-	-
W-PIT2-2226	6/2/10	-	<0.1	-	<0.1 O	-	-	<0.1	-	-
W-PIT2-2226	11/15/10	-	<0.1	-	<0.1	-	-	<0.1	-	-
W-PIT2-2301	5/17/10	1.20 ± 0.0320	0.709 ± 0.240	0.650 ± 0.0310	<0.1	0.0250 ± 0.000330	<0.00029	0.590 ± 0.214	0.580 ± 0.00500	0.00681 ± 0.0000650
W-PIT2-2302	5/17/10	0.130 ± 0.00360	0.102 ± 0.0793	<0.062	<0.1	0.00270 ± 0.0000540	<0.000072	<0.1	0.0640 ± 0.000380	0.00653 ± 0.000127

## B-5.11. Pit 2 Landfill nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
K2-01C	5/12/10	26	<4
K2-01C	11/10/10	-	5.5
NC2-08	5/12/10	35	<4
NC2-08	11/9/10	-	5.4
W-PIT2-1934	5/11/10	37 D	<4
W-PIT2-1934	11/4/10	-	<4
W-PIT2-1935	5/11/10	36	<4
W-PIT2-1935	05/11/10 DUP	38	<4
W-PIT2-1935	11/4/10	-	<4
W-PIT2-1935	11/04/10 DUP	-	<4
W-PIT2-2226	2/17/10	-	<4
W-PIT2-2226	6/2/10	<0.5	<4
W-PIT2-2226	7/19/10	-	<4
W-PIT2-2226	11/15/10	<0.5	<4
W-PIT2-2301	5/17/10	33	<4
W-PIT2-2302	5/17/10	31	<4
W-PIT2-2302	11/11/10	-	<4



## B-5.12. Pit 2 Landfill high explosive compounds in ground water.

Location	Date	1,3,5-	1,3-Dinitro-	2,4,6-TNT	2,4-Dinitro-	2,6-Dinitro-	2-Amino-4,6-	2-Nitro-	3-Nitro-	4-Amino-2,6-	4-Nitro-	HMX (µg/L)	Nitro-	RDX (µg/L)
		Trinitro-	benzene		toluene	toluene	Dinitro-	toluene	Dinitro-	toluene	Dinitro-		toluene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		(µg/L)	
K2-01C	5/12/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC2-08	5/12/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-PIT2-1934	5/11/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1.2	<2	<1.2
W-PIT2-1935	5/11/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-PIT2-1935	05/11/10 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

## B-5.13. Pit 2 Landfill tritium in ground water.

Location	Date	Tritium (pCi/L)
K2-01C	2/3/10	4790 ± 947
K2-01C	5/12/10	1990 ± 407
K2-01C	05/12/10 REA	1820 ± 374 L
K2-01C	7/19/10	2070 ± 419
K2-01C	11/10/10	4070 ± 825
NC2-08	5/12/10	5810 ± 1160
NC2-08	11/9/10	4240 ± 840
W-PIT2-1934	5/11/10	1340 ± 299
W-PIT2-1934	11/4/10	2390 ± 500 S
W-PIT2-1934	11/04/10 REA	1300 ± 290
W-PIT2-1935	5/11/10	2110 ± 446
W-PIT2-1935	05/11/10 DUP	2170 ± 340
W-PIT2-1935	11/4/10	<100 S
W-PIT2-1935	11/04/10 REA	1930 ± 411
W-PIT2-1935	11/04/10 DUP	2480 ± 390 B
W-PIT2-2226	2/17/10	<100
W-PIT2-2226	6/2/10	<100
W-PIT2-2226	7/19/10	<100
W-PIT2-2226	11/15/10	<100
W-PIT2-2301	5/17/10	R
W-PIT2-2301	05/17/10 REA	<100
W-PIT2-2302	5/17/10	R
W-PIT2-2302	05/17/10 REA	<100
W-PIT2-2302	11/11/10	<100

B-5.14. Pit 2 Landfill fluoride in ground water.

Location	Date	Fluoride (mg/L)
K2-01C	5/12/10	0.14
NC2-08	5/12/10	0.21
W-PIT2-1934	5/11/10	0.22
W-PIT2-1935	5/11/10	0.082
W-PIT2-1935	05/11/10 DUP	0.16

## B-5.15. Pit 2 Landfill metals in ground water.

Constituents of concern	K2-01C 5/12/10	NC2-08 5/12/10	W-PIT2-1934 5/11/10	W-PIT2-1935 5/11/10	W-PIT2-1935 05/11/10 DUP
Antimony (mg/L)	<0.0005	<0.0005	<0.0005	<0.0005	<0.06
Arsenic (mg/L)	0.007	0.01	0.01	0.004	0.01
Barium (mg/L)	0.03 L	0.01 L	0.02 L	0.38 DL	0.15
Beryllium (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001	<0.002
Cadmium (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001	<0.005
Chromium (mg/L)	0.0007	0.0007	<0.0005	0.03	<0.01
Cobalt (mg/L)	<0.0005	<0.0005	<0.0005	0.0007	<0.02
Copper (mg/L)	0.02	0.0006	0.001	0.001	<0.01
Lead (mg/L)	0.0007	<0.0002	<0.0002	<0.0002	<0.003
Lithium (mg/L)	<0.02	0.026	-	-	0.032
Lithium (µg/L)	-	-	18	-	-
Mercury (mg/L)	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002
Molybdenum (mg/L)	0.004	0.003	0.003	0.002	<0.02
Nickel (mg/L)	0.0008	<0.0005	<0.0005	<0.0005	<0.02
Selenium (mg/L)	<0.001	0.001	0.002	0.002	<0.005
Silver (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001	<0.005
Thallium (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001	<0.005
Vanadium (mg/L)	0.05	0.06	0.06	0.04	0.049
Zinc (mg/L)	0.01	<0.01	<0.01	<0.01	<0.05

B-5.16. Pit 7 Landfill in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
K7-01	5/13/10	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	4/14/10	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
K7-06	5/13/10	E601	<0.5	<0.5	<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	5/4/10	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	5/4/10	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	4/19/10	E601	<0.5	<0.5	<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	2/1/10	E601	<0.5	<0.5	<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	4/14/10	E601	<0.5	<0.5	<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	2/1/10	E601	<0.5	<0.5	<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	4/8/10	E601	<0.5	<0.5	<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	2/1/10	E601	<0.5	<0.5	<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	4/15/10	E601	<0.5	<0.5	<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	1/28/10	E601	<0.5	<0.5	<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	6/2/10	E601	<0.5	<0.5	<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	11/2/10	E601	<0.5	<0.5	<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	2/2/10	E601	<0.5	<0.5	<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	5/4/10	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	2/1/10	E601	<0.5	<0.5	<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	5/4/10	E601	<0.5	<0.5	<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	2/2/10	E601	<0.5	<0.5	<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	4/13/10	E601	<0.5	<0.5	<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	04/13/10 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	4/13/10	E601	<0.5	<0.5	<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	5/6/10	E601	<0.5	<0.5	<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	4/8/10	E601	<0.5	<0.5	<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	2/1/10	E601	2.2	<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
NC7-51	2/2/10	E601	2	<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
NC7-51	4/13/10	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
NC7-51	04/13/10 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
NC7-52	2/2/10	E601	<0.5	<0.5	<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	1/28/10	E601	<0.5	<0.5	<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	1/28/10	E601	<0.5	<0.5	<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	6/2/10	E601	<0.5	<0.5	<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	10/12/10	E601	<0.5	<0.5	<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	4/1/10	E601	<0.5	<0.5	<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	4/14/10	E601	<0.5	<0.5	<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	04/14/10 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
NC7-68	2/2/10	E601	<0.5	<0.5	<0.5	<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	1/11/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-5.16. Pit 7 Landfill in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-865-01	7/14/10	E601	<0.5	<0.5	<0.5	<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	2/2/10	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-PIT7-03	2/3/10	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-PIT7-03	4/12/10	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-PIT7-03	04/12/10 DUP	E601	0.75	<0.5	<0.5	<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	10/13/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-03	10/13/10 DUP	E601	0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-1918	1/28/10	E601	<0.5	<0.5	<0.5	<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	4/27/10	E601	<0.5	<0.5	<0.5	<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	10/13/10	E601	<0.5	<0.5	<0.5	<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	1/28/10	E601	<0.5	<0.5	<0.5	<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	5/26/10	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-PIT7-2305	10/12/10	E601	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	<0.5
W-PIT7-2306	1/28/10	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-PIT7-2306	6/14/10	E601	2.2	<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
W-PIT7-2306	10/12/10	E601	5.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2307	1/28/10	E601	8.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2307	6/2/10	E601	6.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2307	10/12/10	E601	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2309	2/2/10	E601	<0.5	<0.5	<0.5	<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	4/14/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
K7-01	5/13/10	E601	0 of 18
K7-03	4/14/10	E601	0 of 18
K7-06	5/13/10	E601	0 of 18
K7-09	5/4/10	E601	0 of 18
K7-10	5/4/10	E601	0 of 18
NC7-12	4/19/10	E601	0 of 18
NC7-16	2/1/10	E601	0 of 18
NC7-16	4/14/10	E601	0 of 18
NC7-17	2/1/10	E601	0 of 18
NC7-17	4/8/10	E601	0 of 18
NC7-21	2/1/10	E601	0 of 18
NC7-21	4/15/10	E601	0 of 18
NC7-25	1/28/10	E601	0 of 18
NC7-25	6/2/10	E601	0 of 18

## Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
NC7-25	11/2/10	E601	0 of 18
NC7-26	2/2/10	E601	0 of 18
NC7-26	5/4/10	E601	0 of 18
NC7-34	2/1/10	E601	0 of 18
NC7-34	5/4/10	E601	0 of 18
NC7-36	2/2/10	E601	0 of 18
NC7-36	4/13/10	E601	0 of 18
NC7-36	04/13/10 DUP	E601	0 of 18
NC7-40	4/13/10	E601	0 of 18
NC7-47	5/6/10	E601	0 of 18
NC7-48	4/8/10	E601	0 of 18
NC7-51	2/1/10	E601	0 of 18
NC7-51	2/2/10	E601	0 of 18
NC7-51	4/13/10	E601	0 of 18
NC7-51	04/13/10 DUP	E601	0 of 18
NC7-52	2/2/10	E601	0 of 18
NC7-63	1/28/10	E601	0 of 18
NC7-64	1/28/10	E601	0 of 18
NC7-64	6/2/10	E601	0 of 18
NC7-64	10/12/10	E601	0 of 18
NC7-65	4/1/10	E601	0 of 18
NC7-67	4/14/10	E601	0 of 18
NC7-67	04/14/10 DUP	E601	0 of 18
NC7-68	2/2/10	E601	0 of 18
W-865-01	1/11/10	E601	0 of 18
W-865-01	7/14/10	E601	0 of 18
W-PIT7-03	2/2/10	E601	0 of 18
W-PIT7-03	2/3/10	E601	0 of 18
W-PIT7-03	4/12/10	E601	0 of 18
W-PIT7-03	04/12/10 DUP	E601	0 of 18
W-PIT7-03	10/13/10	E601	0 of 18
W-PIT7-03	10/13/10 DUP	E601	0 of 18
W-PIT7-1918	1/28/10	E601	0 of 18
W-PIT7-1918	4/27/10	E601	0 of 18
W-PIT7-1918	10/13/10	E601	0 of 18
W-PIT7-2305	1/28/10	E601	0 of 18
W-PIT7-2305	5/26/10	E601	0 of 18
W-PIT7-2305	10/12/10	E601	0 of 18
W-PIT7-2306	1/28/10	E601	0 of 18
W-PIT7-2306	6/14/10	E601	0 of 18
W-PIT7-2306	10/12/10	E601	0 of 18

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
W-PIT7-2307	1/28/10	E601	0 of 18
W-PIT7-2307	6/2/10	E601	0 of 18
W-PIT7-2307	10/12/10	E601	0 of 18
W-PIT7-2309	2/2/10	E601	0 of 18
W-PIT7-2309	4/14/10	E601	0 of 18



## B-5.17. Pit 7 Landfill in Operable Unit 5 nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate as NO <sub>3</sub> (mg/L)	Perchlorate (mg/L)
K7-01	5/13/10	44	12
K7-03	4/14/10	34	7.7
K7-06	5/13/10	16	<4
K7-06	10/7/10	-	<4
K7-07	4/19/10	24	<4
K7-09	5/4/10	<0.5	<4
K7-09	11/2/10	-	<4
K7-10	5/4/10	0.77	<4
NC7-12	4/19/10	23 D	<4
NC7-16	2/1/10	290 DLS	<4
NC7-16	4/14/10	39 D	<4
NC7-17	2/1/10	41 L	<4
NC7-17	4/8/10	36 D	<4
NC7-18	4/15/10	41	<4
NC7-20	4/19/10	-	<4
NC7-21	2/1/10	210 DLS	7
NC7-21	4/15/10	40	9.6
NC7-25	1/28/10	38	11
NC7-25	6/2/10	38	10
NC7-25	11/2/10	-	10
NC7-26	2/2/10	<0.5	<4 O
NC7-26	5/4/10	0.54	<4
NC7-26	10/14/10	-	<4
NC7-34	2/1/10	150 DLS	19
NC7-34	5/4/10	27	12
NC7-36	2/2/10	22	<4
NC7-36	4/13/10	38 L	<4
NC7-36	04/13/10 DUP	40	<4
NC7-40	4/13/10	32 DL	10
NC7-47	5/6/10	68	<4
NC7-48	4/8/10	18	<4
NC7-49A	4/8/10	22 D	<4
NC7-51	4/13/10	36 DL	14
NC7-51	04/13/10 DUP	44	15
NC7-52	2/2/10	24 D	5
NC7-52	4/13/10	18 DL	4.3
NC7-63	1/28/10	48	12 D
NC7-64	1/28/10	41	13
NC7-64	6/2/10	46	9.8
NC7-64	10/12/10	-	7.4

## B-5.17. Pit 7 Landfill in Operable Unit 5 nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate as NO <sub>3</sub> (mg/L)	Perchlorate (mg/L)
NC7-65	4/1/10	<0.5	<4
NC7-67	4/14/10	0.93	<4
NC7-67	04/14/10 DUP	1.2	<4
NC7-68	2/2/10	17 D	9.1
NC7-68	4/14/10	18	11
NC7-75	4/12/10	<0.5	<4
NC7-75	10/12/10	-	<4
NC7-76	4/19/10	-	<4
W-865-01	1/11/10	19 D	<4
W-865-03	1/11/10	37 D	<4
W-PIT7-02	4/15/10	1.2	<4
W-PIT7-03	4/12/10	33 D	9.1
W-PIT7-03	04/12/10 DUP	41	8.1
W-PIT7-10	4/15/10	29	<4
W-PIT7-12	4/1/10	36 D	<4
W-PIT7-12	10/4/10	-	<4
W-PIT7-13	4/1/10	49 D	<4
W-PIT7-13	04/01/10 DUP	62	4.1
W-PIT7-14	4/7/10	-	<4
W-PIT7-14	04/07/10 DUP	-	<4
W-PIT7-15	5/6/10	<0.5	<4
W-PIT7-1860	4/8/10	-	<4
W-PIT7-1918	1/28/10	18	6.9
W-PIT7-1918	4/27/10	27	8.6
W-PIT7-1918	10/13/10	-	8.9
W-PIT7-2141	4/7/10	33 D	7.1
W-PIT7-2141	10/4/10	-	6.9
W-PIT7-2305	1/28/10	41	14
W-PIT7-2305	5/26/10	43	12
W-PIT7-2305	10/12/10	-	10
W-PIT7-2306	1/28/10	29	27 D
W-PIT7-2306	6/14/10	30	25 D
W-PIT7-2306	10/12/10	-	16
W-PIT7-2307	1/28/10	32	11
W-PIT7-2307	6/2/10	34	11
W-PIT7-2307	10/12/10	-	9.1
W-PIT7-2309	2/2/10	18	6.5 O
W-PIT7-2309	4/14/10	48	8.9

## B-5.18. Pit 7 Landfill 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
	5/13/10	4/14/10	5/13/10	5/4/10	5/4/10	4/8/10	5/4/10	5/6/10	4/8/10	1/11/10
Antimony (mg/L)	<0.0005	<0.0005 L	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.06	<0.06	-
Arsenic (mg/L)	0.007	0.001	0.02	<0.0005	<0.0005	-	0.002	0.012	<0.005	0.0037
Barium (mg/L)	0.19	0.07	0.08	0.01	0.1	-	0.03	0.056	0.14	0.06
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	0.0002	<0.0001	<0.0001	-	<0.0001	<0.005	<0.005	<0.0005
Chromium (mg/L)	0.0006	<0.0005	<0.0005	<0.0005	0.003	-	<0.0005	<0.01	<0.01	<0.001
Cobalt (mg/L)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.02	<0.02	-
Copper (mg/L)	0.006	0.08	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.01	<0.01	-
Lead (mg/L)	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	0.0044	<0.003	<0.005
Lithium (mg/L)	0.031	0.035	0.025	0.084	0.062	-	0.02	0.024	0.078	-
Mercury (mg/L)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0002	<0.0002	<0.0002
Molybdenum (mg/L)	0.003	0.004	0.003	0.004	0.003	-	0.006	<0.02	<0.02	-
Nickel (mg/L)	0.002	0.02	<0.0005	0.001	<0.0005	-	<0.0005	<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
Silica (as SiO <sub>2</sub> ) (mg/L)	-	-	-	-	-	78	-	-	-	-
Silver (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.005	<0.005	<0.001
Thallium (mg/L)	<0.0001 L	<0.0001	<0.0001 L	<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	0.056	0.02	-
Zinc (mg/L)	<0.01	0.02 L	<0.01	<0.01	<0.01	-	<0.01	<0.05	<0.05	-



## B-5.20. Pit 7 Landfill in Operable Unit 5 fluoride in ground water.

Location	Date	Fluoride (mg/L)
K7-01	2/4/10	0.32
K7-01	5/13/10	0.43
K7-03	4/14/10	0.3 O
K7-06	5/13/10	0.31
K7-09	5/4/10	0.12
K7-10	5/4/10	<0.05
NC7-17	2/1/10	0.61 L
NC7-17	4/8/10	0.62
NC7-26	5/4/10	0.19
NC7-47	5/6/10	0.42
NC7-48	4/8/10	0.23

## B-5.21. Pit 7 Landfill in Operable Unit 5 uranium isotopes by mass spectrometry in ground water.

Location	Date	Uranium (pCi/L)	Uranium (µg/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	5/13/10	19.0 ± 0.480	-	9.80 ± 0.470	0.400 ± 0.00560	<0.0016	8.50 ± 0.0380	0.00731 ± 0.0000970
K7-03	4/14/10	8.10 ± 0.190	-	4.10 ± 0.190	0.180 ± 0.00180	<0.00091	3.80 ± 0.0140	0.00725 ± 0.0000690
NC7-12	4/19/10	3.10 ± 0.0690	-	1.60 ± 0.0690	0.0640 ± 0.000680	<0.00067	1.40 ± 0.00670	0.00707 ± 0.0000670
NC7-16	2/1/10	17.0 ± 0.370	-	6.50 ± 0.360	0.300 ± 0.00280	0.0340 ± 0.000120	11.0 ± 0.0690	0.00446 ± 0.0000300
NC7-16	4/14/10	8.50 ± 0.210	-	3.00 ± 0.210	0.150 ± 0.00120	0.0190 ± 0.000150	5.40 ± 0.0110	0.00424 ± 0.0000330
NC7-16	7/12/10	14.0 ± 0.300	-	5.30 ± 0.300	0.240 ± 0.00160	0.0280 ± 0.0000400	8.20 ± 0.0290	0.00459 ± 0.0000250
NC7-16	10/14/10	14.0 ± 0.320	-	5.40 ± 0.310	0.240 ± 0.00340	0.0240 ± 0.000190	7.90 ± 0.0730	0.00478 ± 0.0000510
NC7-25	1/28/10	36.0 ± 0.760	-	20.0 ± 0.760	0.750 ± 0.00640	<0.0031	16.0 ± 0.0670	0.00728 ± 0.0000540
NC7-25	6/2/10	36.0 ± 0.700	-	20.0 ± 0.700	0.730 ± 0.00530	<0.003	16.0 ± 0.0930	0.00726 ± 0.0000300
NC7-25	11/2/10	36.0 ± 0.540	-	20.0 ± 0.520	0.730 ± 0.00980	<0.003	16.0 ± 0.130	0.00721 ± 0.0000770
NC7-26	2/2/10	0.310 ± 0.00760	-	0.180 ± 0.00750	0.00590 ± 0.0000780	<0.000048	0.130 ± 0.00120	0.00729 ± 0.0000640
NC7-26	5/4/10	0.290 ± 0.0120	-	0.170 ± 0.0120	0.00540 ± 0.0000530	<0.000065	0.120 ± 0.000570	0.00727 ± 0.0000620
NC7-40	2/2/10	95.0 ± 1.10	-	26.0 ± 1.00	1.40 ± 0.0100	<0.49	68.0 ± 0.440	0.00311 ± 0.0000120
NC7-40	4/13/10	95.0 ± 2.80	-	27.0 ± 2.80	1.40 ± 0.0160	0.320 ± 0.00200	67.0 ± 0.500	0.00323 ± 0.0000270
NC7-40	7/12/10	86.0 ± 1.90	-	24.0 ± 1.90	1.30 ± 0.0160	0.290 ± 0.00110	61.0 ± 0.550	0.00321 ± 0.0000280
NC7-40	10/13/10	87.0 ± 1.40	-	24.0 ± 1.40	1.30 ± 0.0140	0.300 ± 0.00140	62.0 ± 0.450	0.00317 ± 0.0000260
NC7-48	4/8/10	12.0 ± 0.260	-	2.70 ± 0.250	0.160 ± 0.00200	0.0430 ± 0.000240	8.80 ± 0.0830	0.00283 ± 0.0000220
NC7-51	2/1/10	80.0 ± 0.870	-	36.0 ± 0.840	1.50 ± 0.0150	0.00910 ± 0.000400	42.0 ± 0.230	0.00554 ± 0.0000490
NC7-51	4/13/10	84.0 ± 2.00	-	33.0 ± 2.00	1.50 ± 0.00970	0.160 ± 0.00140	49.0 ± 0.160	0.00463 ± 0.0000270
NC7-51	7/12/10	61.0 ± 0.980	-	26.0 ± 0.970	1.10 ± 0.00830	0.0880 ± 0.000400	33.0 ± 0.140	0.00505 ± 0.0000320
NC7-51	10/12/10	68.0 ± 0.860	-	29.0 ± 0.810	1.20 ± 0.0210	0.100 ± 0.00150	38.0 ± 0.300	0.00504 ± 0.0000760
NC7-51	10/12/10 DUP	74.0 ± 1.60	-	32.0 ± 1.60	1.30 ± 0.0190	0.120 ± 0.000240	41.0 ± 0.320	0.00508 ± 0.0000620
NC7-63	1/28/10	120 ± 0.750	-	37.0 ± 0.610	1.80 ± 0.0220	<0.58	81.0 ± 0.440	0.00341 ± 0.0000390
NC7-64	1/28/10	87.0 ± 1.20	-	40.0 ± 1.20	1.70 ± 0.0160	0.0740 ± 0.000460	45.0 ± 0.250	0.00581 ± 0.0000470
NC7-64	6/2/10	94.0 ± 1.80	-	45.0 ± 1.80	1.80 ± 0.0130	0.0870 ± 0.000440	47.0 ± 0.180	0.00598 ± 0.0000340
NC7-64	7/14/10	90.0 ± 0.900	-	43.0 ± 0.850	1.70 ± 0.0170	0.0840 ± 0.000740	45.0 ± 0.320	0.00595 ± 0.0000400
NC7-64	9/1/10	-	152 ± 16.2	-	-	-	-	-
NC7-64	10/12/10	96.0 ± 1.40	152 ± 16.7	46.0 ± 1.30	1.90 ± 0.0150	0.0710 ± 0.000540	48.0 ± 0.340	0.00610 ± 0.0000230
NC7-65	4/1/10	0.980 ± 0.0320	-	0.550 ± 0.0320	0.0200 ± 0.000180	<0.00021	0.410 ± 0.00200	0.00734 ± 0.0000580
W-PIT7-14	4/7/10	<0.0627	-	<0.0069	0.0000380 ± 0.00000230	<0.00014	0.000570 ± 0.0000240	0.0104 ± 0.000424
W-PIT7-15	5/6/10	<0.0627	-	<0.056	0.00120 ± 0.0000400	<0.000056	0.0260 ± 0.000590	0.00732 ± 0.000175
W-PIT7-1918	1/28/10	48.0 ± 1.00	-	16.0 ± 1.00	0.780 ± 0.00690	0.120 ± 0.000140	31.0 ± 0.0830	0.00390 ± 0.0000330
W-PIT7-1918	4/27/10	53.0 ± 0.330	-	<25	1.10 ± 0.0170	0.230 ± 0.000750	52.0 ± 0.330	0.00325 ± 0.0000470
W-PIT7-1918	7/12/10	53.0 ± 0.690	-	17.0 ± 0.680	0.820 ± 0.00710	0.150 ± 0.00130	35.0 ± 0.140	0.00361 ± 0.0000280
W-PIT7-1918	10/13/10	52.0 ± 1.30	-	16.0 ± 1.30	0.830 ± 0.00830	0.130 ± 0.000770	34.0 ± 0.160	0.00373 ± 0.0000330
W-PIT7-2141	4/7/10	5.80 ± 0.100	-	3.50 ± 0.100	0.100 ± 0.00120	<0.00043	2.20 ± 0.0210	0.00725 ± 0.0000510
W-PIT7-2305	1/28/10	21.0 ± 0.170	-	11.0 ± 0.170	0.460 ± 0.00280	<0.0019	10.0 ± 0.0150	0.00715 ± 0.0000420
W-PIT7-2305	5/26/10	17.0 ± 0.320	-	8.90 ± 0.310	0.370 ± 0.00390	<0.0016	8.00 ± 0.0620	0.00717 ± 0.0000530
W-PIT7-2305	7/14/10	15.0 ± 0.400	-	7.60 ± 0.400	0.310 ± 0.00320	<0.0013	6.70 ± 0.0330	0.00716 ± 0.0000660

## B-5.21. Pit 7 Landfill in Operable Unit 5 uranium isotopes by mass spectrometry in ground water.

Location	Date	Uranium (pCi/L)	Uranium ( $\mu\text{g/L}$ )	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-PIT7-2305	9/1/10	-	22.5 $\pm$ 1.97	-	-	-	-	-
W-PIT7-2305	10/12/10	15.0 $\pm$ 0.110	23.6 $\pm$ 2.10	7.60 $\pm$ 0.100	0.320 $\pm$ 0.00310	<0.0013	6.90 $\pm$ 0.0310	0.00715 $\pm$ 0.0000620
W-PIT7-2306	1/28/10	5.50 $\pm$ 0.0950	-	2.40 $\pm$ 0.0950	0.0930 $\pm$ 0.000950	0.00830 $\pm$ 0.0000280	2.90 $\pm$ 0.00980	0.00491 $\pm$ 0.0000470
W-PIT7-2306	6/14/10	3.80 $\pm$ 0.160	-	2.00 $\pm$ 0.160	0.0700 $\pm$ 0.000410	<0.007	1.80 $\pm$ 0.00480	0.00620 $\pm$ 0.0000330
W-PIT7-2306	7/14/10	3.50 $\pm$ 0.0970	-	2.00 $\pm$ 0.0970	0.0660 $\pm$ 0.000430	<0.00094	1.50 $\pm$ 0.00200	0.00686 $\pm$ 0.0000430
W-PIT7-2306	9/1/10	-	4.74 $\pm$ 0.416	-	-	-	-	-
W-PIT7-2306	10/12/10	3.60 $\pm$ 0.0460	5.18 $\pm$ 0.461	2.00 $\pm$ 0.0460	0.0680 $\pm$ 0.000670	<0.00066	1.50 $\pm$ 0.00510	0.00691 $\pm$ 0.0000640
W-PIT7-2307	1/28/10	21.0 $\pm$ 0.320	-	11.0 $\pm$ 0.320	0.430 $\pm$ 0.00210	<0.0018	9.40 $\pm$ 0.0360	0.00707 $\pm$ 0.0000220
W-PIT7-2307	6/2/10	17.0 $\pm$ 0.380	-	8.90 $\pm$ 0.370	0.340 $\pm$ 0.00350	<0.0029	7.40 $\pm$ 0.0430	0.00711 $\pm$ 0.0000610
W-PIT7-2307	7/14/10	13.0 $\pm$ 0.140	-	7.00 $\pm$ 0.140	0.260 $\pm$ 0.00220	<0.0011	5.60 $\pm$ 0.0350	0.00716 $\pm$ 0.0000390
W-PIT7-2307	9/1/10	-	19.7 $\pm$ 1.72	-	-	-	-	-
W-PIT7-2307	10/12/10	12.0 $\pm$ 0.250	17.9 $\pm$ 1.59	6.40 $\pm$ 0.240	0.250 $\pm$ 0.00380	<0.0018	5.50 $\pm$ 0.0680	0.00709 $\pm$ 0.0000620
W-PIT7-2309	2/2/10	1.20 $\pm$ 0.0190	-	0.630 $\pm$ 0.0190	0.0260 $\pm$ 0.000200	<0.00011	0.570 $\pm$ 0.00250	0.00723 $\pm$ 0.0000430
W-PIT7-2309	4/14/10	0.740 $\pm$ 0.0180	-	0.390 $\pm$ 0.0180	0.0150 $\pm$ 0.000170	<0.000081	0.330 $\pm$ 0.00150	0.00725 $\pm$ 0.0000710

## B-5.22. Pit 7 Landfill in Operable Unit 5 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)
K7-01	5/13/10	10.1 ± 1.96	0.350 ± 0.166	8.83 ± 1.74
K7-03	4/14/10	2.57 ± 0.574 FO	0.190 ± 0.112	2.54 ± 0.569
K7-06	5/13/10	0.435 ± 0.171	<0.1	0.469 ± 0.179
K7-07	4/19/10	3.21 ± 0.761	0.211 ± 0.136 O	4.24 ± 0.960
K7-09	5/4/10	<0.1 O	<0.1	<0.1 O
K7-10	5/4/10	<0.1 O	<0.1	<0.1 O
NC7-12	4/19/10	1.49 ± 0.447	<0.1 O	1.68 ± 0.487
NC7-16	2/1/10	6.68 ± 1.28	0.366 ± 0.160	11.4 ± 2.11
NC7-16	4/14/10	2.15 ± 0.521 FO	0.214 ± 0.127	4.52 ± 0.958
NC7-17	4/8/10	1.03 ± 0.323 O	<0.1	0.675 ± 0.245
NC7-18	4/15/10	0.604 ± 0.213 O	<0.1	0.419 ± 0.170
NC7-20	4/19/10	3.09 ± 0.708	0.164 ± 0.115 O	2.84 ± 0.663
NC7-21	2/1/10	9.28 ± 1.87	0.675 ± 0.256	9.24 ± 1.86
NC7-21	4/15/10	9.77 ± 2.16 O	0.813 ± 0.332	9.33 ± 2.07
NC7-25	1/28/10	19.0 ± 3.67	1.18 ± 0.372	15.9 ± 3.09
NC7-25	6/2/10	19.6 ± 3.88	0.898 ± 0.304 O	16.0 ± 3.19
NC7-26	2/2/10	0.254 ± 0.130	<0.1	0.175 ± 0.108 O
NC7-26	5/4/10	0.122 ± 0.0642 O	<0.1	0.169 ± 0.0742 O
NC7-34	2/1/10	3.72 ± 0.806	<0.1	6.46 ± 1.30
NC7-34	5/4/10	2.84 ± 0.554 O	0.156 ± 0.0860	3.99 ± 0.742 O
NC7-36	2/2/10	1.72 ± 0.460	<0.1	1.61 ± 0.439 O
NC7-36	4/13/10	1.19 ± 0.340 O	<0.1	0.994 ± 0.301
NC7-36	04/13/10 DUP	1.16 ± 0.260	<0.1	0.890 ± 0.210
NC7-40	2/2/10	23.1 ± 5.27	1.63 ± 0.583	62.7 ± 13.9 O
NC7-40	4/13/10	25.5 ± 6.65 O	2.67 ± 0.968	70.0 ± 17.7
NC7-47	5/6/10	1.28 ± 0.274	<0.1	0.714 ± 0.178
NC7-48	4/8/10	2.67 ± 0.690 O	0.314 ± 0.182	10.3 ± 2.22
NC7-49A	4/8/10	1.61 ± 0.430 O	<0.1	1.32 ± 0.372
NC7-50	5/6/10	<0.1	<0.1	<0.1
NC7-51	2/1/10	41.0 ± 9.11	3.23 ± 0.947	51.2 ± 11.3
NC7-51	4/13/10	33.3 ± 7.64 O	2.36 ± 0.773	50.1 ± 11.4
NC7-51	04/13/10 DUP	29.6 ± 5.10	1.55 ± 0.340	46.4 ± 7.90
NC7-52	2/2/10	0.563 ± 0.215	<0.1	0.407 ± 0.176 O
NC7-52	4/13/10	0.527 ± 0.200 O	<0.1	0.523 ± 0.201
NC7-53	5/4/10	0.585 ± 0.157 O	<0.1	0.495 ± 0.141 O
NC7-63	1/28/10	28.4 ± 6.59	2.21 ± 0.746	72.7 ± 16.5
NC7-64	1/28/10	38.9 ± 8.53	1.81 ± 0.609	44.1 ± 9.64
NC7-64	6/2/10	45.6 ± 9.75	2.85 ± 0.795 O	50.8 ± 10.8
NC7-65	4/1/10	0.695 ± 0.256	<0.1	0.429 ± 0.192



## B-5.22. Pit 7 Landfill in Operable Unit 5 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)
NC7-67	4/14/10	<0.1	<0.1	<0.1
NC7-67	04/14/10 DUP	<0.1	<0.1 O	<0.1
NC7-68	2/2/10	1.30 ± 0.342	<0.1	1.17 ± 0.318 O
NC7-68	4/14/10	1.23 ± 0.354 O	<0.1	1.04 ± 0.314
NC7-75	4/12/10	0.211 ± 0.133 O	<0.1	0.130 ± 0.0999
NC7-76	4/19/10	1.41 ± 0.421	<0.1 O	1.27 ± 0.391
W-PIT7-02	4/15/10	0.187 ± 0.123 O	<0.1	0.133 ± 0.102
W-PIT7-03	2/2/10	14.8 ± 2.94	0.589 ± 0.244	12.9 ± 2.58 O
W-PIT7-03	4/12/10	12.8 ± 2.59 O	0.985 ± 0.341	12.3 ± 2.50
W-PIT7-03	04/12/10 DUP	14.7 ± 2.60	0.700 ± 0.180 O	13.2 ± 2.30
W-PIT7-10	4/15/10	1.55 ± 0.481 O	<0.1	1.28 ± 0.422
W-PIT7-13	4/1/10	3.91 ± 0.850	0.125 ± 0.0956	2.24 ± 0.539
W-PIT7-13	04/01/10 DUP	4.38 ± 0.810	0.205 ± 0.0830 O	2.77 ± 0.540
W-PIT7-15	5/6/10	0.164 ± 0.0772	<0.1	<0.1
W-PIT7-1860	4/8/10	<0.1 O	<0.1	<0.1
W-PIT7-1903	4/13/10	23.7 ± 4.65 O	2.55 ± 0.659	77.1 ± 14.7
W-PIT7-1904	4/27/10	20.5 ± 4.23	1.57 ± 0.494	43.2 ± 8.69
W-PIT7-1905	4/27/10	10.2 ± 2.46	0.710 ± 0.341	31.4 ± 7.10
W-PIT7-1907	4/27/10	<0.1	<0.1	<0.1
W-PIT7-1915	4/27/10	<0.1	<0.1	<0.1
W-PIT7-1916	4/27/10	18.3 ± 3.99	1.37 ± 0.480	41.9 ± 8.89
W-PIT7-1916	4/27/10	20.2 ± 3.50	1.20 ± 0.280 O	47.0 ± 8.10 O
W-PIT7-1917	4/27/10	18.5 ± 4.42	1.15 ± 0.479	41.3 ± 9.56
W-PIT7-1918	1/28/10	16.2 ± 3.35	0.932 ± 0.348	31.6 ± 6.36
W-PIT7-1918	4/27/10	16.9 ± 3.64	1.52 ± 0.505	43.1 ± 8.96
W-PIT7-1918	10/13/10	14.5 ± 3.04	0.862 ± 0.343	33.8 ± 6.83
W-PIT7-1919	4/27/10	21.6 ± 4.84	1.42 ± 0.515 O	56.6 ± 12.3
W-PIT7-2141	4/7/10	3.43 ± 0.801	<0.1	2.09 ± 0.540
W-PIT7-2305	1/28/10	11.2 ± 2.14	0.515 ± 0.206	10.7 ± 2.06
W-PIT7-2305	5/26/10	7.31 ± 1.84 L	0.445 ± 0.254 L	7.39 ± 1.85 L
W-PIT7-2306	1/28/10	2.80 ± 0.635	0.211 ± 0.125	3.55 ± 0.771
W-PIT7-2306	6/14/10	1.79 ± 0.397	<0.1	1.45 ± 0.338
W-PIT7-2307	1/28/10	12.1 ± 2.55	0.736 ± 0.300	11.9 ± 2.52
W-PIT7-2307	6/2/10	9.53 ± 1.90	0.312 ± 0.154 O	7.98 ± 1.61
W-PIT7-2309	2/2/10	0.618 ± 0.188	<0.1	0.595 ± 0.183 O
W-PIT7-2309	4/14/10	0.350 ± 0.166 FO	<0.1	0.354 ± 0.167

## B-5.23. Pit 7 Landfill in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
K7-01	5/13/10	R
K7-01	05/13/10 REA	47200 ± 9170
K7-01	10/21/10	38300 ± 7450
K7-03	4/14/10	82000 ± 15900
K7-03	04/14/10 REA	78600 ± 15300 L
K7-06	5/13/10	R
K7-06	05/13/10 REA	<100
K7-06	10/7/10	<100
K7-07	4/19/10	2000 ± 409
K7-09	5/4/10	<100
K7-09	11/2/10	<100
K7-10	5/4/10	<100
K7-10	11/2/10	<100
NC7-12	4/19/10	3100 ± 621
NC7-12	10/18/10	2800 ± 596 L
NC7-16	2/1/10	42700 ± 8300
NC7-16	4/14/10	22000 ± 4280
NC7-16	04/14/10 REA	19600 ± 3800 L
NC7-16	5/4/10	22600 ± 4400
NC7-16	7/12/10	32500 ± 6320 O
NC7-16	07/12/10 DUP	35600 ± 5400
NC7-16	10/14/10	41400 ± 8050 L
NC7-17	4/8/10	<100
NC7-17	10/7/10	<100
NC7-18	4/15/10	<100
NC7-18	10/14/10	<100 L
NC7-20	4/19/10	14600 ± 2840
NC7-20	10/18/10	11700 ± 2320 L
NC7-21	2/1/10	64700 ± 12600
NC7-21	4/15/10	64200 ± 12500
NC7-21	10/14/10	52800 ± 10300 L
NC7-25	1/28/10	271000 ± 52700
NC7-25	6/2/10	269000 ± 52300 L
NC7-25	7/14/10	233000 ± 45200 O
NC7-25	11/2/10	230000 ± 44800
NC7-26	2/2/10	2600 ± 522
NC7-26	5/4/10	1960 ± 400
NC7-26	05/04/10 REA	1720 ± 354 L
NC7-26	10/14/10	1850 ± 379 L
NC7-34	2/1/10	1220 ± 259

## B-5.23. Pit 7 Landfill in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
NC7-34	5/4/10	570 ± 136
NC7-34	10/7/10	624 ± 145
NC7-36	2/2/10	<100
NC7-36	4/13/10	<100
NC7-36	04/13/10 DUP	<100 O
NC7-36	10/7/10	<100
NC7-40	4/13/10	77200 ± 15000
NC7-40	7/12/10	66900 ± 13000 O
NC7-40	10/13/10	71700 ± 13900 L
NC7-47	5/6/10	<100
NC7-48	4/8/10	<100
NC7-48	10/7/10	<100
NC7-49A	4/8/10	<100
NC7-49A	10/7/10	<100
NC7-51	4/13/10	235000 ± 45600
NC7-51	04/13/10 DUP	226000 ± 34000 O
NC7-51	04/13/10 REA	224000 ± 43600 L
NC7-51	7/12/10	189000 ± 36700 O
NC7-51	07/12/10 DUP	202000 ± 31000
NC7-51	10/12/10	175000 ± 34000
NC7-51	10/12/10 DUP	168000 ± 32700
NC7-52	1/11/10	47000 ± 9130
NC7-52	2/2/10	42500 ± 8260
NC7-52	7/12/10	21800 ± 4230 O
NC7-63	1/28/10	255000 ± 49700
NC7-64	1/28/10	126000 ± 24400
NC7-64	6/2/10	124000 ± 24100 L
NC7-64	7/14/10	118000 ± 22900 O
NC7-64	10/12/10	102000 ± 19800 L
NC7-65	4/1/10	299 ± 93.8
NC7-65	10/4/10	251 ± 78.0
NC7-67	4/14/10	2270 ± 462
NC7-67	04/14/10 DUP	1990 ± 310 L
NC7-67	10/13/10	1960 ± 399 L
NC7-67	10/13/10 DUP	2210 ± 340
NC7-68	2/2/10	1660 ± 343
NC7-68	4/14/10	1600 ± 333
NC7-68	10/13/10	1570 ± 324 L
NC7-75	1/21/10	112 ± 58.5
NC7-75	7/12/10	<100 O

## B-5.23. Pit 7 Landfill in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
NC7-75	10/12/10	<100
NC7-76	4/19/10	2910 ± 583
NC7-76	10/18/10	2270 ± 494 L
W-865-01	1/11/10	<100
W-865-01	7/14/10	<100
W-865-03	1/11/10	<100
W-PIT7-02	2/3/10	<100
W-PIT7-02	7/12/10	<100 O
W-PIT7-03	1/21/10	127000 ± 24700
W-PIT7-03	01/21/10 DUP	126000 ± 24500
W-PIT7-03	2/2/10	125000 ± 24200
W-PIT7-10	4/15/10	<100
W-PIT7-10	10/14/10	<100 L
W-PIT7-12	4/1/10	2770 ± 557
W-PIT7-12	10/4/10	2280 ± 461
W-PIT7-13	4/1/10	45800 ± 8900
W-PIT7-13	04/01/10 DUP	40900 ± 6200
W-PIT7-13	10/4/10	42800 ± 8320
W-PIT7-14	4/7/10	107 ± 67.5
W-PIT7-14	04/07/10 DUP	<100
W-PIT7-15	5/6/10	<100
W-PIT7-15	11/3/10	<100
W-PIT7-1860	4/8/10	<100
W-PIT7-1918	1/28/10	65600 ± 12700
W-PIT7-1918	4/27/10	59300 ± 11500
W-PIT7-1918	10/13/10	55400 ± 10800 L
W-PIT7-2141	4/7/10	16100 ± 3140
W-PIT7-2141	10/4/10	14400 ± 2800
W-PIT7-2305	1/28/10	73900 ± 14400
W-PIT7-2305	5/26/10	63600 ± 12400 L
W-PIT7-2305	05/26/10 REA	51700 ± 10000 L
W-PIT7-2305	7/14/10	43900 ± 8540 O
W-PIT7-2305	10/12/10	42800 ± 8320 L
W-PIT7-2306	1/28/10	6690 ± 1310
W-PIT7-2306	6/14/10	4460 ± 882
W-PIT7-2306	06/14/10 REA	3680 ± 732 I
W-PIT7-2306	7/14/10	2110 ± 427 O
W-PIT7-2306	10/12/10	2170 ± 440 L
W-PIT7-2307	1/28/10	53000 ± 10300
W-PIT7-2307	6/2/10	66600 ± 13000 L

## B-5.23. Pit 7 Landfill in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
W-PIT7-2307	06/02/10 REA	59200 ± 11500 L
W-PIT7-2307	7/14/10	52600 ± 10200 O
W-PIT7-2307	10/12/10	55100 ± 10700 L
W-PIT7-2309	2/2/10	64200 ± 12500
W-PIT7-2309	4/14/10	33400 ± 6500
W-PIT7-2309	04/14/10 REA	30100 ± 5850 L
W-PIT7-2309	10/13/10	39900 ± 7750 L

B-5.24. Pit 7 Landfill in Operable Unit 5 high explosive compounds in ground water.

Location	Date	1,3,5-	1,3-Dinitro-	2,4,6-TNT	2,4-Dinitro-	2,6-Dinitro-	2-Amino-4,6-	2-Nitro-	3-Nitro-	4-Amino-2,6-	4-Nitro-	HMX (µg/L)	Nitro-	RDX (µg/L)
		Trinitro-	benzene	(µg/L)	toluene	toluene	Dinitro-	toluene	toluene	Dinitro-	toluene		benzene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		(µg/L)	
K7-01	5/13/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
K7-03	4/14/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2 O	<1
K7-06	5/13/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
K7-09	5/4/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
K7-10	5/4/10	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<2.7 D	<1.3 D	<2.7 D	<1.3 D
NC7-17	2/1/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-26	5/4/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
NC7-47	5/6/10	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<2 IJ	<1 IJ	<2 IJ	<1 IJ
NC7-48	4/8/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

## B-5.25. Pit 7 Landfill in Operable Unit 5 general minerals in ground water.

Constituents of concern	NC7-17 2/1/10	NC7-17 4/8/10
Total Alkalinity (as CaCO <sub>3</sub> ) (mg/L)	180	180
Aluminum (mg/L)	<0.05 L	<0.05
Bicarbonate Alk (as CaCO <sub>3</sub> ) (mg/L)	180	180
Calcium (mg/L)	45	45
Carbonate Alk (as CaCO <sub>3</sub> ) (mg/L)	<10	<10
Chloride (mg/L)	45 DL	49 DL
Copper (mg/L)	<0.01	<0.01
Fluoride (mg/L)	0.61 L	0.62
Hydroxide Alk (as CaCO <sub>3</sub> ) (mg/L)	<10	<10
Iron (mg/L)	<0.1	<0.1
Magnesium (mg/L)	21	21 L
Manganese (mg/L)	<0.03	<0.03
Nickel (mg/L)	<0.1	<0.1
Nitrate (as N) (mg/L)	-	9.9
Nitrate (as NO <sub>3</sub> ) (mg/L)	41 L	44
Nitrite (as N) (mg/L)	<0.1 L	<0.1
pH (Units)	7.5	7.3
Ortho-Phosphate (mg/L)	0.32 L	0.25 L
Total Phosphorus (as PO <sub>4</sub> ) (mg/L)	0.39 H	0.29 H
Potassium (mg/L)	2.4	2.4
Sodium (mg/L)	48	49 L
Total dissolved solids (TDS) (mg/L)	420 H	430 H
Specific Conductance (µmhos/cm)	610 H	640 H
Sulfate (mg/L)	33 DL	-
Surfactants (mg/L)	<0.5	<0.5
Total Hardness (as CaCO <sub>3</sub> ) (mg/L)	200	200
Zinc (mg/L)	<0.01	<0.01

OU5B-GENMIN [mg/L; Units; umhos/cm] 2010 data (prepared 2011-02-23 17:21:18, Oracle eprpd02.llnl.gov)

## B-5.26. Pit 7 Landfill in Operable Unit 5 orthophosphate in ground water.

Location	Date	Orthophosphate (mg/L)
NC7-17	2/1/10	0.32 L
NC7-17	4/8/10	0.25 L
W-PIT7-1903	4/13/10	0.27
W-PIT7-1904	4/27/10	0.25
W-PIT7-1905	4/27/10	0.27
W-PIT7-1907	4/27/10	5.8 D
W-PIT7-1915	4/27/10	3.6 D
W-PIT7-1916	4/27/10	0.24
W-PIT7-1916	04/27/10 DUP	0.74
W-PIT7-1917	4/27/10	0.29
W-PIT7-1918	4/27/10	0.74
W-PIT7-1919	4/27/10	0.23



B-6.1. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-854-01	6/3/10	E601	<0.5	<0.5	<0.5	<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	10/25/10	E601	<0.5	<0.5	<0.5	<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	3/17/10	E601	83	<0.5	<0.5	<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	4/6/10	E601	97 LO	<0.5	<0.5	<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	8/2/10	E601	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-854-02	10/5/10	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-854-03	2/18/10	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	5/20/10	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-854-03	05/20/10 DUP	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-854-03	7/19/10	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-854-03	10/5/10	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-854-04	6/7/10	E601	<0.5	<0.5	<0.5	<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	10/25/10	E601	<0.5	<0.5	<0.5	<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	6/8/10	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-854-06	06/08/10 DUP	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-854-06	11/1/10	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-854-07	6/8/10	E601	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-854-07	06/08/10 DUP	E601	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-854-07	11/1/10	E601	36 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-854-08	10/25/10	E601	<0.5	<0.5	<0.5	<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	6/3/10	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-854-09	11/2/10	E601	10	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-10	6/3/10	E601	41	<0.5	<0.5	<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	10/25/10	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-854-13	6/8/10	E601	<0.5	<0.5	<0.5	<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	11/4/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-14	6/9/10	E601	<0.5	<0.5	<0.5	<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	11/2/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-14	11/02/10 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	6/7/10	E601	<0.5	<0.5	<0.5	<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	10/25/10	E601	<0.5	<0.5	<0.5	<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	3/17/10	E601	32	<0.5	5.4	<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	4/6/10	E601	5.8 LO	<0.5	3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-17	8/2/10	E601	4.8	<0.5	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-854-17	10/5/10	E601	4	<0.5	1.9	<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	3/17/10	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-854-18A	4/13/10	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-854-18A	8/2/10	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-854-18A	12/6/10	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

B-6.1. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-854-45	6/9/10	E601	<0.5	<0.5	<0.5	<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	11/2/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1701	6/7/10	E601	<0.5	<0.5	<0.5	<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	11/1/10	E601	<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
W-854-1707	6/22/10	E601	<0.5	<0.5	<0.5	<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	11/9/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
W-854-1731	6/9/10	E601	<0.5	<0.5	<0.5	<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	11/2/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1822	6/7/10	E601	<0.5	<0.5	<0.5	<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	11/1/10	E601	<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
W-854-1823	6/7/10	E601	<0.5	<0.5	<0.5	<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	11/1/10	E601	<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
W-854-1902	6/7/10	E601	<0.5	<0.5	<0.5	<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	11/1/10	E601	<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
W-854-2115	6/8/10	E601	<0.5	<0.5	<0.5	<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	11/1/10	E601	<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
W-854-2139	2/9/10	E601	43	<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-854-2139	4/7/10	E601	35	<0.5	0.63	<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	04/07/10 DUP	E601	32	<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-854-2139	7/29/10	E601	26	<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
W-854-2139	10/5/10	E601	31	<0.5	0.58	<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	3/17/10	E601	46	<0.5	<0.5	<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	4/13/10	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-854-2218	8/2/10	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-854-2218	10/5/10	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-854-2611	9/23/10	E624	4.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SPRING10	3/29/10	E601	<0.5	<0.5	<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	03/29/10 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
SPRING10	9/21/10	E601	<0.5	<0.5	<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	09/21/10 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
SPRING11	3/29/10	E601	<0.5	<0.5	<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	9/21/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro- ethene (total) (µg/L)
W-854-01	6/3/10	E601	0 of 18	-
W-854-01	10/25/10	E601	0 of 18	-
W-854-02	3/17/10	E601	0 of 18	-
W-854-02	4/6/10	E601	0 of 18	-
W-854-02	8/2/10	E601	0 of 18	-
W-854-02	10/5/10	E601	0 of 18	-
W-854-03	2/18/10	E601	0 of 18	-
W-854-03	5/20/10	E601	0 of 18	-
W-854-03	05/20/10 DUP	E601	0 of 18	-
W-854-03	7/19/10	E601	0 of 18	-
W-854-03	10/5/10	E601	0 of 18	-
W-854-04	6/7/10	E601	0 of 18	-
W-854-04	10/25/10	E601	0 of 18	-
W-854-06	6/8/10	E601	0 of 18	-
W-854-06	06/08/10 DUP	E601	0 of 18	-
W-854-06	11/1/10	E601	0 of 18	-
W-854-07	6/8/10	E601	0 of 18	-
W-854-07	06/08/10 DUP	E601	0 of 18	-
W-854-07	11/1/10	E601	0 of 18	-
W-854-08	10/25/10	E601	0 of 18	-
W-854-09	6/3/10	E601	0 of 18	-
W-854-09	11/2/10	E601	0 of 18	-
W-854-10	6/3/10	E601	0 of 18	-
W-854-10	10/25/10	E601	0 of 18	-
W-854-13	6/8/10	E601	0 of 18	-
W-854-13	11/4/10	E601	0 of 18	-
W-854-14	6/9/10	E601	0 of 18	-
W-854-14	11/2/10	E601	0 of 18	-
W-854-14	11/02/10 DUP	E601	0 of 18	-
W-854-15	6/7/10	E601	0 of 18	-
W-854-15	10/25/10	E601	0 of 18	-
W-854-17	3/17/10	E601	1 of 18	5.4
W-854-17	4/6/10	E601	1 of 18	3.7
W-854-17	8/2/10	E601	1 of 18	1.8
W-854-17	10/5/10	E601	1 of 18	1.9
W-854-18A	3/17/10	E601	0 of 18	-
W-854-18A	4/13/10	E601	0 of 18	-
W-854-18A	8/2/10	E601	0 of 18	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) ( $\mu\text{g/L}$ )
W-854-18A	12/6/10	E601	0 of 18	-
W-854-45	6/9/10	E601	0 of 18	-
W-854-45	11/2/10	E601	0 of 18	-
W-854-1701	6/7/10	E601	0 of 18	-
W-854-1701	11/1/10	E601	0 of 18	-
W-854-1707	6/22/10	E601	0 of 18	-
W-854-1707	11/9/10	E601	0 of 18	-
W-854-1731	6/9/10	E601	0 of 18	-
W-854-1731	11/2/10	E601	0 of 18	-
W-854-1822	6/7/10	E601	0 of 18	-
W-854-1822	11/1/10	E601	0 of 18	-
W-854-1823	6/7/10	E601	0 of 18	-
W-854-1823	11/1/10	E601	0 of 18	-
W-854-1902	6/7/10	E601	0 of 18	-
W-854-1902	11/1/10	E601	0 of 18	-
W-854-2115	6/8/10	E601	0 of 18	-
W-854-2115	11/1/10	E601	0 of 18	-
W-854-2139	2/9/10	E601	0 of 18	-
W-854-2139	4/7/10	E601	0 of 18	-
W-854-2139	04/07/10 DUP	E601	0 of 18	-
W-854-2139	7/29/10	E601	0 of 18	-
W-854-2139	10/5/10	E601	0 of 18	-
W-854-2218	3/17/10	E601	0 of 18	-
W-854-2218	4/13/10	E601	0 of 18	-
W-854-2218	8/2/10	E601	0 of 18	-
W-854-2218	10/5/10	E601	0 of 18	-
W-854-2611	9/23/10	E624	0 of 30	-
SPRING10	3/29/10	E601	0 of 18	-
SPRING10	03/29/10 DUP	E601	0 of 18	-
SPRING10	9/21/10	E601	0 of 18	-
SPRING10	09/21/10 DUP	E601	0 of 18	-
SPRING11	3/29/10	E601	0 of 18	-
SPRING11	9/21/10	E601	0 of 18	-

## B-6.2. Building 854 Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-854-01	6/3/10	<0.5	<4
W-854-01	10/25/10	-	<4
W-854-02	3/17/10	-	5.8
W-854-02	4/6/10	-	7.2
W-854-02	8/2/10	53	6.6
W-854-02	10/5/10	-	5.5
W-854-03	2/18/10	43	14 D
W-854-03	5/20/10	43	13
W-854-03	05/20/10 DUP	44	-
W-854-03	7/19/10	44	11
W-854-03	10/5/10	43	10
W-854-04	6/7/10	<0.5	<4
W-854-04	10/25/10	-	<4
W-854-06	6/8/10	<0.5	<4
W-854-06	06/08/10 DUP	<0.5	<4
W-854-06	11/1/10	-	<4
W-854-07	6/8/10	28 D	5.4
W-854-07	06/08/10 DUP	28 D	5.8
W-854-07	11/1/10	-	5.3
W-854-08	10/25/10	-	4
W-854-09	6/3/10	37 D	<4
W-854-09	11/2/10	-	4.1
W-854-10	6/3/10	19	<4
W-854-10	10/25/10	-	<4
W-854-13	6/8/10	<0.5	<4
W-854-13	11/4/10	-	<4
W-854-14	6/9/10	180 DL	<4
W-854-14	11/2/10	-	<4
W-854-14	11/02/10 DUP	-	<4
W-854-15	6/7/10	5.9	<4
W-854-15	10/25/10	-	6.1
W-854-17	3/17/10	-	<4
W-854-17	4/6/10	-	<4
W-854-17	8/2/10	11	<4
W-854-17	10/5/10	-	4.4
W-854-18A	3/17/10	-	<4
W-854-18A	4/13/10	-	<4
W-854-18A	8/2/10	34	<4
W-854-18A	12/6/10	-	<4
W-854-45	6/9/10	46 DL	12.8

## B-6.2. Building 854 Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-854-45	11/2/10	-	13.6
W-854-1701	6/7/10	<0.5	<4
W-854-1701	11/1/10	-	<4
W-854-1707	6/22/10	5.1 L	<4
W-854-1707	11/9/10	-	<4
W-854-1731	6/9/10	0.58 L	<4
W-854-1731	11/2/10	-	<4
W-854-1822	6/7/10	1.1	<4
W-854-1822	11/1/10	-	<4
W-854-1823	6/7/10	25 D	16.6
W-854-1823	11/1/10	-	19
W-854-1902	6/7/10	6.7	<4
W-854-1902	11/1/10	-	<4
W-854-2115	6/8/10	2	<4
W-854-2115	11/1/10	-	<4
W-854-2139	2/9/10	24	5.4
W-854-2139	4/7/10	23	4.9
W-854-2139	04/07/10 DUP	24	5.1
W-854-2139	7/29/10	25	5.8
W-854-2139	10/5/10	24	5.2
W-854-2218	3/17/10	-	<4
W-854-2218	4/13/10	-	<4
W-854-2218	8/2/10	47	<4
W-854-2218	10/5/10	-	<4
W-854-2611	6/3/10	34	-
W-854-2611	9/23/10	-	4
SPRING10	6/22/10	17 DL	<4
SPRING10	11/9/10	-	<4
SPRING11	6/22/10	<0.5 L	<4
SPRING11	11/9/10	-	<4

B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon								Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-830-04A	3/17/10	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-830-04A	03/17/10 DUP	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-830-04A	8/24/10	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-830-04A	08/24/10 DUP	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-830-05	3/4/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-05	8/17/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-09	3/8/10	E601	<0.5	<0.5	<0.5	<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	8/10/10	E601	<0.5	<0.5	<0.5	<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	3/4/10	E601	35	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-10	8/16/10	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-830-10	08/16/10 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	3/4/10	E601	<0.5	<0.5	<0.5	<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	8/16/10	E601	<0.5	<0.5	<0.5	<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	8/10/10	E601	<0.5	<0.5	<0.5	<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	11/30/10	E601	<0.5	<0.5	<0.5	<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	3/10/10	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-830-13	8/26/10	E601	3.8	<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-830-14	3/23/10	E601	8.5	<0.5	2.3	<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	8/24/10	E601	7.4	<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
W-830-15	3/4/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-15	6/10/10	E601	<0.5	<0.5	<0.5	<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	8/17/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-15	11/30/10	E601	<0.5	<0.5	<0.5	<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	3/9/10	E601	<0.5	<0.5	<0.5	<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	8/18/10	E601	<0.5	<0.5	<0.5	<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	3/9/10	E601	<0.5	<0.5	<0.5	<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	8/18/10	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-830-18	3/10/10	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-830-18	8/12/10	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-830-18	08/12/10 DUP	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-830-19	2/11/10	E601	4,200 D	<5 D	6.8 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	4/15/10	E601	3,700 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-830-19	8/30/10	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	10/5/10	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	3/4/10	E601	<0.5	<0.5	<0.5	<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	8/16/10	E601	<0.5	<0.5	<0.5	<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	3/10/10	E601	39	<0.5	2.7	7.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-21	03/10/10 DUP	E601	39	<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-830-21	8/17/10	E601	45 L	<0.5	8.2	23 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon									Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)			
W-830-22	3/4/10	E601	4.7	<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
W-830-22	8/9/10	E601	17	<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-830-25	8/12/10	E601	567 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-830-27	3/9/10	E601	450 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	03/09/10 DUP	E601	460 D	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
W-830-27	8/12/10	E601	573 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-830-28	3/9/10	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-830-28	8/12/10	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-830-29	3/4/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-29	8/10/10	E601	<0.5	<0.5	<0.5	<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	3/8/10	E601	7.7	<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-830-30	03/08/10 DUP	E601	7.7	<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-830-30	8/10/10	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-830-34	3/9/10	E601	300 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-830-34	8/10/10	E601	214 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-830-49	2/11/10	E601	3,700 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	4/15/10	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-830-49	8/30/10	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-830-49	10/5/10	E601	1,600 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-830-50	3/10/10	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-830-50	8/16/10	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-830-51	2/9/10	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-830-51	4/6/10	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-830-51	7/12/10	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-830-51	10/5/10	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	2/9/10	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	4/6/10	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	7/12/10	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-830-52	10/5/10	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-830-53	2/9/10	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-830-53	4/6/10	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-830-53	7/12/10	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-830-53	10/5/10	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-830-54	3/10/10	E601	<0.5	<0.5	<0.5	<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	8/18/10	E601	<0.5	<0.5	<0.5	<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	3/9/10	E601	3.8	<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-830-55	8/18/10	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	3/4/10	E601	3.4	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-56	8/17/10	E601	3.5 L	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon								Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-830-57	2/11/10	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-830-57	4/15/10	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-830-57	8/30/10	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	10/5/10	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-830-58	3/9/10	E601	960 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-830-58	8/12/10	E601	1,630 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	2/11/10	E601	2,500 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-830-59	4/15/10	E601	2,500 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-830-59	8/30/10	E601	2,000 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	10/5/10	E601	2,000 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-830-60	2/11/10	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-830-60	4/15/10	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-830-60	8/30/10	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-830-60	10/5/10	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-830-1730	3/4/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1730	6/10/10	E601	<0.5	<0.5	<0.5	<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	8/17/10	E601	<0.5 L	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1730	11/29/10	E601	<0.5	<0.5	<0.5	<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	11/29/10 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-830-1807	2/11/10	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-830-1807	4/15/10	E601	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
W-830-1807	8/30/10	E601	380 D	3.9	<0.5	<0.5	<0.5	<0.5	<0.5	0.78	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1807	10/5/10	E601	90	<0.5	<0.5	<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	3/11/10	E601	1,800 DO	3.4	1	<0.5	<0.5	1	<0.5	1.2	0.57	<0.5	0.71	<0.5	<0.5	<0.5
W-830-1829	8/9/10	E601	2,500 D	2.6 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-830-1830	3/8/10	E601	2,000 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	8/10/10	E601	2,550 D	3	0.6	<0.5	<0.5	1.2	<0.5	1	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
W-830-1831	3/10/10	E601	<0.5	<0.5	<0.5	<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	8/18/10	E601	<0.5	<0.5	<0.5	<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	3/10/10	E601	<0.5	<0.5	<0.5	<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	8/18/10	E601	<0.5	<0.5	<0.5	<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	8/12/10	E601	610 D	0.67	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-830-2214	2/11/10	E601	640 D	0.8	3.1	<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	4/15/10	E601	810 D	0.79	2.2	<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	8/30/10	E601	770 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-830-2214	10/5/10	E601	800 D	0.92	2	<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	2/11/10	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-830-2215	4/15/10	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	8/30/10	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

B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-830-2215	10/5/10	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-830-2216	2/9/10	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-830-2216	8/2/10	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	10/5/10	E601	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
W-830-2311	3/18/10	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-830-2311	6/23/10	E601	13 O	<0.5	<0.5	<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	6/23/10	E624	13 O	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-830-2311	06/23/10 DUP	E601	25 O	<0.5	<0.5	<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	06/23/10 DUP	E624	25 O	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-832-01	2/16/10	E601	6.1	<0.5	0.53	<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	4/19/10	E601	120 D	<0.5	5.8	<0.5	<0.5	0.99	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-01	8/30/10	E601	130 D	<0.5	3.5	<0.5	<0.5	0.65	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-01	10/6/10	E601	190 D	<0.5	6.5	<0.5	<0.5	0.84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-06	3/4/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-06	8/10/10	E601	<0.5	<0.5	<0.5	<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	08/10/10 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-832-09	3/9/10	E601	<0.5	<0.5	<0.5	<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	8/11/10	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
W-832-10	2/16/10	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-832-10	4/19/10	E601	100 D	<0.5	3.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.58	<0.5	<0.5
W-832-10	8/30/10	E601	97	<0.5	2.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.69	<0.5	<0.5
W-832-10	10/6/10	E601	110 D	<0.5	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-11	2/16/10	E601	65	<0.5	3	<0.5	<0.5	0.54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-11	4/19/10	E601	69	<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
W-832-11	8/30/10	E601	72	<0.5	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-11	10/6/10	E601	77	<0.5	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-12	2/16/10	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-832-12	4/19/10	E601	32	<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-832-12	8/30/10	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-832-12	10/6/10	E601	36	<0.5	0.86	<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	2/16/10	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-832-13	8/30/10	E601	49	<0.5	<0.5	<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	3/11/10	E601	0.61 O	<0.5	<0.5	<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	8/30/10	E601	<0.5	<0.5	<0.5	<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	3/8/10	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-832-15	4/19/10	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-832-15	8/30/10	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-832-15	10/6/10	E601	43	<0.5	0.87	<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	3/11/10	E601	<0.5 O	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon								Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-832-17	3/11/10	E601	2.9 O	<0.5	<0.5	<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	8/30/10	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-832-18	3/11/10	E601	140 DO	<0.5	<0.5	<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	3/4/10	E601	2.3	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-19	8/9/10	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-832-19	08/09/10 DUP	E601	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-832-1927	3/9/10	E601	34	<0.5	<0.5	<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	8/11/10	E601	50 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
W-832-20	3/11/10	E601	41	<0.5	<0.5	<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	8/30/10	E601	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-832-21	3/4/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-2112	3/15/10	E601	<0.5	<0.5	<0.5	<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	6/14/10	E601	<0.5	<0.5	<0.5	<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	8/18/10	E601	<0.5	<0.5	<0.5	<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	11/30/10	E601	<0.5	<0.5	<0.5	<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	3/4/10	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-832-23	8/9/10	E601	216 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-832-24	3/4/10	E601	19	<0.5	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-24	03/04/10 DUP	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-832-24	8/9/10	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-832-25	2/16/10	E601	100 D	<0.5	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5
W-832-25	4/19/10	E601	72	<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	8/30/10	E601	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
W-832-25	10/6/10	E601	72	0.55	1.7	<0.5	<0.5	0.59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.67
W-832-SC1	3/9/10	E601	<0.5	<0.5	<0.5	<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	3/9/10	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-832-SC3	8/16/10	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-832-SC4	3/9/10	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-SC4	8/17/10	E601	5.2 L	<0.5	<0.5	<0.5 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-870-01	3/11/10	E601	<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	<0.5
W-870-02	3/11/10	E601	<0.5	<0.5	<0.5	<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	8/19/10	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
SVI-830-031	3/8/10	E601	130 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	3/8/10	E601	66 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	8/11/10	E601	297 DL	<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	3/8/10	E601	220 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	3/9/10	E601	1,100 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	8/11/10	E601	936 DL	<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	3/9/10	E601	9.9	<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

B-7.1. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
SPRING3	8/17/10	E601	6.4 L	<0.5	1.5	0.6 L	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-01	3/11/10	E601	<0.5 O	<0.5	<0.5	<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	6/14/10	E601	<0.5	<0.5	<0.5	<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	8/19/10	E601	<0.5	<0.5	<0.5	<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	12/1/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-880-02	3/11/10	E601	<0.5 O	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-880-02	6/14/10	E601	<0.5	<0.5	<0.5	<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	8/19/10	E601	<0.5	<0.5	<0.5	<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	8/19/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-880-02	12/1/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-880-03	6/14/10	E601	<0.5	<0.5	<0.5	<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	6/14/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-880-03	8/19/10	E601	<0.5	<0.5	<0.5	<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	8/19/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-880-03	12/1/10	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-		
				ethene (total) (µg/L)	Chloroethane (µg/L)	Chloromethane (µg/L)
W-830-04A	3/17/10	E601	0 of 18	-	-	-
W-830-04A	03/17/10 DUP	E601	0 of 18	-	-	-
W-830-04A	8/24/10	E601	0 of 18	-	-	-
W-830-04A	08/24/10 DUP	E601	0 of 18	-	-	-
W-830-05	3/4/10	E601	0 of 18	-	-	-
W-830-05	8/17/10	E601	0 of 18	-	-	-
W-830-09	3/8/10	E601	0 of 18	-	-	-
W-830-09	8/10/10	E601	0 of 18	-	-	-
W-830-10	3/4/10	E601	0 of 18	-	-	-
W-830-10	8/16/10	E601	0 of 18	-	-	-
W-830-10	08/16/10 DUP	E601	0 of 18	-	-	-
W-830-11	3/4/10	E601	0 of 18	-	-	-
W-830-11	8/16/10	E601	0 of 18	-	-	-
W-830-12	8/10/10	E601	0 of 18	-	-	-
W-830-12	11/30/10	E601	0 of 18	-	-	-
W-830-13	3/10/10	E601	0 of 18	-	-	-
W-830-13	8/26/10	E601	0 of 18	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)	Chloro-methane (µg/L)
W-830-14	3/23/10	E601	1 of 18	2.3	-	-
W-830-14	8/24/10	E601	1 of 18	2.2	-	-
W-830-15	3/4/10	E601	0 of 18	-	-	-
W-830-15	6/10/10	E601	0 of 18	-	-	-
W-830-15	8/17/10	E601	0 of 18	-	-	-
W-830-15	11/30/10	E601	0 of 18	-	-	-
W-830-16	3/9/10	E601	0 of 18	-	-	-
W-830-16	8/18/10	E601	0 of 18	-	-	-
W-830-17	3/9/10	E601	0 of 18	-	-	-
W-830-17	8/18/10	E601	0 of 18	-	-	-
W-830-18	3/10/10	E601	0 of 18	-	-	-
W-830-18	8/12/10	E601	0 of 18	-	-	-
W-830-18	08/12/10 DUP	E601	0 of 18	-	-	-
W-830-19	2/11/10	E601	0 of 18	-	-	-
W-830-19	4/15/10	E601	0 of 18	-	-	-
W-830-19	8/30/10	E601	0 of 18	-	-	-
W-830-19	10/5/10	E601	0 of 18	-	-	-
W-830-20	3/4/10	E601	0 of 18	-	-	-
W-830-20	8/16/10	E601	0 of 18	-	-	-
W-830-21	3/10/10	E601	1 of 18	10	-	-
W-830-21	03/10/10 DUP	E601	1 of 18	11	-	-
W-830-21	8/17/10	E601	1 of 18	31 L	-	-
W-830-22	3/4/10	E601	0 of 18	-	-	-
W-830-22	8/9/10	E601	1 of 18	1.2	-	-
W-830-25	8/12/10	E601	0 of 18	-	-	-
W-830-27	3/9/10	E601	0 of 18	-	-	-
W-830-27	03/09/10 DUP	E601	0 of 18	-	-	-
W-830-27	8/12/10	E601	0 of 18	-	-	-
W-830-28	3/9/10	E601	0 of 18	-	-	-
W-830-28	8/12/10	E601	0 of 18	-	-	-
W-830-29	3/4/10	E601	0 of 18	-	-	-
W-830-29	8/10/10	E601	0 of 18	-	-	-
W-830-30	3/8/10	E601	0 of 18	-	-	-
W-830-30	03/08/10 DUP	E601	0 of 18	-	-	-
W-830-30	8/10/10	E601	0 of 18	-	-	-
W-830-34	3/9/10	E601	0 of 18	-	-	-
W-830-34	8/10/10	E601	0 of 18	-	-	-
W-830-49	2/11/10	E601	0 of 18	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)	Chloro-methane (µg/L)
W-830-49	4/15/10	E601	0 of 18	-	-	-
W-830-49	8/30/10	E601	0 of 18	-	-	-
W-830-49	10/5/10	E601	0 of 18	-	-	-
W-830-50	3/10/10	E601	0 of 18	-	-	-
W-830-50	8/16/10	E601	0 of 18	-	-	-
W-830-51	2/9/10	E601	0 of 18	-	-	-
W-830-51	4/6/10	E601	0 of 18	-	-	-
W-830-51	7/12/10	E601	0 of 18	-	-	-
W-830-51	10/5/10	E601	0 of 18	-	-	-
W-830-52	2/9/10	E601	0 of 18	-	-	-
W-830-52	4/6/10	E601	0 of 18	-	-	-
W-830-52	7/12/10	E601	0 of 18	-	-	-
W-830-52	10/5/10	E601	0 of 18	-	-	-
W-830-53	2/9/10	E601	0 of 18	-	-	-
W-830-53	4/6/10	E601	0 of 18	-	-	-
W-830-53	7/12/10	E601	0 of 18	-	-	-
W-830-53	10/5/10	E601	0 of 18	-	-	-
W-830-54	3/10/10	E601	0 of 18	-	-	-
W-830-54	8/18/10	E601	0 of 18	-	-	-
W-830-55	3/9/10	E601	0 of 18	-	-	-
W-830-55	8/18/10	E601	0 of 18	-	-	-
W-830-56	3/4/10	E601	0 of 18	-	-	-
W-830-56	8/17/10	E601	0 of 18	-	-	-
W-830-57	2/11/10	E601	0 of 18	-	-	-
W-830-57	4/15/10	E601	0 of 18	-	-	-
W-830-57	8/30/10	E601	0 of 18	-	-	-
W-830-57	10/5/10	E601	0 of 18	-	-	-
W-830-58	3/9/10	E601	0 of 18	-	-	-
W-830-58	8/12/10	E601	0 of 18	-	-	-
W-830-59	2/11/10	E601	0 of 18	-	-	-
W-830-59	4/15/10	E601	0 of 18	-	-	-
W-830-59	8/30/10	E601	0 of 18	-	-	-
W-830-59	10/5/10	E601	0 of 18	-	-	-
W-830-60	2/11/10	E601	0 of 18	-	-	-
W-830-60	4/15/10	E601	0 of 18	-	-	-
W-830-60	8/30/10	E601	0 of 18	-	-	-
W-830-60	10/5/10	E601	0 of 18	-	-	-
W-830-1730	3/4/10	E601	0 of 18	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)	Chloro-methane (µg/L)
W-830-1730	6/10/10	E601	0 of 18	-	-	-
W-830-1730	8/17/10	E601	0 of 18	-	-	-
W-830-1730	11/29/10	E601	0 of 18	-	-	-
W-830-1730	11/29/10 DUP	E601	0 of 18	-	-	-
W-830-1807	2/11/10	E601	0 of 18	-	-	-
W-830-1807	4/15/10	E601	0 of 18	-	-	-
W-830-1807	8/30/10	E601	0 of 18	-	-	-
W-830-1807	10/5/10	E601	0 of 18	-	-	-
W-830-1829	3/11/10	E601	1 of 18	1	-	-
W-830-1829	8/9/10	E601	0 of 18	-	-	-
W-830-1830	3/8/10	E601	0 of 18	-	-	-
W-830-1830	8/10/10	E601	0 of 18	-	-	-
W-830-1831	3/10/10	E601	0 of 18	-	-	-
W-830-1831	8/18/10	E601	0 of 18	-	-	-
W-830-1832	3/10/10	E601	0 of 18	-	-	-
W-830-1832	8/18/10	E601	0 of 18	-	-	-
W-830-2213	8/12/10	E601	0 of 18	-	-	-
W-830-2214	2/11/10	E601	1 of 18	3.1	-	-
W-830-2214	4/15/10	E601	1 of 18	2.2	-	-
W-830-2214	8/30/10	E601	0 of 18	-	-	-
W-830-2214	10/5/10	E601	1 of 18	2	-	-
W-830-2215	2/11/10	E601	0 of 18	-	-	-
W-830-2215	4/15/10	E601	0 of 18	-	-	-
W-830-2215	8/30/10	E601	0 of 18	-	-	-
W-830-2215	10/5/10	E601	0 of 18	-	-	-
W-830-2216	2/9/10	E601	0 of 18	-	-	-
W-830-2216	8/2/10	E601	0 of 18	-	-	-
W-830-2216	10/5/10	E601	0 of 18	-	-	-
W-830-2311	3/18/10	E601	0 of 18	-	-	-
W-830-2311	6/23/10	E601	0 of 18	-	-	-
W-830-2311	6/23/10	E624	0 of 30	-	-	-
W-830-2311	06/23/10 DUP	E601	0 of 18	-	-	-
W-830-2311	06/23/10 DUP	E624	0 of 30	-	-	-
W-832-01	2/16/10	E601	0 of 18	-	-	-
W-832-01	4/19/10	E601	1 of 18	5.8	-	-
W-832-01	8/30/10	E601	1 of 18	3.5	-	-
W-832-01	10/6/10	E601	1 of 18	6.5	-	-
W-832-06	3/4/10	E601	0 of 18	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)	Chloro-methane (µg/L)
W-832-06	8/10/10	E601	0 of 18	-	-	-
W-832-06	08/10/10 DUP	E601	0 of 18	-	-	-
W-832-09	3/9/10	E601	0 of 18	-	-	-
W-832-09	8/11/10	E601	0 of 18	-	-	-
W-832-10	2/16/10	E601	0 of 18	-	-	-
W-832-10	4/19/10	E601	1 of 18	3.6	-	-
W-832-10	8/30/10	E601	1 of 18	2.8	-	-
W-832-10	10/6/10	E601	1 of 18	3.4	-	-
W-832-11	2/16/10	E601	2 of 18	3	5.1	-
W-832-11	4/19/10	E601	1 of 18	2.2	-	-
W-832-11	8/30/10	E601	1 of 18	2	-	-
W-832-11	10/6/10	E601	1 of 18	2	-	-
W-832-12	2/16/10	E601	1 of 18	-	0.72	-
W-832-12	4/19/10	E601	0 of 18	-	-	-
W-832-12	8/30/10	E601	0 of 18	-	-	-
W-832-12	10/6/10	E601	0 of 18	-	-	-
W-832-13	2/16/10	E601	0 of 18	-	-	-
W-832-13	8/30/10	E601	0 of 18	-	-	-
W-832-14	3/11/10	E601	0 of 18	-	-	-
W-832-14	8/30/10	E601	0 of 18	-	-	-
W-832-15	3/8/10	E601	0 of 18	-	-	-
W-832-15	4/19/10	E601	0 of 18	-	-	-
W-832-15	8/30/10	E601	0 of 18	-	-	-
W-832-15	10/6/10	E601	0 of 18	-	-	-
W-832-16	3/11/10	E601	0 of 18	-	-	-
W-832-17	3/11/10	E601	0 of 18	-	-	-
W-832-17	8/30/10	E601	0 of 18	-	-	-
W-832-18	3/11/10	E601	0 of 18	-	-	-
W-832-19	3/4/10	E601	0 of 18	-	-	-
W-832-19	8/9/10	E601	0 of 18	-	-	-
W-832-19	08/09/10 DUP	E601	0 of 18	-	-	-
W-832-1927	3/9/10	E601	0 of 18	-	-	-
W-832-1927	8/11/10	E601	0 of 18	-	-	-
W-832-20	3/11/10	E601	0 of 18	-	-	-
W-832-20	8/30/10	E601	0 of 18	-	-	-
W-832-21	3/4/10	E601	0 of 18	-	-	-
W-832-2112	3/15/10	E601	0 of 18	-	-	-
W-832-2112	6/14/10	E601	0 of 18	-	-	-



Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)	Chloro-methane (µg/L)
W-832-2112	8/18/10	E601	0 of 18	-	-	-
W-832-2112	11/30/10	E601	0 of 18	-	-	-
W-832-23	3/4/10	E601	0 of 18	-	-	-
W-832-23	8/9/10	E601	0 of 18	-	-	-
W-832-24	3/4/10	E601	0 of 18	-	-	-
W-832-24	03/04/10 DUP	E601	0 of 18	-	-	-
W-832-24	8/9/10	E601	0 of 18	-	-	-
W-832-25	2/16/10	E601	1 of 18	2	-	-
W-832-25	4/19/10	E601	2 of 18	1.6	-	0.69
W-832-25	8/30/10	E601	2 of 18	1.5	-	2
W-832-25	10/6/10	E601	2 of 18	1.7	-	2.6
W-832-SC1	3/9/10	E601	0 of 18	-	-	-
W-832-SC3	3/9/10	E601	0 of 18	-	-	-
W-832-SC3	8/16/10	E601	0 of 18	-	-	-
W-832-SC4	3/9/10	E601	0 of 18	-	-	-
W-832-SC4	8/17/10	E601	0 of 18	-	-	-
W-870-01	3/11/10	E601	0 of 18	-	-	-
W-870-02	3/11/10	E601	0 of 18	-	-	-
W-870-02	8/19/10	E601	0 of 18	-	-	-
SVI-830-031	3/8/10	E601	0 of 18	-	-	-
SVI-830-032	3/8/10	E601	0 of 18	-	-	-
SVI-830-032	8/11/10	E601	0 of 18	-	-	-
SVI-830-033	3/8/10	E601	0 of 18	-	-	-
SVI-830-035	3/9/10	E601	0 of 18	-	-	-
SVI-830-035	8/11/10	E601	0 of 18	-	-	-
SPRING3	3/9/10	E601	0 of 18	-	-	-
SPRING3	8/17/10	E601	1 of 18	2.1 L	-	-
W-880-01	3/11/10	E601	0 of 18	-	-	-
W-880-01	6/14/10	E601	0 of 18	-	-	-
W-880-01	8/19/10	E601	0 of 18	-	-	-
W-880-01	12/1/10	E624	0 of 30	-	-	-
W-880-02	3/11/10	E601	0 of 18	-	-	-
W-880-02	6/14/10	E601	0 of 18	-	-	-
W-880-02	8/19/10	E601	0 of 18	-	-	-
W-880-02	8/19/10	E624	0 of 30	-	-	-
W-880-02	12/1/10	E624	0 of 30	-	-	-
W-880-03	6/14/10	E601	0 of 18	-	-	-
W-880-03	6/14/10	E624	0 of 30	-	-	-

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)	Chloro-methane (µg/L)
W-880-03	8/19/10	E601	0 of 18	-	-	-
W-880-03	8/19/10	E624	0 of 30	-	-	-
W-880-03	12/1/10	E624	0 of 30	-	-	-

## B-7.2. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-830-04A	3/17/10	82	<4
W-830-04A	03/17/10 DUP	83	<4
W-830-05	3/4/10	63 D	<4
W-830-10	3/4/10	71 D	<4
W-830-11	3/4/10	11	<4
W-830-12	8/10/10	<0.5 L	<4
W-830-13	3/10/10	47 D	<4
W-830-14	3/23/10	<0.5	<4
W-830-15	3/4/10	0.74	<4
W-830-15	8/17/10	1.2	<4
W-830-17	3/9/10	77 D	<4
W-830-18	3/10/10	2.4	<4
W-830-19	2/11/10	160 DO	4.1
W-830-19	8/30/10	-	4.6
W-830-20	3/4/10	<0.5	<4
W-830-21	3/10/10	<0.5	<4
W-830-21	03/10/10 DUP	<0.5	<4
W-830-22	3/4/10	<0.5	<4
W-830-27	3/9/10	69 DL	<4
W-830-27	03/09/10 DUP	73 D	5.4
W-830-29	3/4/10	<0.5	<4
W-830-30	3/8/10	91 D	<4
W-830-30	03/08/10 DUP	94 D	<4
W-830-34	3/9/10	120 D	<4
W-830-49	2/11/10	190 DO	<4
W-830-49	8/30/10	-	4.8
W-830-50	3/10/10	7.5	-
W-830-51	2/9/10	80	4.9
W-830-51	7/12/10	-	<4
W-830-52	2/9/10	83	4.9
W-830-52	7/12/10	-	4.4
W-830-53	2/9/10	72	4
W-830-53	7/12/10	-	4.3
W-830-55	3/9/10	23 D	<4
W-830-56	3/4/10	28 D	-
W-830-57	2/11/10	6.6 DO	<4
W-830-58	3/9/10	100 DL	6
W-830-59	2/11/10	130 DO	4.9
W-830-59	8/30/10	-	4.5
W-830-60	2/11/10	9.3 DO	<4

## B-7.2. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-830-1730	3/4/10	1.5	<4
W-830-1730	8/17/10	1.7	<4
W-830-1807	2/11/10	110 DO	<4
W-830-1807	8/30/10	-	<4
W-830-1829	3/11/10	130 D	<4
W-830-1830	3/8/10	99 D	<4
W-830-1832	3/10/10	<0.5	<4
W-830-2214	2/11/10	56 DO	4
W-830-2214	8/30/10	-	4.6
W-830-2215	2/11/10	9.7 DO	<4
W-830-2216	2/9/10	57 D	4
W-830-2216	8/2/10	-	<4
W-830-2311	3/18/10	77	4.4
W-832-01	2/16/10	78 D	4.7
W-832-01	8/30/10	-	6.1
W-832-06	3/4/10	6.7	<4
W-832-09	3/9/10	<0.5	<4
W-832-10	2/16/10	67 D	<8 D
W-832-10	8/30/10	-	7.1
W-832-11	2/16/10	69 D	5.1
W-832-11	8/30/10	-	6.4
W-832-12	2/16/10	110 D	5.7
W-832-12	8/30/10	-	5
W-832-13	2/16/10	150 D	<4
W-832-14	3/11/10	18	<4
W-832-15	3/8/10	120 D	5.4
W-832-15	8/30/10	110 D	6
W-832-16	3/11/10	7.9	<4
W-832-17	3/11/10	16	<4
W-832-18	3/11/10	55 D	17 D
W-832-19	3/4/10	81 D	<4
W-832-1927	3/9/10	46 D	<4
W-832-20	3/11/10	34	<4
W-832-21	3/4/10	16 D	<4
W-832-2112	3/15/10	<0.5	<4
W-832-2112	8/18/10	<0.5	<4
W-832-23	3/4/10	34 D	<4
W-832-24	3/4/10	47 D	<4
W-832-24	03/04/10 DUP	60 D	4.3
W-832-25	2/16/10	88 D	7.3

## B-7.2. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-832-25	8/30/10	-	6.3
W-832-SC1	3/9/10	20 L	-
W-832-SC3	3/9/10	11 L	-
W-832-SC4	3/9/10	24 DL	<4
W-870-01	3/11/10	35 D	-
W-870-02	3/11/10	2.5	<4
SVI-830-031	3/8/10	130 D	<4
SVI-830-032	3/8/10	100 D	<4
SVI-830-033	3/8/10	180 D	<4
SVI-830-035	3/9/10	70 D	<4
SPRING3	3/9/10	11 DL	<4
W-880-01	3/11/10	<0.5	<4
W-880-01	8/19/10	<0.5	<4
W-880-02	3/11/10	17	<4
W-880-02	8/19/10	<1 D	<4
W-880-03	8/19/10	<0.5	<4

B-7.3. Building 832 Canyon Operable Unit high explosive compounds in ground water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
W-830-13	3/10/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-830-34	3/9/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
W-832-15	4/19/10	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D
W-832-20	3/11/10	<2 O	<2 O	<2 O	<2 O	<2	<2 O	<2	<2	<2	<2	<1 O	<2 O	<1
W-880-01	3/11/10	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<1 O	<2 O	<1 J
W-880-01	8/19/10	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<0.87	<1.7	<0.87
W-880-02	3/11/10	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<1 O	<2 O	<1 J
W-880-02	8/19/10	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<0.88	<1.8	<0.88
W-880-03	8/19/10	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<0.83	<1.7	<0.83

B-7.4. Building 832 Canyon Operable Unit diesel range organic compounds in ground water.

Location	Date	Diesel Fuel (µg/L)	Oil (µg/L)
W-832-20	3/11/10	240 D	-
W-832-21	3/4/10	<50	<200

## B-8.1. 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	5/24/10	<0.0627	<0.06	$0.000380 \pm 0.0000190$	<0.0001	$0.00830 \pm 0.000150$	$0.00706 \pm 0.000331$
W-851-06	5/24/10	$0.150 \pm 0.00810$	$0.100 \pm 0.00810$	$0.00160 \pm 0.0000290$	<0.00011	$0.0420 \pm 0.000550$	$0.00597 \pm 0.0000710$
W-851-07	5/24/10	$0.160 \pm 0.0140$	$0.120 \pm 0.0140$	$0.00170 \pm 0.0000750$	<0.00012	$0.0360 \pm 0.000460$	$0.00746 \pm 0.000308$
W-851-08	5/24/10	$1.00 \pm 0.0240$	$0.570 \pm 0.0240$	$0.0210 \pm 0.000160$	<0.00019	$0.460 \pm 0.00270$	$0.00695 \pm 0.0000350$



## B-8.2. Building 851 Firing Table uranium isotopes by alpha spectrometry in ground water.

Location	Date	Uranium 234 and	Uranium 235 and	
		Uranium 233 (pCi/L)	Uranium 236 (pCi/L)	Uranium 238 (pCi/L)
W-851-05	5/24/10	<0.1 O	<0.1 O	<0.1 O
W-851-05	10/11/10	<0.1	<0.1	<0.1
W-851-06	5/24/10	0.145 ± 0.0808 O	<0.1 O	<0.1 O
W-851-06	10/11/10	<0.1	<0.1	<0.1
W-851-07	5/24/10	<0.1 O	<0.1 O	<0.1 O
W-851-07	10/11/10	0.337 ± 0.152	<0.1	<0.1
W-851-08	5/24/10	0.439 ± 0.177 O	<0.1 O	0.334 ± 0.151 O
W-851-08	10/11/10	0.458 ± 0.186	<0.1	0.501 ± 0.197

B-8.3. Building 845 Firing Table and Pit 9 Landfill tritium in ground water.

Location	Date	Tritium (pCi/L)
K9-01	5/25/10	<100 L
K9-02	5/25/10	<100 L
K9-03	5/25/10	<100 L

## B-8.4. Building 845 Firing Table and Pit 9 Landfill metals in ground water.

Constituents of concern	K9-01	K9-02	K9-03
	5/25/10	5/25/10	5/25/10
Antimony (mg/L)	<0.0005 L	<0.0005 L	<0.0005 L
Arsenic (mg/L)	0.002	0.02	0.004
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	69	76
Mercury (mg/L)	<0.0002	<0.0002	<0.0002
Molybdenum (mg/L)	0.03	0.05	0.03
Nickel (mg/L)	<0.0005	<0.0005	<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

B-8.5. Building 845 Firing Table and Pit 9 Landfill volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon										Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
K9-01	5/25/10	E601	<0.5	<0.5	<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	5/25/10	E601	<0.5	<0.5	<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	5/25/10	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
K9-01	5/25/10	E601	0 of 18
K9-02	5/25/10	E601	0 of 18
K9-03	5/25/10	E601	0 of 18

B-8.6. Building 845 Firing Table and Pit 9 Landfill high explosive compounds in ground water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
K9-01	5/25/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
K9-02	5/25/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
K9-03	5/25/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

B-8.7. Building 845 Firing Table and Pit 9 Landfill nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
K9-01	5/25/10	<0.5	<4
K9-02	5/25/10	<0.5	<4
K9-03	5/25/10	<0.5	<4

B-8.8. Building 845 Firing Table and Pit 9 Landfill fluoride in ground water.

Location	Date	Fluoride (mg/L)
K9-01	5/25/10	0.16
K9-02	5/25/10	0.22
K9-03	5/25/10	0.17

## B-8.9. 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	5/25/10	<0.06273	<0.068	0.00100 ± 0.0000310	<0.0001	0.0220 ± 0.000460	0.00719 ± 0.000163
K9-02	5/25/10	0.220 ± 0.0180	0.170 ± 0.0180	0.00220 ± 0.0000420	<0.00009	0.0460 ± 0.000580	0.00734 ± 0.000107
K9-03	5/25/10	0.410 ± 0.00980	0.300 ± 0.00980	0.00490 ± 0.0000510	<0.000084	0.100 ± 0.000820	0.00732 ± 0.0000510



## B-8.10. 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	5/25/10	<0.1 O	<0.1 O	<0.1 O
K9-02	5/25/10	0.154 ± 0.103 O	<0.1 O	<0.1 O
K9-03	5/25/10	0.348 ± 0.178 O	<0.1 O	0.115 ± 0.0954 O

B-8.11. Building 833 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon								Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
W-833-12	2/18/10	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 L	<0.5	<0.5
W-833-12	02/18/10 DUP	E601	3.5	<0.5	<0.5	<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	2/18/10	E601	<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
W-833-30	9/9/10	E601	<0.5	<0.5	<0.5	<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	2/18/10	E601	110 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	2/18/10	E601	<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

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
W-833-12	2/18/10	E601	0 of 18
W-833-12	02/18/10 DUP	E601	0 of 18
W-833-30	2/18/10	E601	0 of 18
W-833-30	9/9/10	E601	0 of 18
W-833-33	2/18/10	E601	0 of 18
W-840-01	2/18/10	E601	0 of 18

B-8.12. Building 833 nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
W-840-01	2/18/10	<0.5	<20 D

## B-8.13. Building 801 Firing Table and Pit 8 Landfill tritium in ground water.

Location	Date	Tritium (pCi/L)
K8-01	6/1/10	155 ± 70.3
K8-01	06/01/10 DUP	150 ± 55.0
K8-01	11/15/10	156 ± 59.2
K8-02B	2/17/10	<100
K8-02B	11/15/10	<100
K8-03B	6/1/10	110 ± 64.4
K8-03B	11/15/10	113 ± 53.1
K8-03B	11/15/10 DUP	151 ± 59.0 B
K8-04	6/1/10	<100
K8-04	11/15/10	<100

## B-8.14. Building 801 Firing Table and Pit 8 Landfill metals in ground water.

Constituents of concern	K8-02B	K8-04
	6/1/10	6/1/10
Antimony (mg/L)	<0.0005	<0.0005
Arsenic (mg/L)	0.02	0.02
Barium (mg/L)	0.008	0.007
Beryllium (mg/L)	<0.0001	<0.0001
Cadmium (mg/L)	<0.0001	0.004
Chromium (mg/L)	0.002	0.009
Cobalt (mg/L)	<0.0005	<0.0005
Copper (mg/L)	0.05	0.0006
Lead (mg/L)	0.0003	<0.0002
Lithium (µg/L)	31	36
Mercury (mg/L)	<0.0002 L	<0.0002 L
Molybdenum (mg/L)	0.005	0.006
Nickel (mg/L)	0.005	<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)	0.06	0.09
Zinc (mg/L)	0.04	<0.01

B-8.15. Building 801 Firing Table and Pit 8 Landfill volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	Carbon								Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)	
					cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	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)
K8-01	6/1/10	E601	3.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5
K8-01	06/01/10 DUP	E601	4.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5	<0.5	<0.5	<0.5	<0.5
K8-01	11/15/10	E601	3.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5
K8-02B	6/1/10	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
K8-03B	6/1/10	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
K8-03B	11/15/10	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
K8-03B	11/15/10 DUP	E601	0.64	<0.5	<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	6/1/10	E601	1.4	<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

Analytes detected but not reported in main table.

Location	Date	Method	Detection frequency
K8-01	6/1/10	E601	0 of 18
K8-01	06/01/10 DUP	E601	0 of 18
K8-01	11/15/10	E601	0 of 18
K8-02B	6/1/10	E601	0 of 18
K8-03B	6/1/10	E601	0 of 18
K8-03B	11/15/10	E601	0 of 18
K8-03B	11/15/10 DUP	E601	0 of 18
K8-04	6/1/10	E601	0 of 18

## B-8.16. Building 801 Firing Table and Pit 8 Landfill high explosive compounds in ground water.

Location	Date	1,3,5-Trinitrobenzene (µg/L)	1,3-Dinitrobenzene (µg/L)	2,4,6-TNT (µg/L)	2,4-Dinitrotoluene (µg/L)	2,6-Dinitrotoluene (µg/L)	2-Amino-4,6-Dinitrotoluene (µg/L)	2-Nitrotoluene (µg/L)	3-Nitrotoluene (µg/L)	4-Amino-2,6-Dinitrotoluene (µg/L)	4-Nitrotoluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)
K8-02B	6/1/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1
K8-04	6/1/10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1

## B-8.17. Building 801 Firing Table and Pit 8 Landfill nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO <sub>3</sub> ) (mg/L)	Perchlorate (µg/L)
K8-01	6/1/10	41 DL	<4
K8-01	06/01/10 DUP	51	<4
K8-01	11/15/10	-	4.2
K8-02B	2/17/10	-	<4
K8-02B	6/1/10	38 L	<4
K8-02B	7/20/10	-	<4
K8-02B	11/15/10	37 D	<4
K8-03B	6/1/10	19 DL	<4
K8-03B	11/15/10	-	<4
K8-03B	11/15/10 DUP	-	<4
K8-04	6/1/10	54 DL	<4
K8-04	11/15/10	-	<4



B-8.18. Building 801 Firing Table and Pit 8 Landfill fluoride in ground water.

Location	Date	Fluoride (mg/L)
K8-02B	6/1/10	0.3
K8-04	6/1/10	0.33

## B-8.19. Building 845 Firing Table and Pit 9 Landfill uranium isotopes by mass spectrometry in ground water.

Location	Date	Uranium (pCi/L)	Uranium 234		Uranium 236		Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
			by mass (pCi/L)	Uranium 235 by mass (pCi/L)	by mass (pCi/L)	Uranium 238 by mass (pCi/L)		
K8-02B	6/1/10	10.0 ± 0.260	6.30 ± 0.250	0.170 ± 0.00170	<0.00072	3.80 ± 0.0220	0.00723 ± 0.0000570	
K8-04	6/1/10	12.0 ± 0.530	7.50 ± 0.530	0.220 ± 0.00230	<0.00091	4.70 ± 0.0450	0.00734 ± 0.0000280	

## B-8.20. 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)
K8-01	6/1/10	5.73 ± 1.15	0.342 ± 0.153 O	3.86 ± 0.814
K8-01	06/01/10 DUP	5.41 ± 0.930	0.380 ± 0.110	3.91 ± 0.690
K8-02B	6/1/10	6.84 ± 1.37	0.183 ± 0.111 O	4.52 ± 0.947
K8-02B	11/15/10	6.35 ± 1.26	0.210 ± 0.125	3.97 ± 0.836
K8-03B	6/1/10	5.85 ± 1.12	0.222 ± 0.113 O	3.68 ± 0.742
K8-04	6/1/10	7.78 ± 1.59	0.356 ± 0.166 O	4.96 ± 1.06



## **Appendix C**

### **Ground Water Elevations Measured During 2010**



## Appendix C

### Ground Water Elevations Measured During 2010

- Table C-1. General Services Area ground water elevations.
- Table C-2. Building 834 Operable Unit ground water elevations.
- Table C-3. Pit 6 Landfill Operable Unit ground water elevations.
- Table C-4. High Explosives Process Area Operable Unit ground water elevations.
- Table C-5. Building 850 area in Operable Unit 5 ground water elevations.
- Table C-6. Building 854 Operable Unit ground water elevations.
- Table C-7. Building 832 Canyon Operable Unit ground water elevations.
- Table C-8. Building 801 firing table and Pit 8 Landfill ground water elevations.
- Table C-9. Building 845 firing table and Pit 9 Landfill ground water elevations.
- Table C-10. Building 833 ground water elevations.
- Table C-11. Building 851 Firing Table ground water elevations.
- Table C-12. Pit 2 Landfill ground water elevations.
- Table C-13. Pit 7 Complex area in Operable Unit 5 ground water elevations.

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
CDF1	1/5/10	12	490.62	
CDF1	4/8/10	6.21	496.41	
CDF1	7/7/10	12.15	490.47	
CDF1	10/19/10	13.75	488.87	
CON1	1/5/10	10.66	490.42	
CON1	4/8/10	5.04	496.04	
CON1	7/7/10	36.88	464.2	
CON1	10/19/10	37.75	463.33	
CON2	1/5/10	16	489.29	
CON2	4/8/10	7.48	497.81	
CON2	7/7/10	9.52	495.77	
CON2	10/19/10	13.71	491.58	
W-24P-03	1/6/10	1.97	425.77	
W-24P-03	4/13/10	1.89	425.85	
W-24P-03	7/7/10	2.32	425.42	
W-24P-03	10/19/10	2.62	425.12	
W-25D-01	1/6/10	18.75	446.74	
W-25D-01	4/8/10	16.54	448.95	
W-25D-01	7/7/10	-	NA	NM/UC SNAKE
W-25D-01	10/19/10	17.33	448.16	
W-25D-02	1/5/10	11.35	446.84	
W-25D-02	4/8/10	8.9	449.29	
W-25D-02	7/7/10	9.47	448.72	
W-25D-02	10/19/10	9.88	448.31	
W-25M-01	1/6/10	22.6	456.96	
W-25M-01	4/8/10	16.76	462.8	
W-25M-01	7/7/10	17.95	461.61	
W-25M-01	10/19/10	19.7	459.86	
W-25M-02	1/6/10	11.2	474.04	
W-25M-02	4/8/10	5.45	479.79	
W-25M-02	7/7/10	5.87	479.37	
W-25M-02	10/19/10	8.67	476.57	
W-25M-03	1/6/10	11.84	475.59	
W-25M-03	4/8/10	5.62	481.81	
W-25M-03	7/7/10	-	NA	NM/UC FIRE HAZARD
W-25M-03	10/19/10	9.27	478.16	
W-25N-01	1/7/10	18.28	488.84	
W-25N-01	4/12/10	10	497.12	
W-25N-01	7/8/10	12.04	495.08	

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-25N-01	10/21/10	16.2	490.92	
W-25N-04	1/7/10	41.42	486.47	
W-25N-04	4/12/10	40.38	487.51	
W-25N-04	7/8/10	40.22	487.67	
W-25N-04	10/21/10	40.54	487.35	
W-25N-05	1/6/10	13.23	484.24	
W-25N-05	4/8/10	6.02	491.15	
W-25N-05	7/7/10	7.23	489.94	
W-25N-05	10/19/10	11.19	485.98	
W-25N-06	1/6/10	16.14	480.68	
W-25N-06	4/8/10	8.64	488.18	
W-25N-06	7/7/10	9.53	487.29	
W-25N-06	10/19/10	13.8	483.02	
W-25N-07	1/5/10	16.3	489.1	
W-25N-07	4/8/10	7.91	497.49	
W-25N-07	7/7/10	9.97	495.43	
W-25N-07	10/19/10	14.17	491.23	
W-25N-08	1/7/10	23.68	487.14	
W-25N-08	4/12/10	16.42	494.4	
W-25N-08	7/8/10	18.03	492.79	
W-25N-08	10/21/10	21.9	488.92	
W-25N-09	1/7/10	19.7	490.76	
W-25N-09	4/12/10	13.58	496.88	
W-25N-09	7/8/10	15.38	495.08	
W-25N-09	10/21/10	18.3	492.16	
W-25N-10	1/5/10	15.52	490.34	
W-25N-10	4/8/10	9.77	495.79	
W-25N-10	7/7/10	17.37	488.19	
W-25N-10	10/19/10	18.11	487.45	
W-25N-11	1/5/10	15.13	490.01	
W-25N-11	4/8/10	9.31	495.83	
W-25N-11	7/7/10	19.57	485.57	
W-25N-11	10/19/10	20.61	484.53	
W-25N-12	1/5/10	15.96	489.56	
W-25N-12	4/8/10	9.8	495.72	
W-25N-12	7/7/10	16.47	489.05	
W-25N-12	10/19/10	17.16	488.36	
W-25N-13	1/5/10	17.18	488.2	
W-25N-13	4/8/10	9.72	495.66	

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-25N-13	7/7/10	11.29	494.09	
W-25N-13	10/19/10	15.2	490.18	
W-25N-15	1/6/10	14.17	487.2	
W-25N-15	4/8/10	6.71	494.66	
W-25N-15	7/7/10	8.35	493.02	
W-25N-15	10/19/10	12.3	489.07	
W-25N-18	1/6/10	15.23	486.59	
W-25N-18	4/8/10	8.02	493.8	
W-25N-18	7/7/10	9.83	491.99	
W-25N-18	10/19/10	13.65	488.17	
W-25N-20	1/7/10	15.94	489	
W-25N-20	4/12/10	7.6	497.34	
W-25N-20	7/8/10	9.7	495.24	
W-25N-20	10/21/10	13.85	491.09	
W-25N-20	10/25/10	13.74	491.2	PS
W-25N-20	10/26/10	13.75	491.19	PS
W-25N-21	1/7/10	22.42	490.76	
W-25N-21	4/12/10	16.32	496.86	
W-25N-21	7/8/10	18.15	495.03	
W-25N-21	10/21/10	21.1	492.08	
W-25N-22	1/7/10	24.8	488.26	
W-25N-22	4/12/10	17.72	495.34	
W-25N-22	7/8/10	19.25	493.81	
W-25N-22	10/21/10	22.85	490.21	
W-25N-23	1/7/10	22.58	487.81	
W-25N-23	4/12/10	15	495.39	
W-25N-23	7/8/10	16.76	493.63	
W-25N-23	10/21/10	20.62	489.77	
W-25N-24	1/7/10	18.11	488.51	
W-25N-24	4/12/10	10	496.62	
W-25N-24	7/8/10	12.02	494.6	
W-25N-24	10/21/10	16.08	490.54	
W-25N-25	1/5/10	13.24	487.83	
W-25N-25	4/8/10	5.4	495.67	
W-25N-25	7/7/10	7.31	493.76	
W-25N-25	10/19/10	11.3	489.77	
W-25N-26	1/6/10	12.48	486.89	
W-25N-26	4/8/10	5.36	494.01	
W-25N-26	7/7/10	7.2	492.17	



## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-25N-26	10/19/10	11	488.37	
W-25N-28	1/6/10	13.37	483.78	
W-25N-28	4/8/10	6.51	490.64	
W-25N-28	7/7/10	7.56	489.59	
W-25N-28	10/19/10	11.45	485.7	
W-26R-01	1/7/10	20.6	489.11	
W-26R-01	4/12/10	11.88	497.83	
W-26R-01	7/8/10	14.02	495.69	
W-26R-01	10/21/10	18.4	491.31	
W-26R-01	10/25/10	18.28	491.43	PS
W-26R-01	10/26/10	18.31	491.4	PS
W-26R-02	1/7/10	27.35	500.85	
W-26R-02	4/12/10	31.35	496.85	
W-26R-02	7/8/10	33.13	495.07	
W-26R-02	10/21/10	35.9	492.3	
W-26R-03	1/7/10	17.04	489.18	
W-26R-03	4/12/10	8.63	497.59	
W-26R-03	7/8/10	10.74	495.48	
W-26R-03	10/21/10	14.95	491.27	
W-26R-04	1/7/10	19.7	489.26	
W-26R-04	4/12/10	10.33	498.63	
W-26R-04	7/8/10	13.11	495.85	
W-26R-04	10/21/10	17.5	491.46	
W-26R-05	1/7/10	23.8	489.31	
W-26R-05	4/12/10	15.73	497.38	
W-26R-05	7/8/10	17.8	495.31	
W-26R-05	10/21/10	21.84	491.27	
W-26R-05	10/25/10	21.72	491.39	PS
W-26R-05	10/28/10	25.29	487.82	PS
W-26R-06	1/7/10	25.91	488.93	
W-26R-06	4/12/10	17.08	497.76	
W-26R-06	7/8/10	19.27	495.57	
W-26R-06	10/21/10	23.78	491.06	
W-26R-07	1/7/10	29.75	490.84	
W-26R-07	4/12/10	23.65	496.94	
W-26R-07	7/8/10	25.53	495.06	
W-26R-07	10/21/10	28.34	492.25	
W-26R-08	1/7/10	31.91	491.2	
W-26R-08	4/12/10	26.15	496.96	

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-26R-08	7/8/10	28	495.11	
W-26R-08	10/21/10	30.6	492.51	
W-26R-11	1/7/10	17.87	489.34	
W-26R-11	4/12/10	9.02	498.19	
W-26R-11	7/8/10	11.26	495.95	
W-26R-11	10/21/10	15.92	491.29	
W-26R-11	10/25/10	15.6	491.61	PS
W-26R-11	10/26/10	15.53	491.68	PS
W-35A-01	1/5/10	16.51	491.9	
W-35A-01	4/8/10	2.01	506.4	
W-35A-01	7/7/10	8.95	499.46	
W-35A-01	10/18/10	1.98	506.43	
W-35A-02	1/5/10	15.56	494.14	
W-35A-02	4/7/10	4.01	505.69	
W-35A-02	7/7/10	7.62	502.08	
W-35A-02	10/18/10	12.95	496.75	
W-35A-03	1/5/10	15.4	491.44	
W-35A-03	4/8/10	5.37	501.47	
W-35A-03	7/7/10	8.06	498.78	
W-35A-03	10/18/10	13	493.84	
W-35A-04	1/5/10	14	490.07	
W-35A-04	4/8/10	4.75	499.32	
W-35A-04	7/7/10	7.02	497.05	
W-35A-04	10/18/10	11.7	492.37	
W-35A-04	11/1/10	11.74	492.33	PS
W-35A-04	11/2/10	11.79	492.28	PS
W-35A-04	11/30/10	12.32	491.75	PS
W-35A-05	1/5/10	16.3	491.67	
W-35A-05	4/8/10	6.11	501.86	
W-35A-05	7/7/10	8.86	499.11	
W-35A-05	10/18/10	14	493.97	
W-35A-06	1/5/10	14.26	490.06	
W-35A-06	4/8/10	4.85	499.47	
W-35A-06	7/7/10	7.1	497.22	
W-35A-06	10/18/10	11.81	492.51	
W-35A-07	1/5/10	3.46	509.86	
W-35A-07	4/7/10	0.22	513.1	
W-35A-07	7/7/10	-	NA	FA
W-35A-07	10/18/10	1.5	511.82	

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-35A-08	1/5/10	17.87	500.09	
W-35A-08	4/7/10	7.88	510.08	
W-35A-08	7/7/10	12.14	505.82	
W-35A-08	10/18/10	16.63	501.33	
W-35A-09	1/5/10	18.97	496.68	
W-35A-09	4/7/10	7.08	508.57	
W-35A-09	7/7/10	11.05	504.6	
W-35A-09	10/18/10	16.55	499.1	
W-35A-10	1/5/10	16.47	495.69	
W-35A-10	4/7/10	4.87	507.29	
W-35A-10	7/7/10	8.47	503.69	
W-35A-10	10/18/10	13.28	498.88	
W-35A-11	1/5/10	4.41	500.94	
W-35A-11	4/8/10	0.21	505.14	
W-35A-11	7/7/10	0.98	504.37	
W-35A-11	10/18/10	2.5	502.85	
W-35A-12	1/5/10	8.6	497.22	
W-35A-12	4/8/10	0.61	505.21	
W-35A-12	7/7/10	2.94	502.88	
W-35A-12	10/18/10	6.2	499.62	
W-35A-13	1/5/10	12.42	490.92	
W-35A-13	4/8/10	3.5	499.84	
W-35A-13	7/7/10	5.7	497.64	
W-35A-13	10/18/10	10.2	493.14	
W-35A-14	1/5/10	16.18	496.35	
W-35A-14	4/7/10	5.02	507.51	
W-35A-14	7/7/10	8.28	504.25	
W-35A-14	10/18/10	13.3	499.23	
W-7A	1/11/10	14.95	509.93	
W-7A	4/15/10	11.15	513.73	
W-7A	7/12/10	11.54	513.34	
W-7A	10/21/10	13.45	511.43	
W-7B	1/7/10	20.67	490.77	
W-7B	4/12/10	11.64	499.8	
W-7B	7/8/10	14	497.44	
W-7B	10/20/10	18.48	492.96	
W-7C	1/7/10	14.47	503.4	
W-7C	4/12/10	8.74	509.13	
W-7C	7/8/10	9.68	508.19	

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-7C	10/20/10	12.1	505.77	
W-7D	1/7/10	16.02	491.1	
W-7D	4/12/10	10.12	497	
W-7D	7/8/10	12.02	495.1	
W-7D	10/21/10	14.65	492.47	
W-7DS	1/7/10	17.2	489.4	
W-7DS	4/12/10	8.32	498.28	
W-7DS	7/8/10	10.61	495.99	
W-7DS	10/21/10	14.93	491.67	
W-7DS	10/26/10	14.93	491.67	PS
W-7DS	10/27/10	14.82	491.78	PS
W-7E	1/7/10	18.82	490.46	
W-7E	4/12/10	9.7	499.58	
W-7E	7/8/10	12.08	497.2	
W-7E	10/20/10	16.55	492.73	
W-7E	10/27/10	16.53	492.75	PS
W-7E	10/28/10	16.61	492.67	PS
W-7ES	1/7/10	18.78	490.93	
W-7ES	4/12/10	9.1	500.61	
W-7ES	7/8/10	11.73	497.98	
W-7ES	10/20/10	16.44	493.27	
W-7ES	10/27/10	16.42	493.29	PS
W-7ES	10/28/10	16.44	493.27	PS
W-7F	1/11/10	32.67	494.41	
W-7F	4/15/10	42.56	484.52	
W-7F	7/12/10	40.38	486.7	
W-7F	10/21/10	43.07	484.01	
W-7G	1/11/10	14.77	498.15	
W-7G	4/14/10	10.13	502.79	
W-7G	7/12/10	10.6	502.32	
W-7G	10/20/10	12.5	500.42	
W-7H	1/11/10	16.62	494.82	
W-7H	4/14/10	10.33	501.11	
W-7H	7/12/10	12.68	498.76	
W-7I	1/11/10	34.75	494.54	
W-7I	4/15/10	42.02	487.27	
W-7I	7/12/10	43.97	485.32	
W-7I	10/21/10	38.75	490.54	
W-7J	1/11/10	33.11	494.78	

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-7J	4/15/10	43.62	484.27	
W-7J	7/12/10	39	488.89	
W-7J	10/21/10	43.1	484.79	
W-7K	1/7/10	11.63	498.3	
W-7K	4/12/10	6.83	503.1	
W-7K	7/8/10	7.14	502.79	
W-7K	10/20/10	9.2	500.73	
W-7L	1/7/10	14.4	498.36	
W-7L	4/12/10	9.62	503.14	
W-7L	7/8/10	10	502.76	
W-7L	10/20/10	12.05	500.71	
W-7M	1/7/10	13.32	494.43	
W-7M	4/12/10	6.87	500.88	
W-7M	7/8/10	8.44	499.31	
W-7M	10/20/10	11.6	496.15	
W-7N	1/7/10	17.47	490.71	
W-7N	4/12/10	8.33	499.85	
W-7N	7/8/10	10.76	497.42	
W-7N	10/20/10	15.23	492.95	
W-7O	1/11/10	25.07	491.02	
W-7O	4/14/10	15.3	500.49	
W-7O	7/12/10	17.77	498.02	
W-7O	10/21/10	22.6	493.19	
W-7P	1/7/10	19.43	490.49	
W-7P	4/12/10	10.54	499.38	
W-7P	7/8/10	14.03	495.89	
W-7P	10/20/10	17.15	492.77	
W-7PS	1/7/10	-	NA	DRY
W-7PS	4/12/10	9.1	499.68	
W-7PS	7/8/10	11.55	497.23	
W-7PS	10/20/10	16.05	492.73	
W-7PS	10/26/10	16	492.78	PS
W-7PS	10/27/10	16.03	492.75	PS
W-7Q	1/11/10	25.65	491.97	
W-7Q	4/14/10	14.69	502.93	
W-7Q	7/12/10	17.88	499.74	
W-7Q	10/20/10	22.95	494.67	
W-7R	1/7/10	19.4	491	
W-7R	4/12/10	10	500.4	

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-7R	7/8/10	12.51	497.89	
W-7R	10/20/10	17.1	493.3	
W-7S	1/7/10	18.87	491.01	
W-7S	4/12/10	9.23	500.65	
W-7S	7/8/10	11.82	498.06	
W-7S	10/20/10	16.54	493.34	
W-7T	1/7/10	18.77	491	
W-7T	4/12/10	9.07	500.7	
W-7T	7/8/10	11.65	498.12	
W-7T	10/20/10	16.4	493.37	
W-843-01	1/11/10	116.04	507.72	
W-843-01	4/15/10	114.02	509.74	
W-843-01	7/12/10	113.22	510.54	
W-843-01	10/25/10	114.11	509.65	
W-843-02	1/11/10	103.71	518.88	
W-843-02	4/15/10	102.2	520.39	
W-843-02	7/12/10	101.43	521.16	
W-843-02	10/25/10	102.51	520.08	
W-872-01	1/11/10	32.07	498.57	
W-872-01	4/15/10	30.1	500.54	
W-872-01	7/12/10	30.41	500.23	
W-872-01	10/21/10	31.93	498.71	
W-872-02	1/11/10	35.46	497.53	
W-872-02	4/15/10	29.4	503.59	
W-872-02	7/12/10	29.83	503.16	
W-872-02	10/21/10	32.6	500.39	
W-873-01	1/11/10	22.95	510.98	
W-873-01	4/15/10	20.73	513.2	
W-873-01	7/12/10	21	512.93	
W-873-01	10/21/10	21.52	512.41	
W-873-02	1/11/10	34.4	498.45	
W-873-02	4/15/10	26.97	505.88	
W-873-02	7/12/10	27.9	504.95	
W-873-02	10/21/10	31.15	501.7	
W-873-03	1/11/10	30.85	502.94	
W-873-03	4/15/10	25.05	508.74	
W-873-03	7/12/10	26.41	507.38	
W-873-03	10/21/10	29.38	504.41	
W-873-04	1/11/10	20.17	511.24	

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-873-04	4/15/10	18.85	512.56	
W-873-04	7/12/10	18.8	512.61	
W-873-04	10/21/10	19.53	511.88	
W-873-06	1/11/10	33.87	499.19	
W-873-06	4/15/10	26.75	506.31	
W-873-06	7/12/10	27.57	505.49	
W-873-06	10/21/10	30.9	502.16	
W-873-07	1/11/10	34.9	498	
W-873-07	4/15/10	42.49	490.41	
W-873-07	7/12/10	29.02	503.88	
W-873-07	10/21/10	31.93	500.97	
W-875-01	1/11/10	30.56	501.84	
W-875-01	4/14/10	20.31	512.09	
W-875-01	7/12/10	21.11	511.29	
W-875-01	10/21/10	21.35	511.05	
W-875-02	1/11/10	21.9	509.46	
W-875-02	4/14/10	21.06	510.3	
W-875-02	7/12/10	21.75	509.61	
W-875-02	10/21/10	22.1	509.26	
W-875-03	1/11/10	32.4	496.24	
W-875-03	4/15/10	32.62	496.02	
W-875-03	7/12/10	30.27	498.37	
W-875-03	10/21/10	30.9	497.74	
W-875-04	1/11/10	20.6	511.63	
W-875-04	4/14/10	19.65	512.58	
W-875-04	7/12/10	20.4	511.83	
W-875-04	10/21/10	21.15	511.08	
W-875-05	1/11/10	23.19	513.51	
W-875-05	4/14/10	22.98	513.72	
W-875-05	7/12/10	23.21	513.49	
W-875-05	10/21/10	23.43	513.27	
W-875-06	1/11/10	24.45	504.97	
W-875-06	4/14/10	21.05	508.37	
W-875-06	7/12/10	23.65	505.77	
W-875-06	10/21/10	24.95	504.47	
W-875-07	1/11/10	35.27	493.17	
W-875-07	4/15/10	34.79	493.65	
W-875-07	7/12/10	35.07	493.37	
W-875-07	10/21/10	35.55	492.89	

## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-875-08	1/11/10	34.63	493.52	
W-875-08	4/15/10	51.21	476.94	
W-875-08	7/12/10	37.67	490.48	
W-875-08	10/21/10	41.31	488.45	
W-875-09	1/11/10	34.7	494.85	
W-875-09	4/15/10	42.1	487.45	
W-875-09	7/12/10	37.47	492.08	
W-875-09	10/21/10	41.21	488.5	
W-875-10	1/11/10	35.02	494.3	
W-875-10	4/15/10	41.95	487.37	
W-875-10	7/12/10	37.9	491.42	
W-875-10	10/21/10	41.8	488.39	
W-875-11	1/11/10	35.02	494.14	
W-875-11	4/15/10	41.66	487.5	
W-875-11	7/12/10	37.95	491.21	
W-875-11	10/21/10	41.81	487.92	
W-875-15	1/11/10	34.72	493.62	
W-875-15	4/15/10	-	NA	DRY
W-875-15	7/12/10	38.12	490.22	
W-875-15	10/21/10	41.8	488.11	
W-876-01	1/11/10	24.37	513.61	
W-876-01	4/14/10	23.14	514.84	
W-876-01	7/12/10	23.87	514.11	
W-876-01	10/21/10	24.7	513.28	
W-879-01	1/11/10	39.83	512.03	
W-879-01	4/15/10	36.76	515.1	
W-879-01	7/12/10	36.65	515.21	
W-879-01	10/21/10	38.3	513.56	
W-889-01	1/11/10	39.08	514.55	
W-889-01	4/15/10	38.87	514.76	
W-889-01	7/12/10	38.92	514.71	
W-889-01	10/21/10	39.05	514.58	
W-CGSA-1732	1/11/10	19.1	503.75	
W-CGSA-1732	4/15/10	18.85	504	
W-CGSA-1732	7/12/10	19.09	503.76	
W-CGSA-1732	10/21/10	19.1	503.75	
W-CGSA-1733	1/7/10	-	NA	DRY
W-CGSA-1733	4/12/10	11.14	500.85	
W-CGSA-1733	7/8/10	13.78	498.21	



## C-1. General Services Area ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-CGSA-1733	10/20/10	18.48	493.51	
W-CGSA-1735	1/7/10	-	NA	DRY
W-CGSA-1735	4/12/10	10.52	498.85	
W-CGSA-1735	7/8/10	12.68	496.69	
W-CGSA-1735	10/21/10	14.7	494.67	
W-CGSA-1736	1/7/10	19.75	489.62	
W-CGSA-1736	4/12/10	10.73	498.64	
W-CGSA-1736	7/8/10	13.02	496.35	
W-CGSA-1736	10/21/10	17.53	491.84	
W-CGSA-1737	1/7/10	16.97	490.64	
W-CGSA-1737	4/12/10	7.7	499.91	
W-CGSA-1737	7/8/10	10.2	497.41	
W-CGSA-1737	10/20/10	14.72	492.89	
W-CGSA-1739	1/7/10	19.3	493.17	
W-CGSA-1739	4/12/10	11.71	500.76	
W-CGSA-1739	7/8/10	14.2	498.27	
W-CGSA-1739	10/18/10	18.6	493.87	

## C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-1709	1/26/10	23.97	992.61	
W-834-1709	4/22/10	20.17	996.41	
W-834-1709	7/20/10	-	NA	NM
W-834-1709	10/26/10	23.58	993	
W-834-1711	1/26/10	37.5	979.44	
W-834-1711	4/22/10	36.37	980.57	
W-834-1711	7/20/10	-	NA	NM
W-834-1711	10/26/10	36.35	980.59	
W-834-1712	1/26/10	-	NA	DRY
W-834-1712	4/22/10	-	NA	DRY
W-834-1712	7/20/10	-	NA	NM/RA
W-834-1712	10/26/10	-	NA	DRY
W-834-1824	1/26/10	40	920.78	
W-834-1824	4/21/10	40.5	920.28	
W-834-1824	7/20/10	40.2	920.58	
W-834-1824	10/26/10	40.25	920.53	
W-834-1825	1/26/10	40.47	917.2	
W-834-1825	4/21/10	39.88	917.79	
W-834-1825	7/20/10	40.1	917.57	
W-834-1825	10/26/10	39.67	918	
W-834-1833	1/26/10	40.38	915.73	
W-834-1833	4/21/10	39.03	917.08	
W-834-1833	7/20/10	39.26	916.85	
W-834-1833	10/26/10	39.95	916.16	
W-834-2001	1/26/10	18.62	995.67	
W-834-2001	4/22/10	24.11	990.18	
W-834-2001	7/20/10	24.25	990.04	
W-834-2001	10/26/10	24.2	990.09	
W-834-2113	1/26/10	38.65	960.36	
W-834-2113	4/22/10	38.3	960.71	
W-834-2113	7/20/10	38	961.01	
W-834-2113	10/26/10	38.22	960.79	
W-834-2117	1/26/10	42	931.89	
W-834-2117	4/21/10	41.27	932.62	
W-834-2117	7/20/10	40.46	933.43	
W-834-2117	10/26/10	40.84	933.05	
W-834-2118	1/26/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-834-2118	4/21/10	29.14	910.15	
W-834-2118	7/20/10	30.23	909.06	

## C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-2118	10/26/10	29.93	909.36	
W-834-2119	1/26/10	55.48	899.73	
W-834-2119	4/21/10	54.61	900.6	
W-834-2119	7/20/10	54.8	900.41	
W-834-2119	10/26/10	53.3	901.91	
W-834-A1	1/26/10	31.5	983.59	
W-834-A1	4/22/10	27.95	987.14	
W-834-A1	7/20/10	27.95	987.14	
W-834-A1	10/26/10	29.04	986.05	
W-834-A2	1/26/10	-	NA	DRY
W-834-A2	4/22/10	17	998.48	
W-834-A2	7/20/10	18.3	997.18	
W-834-A2	10/26/10	18.47	997.01	
W-834-B2	1/26/10	-	NA	DRY
W-834-B2	4/22/10	16.45	1001.94	
W-834-B2	7/20/10	16.69	1001.7	
W-834-B2	10/26/10	16.57	1001.82	
W-834-B3	1/26/10	5.12	1013.03	
W-834-B3	4/22/10	11.3	1006.85	
W-834-B3	7/20/10	11.45	1006.7	
W-834-B3	10/26/10	11.51	1006.64	
W-834-B4	1/26/10	-	NA	DRY
W-834-B4	4/22/10	11.65	1003.92	
W-834-B4	7/20/10	13.88	1001.69	
W-834-B4	10/26/10	-	NA	DRY
W-834-C2	1/26/10	17.73	1002.07	
W-834-C2	4/22/10	16.21	1003.59	
W-834-C2	7/20/10	18.53	1001.27	
W-834-C2	10/26/10	-	NA	DRY
W-834-C4	1/26/10	4.93	1014.33	
W-834-C4	4/22/10	6.25	1013.01	
W-834-C4	7/20/10	9.04	1010.22	
W-834-C4	10/26/10	11.31	1007.95	
W-834-C5	1/26/10	9	1006.67	
W-834-C5	4/22/10	8.61	1007.06	
W-834-C5	7/20/10	11.9	1003.77	
W-834-C5	10/26/10	13.47	1002.2	
W-834-D10	1/26/10	-	NA	DRY
W-834-D10	4/22/10	33.71	982.7	

## C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-D10	7/20/10	33.12	983.29	
W-834-D10	10/26/10	33.2	983.21	
W-834-D11	1/26/10	24.21	993.33	
W-834-D11	4/22/10	23.52	994.02	
W-834-D11	7/20/10	24.13	993.41	
W-834-D11	10/26/10	24.2	993.34	
W-834-D12	1/26/10	28.7	987.59	
W-834-D12	4/22/10	29.36	986.93	
W-834-D12	7/20/10	29.4	986.89	
W-834-D12	10/26/10	29.35	986.94	
W-834-D13	1/26/10	29.1	988.89	
W-834-D13	4/22/10	28.83	989.16	
W-834-D13	7/20/10	28.84	989.15	
W-834-D13	10/26/10	28.87	989.12	
W-834-D14	1/26/10	30.13	988.24	
W-834-D14	4/22/10	30.1	988.27	
W-834-D14	7/20/10	30.8	987.57	
W-834-D14	10/26/10	30.72	987.65	
W-834-D15	1/26/10	24.9	993.26	
W-834-D15	4/22/10	21.62	996.54	
W-834-D15	7/20/10	23.57	994.59	
W-834-D15	10/26/10	-	NA	DRY
W-834-D16	1/26/10	-	NA	DRY
W-834-D16	4/22/10	-	NA	DRY
W-834-D16	7/20/10	-	NA	DRY
W-834-D16	10/26/10	-	NA	DRY
W-834-D17	1/26/10	-	NA	DRY
W-834-D17	4/22/10	-	NA	DRY
W-834-D17	7/20/10	-	NA	DRY
W-834-D17	10/26/10	-	NA	DRY
W-834-D18	1/26/10	26.84	991.62	
W-834-D18	4/22/10	24.06	994.4	
W-834-D18	7/20/10	24.3	994.16	
W-834-D18	10/26/10	25.78	992.68	
W-834-D2	1/26/10	-	NA	DRY
W-834-D2	4/22/10	-	NA	DRY
W-834-D2	7/20/10	-	NA	DRY
W-834-D2	10/26/10	-	NA	DRY
W-834-D3	1/26/10	28.35	990.2	

## C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-D3	4/22/10	24.31	994.24	
W-834-D3	7/20/10	25.8	992.75	
W-834-D3	10/26/10	-	NA	NM/RA
W-834-D4	1/26/10	28.6	989.76	
W-834-D4	4/22/10	35.8	982.56	
W-834-D4	7/20/10	-	NA	NM
W-834-D4	10/26/10	-	NA	NM/RA
W-834-D5	1/26/10	33.3	985.17	
W-834-D5	4/22/10	27.92	990.55	
W-834-D5	7/20/10	20.4	998.07	
W-834-D5	10/26/10	-	NA	NM/RA
W-834-D6	1/26/10	29.88	988.4	
W-834-D6	4/22/10	34.13	984.15	
W-834-D6	7/20/10	34.11	984.17	
W-834-D6	10/26/10	34.09	984.19	
W-834-D7	1/26/10	26.73	987.19	
W-834-D7	4/22/10	32.48	981.44	
W-834-D7	7/20/10	32.53	981.39	
W-834-D7	10/26/10	32.64	981.28	
W-834-G3	1/26/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-834-G3	4/22/10	-	NA	DRY
W-834-G3	7/20/10	-	NA	DRY
W-834-G3	10/26/10	-	NA	DRY
W-834-H2	1/26/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-834-H2	4/22/10	-	NA	DRY
W-834-H2	7/20/10	-	NA	DRY
W-834-H2	10/26/10	31.2	992.75	
W-834-J1	1/26/10	31	988.83	
W-834-J1	4/22/10	30.73	989.1	
W-834-J1	7/20/10	30.85	988.98	
W-834-J1	10/26/10	30.72	989.11	
W-834-J2	1/26/10	32.06	987.89	
W-834-J2	4/22/10	32.54	987.41	
W-834-J2	7/20/10	32.75	987.2	
W-834-J2	10/26/10	33.57	986.38	
W-834-J3	1/26/10	-	NA	DRY
W-834-J3	4/22/10	-	NA	DRY
W-834-J3	7/20/10	-	NA	DRY
W-834-J3	10/26/10	-	NA	DRY

## C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-K1A	1/26/10	-	NA	DRY
W-834-M1	1/26/10	61.45	963.06	
W-834-M1	4/22/10	61.36	963.15	
W-834-M1	7/20/10	62.03	962.48	
W-834-M1	10/26/10	61.28	963.23	
W-834-M2	1/26/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-834-M2	4/21/10	-	NA	DRY
W-834-M2	7/20/10	-	NA	DRY
W-834-M2	10/26/10	-	NA	DRY
W-834-S1	1/26/10	34.52	967.56	
W-834-S1	4/22/10	35.06	967.02	
W-834-S1	7/20/10	35.03	967.05	
W-834-S1	10/26/10	35.1	966.98	
W-834-S10	1/26/10	-	NA	DRY
W-834-S10	4/22/10	-	NA	DRY
W-834-S10	7/20/10	-	NA	DRY
W-834-S10	10/26/10	-	NA	DRY
W-834-S12A	1/26/10	51.62	953.11	
W-834-S12A	4/22/10	50.62	954.11	
W-834-S12A	7/20/10	50.78	953.95	
W-834-S12A	10/26/10	50.8	953.93	
W-834-S13	1/26/10	47.06	956.68	
W-834-S13	4/22/10	46.81	956.93	
W-834-S13	7/20/10	46.77	956.97	
W-834-S13	10/26/10	46.85	956.89	
W-834-S4	1/26/10	78.62	948.05	
W-834-S4	4/22/10	78.57	948.1	
W-834-S4	7/20/10	78.65	948.02	
W-834-S4	10/26/10	78.72	947.95	
W-834-S5	1/26/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-834-S5	4/21/10	-	NA	DRY
W-834-S5	7/20/10	-	NA	DRY
W-834-S5	10/26/10	-	NA	DRY
W-834-S6	1/26/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-834-S6	4/21/10	38.56	890.86	
W-834-S6	7/20/10	38.61	890.81	
W-834-S6	10/26/10	38.7	890.72	
W-834-S7	1/26/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-834-S7	4/21/10	51.4	887.17	

## C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-S7	7/20/10	51.56	887.01	
W-834-S7	10/26/10	52.55	886.02	
W-834-S8	1/26/10	61.04	941.68	
W-834-S8	4/22/10	59.54	943.18	
W-834-S8	7/20/10	58.06	944.66	
W-834-S8	10/26/10	58.09	944.63	
W-834-S9	1/26/10	56.71	943.3	
W-834-S9	4/22/10	55.18	944.83	
W-834-S9	7/20/10	53.94	946.07	
W-834-S9	10/26/10	54.4	945.61	
W-834-T1	1/26/10	316.22	642.7	
W-834-T1	4/21/10	316.3	642.62	
W-834-T1	7/20/10	316.6	642.32	
W-834-T1	10/26/10	316.55	642.37	
W-834-T11	1/26/10	-	NA	DRY
W-834-T11	4/21/10	-	NA	DRY
W-834-T11	7/20/10	-	NA	DRY
W-834-T11	10/26/10	-	NA	DRY
W-834-T2	1/26/10	41.65	918.11	
W-834-T2	4/21/10	40.64	919.12	
W-834-T2	7/20/10	40.58	919.18	
W-834-T2	10/26/10	41.12	918.64	
W-834-T2A	1/26/10	39.85	919.09	
W-834-T2A	4/21/10	38.55	920.39	
W-834-T2A	7/20/10	38	920.94	
W-834-T2A	10/26/10	39.26	919.68	
W-834-T2B	1/26/10	-	NA	DRY
W-834-T2B	4/21/10	-	NA	DRY
W-834-T2B	7/20/10	-	NA	DRY
W-834-T2B	10/26/10	-	NA	DRY
W-834-T2C	1/26/10	-	NA	DRY
W-834-T2C	4/21/10	-	NA	DRY
W-834-T2C	7/20/10	-	NA	DRY
W-834-T2C	10/26/10	-	NA	DRY
W-834-T2D	1/26/10	37.55	916.84	
W-834-T2D	4/21/10	36.42	917.97	
W-834-T2D	7/20/10	36.43	917.96	
W-834-T2D	10/26/10	37.04	917.35	
W-834-T3	1/26/10	325.49	607.05	

## C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-T3	4/21/10	325.14	607.4	
W-834-T3	7/20/10	325.46	607.08	
W-834-T3	10/26/10	325.78	606.76	
W-834-T5	1/26/10	77.31	853.66	
W-834-T5	4/21/10	77.27	853.7	
W-834-T5	7/20/10	77.34	853.63	
W-834-T5	10/26/10	77.3	853.67	
W-834-T7A	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-834-T7A	4/21/10	-	NA	DRY
W-834-T7A	7/20/10	-	NA	DRY
W-834-T7A	10/26/10	-	NA	DRY
W-834-T8A	1/26/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-834-T8A	4/21/10	-	NA	DRY
W-834-T8A	7/20/10	32.4	886.03	
W-834-T8A	10/26/10	-	NA	DRY
W-834-T9	1/26/10	-	NA	DRY
W-834-T9	4/21/10	-	NA	DRY
W-834-T9	7/20/10	-	NA	DRY
W-834-T9	10/26/10	-	NA	DRY
W-834-U1	1/26/10	24.3	987.96	
W-834-U1	4/22/10	23.05	989.21	
W-834-U1	7/20/10	23.35	988.91	
W-834-U1	10/26/10	24.6	987.66	



## C-3. Pit 6 Landfill Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
BC6-10	1/5/10	30.37	657.18	
BC6-10	4/7/10	30.17	657.38	
BC6-10	7/6/10	29.7	657.85	
BC6-10	10/18/10	29.85	657.7	
BC6-13	1/5/10	-	NA	DRY
BC6-13	4/7/10	-	NA	DRY
BC6-13	7/6/10	-	NA	DRY
BC6-13	10/18/10	-	NA	DRY
CARNRW1	1/5/10	41.82	636.91	
CARNRW1	4/7/10	37.48	641.25	
CARNRW1	7/6/10	38.7	639.73	
CARNRW1	10/18/10	45.6	632.83	
CARNRW3	1/5/10	44.33	658.67	
CARNRW3	4/7/10	41.86	661.14	
CARNRW3	7/6/10	41.14	661.86	
CARNRW3	10/18/10	45	658	
CARNRW4	1/5/10	15.33	636.42	
CARNRW4	4/7/10	5.4	646.35	
CARNRW4	7/6/10	8.9	642.85	
CARNRW4	10/18/10	13.24	638.51	
EP6-06	1/5/10	27.86	660.25	
EP6-06	4/7/10	33	655.11	
EP6-06	7/6/10	28.31	659.8	
EP6-06	10/18/10	28.83	659.28	
EP6-07	1/5/10	63.2	644.35	
EP6-07	4/7/10	58.83	648.72	
EP6-07	7/6/10	58.6	648.95	
EP6-07	10/18/10	65.21	642.34	
EP6-08	1/5/10	-	NA	DRY
EP6-08	4/7/10	60.7	647.71	
EP6-08	7/6/10	60	648.41	
EP6-08	10/18/10	61.43	646.98	
EP6-09	1/5/10	30.76	663.52	
EP6-09	4/7/10	30.23	664.05	
EP6-09	7/6/10	30.08	664.2	
EP6-09	10/18/10	30.2	664.08	
K6-01	1/5/10	27.98	663.48	
K6-01	4/7/10	27.55	663.91	
K6-01	7/6/10	27.38	664.08	

## C-3. Pit 6 Landfill Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K6-01	10/18/10	27.35	664.11	
K6-01S	1/5/10	29.03	663.49	
K6-01S	4/7/10	28.55	663.97	
K6-01S	7/6/10	28.31	664.21	
K6-01S	10/18/10	28.54	663.98	
K6-03	1/5/10	82.5	644.05	
K6-03	4/7/10	78.1	648.45	
K6-03	7/6/10	77.73	648.82	
K6-03	10/18/10	84.28	642.27	
K6-04	1/5/10	63.42	644.75	
K6-04	4/7/10	59.91	648.26	
K6-04	7/6/10	58.63	649.54	
K6-04	10/18/10	64.6	643.57	
K6-14	1/5/10	22.96	657.91	
K6-14	4/7/10	20.65	660.22	
K6-14	7/6/10	21.83	659.04	
K6-14	10/18/10	23.45	657.42	
K6-15	1/5/10	-	NA	DRY
K6-15	4/7/10	-	NA	DRY
K6-15	7/6/10	-	NA	DRY
K6-15	10/18/10	-	NA	DRY
K6-16	1/5/10	18.3	661.15	
K6-16	4/7/10	17.9	661.55	
K6-16	7/6/10	18.43	661.02	
K6-16	10/18/10	19.05	660.4	
K6-17	1/5/10	23.1	655.61	
K6-17	4/7/10	18.07	660.64	
K6-17	7/6/10	19.53	659.18	
K6-17	10/18/10	22.65	656.06	
K6-18	1/5/10	26.03	659.26	
K6-18	4/7/10	25.94	659.35	
K6-18	7/6/10	25.84	659.45	
K6-18	10/18/10	26.03	659.26	
K6-19	1/5/10	29.91	663.16	
K6-19	4/7/10	30.28	662.79	
K6-19	7/6/10	31.15	661.92	
K6-19	10/18/10	29.7	663.37	
K6-21	1/5/10	-	NA	DRY
K6-21	4/7/10	-	NA	DRY

## C-3. Pit 6 Landfill Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)		Notes
K6-21	7/6/10	-	NA	DRY	
K6-21	10/18/10	-	NA	DRY	
K6-22	1/5/10	36.54	644.99		
K6-22	4/7/10	35.87	645.66		
K6-22	7/6/10	35.17	646.36		
K6-22	10/18/10	35.53	646		
K6-23	1/5/10	24.7	656.28		
K6-23	4/7/10	23.54	657.44		
K6-23	7/6/10	23.76	657.22		
K6-23	10/18/10	24.33	656.65		
K6-24	1/5/10	-	NA	DRY	
K6-24	4/7/10	39.13	647.8		
K6-24	7/6/10	39.26	647.67		
K6-24	10/18/10	42.77	644.16		
K6-25	1/5/10	18.85	660.9		
K6-25	4/7/10	18.5	661.25		
K6-25	7/6/10	18.86	660.89		
K6-25	10/18/10	19.2	660.55		
K6-26	1/5/10	43.11	644.22		
K6-26	4/7/10	38.84	648.49		
K6-26	7/6/10	38.59	648.74		
K6-26	10/18/10	45.16	642.17		
K6-27	1/5/10	44.58	642.61		
K6-27	4/7/10	40.01	647.18		
K6-27	7/6/10	39.77	647.42		
K6-27	10/18/10	46.9	640.29		
K6-32	1/5/10	-	NA	DRY	
K6-32	4/7/10	-	NA	DRY	
K6-32	7/6/10	-	NA	DRY	
K6-32	10/18/10	-	NA	DRY	
K6-33	1/5/10	44.16	638.08		
K6-33	4/7/10	38.55	643.69		
K6-33	7/6/10	40.48	641.76		
K6-33	10/18/10	49.4	632.84		
K6-34	1/5/10	65.06	638.22		
K6-34	4/7/10	59.56	643.72		
K6-34	7/6/10	64.66	638.62		
K6-34	10/18/10	72.9	630.38		
K6-35	1/5/10	48.95	644.01		

## C-3. Pit 6 Landfill Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K6-35	4/7/10	44.39	648.57	
K6-35	7/6/10	44.25	648.71	
K6-35	10/18/10	50.83	642.13	
K6-36	1/5/10	-	NA	DRY
K6-36	4/7/10	38.74	651.64	
K6-36	7/6/10	38.65	651.73	
K6-36	10/18/10	38.68	651.7	
W-33C-01	1/5/10	19.22	633.29	
W-33C-01	4/7/10	8.32	644.19	
W-33C-01	7/6/10	11.78	640.73	
W-33C-01	10/18/10	17.8	634.71	
W-34-01	1/5/10	12.37	672.09	
W-34-01	4/7/10	12.5	671.96	
W-34-01	7/6/10	11.64	672.82	
W-34-01	10/18/10	11.22	673.24	
W-34-02	1/5/10	40.32	644.54	
W-34-02	4/7/10	38.12	646.74	
W-34-02	7/6/10	37.08	647.78	
W-34-02	10/18/10	40.68	644.18	
W-PIT6-1819	1/5/10	79.25	636.62	
W-PIT6-1819	4/7/10	73.7	642.17	
W-PIT6-1819	7/6/10	77.1	638.77	
W-PIT6-1819	10/18/10	85.8	630.07	

## 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	1/5/10	19.43	503.59	
W-35B-01	4/7/10	10.33	512.69	
W-35B-01	7/7/10	15.06	507.96	
W-35B-01	10/18/10	19	504.02	
W-35B-02	1/5/10	19.11	503.92	
W-35B-02	4/7/10	9.47	513.56	
W-35B-02	7/7/10	14.2	508.83	
W-35B-02	10/18/10	18.25	504.78	
W-35B-03	1/5/10	17.67	505.43	
W-35B-03	4/7/10	9.85	513.25	
W-35B-03	7/7/10	13.9	509.2	
W-35B-03	10/18/10	17.21	505.89	
W-35B-04	1/5/10	12.87	516.09	
W-35B-04	4/7/10	9.33	519.63	
W-35B-04	7/7/10	10.02	518.94	
W-35B-04	10/18/10	10	518.96	
W-35B-05	1/5/10	12.97	515.76	
W-35B-05	4/7/10	9.3	519.43	
W-35B-05	7/7/10	9.8	518.93	
W-35B-05	10/18/10	9.9	518.83	
W-35C-01	1/12/10	1.35	540.37	
W-35C-01	4/14/10	1.2	540.52	
W-35C-01	7/7/10	1.44	540.28	
W-35C-01	10/25/10	1.7	540.02	
W-35C-02	1/12/10	30.94	541.86	
W-35C-02	4/13/10	34.93	537.87	
W-35C-02	7/7/10	82.68	490.12	
W-35C-02	10/26/10	40.78	532.02	
W-35C-04	1/12/10	78.73	453.19	
W-35C-04	4/13/10	101.82	430.1	
W-35C-04	7/15/10	107	424.92	
W-35C-04	10/25/10	106.91	425.01	
W-35C-05	1/12/10	23.86	507.27	
W-35C-05	4/13/10	21.08	510.05	
W-35C-05	7/15/10	18.39	512.74	
W-35C-05	10/25/10	20.25	510.88	
W-35C-06	1/12/10	25.96	505.77	
W-35C-06	4/13/10	15.36	516.37	
W-35C-06	7/15/10	20.17	511.56	

## C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-35C-06	10/25/10	24.43	507.3	
W-35C-07	1/12/10	4.52	527.62	
W-35C-07	4/13/10	0.62	531.52	
W-35C-07	7/15/10	3.26	528.88	
W-35C-07	10/25/10	0.7	531.44	
W-35C-08	1/12/10	25.32	506.97	
W-35C-08	4/13/10	15.22	517.07	
W-35C-08	7/15/10	19.23	513.06	
W-35C-08	10/25/10	23.6	508.69	
W-4A	1/12/10	6.37	524.1	
W-4A	4/13/10	4.69	525.78	
W-4A	7/13/10	4.84	525.63	
W-4A	10/25/10	4.6	525.87	
W-4AS	1/12/10	9.52	522.13	
W-4AS	4/13/10	6.93	524.72	
W-4AS	7/13/10	8.2	523.45	
W-4AS	10/25/10	8.2	523.45	
W-4B	1/12/10	6.28	523.92	
W-4B	4/13/10	2.65	527.55	
W-4B	7/13/10	3.38	526.82	
W-4B	10/25/10	3.57	526.63	
W-4C	1/12/10	3.68	526.1	
W-4C	4/13/10	1.6	528.18	
W-4C	7/13/10	3.64	526.14	
W-4C	10/25/10	3.59	526.19	
W-6BD	1/12/10	-	NA	NM/RA CAR PARK OVER LID
W-6BD	4/13/10	14.49	518.78	
W-6BD	7/15/10	19.17	514.1	
W-6BD	10/25/10	22.9	510.37	
W-6BS	1/12/10	24.76	508.47	
W-6BS	4/13/10	14.36	518.87	
W-6BS	7/15/10	19.02	514.21	
W-6BS	10/25/10	23.22	510.01	
W-6CD	1/12/10	30.67	549.37	
W-6CD	4/13/10	30.02	550.02	
W-6CD	7/15/10	29.3	550.74	
W-6CD	10/26/10	29.16	550.88	
W-6CI	1/12/10	30.15	550.36	
W-6CI	4/13/10	29.74	550.77	

## C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-6CI	7/15/10	30.65	549.86	
W-6CI	10/26/10	29.15	551.36	
W-6CS	1/12/10	30.35	549.33	
W-6CS	4/13/10	25.54	554.14	
W-6CS	7/15/10	29.68	550	
W-6CS	10/26/10	30.11	549.57	
W-6EI	1/12/10	5.66	525.66	
W-6EI	4/13/10	3.68	527.64	
W-6EI	7/15/10	4.58	526.74	
W-6EI	10/25/10	4	527.32	
W-6ER	1/12/10	89.4	442.17	
W-6ER	4/13/10	90.27	441.3	
W-6ER	7/15/10	92.88	438.69	
W-6ER	10/25/10	80	451.57	
W-6ES	1/12/10	25.88	505.61	
W-6ES	4/13/10	15.36	516.13	
W-6ES	7/15/10	20.15	511.34	
W-6ES	10/25/10	24.37	507.12	
W-6F	1/12/10	59.78	559.08	
W-6F	4/13/10	59.65	559.21	
W-6F	7/15/10	59.14	559.72	
W-6F	10/26/10	58.95	559.91	
W-6G	1/12/10	60.16	559.76	
W-6G	4/13/10	60	559.92	
W-6G	7/15/10	59.31	560.61	
W-6G	10/26/10	59.3	560.62	
W-6H	1/12/10	7.31	554.03	
W-6H	4/14/10	7.13	554.21	
W-6H	7/15/10	8.86	552.48	
W-6H	10/25/10	6.64	554.7	
W-6I	1/12/10	24.77	536.52	
W-6I	4/14/10	22.15	539.14	
W-6I	7/15/10	27.72	533.57	
W-6I	10/25/10	27.83	533.46	
W-6J	1/12/10	7.96	553.4	
W-6J	4/14/10	7.43	553.93	
W-6J	7/15/10	9.45	551.91	
W-6J	10/25/10	7.27	554.09	
W-6K	1/12/10	2.76	531.08	

## C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-6K	4/13/10	1.18	532.66	
W-6K	7/15/10	2.18	531.66	
W-6K	10/25/10	1.3	532.54	
W-6L	1/12/10	2.74	531.17	
W-6L	4/13/10	-0.07	533.98	
W-6L	7/15/10	1.23	532.68	
W-6L	10/25/10	-1.2	NA	1.20 ABOVE POM
W-806-06A	1/12/10	125.87	695.44	
W-806-06A	4/13/10	125.38	695.93	
W-806-06A	7/19/10	-	NA	NM/UC FIRE HAZARD
W-806-06A	10/25/10	-	NA	NM/UC NO ACCESS
W-806-07	1/12/10	-	NA	DRY
W-806-07	4/13/10	-	NA	DRY
W-806-07	7/19/10	-	NA	DRY
W-806-07	10/25/10	-	NA	NM NO ACCESS
W-808-01	1/12/10	50.37	851.64	
W-808-01	4/13/10	48.83	853.18	
W-808-01	7/19/10	48.98	853.03	
W-808-01	10/25/10	49.45	852.56	
W-808-02	1/12/10	-	NA	DRY
W-808-02	4/13/10	-	NA	DRY
W-808-02	7/19/10	-	NA	DRY
W-808-02	10/25/10	-	NA	DRY
W-808-03	1/12/10	297.17	605.72	
W-808-03	4/13/10	297.33	605.56	
W-808-03	7/19/10	297.28	605.61	
W-808-03	10/25/10	297.48	605.41	
W-809-01	1/12/10	68.4	721.83	
W-809-01	4/13/10	68.27	721.96	
W-809-01	7/19/10	68.02	722.21	
W-809-01	10/25/10	68.12	722.11	
W-809-02	1/12/10	141.1	650.72	
W-809-02	4/13/10	141.32	650.5	
W-809-02	7/19/10	141.25	650.57	
W-809-02	10/25/10	141.63	649.9	
W-809-03	1/12/10	102.33	643.74	
W-809-03	4/13/10	102.83	643.24	
W-809-03	7/19/10	102.5	643.57	
W-809-03	10/25/10	103.11	642.96	



## C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-809-04	1/12/10	71.67	704.38	
W-809-04	4/13/10	79.86	696.19	
W-809-04	7/19/10	75.18	700.87	
W-809-04	10/25/10	71.45	704.6	
W-810-01	1/12/10	241.98	599.05	
W-810-01	4/13/10	242.21	598.82	
W-810-01	7/19/10	242.84	598.19	
W-810-01	10/25/10	242.9	598.13	
W-814-01	1/27/10	110.53	698.3	
W-814-01	4/20/10	110.12	698.71	
W-814-01	7/21/10	110.37	698.46	
W-814-01	10/26/10	110.45	698.38	
W-814-02	1/27/10	161.05	632.63	
W-814-02	4/20/10	158.34	635.34	
W-814-02	7/31/10	160.98	632.7	
W-814-02	10/26/10	162.29	631.39	
W-814-03	1/27/10	-	NA	DRY
W-814-03	4/20/10	-	NA	DRY
W-814-03	7/21/10	-	NA	DRY
W-814-03	10/26/10	-	NA	DRY
W-814-04	1/27/10	234.77	579.65	
W-814-04	4/20/10	234.1	580.32	
W-814-04	7/21/10	234.08	580.34	
W-814-04	10/26/10	234.65	579.77	
W-814-2134	1/27/10	158.23	636.66	
W-814-2134	4/20/10	104.38	690.51	
W-814-2134	7/21/10	157.27	637.62	
W-814-2134	10/26/10	158.8	636.09	
W-814-2138	1/27/10	99.31	695.6	
W-814-2138	4/20/10	97.41	697.5	
W-814-2138	7/21/10	99.04	695.87	
W-814-2138	10/26/10	99.16	695.75	
W-815-01	1/12/10	-	NA	DRY
W-815-01	4/13/10	-	NA	DRY
W-815-01	7/19/10	-	NA	DRY
W-815-01	10/26/10	-	NA	DRY
W-815-02	1/12/10	101.69	619.92	
W-815-02	4/13/10	99.5	622.11	
W-815-02	7/19/10	100.6	621.01	

## C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water		Water elevation		Notes
		(ft)	(ft MSL)	(ft MSL)		
W-815-02	10/26/10	102.75	618.86			
W-815-03	1/12/10	-	NA		DRY	
W-815-03	4/13/10	-	NA		DRY	
W-815-03	7/19/10	-	NA		DRY	
W-815-03	10/26/10	-	NA		DRY	
W-815-04	1/12/10	96.32	626.33			
W-815-04	4/13/10	97.8	624.85			
W-815-04	7/19/10	97.45	625.2			
W-815-04	10/26/10	98.95	623.7			
W-815-05	1/12/10	34.6	677.61			
W-815-05	4/13/10	32.15	680.06			
W-815-05	7/19/10	34.15	678.06			
W-815-05	10/26/10	34.25	677.96			
W-815-06	1/27/10	130.87	624.91			
W-815-06	4/20/10	130.09	625.69			
W-815-06	7/21/10	130.79	624.99			
W-815-06	10/26/10	131.77	624.01			
W-815-07	1/27/10	138.9	623.59			
W-815-07	4/20/10	138.15	624.34			
W-815-07	7/21/10	138.8	623.69			
W-815-07	10/26/10	139.71	622.78			
W-815-08	1/12/10	130.55	593.24			
W-815-08	4/13/10	131.07	592.72			
W-815-08	7/19/10	130.27	593.52			
W-815-08	10/26/10	131.14	592.65			
W-815-1918	1/12/10	94.95	650.66			
W-815-1918	4/13/10	94.85	650.76			
W-815-1918	7/19/10	96.2	649.41			
W-815-1918	10/26/10	94.85	650.76			
W-815-1928	1/12/10	27.88	718.17			
W-815-1928	4/13/10	28.86	717.19			
W-815-1928	7/19/10	28.75	717.3			
W-815-1928	10/25/10	27	719.05			
W-815-2110	1/12/10	0.58	545.91			
W-815-2110	4/14/10	-0.86	547.35			
W-815-2110	7/15/10	0.77	545.72			
W-815-2110	10/25/10	-1.45	NA		ABOVE POM	
W-815-2111	1/12/10	0.75	545.24		FA	
W-815-2111	4/14/10	-0.92	546.91		FA	

## 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	7/15/10	0.72	545.27	
W-815-2111	10/25/10	-1.62	NA	
W-815-2217	1/12/10	30.45	549.47	
W-815-2217	4/13/10	29.97	549.95	
W-815-2217	7/15/10	29.35	550.57	
W-815-2217	10/26/10	28.9	551.02	
W-815-2608	4/14/10	-	NA	FA
W-817-01	1/12/10	138.27	635.54	
W-817-01	4/13/10	138.91	634.9	
W-817-01	7/19/10	138.7	635.11	
W-817-01	10/26/10	139.23	634.58	
W-817-02	1/12/10	-	NA	NM/RA
W-817-02	4/13/10	-	NA	NM/RA
W-817-02	4/19/10	-	NA	NM/RA
W-817-02	10/26/10	-	NA	NM/RA
W-817-03	1/12/10	102.91	568.69	
W-817-03	4/13/10	102.21	569.39	
W-817-03	7/19/10	102.5	569.1	
W-817-03	10/25/10	102.89	568.71	
W-817-03A	1/12/10	8.07	669.93	
W-817-03A	4/13/10	11.03	666.97	
W-817-03A	7/19/10	10.55	667.45	
W-817-03A	10/26/10	11.45	666.55	
W-817-04	1/12/10	76.28	606.76	
W-817-04	4/13/10	76.5	606.54	
W-817-04	7/19/10	75.97	607.07	
W-817-04	10/26/10	76.22	606.82	
W-817-05	1/12/10	129.35	634.98	
W-817-05	4/13/10	129.33	635	
W-817-05	7/19/10	129.15	635.18	
W-817-05	10/26/10	129.5	634.83	
W-817-06A	1/12/10	110.3	657.86	
W-817-06A	4/13/10	104.6	663.56	
W-817-06A	7/19/10	104.3	663.86	
W-817-06A	10/26/10	103.95	664.21	
W-817-07	1/12/10	96.54	571.41	
W-817-07	4/13/10	95.97	571.98	
W-817-07	7/19/10	95.94	572.01	
W-817-07	10/26/10	96.72	571.23	

## 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	1/12/10	-	NA	NM/RA
W-817-2109	4/13/10	-	NA	NM/RA
W-817-2109	7/19/10	-	NA	NM/RA
W-817-2109	10/26/10	-	NA	NM/RA
W-817-2318	1/12/10	5.87	670.15	
W-817-2318	4/13/10	12.61	663.41	
W-817-2318	7/19/10	8.8	667.22	
W-817-2318	10/26/10	12.32	663.7	
W-818-01	1/27/10	95.76	584.81	
W-818-01	4/20/10	95.71	584.86	
W-818-01	7/21/10	95.59	584.98	
W-818-01	10/26/10	95.82	584.75	
W-818-03	1/27/10	57.43	541.44	
W-818-03	4/13/10	57.15	541.72	
W-818-03	7/19/10	-	NA	NM/UC FIRE HAZARD
W-818-03	10/26/10	56.53	542.34	
W-818-04	1/27/10	65.8	548.26	
W-818-04	4/13/10	65.45	548.61	
W-818-04	7/15/10	64.87	549.19	
W-818-04	10/26/10	64.75	549.31	
W-818-06	1/27/10	69.7	543.82	
W-818-06	4/13/10	69.77	543.75	
W-818-06	7/15/10	69.7	543.82	
W-818-06	10/26/10	69.2	544.32	
W-818-07	1/27/10	69.52	544.69	
W-818-07	4/13/10	69.83	544.38	
W-818-07	7/15/10	69.7	544.51	
W-818-07	10/26/10	69.22	544.99	
W-818-08	1/27/10	90.08	558.98	
W-818-08	4/20/10	90.82	558.24	
W-818-08	7/21/10	89	560.06	
W-818-08	10/26/10	88.8	560.26	
W-818-09	1/27/10	86.32	555.58	
W-818-09	4/20/10	109.5	532.4	
W-818-09	7/21/10	85.36	556.54	
W-818-09	10/26/10	85.03	556.87	
W-818-11	1/27/10	150.41	599.26	
W-818-11	4/20/10	150.25	599.42	
W-818-11	7/21/10	150.17	599.5	

## C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-818-11	10/26/10	150.79	598.88	
W-819-02	1/27/10	233.05	588.77	
W-819-02	4/20/10	233.7	588.12	
W-819-02	7/21/10	232.95	588.87	
W-819-02	10/26/10	233.4	588.42	
W-823-01	1/12/10	16.81	574.44	
W-823-01	4/14/10	17.07	574.18	
W-823-01	7/15/10	-	NA	NM/UC FIRE HAZARD
W-823-01	10/25/10	18.31	572.94	
W-823-02	1/12/10	16.11	574.27	
W-823-02	4/14/10	16.25	574.13	
W-823-02	7/15/10	18.19	572.19	
W-823-02	10/25/10	17.5	572.88	
W-823-03	1/12/10	16.2	573.82	
W-823-03	4/14/10	16.1	573.92	
W-823-03	7/15/10	17.2	572.82	
W-823-03	10/25/10	17	573.02	
W-823-13	1/12/10	49.68	572.56	
W-823-13	4/14/10	49.45	572.79	
W-823-13	7/21/10	50.25	571.99	
W-823-13	10/25/10	50.31	571.93	
W-827-01	1/27/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-827-01	4/19/10	-	NA	DRY
W-827-01	7/21/10	-	NA	DRY
W-827-01	10/28/10	-	NA	NM/RA
W-827-02	1/27/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-827-02	4/19/10	55.09	867.76	
W-827-02	7/21/10	54.71	868.14	
W-827-02	10/28/10	-	NA	NM/RA
W-827-03	1/27/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-827-03	4/19/10	195.9	728.5	
W-827-03	7/21/10	196.3	728.1	
W-827-03	10/28/10	-	NA	NM/RA
W-827-04	1/27/10	-	NA	DRY
W-827-04	4/14/10	-	NA	DRY
W-827-04	7/21/10	-	NA	DRY
W-827-04	10/28/10	-	NA	DRY
W-827-05	1/27/10	383.05	650.83	
W-827-05	4/19/10	382.81	651.07	

## C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-827-05	7/21/10	382.98	650.6	
W-827-05	10/28/10	383.25	650.33	
W-829-06	1/27/10	97.06	975.23	
W-829-06	4/19/10	100.93	971.36	
W-829-06	7/21/10	99.02	972.97	
W-829-06	10/28/10	97.21	974.78	
W-829-08	1/27/10	98.97	975.78	
W-829-08	4/19/10	98.88	975.87	
W-829-08	7/21/10	97.27	977.18	
W-829-08	10/28/10	99.23	975.22	
W-829-15	1/27/10	337.32	696.68	
W-829-15	4/19/10	336.33	697.67	
W-829-15	7/21/10	336.31	697.69	
W-829-15	10/28/10	337.03	696.97	
W-829-1938	1/27/10	373.42	706.58	
W-829-1938	4/19/10	373.05	706.95	
W-829-1938	7/21/10	373.38	706.62	
W-829-1938	10/21/10	373.47	706.53	PS
W-829-1938	10/28/10	373.54	706.46	
W-829-1940	1/27/10	108.15	976.02	
W-829-1940	4/19/10	108.12	976.05	
W-829-1940	7/21/10	108.2	975.97	
W-829-1940	10/28/10	108.39	975.78	
W-829-22	1/27/10	400.11	652.96	
W-829-22	4/19/10	399.89	653.18	
W-829-22	7/6/10	400.32	652.75	
W-829-22	10/28/10	400.58	652.49	
WELL20	1/5/10	-	NA	NM/RA
WELL20	4/7/10	-	NA	NM/RA
WELL20	7/6/10	-	NA	NM/RA
WELL20	10/18/10	-	NA	NM/RA

## C-5. Building 850 area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K1-01C	2/2/10	107.94	974	
K1-01C	5/3/10	108.32	973.62	
K1-01C	8/3/10	107.96	973.98	
K1-01C	11/9/10	108.05	973.89	
K1-02B	2/2/10	136.14	971.09	
K1-02B	5/3/10	136.5	970.73	
K1-02B	8/3/10	136.1	971.13	
K1-02B	11/9/10	136.25	970.98	
K1-04	2/2/10	157.3	965.37	
K1-04	5/3/10	157.6	965.07	
K1-04	8/3/10	157.28	965.39	
K1-04	11/9/10	157.24	965.43	
K1-05	2/2/10	177.04	953.82	ME
K1-05	5/3/10	172.46	958.4	
K1-05	8/3/10	172.03	958.83	
K1-05	11/9/10	172.13	958.73	
K1-06	2/2/10	116.07	973.47	
K1-06	5/3/10	116.24	973.3	
K1-06	8/3/10	115.83	973.71	
K1-06	11/9/10	116.18	973.36	
K1-07	2/2/10	142.14	967.49	
K1-07	5/3/10	142.39	967.24	
K1-07	8/3/10	141.87	967.76	
K1-07	11/9/10	142.19	967.44	
K1-08	2/2/10	156.48	966.26	
K1-08	5/3/10	156.4	966.34	
K1-08	8/3/10	155.78	966.96	
K1-08	11/9/10	156.15	966.59	
K1-09	2/2/10	163.06	963.62	
K1-09	5/3/10	162.88	963.8	
K1-09	8/3/10	162.25	964.43	
K1-09	11/9/10	162.7	963.98	
K2-03	2/2/10	53.82	1012.82	
K2-03	5/3/10	52.61	1014.03	
K2-03	8/4/10	52.37	1014.27	
K2-03	11/9/10	52.42	1014.22	
K2-04D	2/3/10	26.84	1065.68	
K2-04D	5/5/10	22.35	1070.17	
K2-04D	8/4/10	25.34	1067.18	

## C-5. Building 850 area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K2-04D	11/15/10	28.15	1064.37	
K2-04S	2/3/10	25.72	1066.23	
K2-04S	5/5/10	20.95	1071	
K2-04S	8/4/10	23.95	1068	
K2-04S	11/15/10	24.15	1067.8	
NC2-05	2/2/10	53.93	980.98	
NC2-05	4/28/10	53.32	981.59	
NC2-05	8/3/10	53.06	981.85	
NC2-05	11/9/10	54.2	980.71	
NC2-05A	2/2/10	54.2	981.23	
NC2-05A	4/28/10	53.82	981.61	
NC2-05A	8/3/10	53.4	982.03	
NC2-05A	11/9/10	54	981.43	
NC2-06	2/2/10	51.47	982.07	
NC2-06	4/28/10	51.15	982.39	
NC2-06	8/3/10	50.78	982.76	
NC2-06	11/9/10	51.89	981.65	
NC2-06A	2/2/10	52.23	982	
NC2-06A	4/28/10	51.93	982.3	
NC2-06A	8/3/10	51.6	982.63	
NC2-06A	11/9/10	51.78	982.45	
NC2-09	2/2/10	53.8	981.67	
NC2-09	4/28/10	53.34	982.13	
NC2-09	8/3/10	52.85	982.62	
NC2-09	11/9/10	53.5	981.97	
NC2-10	2/2/10	65.43	974.66	
NC2-10	4/26/10	65.16	974.93	
NC2-10	8/3/10	65.43	974.66	
NC2-10	11/8/10	65.94	974.15	
NC2-11D	2/2/10	52.39	976.23	
NC2-11D	4/25/10	51.76	976.86	
NC2-11D	8/3/10	52.2	976.42	
NC2-11D	10/19/10	52.52	976.1	PS
NC2-11D	11/8/10	52.75	975.87	
NC2-11I	2/2/10	52.51	976.25	
NC2-11I	4/28/10	51.93	976.83	
NC2-11I	8/3/10	52.38	976.38	
NC2-11I	11/8/10	52.84	975.92	
NC2-11S	2/2/10	52.27	976.25	



## C-5. Building 850 area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC2-11S	4/28/10	51.7	976.82	
NC2-11S	8/3/10	52.1	976.42	
NC2-11S	11/8/10	52.75	975.77	
NC2-12D	2/2/10	51.5	976.94	
NC2-12D	4/28/10	51.07	977.37	
NC2-12D	8/3/10	51.24	977.2	
NC2-12D	11/8/10	51.5	976.94	
NC2-12I	2/2/10	51.83	976.92	
NC2-12I	4/28/10	51.52	976.88	
NC2-12I	8/3/10	51.67	976.73	
NC2-12I	11/8/10	52.02	976.38	
NC2-12S	2/2/10	51.58	976.94	
NC2-12S	4/28/10	51.23	977.29	
NC2-12S	8/3/10	51.35	977.17	
NC2-12S	11/8/10	51.93	976.59	
NC2-13	2/2/10	44.62	976.88	
NC2-13	4/28/10	44.02	977.48	
NC2-13	8/3/10	44.52	976.98	
NC2-13	11/8/10	45.09	976.41	
NC2-14S	2/3/10	15.31	1058.59	
NC2-14S	5/5/10	13.74	1060.16	
NC2-14S	8/4/10	15	1058.9	
NC2-14S	11/5/10	16.7	1057.2	
NC2-15	2/2/10	82.83	990.63	
NC2-15	5/5/10	80.15	993.31	
NC2-15	8/3/10	17.63	1055.83	
NC2-15	11/9/10	81.23	992.23	
NC2-16	2/3/10	23.67	1058.79	
NC2-16	5/5/10	22.31	1060.15	
NC2-16	8/4/10	23.39	1059.07	
NC2-16	11/15/10	24.8	1057.66	
NC2-17	2/2/10	107.04	982.45	
NC2-17	4/28/10	106.73	982.76	
NC2-17	8/3/10	106.27	983.22	
NC2-17	11/9/10	106.84	982.65	
NC2-18	2/2/10	74.96	1056.21	
NC2-18	5/5/10	71.7	1059.47	
NC2-18	8/4/10	72.77	1058.4	
NC2-18	11/15/10	74.6	1056.57	

## C-5. Building 850 area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC2-19	2/2/10	111.72	980.67	
NC2-19	4/28/10	111.71	980.68	
NC2-19	8/3/10	-	NA	NM/UC FIRE HAZARD
NC2-19	11/8/10	112.05	980.34	
NC2-20	2/2/10	35.08	967.19	
NC2-20	4/28/10	33.82	968.45	
NC2-20	8/3/10	35.28	966.99	
NC2-20	11/8/10	35.97	966.3	
NC2-21	2/2/10	34.81	967.33	
NC2-21	4/28/10	33.45	968.69	
NC2-21	8/3/10	35	967.14	
NC2-21	11/8/10	35.7	966.44	
NC7-10	2/4/10	9.36	1216.94	
NC7-10	5/5/10	9.66	1216.64	
NC7-10	8/5/10	10.52	1215.78	
NC7-10	11/15/10	10.7	1215.6	
NC7-11	2/4/10	19.52	1224.87	
NC7-11	5/5/10	20.3	1224.09	
NC7-11	8/5/10	20.41	1223.98	
NC7-11	11/15/10	20.6	1223.79	
NC7-14	2/4/10	28.63	1228.36	
NC7-14	5/5/10	28.88	1228.11	
NC7-14	8/5/10	-	NA	DRY
NC7-14	11/15/10	-	NA	DRY
NC7-15	2/4/10	20.5	1248.91	
NC7-15	5/5/10	20.42	1248.99	
NC7-15	8/5/10	21.45	1247.96	
NC7-15	11/22/10	21.57	1247.84	
NC7-19	2/4/10	19.55	1243.43	
NC7-19	5/5/10	20	1240.68	
NC7-19	8/5/10	21.12	1239.56	
NC7-19	11/16/10	21.55	1239.13	
NC7-27	2/4/10	85.96	1196.44	
NC7-27	5/4/10	86	1196.4	
NC7-27	8/4/10	86.32	1196.08	
NC7-27	11/16/10	86.48	1195.92	
NC7-28	2/4/10	55.34	1244.19	
NC7-28	5/5/10	55.47	1241.76	
NC7-28	8/4/10	54.11	1243.12	

## C-5. Building 850 area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-28	11/22/10	54.19	1243.04	
NC7-29	2/3/10	53.46	1201.28	
NC7-29	5/5/10	52.66	1202.08	
NC7-29	8/11/10	52.37	1202.37	
NC7-29	11/15/10	52.75	1201.99	
NC7-43	2/4/10	44.64	1245.54	
NC7-43	5/5/10	45.05	1242.16	
NC7-43	8/5/10	46.23	1240.98	
NC7-43	11/15/10	46.9	1240.31	
NC7-44	2/4/10	32.16	1323.97	
NC7-44	5/5/10	32.34	1323.79	
NC7-44	8/4/10	-	NA	
NC7-45	2/3/10	31.02	1157.67	
NC7-45	5/5/10	-	NA	NM/UC WASPS
NC7-45	8/4/10	35.61	1153.08	NM/RA
NC7-45	11/15/10	35.74	1152.95	
NC7-46	2/3/10	23.53	1107.9	
NC7-46	5/5/10	23.48	1107.95	
NC7-46	8/4/10	24.07	1107.36	
NC7-46	11/15/10	24.2	1107.23	
NC7-54	2/4/10	10.2	1197.05	
NC7-54	5/5/10	11.57	1195.68	
NC7-54	8/5/10	-	NA	NM/UC FIRE HAZARD
NC7-54	11/22/10	-	NA	NM/UC MUDDY
NC7-55	2/3/10	-	NA	DRY
NC7-55	5/5/10	-	NA	DRY
NC7-55	8/4/10	-	NA	DRY
NC7-55	11/15/10	-	NA	DRY
NC7-56	2/3/10	18.15	1114.02	
NC7-56	5/5/10	18.53	1113.64	
NC7-56	8/4/10	20	1112.17	
NC7-56	11/15/10	20.05	1112.12	
NC7-57	2/3/10	-	NA	DRY
NC7-57	5/5/10	-	NA	DRY
NC7-57	8/4/10	-	NA	DRY
NC7-57	11/15/10	-	NA	DRY
NC7-58	2/3/10	20.67	1086.06	
NC7-58	5/5/10	20.6	1086.13	
NC7-58	8/4/10	23.83	1082.9	

## C-5. Building 850 area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-58	11/15/10	24	1082.73	
NC7-59	2/3/10	12.26	1103.05	
NC7-59	5/5/10	12.23	1103.08	
NC7-59	8/4/10	13.34	1101.97	
NC7-59	11/15/10	13.5	1101.81	
NC7-60	2/4/10	159.02	1168.6	
NC7-60	5/4/10	160.91	1166.71	
NC7-60	8/5/10	159.16	1168.46	
NC7-60	11/16/10	159.33	1168.29	
NC7-61	2/4/10	48.22	1231.15	
NC7-61	5/5/10	48.23	1231.14	
NC7-61	8/4/10	48.36	1231.01	
NC7-61	10/18/10	49.33	1230.04	PS
NC7-61	11/15/10	48.59	1230.78	
NC7-62	2/3/10	21.02	1104.09	
NC7-62	5/5/10	20.88	1104.23	
NC7-62	8/4/10	22.38	1102.73	
NC7-62	11/15/10	22.5	1102.61	
NC7-69	2/4/10	3.04	1249.42	
NC7-69	5/5/10	3.3	1249.16	
NC7-69	8/5/10	2.72	1249.74	
NC7-69	11/15/10	3.03	1249.43	
NC7-70	2/4/10	32.38	1275.04	
NC7-70	5/5/10	33.75	1273.67	
NC7-70	8/5/10	34.23	1273.19	
NC7-70	11/15/10	34.4	1273.02	
NC7-71	2/4/10	65.45	1237.77	
NC7-71	5/5/10	65.2	1235.05	
NC7-71	8/5/10	64.65	1235.6	
NC7-71	11/16/10	64.95	1235.3	
NC7-72	2/3/10	30.86	1125.49	
NC7-72	5/5/10	31.22	1125.13	
NC7-72	8/4/10	32.58	1123.77	
NC7-72	11/15/10	32.7	1123.65	
NC7-73	2/3/10	26.37	1139.9	
NC7-73	5/5/10	26.9	1139.37	
NC7-73	8/4/10	27.93	1138.34	
NC7-73	11/15/10	28.1	1138.17	
W-850-05	2/4/10	29.7	1273.69	

## C-5. Building 850 area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-850-05	5/5/10	29.79	1273.6	
W-850-05	8/5/10	30.24	1273.15	
W-850-05	11/15/10	31.05	1272.34	
W-850-2145	2/3/10	176.8	1030.17	
W-850-2145	5/5/10	176.61	1030.36	
W-850-2145	8/4/10	176.37	1030.6	
W-850-2145	11/15/10	177.3	1029.67	
W-850-2312	2/3/10	70.17	1061.79	
W-850-2312	5/5/10	66.46	1065.5	
W-850-2312	8/4/10	68.42	1063.54	
W-850-2312	11/15/10	70.53	1061.43	
W-850-2313	2/3/10	19.11	1163.62	
W-850-2313	5/5/10	22.28	1160.45	
W-850-2313	8/4/10	24.56	1158.17	
W-850-2313	11/15/10	24.68	1158.05	
W-850-2314	2/4/10	157.47	1178.3	
W-850-2314	5/4/10	156.95	1178.82	
W-850-2314	8/5/10	157	1178.77	
W-850-2314	11/16/10	156.13	1179.64	
W-850-2315	2/3/10	53.85	1201.48	
W-850-2315	5/5/10	53	1202.33	
W-850-2315	8/4/10	52.72	1202.61	
W-850-2315	11/15/10	53.1	1202.23	
W-850-2316	2/3/10	177.05	1030.07	
W-850-2316	5/5/10	176.87	1030.25	
W-850-2316	8/4/10	176.61	1030.51	
W-850-2316	11/15/10	176.9	1030.22	
W-850-2416	2/4/10	61.93	1239.97	
W-850-2416	5/5/10	61.77	1240.13	
W-850-2416	8/4/10	61.75	1240.15	
W-850-2416	11/16/10	61.4	1240.5	
W-850-2417	2/4/10	53.71	1248.35	
W-850-2417	5/5/10	54.09	1247.97	
W-850-2417	8/5/10	52.77	1249.29	
W-850-2417	11/16/10	53.92	1248.14	
W-865-02	2/2/10	125.04	987.34	
W-865-02	5/3/10	124.61	987.77	
W-865-02	8/4/10	124.7	987.68	
W-865-02	11/9/10	125.02	987.36	

## C-5. Building 850 area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-865-1802	2/2/10	51.06	1017.99	
W-865-1802	5/3/10	49.82	1019.23	
W-865-1802	8/4/10	49.7	1019.35	
W-865-1802	11/9/10	51.21	1017.84	
W-865-1803	2/2/10	105.44	1074.55	
W-865-1803	5/3/10	104.11	1075.88	
W-865-1803	8/4/10	104.55	1075.44	
W-865-1803	11/9/10	105.3	1074.69	
W-865-2005	2/2/10	325.44	949.43	
W-865-2005	5/3/10	326.64	948.23	
W-865-2005	8/4/10	326.77	948.1	
W-865-2005	11/9/10	326.53	948.34	
W-865-2121	2/2/10	343.98	944.63	
W-865-2121	5/3/10	345.31	943.3	
W-865-2121	8/4/10	345.47	943.14	
W-865-2121	11/9/10	345.09	943.52	
W-865-2133	2/2/10	80.02	928.48	
W-865-2133	5/3/10	80.12	928.38	
W-865-2133	8/4/10	80.03	928.47	
W-865-2133	11/9/10	80.12	928.38	
W-865-2224	2/2/10	80.21	928.34	
W-865-2224	5/3/10	80.32	928.23	
W-865-2224	8/4/10	80.26	928.29	
W-865-2224	11/9/10	80.45	928.1	
W-PIT1-01	2/2/10	-	NA	DRY
W-PIT1-01	5/3/10	-	NA	DRY
W-PIT1-01	8/3/10	-	NA	DRY
W-PIT1-01	11/9/10	-	NA	DRY
W-PIT1-02	2/2/10	232.08	949.22	
W-PIT1-02	5/3/10	232.64	948.66	
W-PIT1-02	8/3/10	231.58	949.72	
W-PIT1-02	11/9/10	232.02	949.28	
W-PIT1-2204	2/2/10	41.41	1031.75	
W-PIT1-2204	3/11/10	41.42	1031.74	
W-PIT1-2204	3/18/10	41.42	1031.74	
W-PIT1-2204	5/3/10	37.12	1036.04	
W-PIT1-2204	8/3/10	40.05	1033.11	
W-PIT1-2204	11/9/10	40.77	1032.39	
W-PIT1-2209	2/2/10	214.71	951.34	

## C-5. Building 850 area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-PIT1-2209	5/3/10	215.18	950.87	
W-PIT1-2209	8/3/10	214.28	951.77	
W-PIT1-2209	11/9/10	214.42	951.63	
W-PIT1-2225	2/2/10	226.07	967.07	
W-PIT1-2225	4/28/10	226	967.14	
W-PIT1-2225	8/3/10	226.09	967.05	
W-PIT1-2225	11/9/10	225.87	967.27	
W-PIT1-2326	2/2/10	180	967.79	
W-PIT1-2326	5/3/10	180.24	967.55	
W-PIT1-2326	8/3/10	179.85	967.94	
W-PIT1-2326	11/9/10	180.18	967.61	
W-PIT7-16	2/4/10	21.6	1249.4	
W-PIT7-16	5/4/10	21.61	1249.39	
W-PIT7-16	8/5/10	21.5	1249.5	

## C-.6. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-01	1/29/10	217.51	1118.64	
W-854-01	5/6/10	217.7	1118.45	
W-854-01	12/1/10	217.84	1118.31	
W-854-02	1/9/10	144.13	1190.14	
W-854-02	5/6/10	144.35	1189.92	
W-854-02	8/9/10	145.55	1188.72	
W-854-02	12/1/10	-	NA	NM HOOKED UP TO FACILITY
W-854-03	2/9/10	117.27	1123.26	
W-854-03	5/6/10	116.92	1123.61	
W-854-03	8/9/10	118.02	1122.51	
W-854-03	12/1/10	-	NA	NM HOOKED UP TO FACILITY
W-854-04	2/9/10	295.04	945.05	
W-854-04	5/6/10	295	945.09	
W-854-04	8/9/10	293.5	946.59	
W-854-04	12/1/10	294.59	945.5	
W-854-05	2/9/10	89.75	1242.29	
W-854-05	5/6/10	89.71	1242.33	
W-854-05	8/9/10	89.6	1242.44	
W-854-05	12/1/10	89.56	1242.48	
W-854-06	2/9/10	118.41	992.04	
W-854-06	5/6/10	118.54	991.91	
W-854-06	8/9/10	118.36	992.09	
W-854-06	12/1/10	118.36	992.09	
W-854-07	2/9/10	117.61	993.25	
W-854-07	5/6/10	117.8	993.06	
W-854-07	8/9/10	117.49	993.37	
W-854-07	12/1/10	117.47	993.39	
W-854-08	2/9/10	121.05	1155.15	
W-854-08	5/6/10	120.18	1156.02	
W-854-08	8/9/10	119.31	1156.89	
W-854-08	12/1/10	119.35	1156.85	
W-854-09	2/9/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-854-09	5/6/10	189.27	1171.94	
W-854-09	8/9/10	189.57	1171.64	
W-854-09	12/1/10	190.58	1170.63	
W-854-10	2/9/10	116.33	1210.05	
W-854-10	5/6/10	115.21	1211.17	
W-854-10	8/9/10	115.25	1211.13	
W-854-10	12/1/10	115.88	1210.5	



## C-.6. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-11	2/9/10	-	NA	DRY
W-854-11	5/6/10	152.47	1189.71	
W-854-11	8/9/10	145.8	1196.38	
W-854-11	12/1/10	-	NA	DRY
W-854-12	2/9/10	-	NA	NM/RA
W-854-12	5/6/10	-	NA	NM/RA
W-854-12	8/10/10	225.94	1030.85	
W-854-12	12/1/10	-	NA	NM/RA
W-854-13	2/9/10	-	NA	NM/RA
W-854-13	5/6/10	-	NA	NM/RA
W-854-13	8/10/10	103.57	1153.6	
W-854-13	12/1/10	-	NA	NM/RA
W-854-14	2/9/10	63.27	940.43	
W-854-14	5/6/10	62.89	940.81	
W-854-14	8/9/10	62.22	941.48	
W-854-14	12/1/10	61.53	942.17	
W-854-15	2/9/10	77.21	1054.79	
W-854-15	5/6/10	76.95	1055.05	
W-854-15	8/9/10	76.33	1055.67	
W-854-15	12/1/10	76.63	1055.37	
W-854-17	2/9/10	143.91	1192.23	
W-854-17	5/6/10	147.03	1189.11	
W-854-17	8/9/10	148.12	1188.02	
W-854-17	12/1/10	143.64	1192.5	
W-854-1701	2/9/10	240.49	1009.83	
W-854-1701	5/6/10	240.2	1010.12	
W-854-1701	8/9/10	239	1011.32	
W-854-1701	12/1/10	240.18	1010.14	
W-854-1706	2/9/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-854-1706	5/6/10	16.3	816.51	
W-854-1706	8/9/10	16.24	816.57	
W-854-1706	12/1/10	16.3	816.51	
W-854-1707	2/9/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-854-1707	5/6/10	27.98	804.23	
W-854-1707	8/9/10	29.53	802.68	
W-854-1707	12/1/10	29.2	803.01	
W-854-1731	2/9/10	60.98	942.51	
W-854-1731	5/6/10	60.53	942.96	
W-854-1731	8/9/10	60.92	942.57	

## C-.6. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-1731	12/1/10	59.59	943.9	
W-854-1822	2/9/10	145.92	1041.54	
W-854-1822	5/6/10	146.03	1041.43	
W-854-1822	8/9/10	146	1041.46	
W-854-1822	12/1/10	146.29	1041.17	
W-854-1823	2/9/10	48.71	1105.55	
W-854-1823	5/6/10	49.23	1105.03	
W-854-1823	8/9/10	50.95	1103.31	
W-854-1823	12/1/10	50.78	1103.48	
W-854-1834	2/9/10	-	NA	DRY
W-854-1834	5/6/10	121.35	1212.04	
W-854-1834	8/9/10	121.3	1212.09	
W-854-1834	12/1/10	-	NA	NM HOOKED UP TO FACILITY
W-854-1835	2/9/10	-	NA	DRY
W-854-1835	5/6/10	122.71	1210.04	
W-854-1835	8/9/10	122.65	1210.1	
W-854-1835	12/1/10	-	NA	DRY
W-854-18A	2/9/10	141.78	1194.12	
W-854-18A	5/6/10	146.38	1189.52	
W-854-18A	8/9/10	146.6	1189.3	
W-854-18A	12/1/10	141.28	1194.62	
W-854-19	2/9/10	-	NA	DRY
W-854-19	5/6/10	-	NA	DRY
W-854-19	8/9/10	-	NA	DRY
W-854-19	12/1/10	-	NA	DRY
W-854-1902	2/9/10	147.84	1040.44	
W-854-1902	5/6/10	147.93	1040.35	
W-854-1902	8/9/10	147.94	1040.34	
W-854-1902	12/1/10	148.21	1040.07	
W-854-2115	2/9/10	118.13	993.57	
W-854-2115	5/6/10	118.32	993.38	
W-854-2115	8/9/10	118.05	993.65	
W-854-2115	12/1/10	118.02	993.68	
W-854-2139	2/9/10	118.73	992.95	
W-854-2139	5/6/10	118.61	993.07	
W-854-2139	8/9/10	118.34	993.34	
W-854-2139	12/1/10	-	NA	DRY
W-854-2218	2/9/10	146.37	1188.33	
W-854-2218	5/6/10	149.36	1185.34	

## C-.6. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-2218	8/9/10	150.55	1184.15	
W-854-2218	12/1/10	-	NA	NM HOOKED UP TO FACILITY
W-854-2611	12/1/10	158.91	NA	
W-854-45	2/9/10	87.65	910.24	
W-854-45	5/6/10	87.65	910.24	
W-854-45	8/9/10	87.28	910.61	
W-854-45	12/1/10	87.02	910.87	
W-854-F2	12/1/10	-	NA	DRY

## C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
SVI-830-031	1/25/10	19.16	NA	
SVI-830-032	4/14/10	26.17	666.23	
SVI-830-033	1/25/10	21.38	NA	
SVI-830-033	7/19/10	23.07	669.28	
W-830-04A	1/26/10	44.77	579.33	
W-830-04A	4/15/10	45.16	578.94	
W-830-04A	7/22/10	45.48	578.62	
W-830-04A	10/27/10	46	578.1	
W-830-05	1/26/10	24.92	559.45	
W-830-05	4/15/10	24.69	559.68	
W-830-05	7/22/10	24.85	559.52	
W-830-05	10/27/10	24.8	559.57	
W-830-07	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-830-07	4/20/10	-	NA	
W-830-07	7/22/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-830-07	10/27/10	-	NA	NM/UC
W-830-09	1/25/10	117.37	578.38	
W-830-09	4/14/10	118.02	577.74	
W-830-09	7/19/10	117.02	578.74	
W-830-09	10/27/10	119.31	576.45	
W-830-10	1/26/10	17.67	579.03	
W-830-10	4/15/10	18.21	578.49	
W-830-10	7/22/10	18.2	578.5	
W-830-10	10/27/10	18.9	577.8	
W-830-11	1/26/10	32.95	563.24	
W-830-11	4/15/10	33.01	563.18	
W-830-11	7/22/10	35.18	561.01	
W-830-11	10/27/10	34.85	561.34	
W-830-12	1/25/10	96.04	596.58	
W-830-12	4/14/10	95.47	596.85	
W-830-12	7/19/10	94.9	597.42	
W-830-12	10/27/10	95.09	597.23	
W-830-13	1/26/10	26.15	538.36	
W-830-13	4/15/10	25.11	539.4	
W-830-13	7/22/10	27.94	536.57	
W-830-13	10/27/10	28.62	535.59	
W-830-14	1/26/10	20.55	544.95	
W-830-14	4/15/10	20.02	545.48	
W-830-14	7/22/10	20.25	545.25	

## C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-14	10/27/10	18.35	547.15	
W-830-15	1/26/10	4.45	560.64	
W-830-15	4/15/10	3.3	561.79	
W-830-15	7/22/10	5.63	559.46	
W-830-15	10/27/10	6.5	558.59	
W-830-16	1/27/10	95.22	575.66	
W-830-16	4/20/10	95.33	575.55	
W-830-16	7/22/10	95.86	575.02	
W-830-16	10/26/10	96.44	574.44	
W-830-17	1/27/10	108.91	565.78	
W-830-17	4/20/10	108.8	565.89	
W-830-17	7/22/10	108.7	565.99	
W-830-17	10/26/10	108.9	565.79	
W-830-1730	1/26/10	24.72	523.38	
W-830-1730	4/15/10	24.32	523.78	
W-830-1730	7/21/10	24.45	523.65	
W-830-1730	10/27/10	24.57	523.53	
W-830-18	1/26/10	80.83	573.66	
W-830-18	4/15/10	81.57	572.92	
W-830-18	7/22/10	80.95	573.54	
W-830-18	10/27/10	80.73	573.76	
W-830-1807	1/25/10	-	NA	NM/RA
W-830-1807	4/15/10	-	NA	NM
W-830-1807	7/19/10	-	NA	NM NO PORT OPEN
W-830-1807	10/27/10	-	NA	NM
W-830-1829	1/25/10	53.78	606.73	
W-830-1829	4/14/10	53.2	607.31	
W-830-1829	7/19/10	52.91	607.6	
W-830-1829	10/27/10	53.72	606.79	
W-830-1830	1/25/10	54.61	606.39	
W-830-1830	4/14/10	54.55	606.45	
W-830-1830	7/19/10	54.8	606.2	
W-830-1830	10/27/10	54.95	606.05	
W-830-1831	1/27/10	165.55	579.16	
W-830-1831	4/20/10	165.52	579.19	
W-830-1831	7/22/10	166.02	578.69	
W-830-1831	10/26/10	166.6	578.11	
W-830-1832	1/27/10	173.51	576.36	
W-830-1832	4/20/10	173.94	575.93	

## C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-1832	7/22/10	174.48	575.39	
W-830-1832	10/26/10	175.11	574.76	
W-830-19	1/25/10	38.73	616.81	
W-830-19	4/14/10	39.66	615.88	
W-830-19	7/19/10	-	NA	DRY
W-830-19	10/27/10	42.9	612.64	
W-830-20	1/26/10	21.65	575.31	
W-830-20	4/15/10	22.5	574.46	
W-830-20	7/22/10	23.04	573.92	
W-830-20	10/27/10	24.32	572.64	
W-830-21	1/26/10	69.35	584.59	
W-830-21	4/15/10	69.02	584.92	
W-830-21	7/22/10	66.95	586.99	
W-830-21	10/27/10	68.95	584.99	
W-830-22	1/25/10	51.62	603.4	
W-830-22	4/14/10	51.34	603.68	
W-830-22	7/19/10	49.9	605.12	
W-830-22	10/27/10	51	604.02	
W-830-2213	1/26/10	-	NA	DRY
W-830-2213	4/15/10	76.82	579.07	
W-830-2213	7/22/10	65.95	589.94	
W-830-2213	10/27/10	76.9	578.99	
W-830-2214	1/26/10	84.52	571.13	
W-830-2214	4/15/10	85.07	570.58	
W-830-2214	7/22/10	65.06	590.59	
W-830-2214	10/27/10	83.45	572.2	
W-830-2215	1/26/10	87.97	567.84	
W-830-2215	4/15/10	82.62	573.19	
W-830-2215	7/22/10	82.03	573.78	
W-830-2215	10/27/10	81.11	574.7	
W-830-2216	1/27/10	15.19	537.48	
W-830-2216	4/20/10	14.26	538.4	
W-830-2216	7/22/10	16.7	535.96	
W-830-2216	10/26/10	17.5	535.16	
W-830-2311	1/26/10	19.31	578.99	
W-830-2311	4/15/10	19.97	578.33	
W-830-2311	7/22/10	20.07	578.23	
W-830-2311	10/27/10	20.45	577.84	
W-830-25	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS

## C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-25	4/15/10	-	NA	DRY
W-830-25	7/22/10	-	NA	NM/UC
W-830-25	10/27/10	26.24	596.34	
W-830-26	1/25/10	-	NA	DRY
W-830-26	4/14/10	-	NA	DRY
W-830-26	7/19/10	-	NA	DRY
W-830-26	10/27/10	-	NA	DRY
W-830-27	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-830-27	4/15/10	31.79	592.73	
W-830-27	7/22/10	-	NA	NM/UC
W-830-27	10/27/10	35.25	589.27	
W-830-28	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-830-28	4/15/10	50	574.86	
W-830-28	7/22/10	-	NA	NM/UC
W-830-28	10/27/10	50.96	573.9	
W-830-29	1/25/10	88.9	572.13	
W-830-29	4/14/10	87.08	573.95	
W-830-29	7/19/10	89.22	571.81	
W-830-29	10/27/10	89.1	571.93	
W-830-30	1/25/10	14.3	678.21	
W-830-30	4/14/10	14.97	677.54	
W-830-30	7/19/10	16.13	676.38	
W-830-30	10/27/10	15.4	677.11	
W-830-34	1/25/10	16.37	675.98	
W-830-34	4/14/10	17.11	675.24	
W-830-34	7/19/10	17.46	674.89	
W-830-34	10/27/10	16.48	675.87	
W-830-49	1/25/10	36.52	631.42	
W-830-49	4/14/10	33.83	634.11	
W-830-49	7/19/10	35.35	632.64	
W-830-49	10/27/10	-	NA	NM
W-830-50	1/26/10	30.1	579.04	
W-830-50	4/15/10	30.72	578.42	
W-830-50	7/22/10	30.85	578.29	
W-830-50	10/27/10	31.28	577.86	
W-830-51	1/26/10	-	NA	FA
W-830-51	4/15/10	-	NA	FA
W-830-51	7/22/10	-	NA	FA
W-830-51	10/27/10	-	NA	FA

## C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-52	1/26/10	-	NA	FA
W-830-52	4/15/10	-0.67	574.05	FA
W-830-52	7/22/10	-1.05	NA	FA
W-830-52	10/27/10	-1.1	NA	FA
W-830-53	1/27/10	-	NA	FA
W-830-53	4/20/10	-2.8	578.87	FA
W-830-53	7/25/10	-1.73	NA	FA
W-830-53	10/26/10	-1.97	NA	FA
W-830-54	1/27/10	57.59	545.43	
W-830-54	4/20/10	56.2	546.82	
W-830-54	7/22/10	56.75	546.27	
W-830-54	10/26/10	57.25	545.77	
W-830-55	1/27/10	86.49	577.55	
W-830-55	4/20/10	86.44	577.6	
W-830-55	7/22/10	87.05	576.99	
W-830-55	10/26/10	87.55	576.49	
W-830-56	1/26/10	31.32	545.5	
W-830-56	4/15/10	31.03	545.79	
W-830-56	7/22/10	31.07	545.75	
W-830-56	10/27/10	31.3	545.52	
W-830-57	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-830-57	4/15/10	63.8	575.39	
W-830-57	7/22/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-830-57	10/27/10	64.82	574.36	
W-830-58	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-830-58	4/15/10	22.9	609.97	
W-830-58	7/22/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-830-58	10/27/10	24.78	608.09	
W-830-59	1/25/10	54	612.11	
W-830-59	4/14/10	59.55	606.56	
W-830-59	7/19/10	60	606.11	
W-830-59	10/27/10	59	607.11	
W-830-60	1/26/10	62.09	575.32	
W-830-60	4/15/10	62.76	574.65	
W-830-60	7/22/10	62.41	575	
W-830-60	10/27/10	63.7	573.71	
W-831-01	1/25/10	133.58	639.91	
W-831-01	4/14/10	133.31	640.18	
W-831-01	7/19/10	133.18	640.31	



## C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-831-01	10/27/10	134.92	638.57	
W-832-01	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-832-01	4/14/10	36.72	669.34	
W-832-01	7/19/10	36.17	669.89	
W-832-01	10/27/10	34.1	671.96	
W-832-05	1/25/10	-	NA	NM/UC
W-832-05	4/14/10	29.62	689.05	
W-832-05	7/19/10	30.78	687.89	
W-832-05	10/27/10	33.8	684.87	
W-832-06	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-832-06	4/14/10	35.73	685.12	
W-832-06	7/19/10	-	NA	NM/UC RATTLESNAKE
W-832-06	10/27/10	37.67	683.18	
W-832-09	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-832-09	4/14/10	74.35	632.87	
W-832-09	7/19/10	74.19	633.03	
W-832-09	10/27/10	74.07	633.15	
W-832-10	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-832-10	4/14/10	36.57	649.58	
W-832-10	7/19/10	-	NA	NM/UC
W-832-10	10/27/10	33.85	652.3	
W-832-11	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-832-11	4/14/10	31.4	667.25	
W-832-11	7/19/10	-	NA	NM/UC
W-832-11	10/27/10	32.24	666.41	
W-832-12	1/25/10	19.23	702.24	
W-832-12	4/14/10	20.2	701.27	
W-832-12	7/19/10	21.07	700.4	
W-832-12	10/27/10	21.1	700.37	
W-832-13	1/25/10	19.47	703.19	
W-832-13	4/14/10	17.8	704.86	
W-832-13	7/19/10	18	704.66	
W-832-13	10/27/10	-	NA	DRY
W-832-14	1/25/10	25.35	695.82	
W-832-14	4/14/10	21.6	699.57	
W-832-14	7/19/10	22.85	698.32	
W-832-14	10/27/10	22.88	698.29	
W-832-15	1/25/10	19.91	700.97	
W-832-15	1/27/10	19.01	702.62	

## C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-832-15	4/14/10	23.8	697.08	
W-832-15	7/19/10	18.21	703.42	
W-832-16	1/25/10	17.42	703.32	
W-832-16	4/14/10	17.41	703.33	
W-832-16	7/19/10	18	702.74	
W-832-16	10/27/10	18.19	702.55	
W-832-17	1/25/10	-	NA	DRY
W-832-17	4/14/10	14.89	707.11	
W-832-17	7/19/10	17.76	704.24	
W-832-17	10/27/10	18.05	703.95	
W-832-18	1/25/10	-	NA	DRY
W-832-18	4/14/10	22.37	698.83	
W-832-18	7/19/10	23.75	697.45	
W-832-18	10/27/10	-	NA	DRY
W-832-19	1/25/10	-	NA	DRY
W-832-19	4/14/10	21.53	698.49	
W-832-19	7/19/10	22.69	697.33	
W-832-19	10/27/10	24.87	695.15	
W-832-1927	1/27/10	234.03	591.97	
W-832-1927	4/20/10	233.5	592.5	
W-832-1927	7/22/10	233.98	592.02	
W-832-1927	10/26/10	234.15	591.85	
W-832-20	1/25/10	-	NA	DRY
W-832-20	4/14/10	22.1	698.79	
W-832-20	7/19/10	23.64	697.25	
W-832-20	10/27/10	25.7	695.19	
W-832-21	1/25/10	12.92	709.03	
W-832-21	4/14/10	12.67	709.28	
W-832-21	7/19/10	13.24	708.71	DRY
W-832-21	10/27/10	-	NA	DRY
W-832-2112	1/27/10	70.95	583.14	
W-832-2112	4/20/10	70.98	583.11	
W-832-2112	7/21/10	71.12	582.97	
W-832-2112	10/26/10	72.35	581.74	
W-832-22	1/25/10	-	NA	DRY
W-832-22	4/14/10	56.37	664.6	
W-832-22	7/19/10	56.34	664.63	
W-832-22	10/27/10	56.5	664.47	
W-832-23	1/25/10	24.96	695.18	

## C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-832-23	4/14/10	29.08	691.06	
W-832-23	7/19/10	30.75	689.39	
W-832-23	10/27/10	33	687.14	
W-832-24	1/25/10	38.16	624.33	
W-832-24	4/14/10	36.22	626.27	
W-832-24	7/19/10	-	NA	NM/UC
W-832-24	10/27/10	37.65	624.84	
W-832-25	1/25/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-832-25	4/14/10	41.55	625.26	
W-832-25	7/19/10	-	NA	NM/UC
W-832-25	10/27/10	38.92	627.89	
W-832-SC1	1/27/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-832-SC1	4/20/10	-	NA	NM/UC UNSAFE TO HIKE
W-832-SC1	7/22/10	-	NA	NM/UC UNSAFE TO HIKE
W-832-SC1	10/27/10	-	NA	NM/UC UNSAFE TO HIKE
W-832-SC2	1/27/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-832-SC2	4/20/10	-	NA	NM/UC UNSAFE TO HIKE
W-832-SC2	7/22/10	-	NA	NM/UC UNSAFE TO HIKE
W-832-SC2	10/27/10	-	NA	NM/UC UNSAFE TO HIKE
W-832-SC3	1/27/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-832-SC3	4/20/10	4.25	559.42	
W-832-SC3	7/22/10	-	NA	NM/UC UNSAFE TO HIKE
W-832-SC3	10/27/10	-	NA	NM/UC UNSAFE TO HIKE
W-832-SC4	1/27/10	6.54	530.76	
W-832-SC4	4/20/10	5.71	531.59	
W-832-SC4	7/22/10	-	NA	NM/UC UNSAFE TO HIKE
W-832-SC4	10/27/10	-	NA	NM/UC UNSAFE TO HIKE
W-870-01	1/12/10	-	NA	DRY
W-870-01	4/15/10	13.31	510.4	
W-870-01	7/12/10	16.15	507.56	
W-870-01	10/21/10	-	NA	DRY
W-870-01	10/27/10	15.85	507.86	
W-870-02	1/12/10	18.2	505.62	
W-870-02	4/15/10	11.14	512.68	
W-870-02	7/12/10	15.79	508.03	
W-870-02	10/27/10	18	505.82	
W-880-01	1/12/10	18.13	507.92	
W-880-01	4/13/10	11.53	514.52	
W-880-01	7/13/10	15.67	510.38	

## C-7. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-880-01	10/27/10	17.3	508.75	
W-880-02	1/12/10	19.1	506.7	
W-880-02	4/13/10	12.19	513.61	
W-880-02	7/13/10	16.95	508.85	
W-880-02	10/27/10	18.6	507.2	
W-880-03	1/12/10	0.8	525.25	
W-880-03	4/13/10	-1.82	527.87	FA
W-880-03	7/13/10	0.48	525.57	FA
W-880-03	10/27/10	-	NA	FA

## C-8. Building 801 firing table and Pit 8 Landfill ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K8-01	2/2/10	132.26	968.18	
K8-01	4/28/10	132.35	968.09	
K8-01	8/3/10	132.38	968.06	
K8-01	11/8/10	132.68	967.76	
K8-02B	2/2/10	161.5	966.62	
K8-02B	4/28/10	161.42	966.7	
K8-02B	8/3/10	161.22	966.9	
K8-02B	11/8/10	161.28	966.84	
K8-03B	4/28/10	106.73	968.85	
K8-03B	8/3/10	106.73	968.85	
K8-03B	11/8/10	106.96	968.62	
K8-04	2/2/10	166.33	966.52	
K8-04	4/28/10	166.33	966.52	
K8-04	8/3/10	166.24	966.61	
K8-04	11/8/10	166.32	966.53	
K8-05	2/2/10	-	NA	DRY
K8-05	4/28/10	-	NA	DRY
K8-05	8/3/10	-	NA	DRY
K8-05	11/8/10	-	NA	DRY

## C-9. Building 845 firing table and Pit 9 Landfill ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K9-01	2/1/10	78.58	996.93	
K9-01	4/26/10	78.66	996.85	
K9-01	8/3/10	78.6	996.91	
K9-01	11/8/10	78.75	996.76	
K9-02	2/1/10	128.79	1006.6	
K9-02	4/26/10	128.85	1006.54	
K9-02	8/3/10	128.85	1006.54	
K9-02	11/8/10	129.1	1006.29	
K9-03	2/1/10	119.94	997.14	
K9-03	4/26/10	120.07	997.01	
K9-03	8/3/10	119.92	997.16	
K9-03	11/8/10	120.07	997.01	
K9-04	2/1/10	89.9	994.42	
K9-04	4/26/10	89.53	994.79	
K9-04	8/3/10	89.45	994.87	
K9-04	11/8/10	90.24	994.08	

## C-10. Building 833 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-833-03	1/27/10	-	NA	DRY
W-833-03	4/20/10	-	NA	DRY
W-833-03	7/22/10	-	NA	DRY
W-833-03	10/27/10	-	NA	DRY
W-833-12	1/27/10	19.83	827.39	
W-833-12	4/20/10	19.85	827.37	
W-833-12	7/22/10	20.3	826.92	
W-833-12	10/27/10	-	NA	DRY
W-833-18	1/26/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-833-18	4/21/10	-	NA	DRY
W-833-18	7/20/10	-	NA	DRY
W-833-18	10/27/10	-	NA	DRY
W-833-22	1/27/10	-	NA	DRY
W-833-22	4/20/10	-	NA	DRY
W-833-22	7/22/10	-	NA	DRY
W-833-22	10/27/10	-	NA	DRY
W-833-28	1/27/10	41.5	814.42	
W-833-28	4/20/10	41.63	814.29	
W-833-28	7/22/10	41.62	814.3	
W-833-28	10/27/10	-	NA	DRY
W-833-30	1/27/10	279.77	571.89	
W-833-30	4/20/10	277.71	573.95	
W-833-30	7/22/10	278.15	573.51	
W-833-30	10/27/10	278.94	572.72	
W-833-33	1/27/10	24.45	824.35	
W-833-33	4/20/10	25.64	823.16	
W-833-33	7/22/10	26.32	822.48	
W-833-33	10/27/10	26.22	822.58	
W-833-34	1/27/10	-	NA	DRY
W-833-34	4/20/10	33.65	815.27	
W-833-34	7/22/10	33.67	815.25	
W-833-34	10/27/10	33.95	814.97	
W-833-43	1/27/10	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-833-43	4/21/10	-	NA	DRY
W-833-43	7/20/10	-	NA	DRY
W-833-43	10/27/10	-	NA	DRY
W-840-01	1/27/10	118.84	578.24	
W-840-01	4/22/10	118.63	578.45	

## C-10. Building 833 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-840-01	7/22/10	118.48	578.6	
W-840-01	10/27/10	118.94	578.14	
W-841-01	1/27/10	-	NA	DRY
W-841-01	4/20/10	-	NA	DRY
W-841-01	7/22/10	-	NA	DRY
W-841-01	10/27/10	-	NA	DRY



## C-11. Building 851 Firing Table ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-851-05	2/3/10	139	1132.79	
W-851-05	5/6/10	139.12	1132.67	
W-851-05	8/5/10	138.62	1133.17	
W-851-06	2/3/10	-	NA	NM/RA
W-851-06	5/6/10	-	NA	NM/RA
W-851-06	8/5/10	132.13	1133.37	
W-851-07	2/3/10	138.74	1132.85	
W-851-07	5/6/10	138.73	1132.86	
W-851-07	8/5/10	138.4	1133.19	
W-851-08	2/3/10	182.32	1090	
W-851-08	5/6/10	182.57	1089.75	
W-851-08	8/5/10	182.2	1090.12	

## C-12. Pit 2 Landfill ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K2-01C	2/2/10	66.25	984.65	
K2-01C	5/3/10	63.3	987.6	
K2-01C	8/3/10	63.59	987.31	
K2-01C	11/9/10	64.04	986.86	
NC2-08	2/2/10	61.7	987.67	
NC2-08	5/5/10	59.05	990.32	
NC2-08	8/3/10	59.21	990.16	
NC2-08	11/9/10	59.25	990.12	
W-PIT2-1934	2/2/10	56.2	1004.91	
W-PIT2-1934	5/3/10	54.9	1006.21	
W-PIT2-1934	8/3/10	54.12	1006.99	
W-PIT2-1934	11/9/10	54.25	1006.86	
W-PIT2-1935	2/2/10	74.1	981.76	
W-PIT2-1935	5/3/10	73.1	982.76	
W-PIT2-1935	8/3/10	72.19	983.67	
W-PIT2-1935	11/9/10	72.91	982.95	
W-PIT2-2226	2/2/10	327.72	966.4	
W-PIT2-2226	4/28/10	327.71	966.41	
W-PIT2-2226	8/3/10	327.78	966.34	
W-PIT2-2226	11/8/10	327.82	966.3	
W-PIT2-2301	2/2/10	17.58	1025.55	
W-PIT2-2301	3/11/10	13.96	1029.17	
W-PIT2-2301	3/18/10	13.95	1029.18	
W-PIT2-2301	4/28/10	16.7	1026.43	
W-PIT2-2301	8/3/10	30.73	1012.4	
W-PIT2-2301	11/8/10	31.1	1012.03	
W-PIT2-2302	2/2/10	13.07	1029.43	
W-PIT2-2302	3/18/10	10	1032.5	
W-PIT2-2302	4/28/10	12.64	1029.86	
W-PIT2-2302	8/3/10	16.13	1026.37	
W-PIT2-2302	11/9/10	16.55	1025.95	
W-PIT2-2303	2/2/10	-	NA	DRY
W-PIT2-2303	3/11/10	-	NA	DRY
W-PIT2-2303	3/18/10	20.51	1019.63	
W-PIT2-2303	4/28/10	-	NA	DRY
W-PIT2-2303	8/3/10	-	NA	DRY
W-PIT2-2303	11/9/10	20.5	1019.64	
W-PIT2-2304	2/2/10	-	NA	DRY
W-PIT2-2304	4/28/10	-	NA	DRY

C-12. Pit 2 Landfill ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)		Notes
W-PIT2-2304	8/3/10	-	NA	DRY	
W-PIT2-2304	11/9/10	-	NA	DRY	

## C-13. Pit 7 Complex area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K7-01	1/28/10	27.62	1291.11	
K7-01	2/9/10	27.6	1291.14	
K7-01	3/11/10	26.89	1291.85	
K7-01	3/18/10	26.95	1291.79	
K7-01	5/4/10	26.85	1291.89	
K7-01	8/11/10	27.3	1291.44	
K7-01	11/16/10	-	NA	NM/UC RATTLESNAKE
K7-03	2/9/10	26.1	1312.99	
K7-03	5/4/10	25.43	1313.66	
K7-03	8/10/10	28.35	1310.74	
K7-03	11/16/10	28.42	1310.67	
K7-06	1/28/10	23.54	1390.41	
K7-06	2/10/10	24.27	1389.68	
K7-06	3/11/10	23.03	1390.92	
K7-06	3/18/10	23.8	1389.15	
K7-06	5/4/10	25.38	1388.27	
K7-06	8/11/10	27.15	1386.5	
K7-06	11/22/10	27.37	1386.28	
K7-07	2/9/10	21.98	1276.04	DRY
K7-07	5/4/10	22.37	1275.65	
K7-07	8/11/10	-	NA	DRY
K7-07	11/22/10	-	NA	DRY
K7-09	2/9/10	50.75	1294.55	
K7-09	5/4/10	49.85	1295.45	
K7-09	8/11/10	50.11	1295.19	
K7-09	11/22/10	51	1294.3	
K7-10	2/9/10	35.13	1308.18	
K7-10	5/4/10	35	1308.31	
K7-10	8/11/10	36.19	1307.12	
K7-10	11/22/10	36.36	1306.95	
NC7-12	2/9/10	21.4	1264.29	
NC7-12	5/4/10	19.95	1265.74	
NC7-12	8/10/10	22.03	1263.66	
NC7-12	11/16/10	22.5	1263.19	
NC7-16	1/28/10	25.05	1285.69	
NC7-16	2/9/10	26.02	1284.72	
NC7-16	3/11/10	25.15	1285.59	
NC7-16	3/18/10	25.48	1288.26	
NC7-16	5/4/10	24.42	1286.32	

## C-13. Pit 7 Complex area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-16	8/10/10	25.35	1285.39	
NC7-16	11/16/10	26.6	1284.14	
NC7-17	1/28/10	30.1	1359.4	
NC7-17	2/10/10	29	1360.5	
NC7-17	3/11/10	27.12	1362.38	
NC7-17	3/18/10	26.55	1362.95	
NC7-17	5/4/10	27.02	1362.18	
NC7-17	8/11/10	29.68	1359.52	
NC7-17	11/22/10	30.5	1358.7	
NC7-18	2/9/10	18.88	1313.38	
NC7-18	5/4/10	19.04	1313.22	
NC7-18	8/11/10	21.82	1310.44	
NC7-18	11/22/10	22	1310.26	
NC7-20	2/9/10	37.71	1257.68	
NC7-20	5/4/10	35.96	1259.43	
NC7-20	8/10/10	37.55	1257.84	
NC7-20	11/16/10	38.05	1257.34	
NC7-21	1/28/10	27.35	1276.82	
NC7-21	2/9/10	26.88	1277.29	
NC7-21	3/11/10	25.51	1278.66	
NC7-21	3/18/10	25.18	1278.99	
NC7-21	5/4/10	26.74	1277.43	
NC7-21	8/10/10	27.8	1276.37	
NC7-21	11/16/10	28.06	1276.11	
NC7-22	1/28/10	-	NA	DRY
NC7-22	2/9/10	-	NA	DRY
NC7-22	3/11/10	37.81	1273.87	
NC7-22	3/18/10	37.78	1273.9	
NC7-22	5/4/10	37.8	1273.88	
NC7-22	8/10/10	37.84	1273.84	
NC7-22	11/16/10	-	NA	DRY
NC7-24	1/28/10	-	NA	DRY
NC7-24	2/9/10	-	NA	DRY
NC7-24	3/11/10	-	NA	DRY
NC7-24	3/18/10	-	NA	DRY
NC7-24	5/4/10	-	NA	DRY
NC7-24	8/10/10	-	NA	DRY
NC7-24	11/16/10	-	NA	DRY
NC7-25	1/28/10	68.63	1297.88	

## C-13. Pit 7 Complex area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-25	2/9/10	67.85	1298.66	
NC7-25	3/11/10	67.6	1298.91	
NC7-25	3/18/10	67.44	1299.07	
NC7-25	5/4/10	67	1299.51	
NC7-25	8/10/10	67.12	1299.39	
NC7-25	11/16/10	67.1	1299.41	
NC7-26	2/9/10	72.14	1256.53	
NC7-26	5/4/10	71.91	1256.76	
NC7-26	8/5/10	71.7	1256.97	
NC7-26	11/16/10	71.75	1256.92	
NC7-34	1/28/10	35.66	1328.67	
NC7-34	2/10/10	35.71	1328.62	
NC7-34	3/11/10	34.27	1330.06	
NC7-34	3/18/10	33.37	1330.96	
NC7-34	5/4/10	24.27	1339.76	
NC7-34	8/11/10	25.54	1338.49	
NC7-34	11/22/10	-	NA	NM
NC7-36	2/9/10	26.53	1335.41	
NC7-36	5/4/10	20.04	1341.9	
NC7-36	8/11/10	21.65	1340.29	
NC7-36	11/22/10	21.84	1340.1	
NC7-37	2/9/10	-	NA	DRY
NC7-37	5/4/10	-	NA	DRY
NC7-37	8/11/10	-	NA	DRY
NC7-37	11/22/10	-	NA	DRY
NC7-40	2/9/10	23.22	1296.56	
NC7-40	5/4/10	21.02	1298.76	
NC7-40	8/5/10	22.41	1297.37	
NC7-40	11/22/10	23	1296.78	
NC7-47	2/2/10	63.53	1204.98	
NC7-47	5/3/10	63.18	1205.33	
NC7-47	8/11/10	63.12	1205.39	
NC7-47	11/9/10	63.13	1205.38	
NC7-48	1/28/10	48.12	1344.7	
NC7-48	2/10/10	46.7	1346.12	
NC7-48	3/11/10	45.02	1347.8	
NC7-48	3/18/10	44.55	1348.27	
NC7-48	5/4/10	46.17	1346.65	
NC7-48	8/11/10	48.03	1344.79	

## C-13. Pit 7 Complex area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-48	11/22/10	48.9	1343.92	
NC7-49A	2/10/10	29.66	1364.07	
NC7-49A	5/4/10	31.3	1362.43	
NC7-49A	8/4/10	33.6	1360.13	
NC7-49A	11/22/10	34.35	1359.38	
NC7-50	2/2/10	75.45	1124.27	
NC7-50	5/3/10	76.21	1123.51	
NC7-50	8/10/10	76.2	1123.52	
NC7-50	11/9/10	76.41	1123.31	
NC7-51	1/28/10	34.65	1313.18	
NC7-51	2/9/10	32.48	1315.35	
NC7-51	3/11/10	29.92	1317.91	
NC7-51	3/18/10	29.42	1318.41	
NC7-51	5/3/10	31.31	1316.52	
NC7-51	8/10/10	34.1	1313.73	
NC7-51	11/16/10	34.22	1313.61	
NC7-52	2/9/10	75.13	1293.22	
NC7-52	5/4/10	74.12	1294.23	
NC7-52	8/10/10	73.35	1295	
NC7-52	11/16/10	73.4	1294.95	
NC7-53	1/28/10	32.86	1390.46	
NC7-53	2/10/10	32.38	1390.94	
NC7-53	3/11/10	31.51	1391.81	
NC7-53	3/18/10	31.5	1391.82	
NC7-53	5/4/10	32.53	1390.51	
NC7-53	8/11/10	33.36	1389.68	
NC7-53	11/22/10	33.5	1389.54	
NC7-63	2/3/10	31.07	1318	
NC7-63	3/11/10	29.88	1319.19	
NC7-63	3/18/10	31.63	1317.44	
NC7-63	5/4/10	31.81	1317.26	
NC7-63	8/10/10	32.4	1316.67	
NC7-63	11/16/10	32.41	1316.66	
NC7-64	2/9/10	31.64	1316.94	
NC7-64	3/11/10	30.41	1318.17	
NC7-64	3/18/10	44.01	1304.57	
NC7-64	5/4/10	43.92	1304.66	
NC7-64	8/10/10	44.02	1304.56	
NC7-64	11/16/10	44.22	1304.36	

## C-13. Pit 7 Complex area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-65	2/10/10	191.54	1259.74	
NC7-65	5/4/10	191.55	1259.73	
NC7-65	8/10/10	189.6	1261.68	
NC7-65	11/15/10	190	1261.28	
NC7-67	2/9/10	32.71	1290.21	
NC7-67	5/4/10	31.87	1291.05	
NC7-67	8/11/10	31.94	1290.98	
NC7-67	11/16/10	34	1288.92	
NC7-68	2/9/10	32.27	1290.63	
NC7-68	5/4/10	31.42	1291.48	
NC7-68	8/11/10	31.46	1291.44	
NC7-68	11/16/10	31.58	1291.32	
NC7-75	2/9/10	50.3	1301.92	
NC7-75	5/4/10	50.12	1302.1	
NC7-75	8/10/10	50.3	1301.92	
NC7-75	11/22/10	50.61	1301.61	
NC7-76	2/4/10	22.58	1254.3	
NC7-76	5/4/10	21.26	1255.62	
NC7-76	8/5/10	22.46	1254.42	
W-865-01	2/2/10	34.31	1153.35	
W-865-01	5/3/10	34.43	1153.23	
W-865-01	8/4/10	34.28	1153.38	
W-865-01	11/9/10	34.37	1153.29	
W-865-03	2/2/10	54.85	1181.13	
W-865-03	5/3/10	54.86	1181.12	
W-865-03	8/4/10	54.69	1181.29	
W-865-03	11/9/10	54.82	1181.16	
W-865-1804	2/2/10	103.02	1109.09	
W-865-1804	5/3/10	103.02	1109.09	
W-865-1804	8/4/10	102.9	1109.21	
W-865-1804	11/9/10	102.9	1109.21	
W-PIT3-02	2/9/10	-	NA	DRY
W-PIT3-02	5/4/10	-	NA	DRY
W-PIT3-02	8/10/10	-	NA	DRY
W-PIT3-02	11/22/10	-	NA	DRY
W-PIT5-02	2/9/10	-	NA	DRY
W-PIT5-02	5/4/10	-	NA	DRY
W-PIT5-02	8/11/10	-	NA	DRY
W-PIT7-02	2/9/10	24.27	1293.7	



## C-13. Pit 7 Complex area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-PIT7-02	5/4/10	21.3	1296.67	
W-PIT7-02	8/11/10	22.65	1295.32	
W-PIT7-03	2/10/10	29.34	1300.18	
W-PIT7-03	5/4/10	26.46	1303.06	
W-PIT7-03	8/11/10	28.67	1300.85	
W-PIT7-10	2/9/10	27.35	1291.08	
W-PIT7-10	5/4/10	26.45	1291.98	
W-PIT7-10	8/11/10	26.32	1292.11	
W-PIT7-10	11/22/10	26.41	1292.02	
W-PIT7-11	2/10/10	-	NA	DRY
W-PIT7-11	5/4/10	-	NA	DRY
W-PIT7-11	8/10/10	-	NA	DRY
W-PIT7-11	11/16/10	-	NA	DRY
W-PIT7-12	2/10/10	213.83	1202.72	
W-PIT7-12	5/4/10	213.92	1202.63	
W-PIT7-12	8/10/10	212.87	1203.68	
W-PIT7-12	11/16/10	213.85	1202.7	
W-PIT7-13	2/10/10	231.78	1250.76	
W-PIT7-13	5/4/10	231.98	1250.56	
W-PIT7-13	8/10/10	230.53	1252.01	
W-PIT7-13	11/16/10	231.5	1251.04	
W-PIT7-14	2/10/10	303.08	1160.16	
W-PIT7-14	5/4/10	303.75	1159.49	
W-PIT7-14	8/10/10	303.52	1159.72	
W-PIT7-14	11/16/10	303.75	1159.49	
W-PIT7-15	2/2/10	104.71	1201.09	
W-PIT7-15	5/3/10	105.04	1200.76	
W-PIT7-15	8/4/10	104.83	1200.97	
W-PIT7-15	11/9/10	104.89	1200.91	
W-PIT7-1715	2/10/10	48.88	1423.1	
W-PIT7-1715	5/4/10	48.27	1423.71	
W-PIT7-1715	8/11/10	48.7	1423.28	
W-PIT7-1715	11/22/10	48.3	1423.68	
W-PIT7-1716	2/10/10	-	NA	DRY
W-PIT7-1716	5/4/10	41.23	1430.28	
W-PIT7-1716	8/11/10	41.87	1429.64	
W-PIT7-1716	11/22/10	41.9	1429.61	
W-PIT7-1719	2/10/10	22.28	1450.24	
W-PIT7-1719	5/4/10	20.81	1451.71	

## C-13. Pit 7 Complex area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-PIT7-1719	8/11/10	21.9	1450.62	
W-PIT7-1719	11/22/10	22.6	1449.92	
W-PIT7-1721	2/10/10	-	NA	DRY
W-PIT7-1721	5/4/10	-	NA	DRY
W-PIT7-1721	8/11/10	26.05	1419.05	
W-PIT7-1721	11/22/10	26.1	1419	
W-PIT7-1722	2/10/10	-	NA	DRY
W-PIT7-1722	5/4/10	-	NA	DRY
W-PIT7-1722	8/11/10	-	NA	DRY
W-PIT7-1722	11/22/10	-	NA	DRY
W-PIT7-1725	2/10/10	120.43	1299.62	
W-PIT7-1725	5/4/10	120.43	1299.62	
W-PIT7-1725	8/11/10	120.4	1299.65	
W-PIT7-1725	11/22/10	120.51	1299.54	
W-PIT7-1726	2/10/10	-	NA	DRY
W-PIT7-1726	5/4/10	-	NA	DRY
W-PIT7-1726	8/11/10	-	NA	DRY
W-PIT7-1726	11/22/10	-	NA	DRY
W-PIT7-1727	2/10/10	-	NA	DRY
W-PIT7-1727	5/4/10	-	NA	DRY
W-PIT7-1727	8/11/10	-	NA	DRY
W-PIT7-1727	11/22/10	-	NA	DRY
W-PIT7-1728	2/10/10	-	NA	DRY
W-PIT7-1728	5/4/10	-	NA	DRY
W-PIT7-1728	8/11/10	-	NA	DRY
W-PIT7-1728	11/22/10	-	NA	DRY
W-PIT7-1729	2/10/10	-	NA	DRY
W-PIT7-1729	5/4/10	-	NA	DRY
W-PIT7-1729	8/11/10	-	NA	DRY
W-PIT7-1729	11/22/10	-	NA	DRY
W-PIT7-1860	2/10/10	13.17	1433.61	
W-PIT7-1860	5/4/10	12.8	1433.98	
W-PIT7-1860	8/11/10	13.02	1433.76	
W-PIT7-1860	11/22/10	13.15	1433.63	
W-PIT7-1861	2/10/10	13.23	1433.6	
W-PIT7-1861	5/4/10	12.89	1433.94	
W-PIT7-1861	8/11/10	13.1	1433.73	
W-PIT7-1861	11/22/10	13.23	1433.6	
W-PIT7-1903	2/9/10	22.4	1295.88	

## C-13. Pit 7 Complex area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-PIT7-1903	5/4/10	20.23	1298.05	
W-PIT7-1903	8/11/10	21.5	1296.78	
W-PIT7-1903	11/22/10	22.58	1295.7	
W-PIT7-1904	2/9/10	22.82	1294.93	
W-PIT7-1904	5/4/10	21.01	1296.74	
W-PIT7-1904	8/11/10	22.23	1295.52	
W-PIT7-1904	11/22/10	23.27	1294.48	
W-PIT7-1905	2/9/10	22.35	1295.63	
W-PIT7-1905	5/4/10	20.36	1297.62	
W-PIT7-1905	8/11/10	21.59	1296.39	
W-PIT7-1905	11/22/10	22.6	1295.38	
W-PIT7-1907	2/9/10	21.91	1296.32	
W-PIT7-1907	5/4/10	19.85	1298.38	
W-PIT7-1907	8/11/10	21.15	1297.08	
W-PIT7-1907	11/22/10	22.11	1296.12	
W-PIT7-1915	2/9/10	22.13	1295.77	
W-PIT7-1915	5/4/10	20.02	1297.88	
W-PIT7-1915	8/11/10	21.05	1296.85	
W-PIT7-1915	11/22/10	22	1295.9	
W-PIT7-1916	2/9/10	22.26	1295.86	
W-PIT7-1916	5/4/10	20.32	1297.8	
W-PIT7-1916	8/11/10	21.47	1296.65	
W-PIT7-1916	11/22/10	22.45	1295.67	
W-PIT7-1917	2/9/10	22.75	1295.26	
W-PIT7-1917	5/4/10	20.82	1297.19	
W-PIT7-1917	8/11/10	21.87	1296.14	
W-PIT7-1917	11/22/10	22.9	1295.11	
W-PIT7-1918	2/9/10	22.22	1295.82	
W-PIT7-1918	3/11/10	21.02	1297.02	
W-PIT7-1918	3/18/10	20.85	1297.19	
W-PIT7-1918	5/4/10	20.26	1297.78	
W-PIT7-1918	8/11/10	21.53	1296.51	
W-PIT7-1919	2/9/10	22.36	1292.64	
W-PIT7-1919	5/4/10	20.26	1294.74	
W-PIT7-1919	8/11/10	21.55	1293.45	
W-PIT7-1919	11/22/10	22.59	1292.41	
W-PIT7-2141	2/10/10	300.53	1163.86	
W-PIT7-2141	5/4/10	300.41	1163.98	
W-PIT7-2141	8/10/10	300.52	1163.87	

## C-13. Pit 7 Complex area of Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-PIT7-2141	11/16/10	300.31	1164.08	
W-PIT7-2305	2/9/10	25.75	1294	
W-PIT7-2305	3/11/10	24.4	1295.35	
W-PIT7-2305	3/18/10	36.2	1283.55	
W-PIT7-2305	5/4/10	36.25	1283.5	
W-PIT7-2305	8/11/10	36.21	1283.54	
W-PIT7-2305	11/16/10	-	NA	NM/UC RATTLESNAKE
W-PIT7-2306	2/9/10	46.08	1305.94	
W-PIT7-2306	3/11/10	45.02	1307	
W-PIT7-2306	3/18/10	44.48	1307.54	
W-PIT7-2306	5/4/10	45.54	1306.48	
W-PIT7-2306	8/10/10	44.86	1307.16	
W-PIT7-2306	11/22/10	44.9	1307.12	
W-PIT7-2307	2/9/10	31.26	1306.29	
W-PIT7-2307	3/11/10	29.19	1308.36	
W-PIT7-2307	3/18/10	41.3	1296.25	
W-PIT7-2307	5/4/10	45.9	1291.65	
W-PIT7-2307	8/11/10	41.53	1296.02	
W-PIT7-2309	2/9/10	30.45	1308.53	
W-PIT7-2309	5/4/10	27.79	1311.19	
W-PIT7-2309	8/10/10	30.59	1308.39	
W-PIT7-2309	11/16/10	31	1307.98	

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**Appendix D**  
**Building 834 T2 Area *In Situ* Bioremediation  
Monitoring Data**

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## **Appendix D**

### **Building 834 T2 Area *In Situ* Bioremediation Monitoring Data**

Table D-1. Results of light hydrocarbon monitoring for the Building 834 T2 Area bioremediation treatability Study.

Table D-2. Results of oxygen-reduction potential (ORP) monitoring for the Building 834 T2 Area bioremediation treatability Study.

**D-1. Results of light hydrocarbon monitoring for the Building 834 T2 Area bioremediation treatability Study.**

Sample Location	Sample Date	Ethane ( $\mu\text{g/L}$ )	Ethene ( $\mu\text{g/L}$ )	Methane ( $\mu\text{g/L}$ )
W-834-1824	8/18/10	<0.25	1.3	13,000
W-834-1825	8/18/10	0.06	31	14,000
W-834-1833	8/18/10	0.03	0.18	0.41
W-834-T2	8/18/10	0.9	370	9,900

**Notes:**

See Acronyms and Abbreviations in the Tables section of this report for definitions.

**D-2. Results of oxygen-reduction potential (ORP) monitoring for the Building 834 T2 Area bioremediation treatability Study.**

Date	W-834-1824 (mv)	W-834-1825 (mv)	W-834-1833 (mv)	W-834-T2 (mv)
8/18/10	-218	-83	-66	-127

**Notes:**

See Acronyms and Abbreviations in the Tables section of this report for definitions.



**Appendix E**  
**Institutional Controls Monitoring Checklist**





## **Appendix E**

# **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 <sup>a</sup>	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. <sup>b</sup>	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. <sup>c</sup>	YES	
Verify that the Building 850 Soil Solidification Corrective Action Management Unit was inspected within the last year and deficiencies were corrected. <sup>d</sup>	YES	
Verify that the Pit 7 Complex Drainage Diversion System was inspected within the last year and deficiencies were corrected. <sup>e</sup>	Yes	
Verify that the Pit 7 Complex landfills were inspected within the last year and deficiencies were corrected. <sup>b</sup>	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. <sup>b</sup>	Yes	

**Table B-2. Institutional Controls Monitoring Checklist (continued).**

Institutional Control	Status <sup>a</sup>	Explanation/Observation of Corrective Action
Verify that the Pit 8 Landfill was inspected within the last year and deficiencies were corrected. <sup>b</sup>	Yes	
Verify that the Pit 9 Landfill was inspected within the last year and deficiencies were corrected. <sup>b</sup>	Yes	

Notes:

- <sup>a</sup> 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.
- <sup>b</sup> 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.
- <sup>c</sup> Perimeter fences are inspected by LLNL Security annually.
- <sup>d</sup> 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.
- <sup>e</sup> 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:

Dawn Chase Dawn M. Chase  
 (Print Name) (Signature)

Date: 11-3-10 Pit CAP Insp.

STEPHEN P. ORLOFF

Stephen P. Orloff

11/4/10

ALL OTHER INSPECTIONS

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# Errata

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## Errata

John Lucey of EPA had two comments following his review of the First Semester 2010 CMR LLNL Site 300. Claire Holtzaple of DOE reviewed these comments with John Lucey and agreed to address them in this Annual CMR, in the following manner.

*General Comment 1: Include the location of the injection trenches (where present) on the OU base maps in future CMR reports.*

Response: This Annual CMR includes the location of infiltration trenches, on figures showing base maps of the applicable OUs.

*Specific Comment 1: Review the references to tritium in Sections 2.5.5.2.2, 2.5.5.2.4, and 2.5.5.2.5 to determine if they are in error. If so, Claire Holtzaple agreed that we would correct them and issue errata pages for the corrected pages.*

Response: Some erroneous references to tritium were made in Sections 2.5.5.2.2, 2.5.5.2.4, and 2.5.5.2.5 of the First Semester 2010 CMR LLNL Site 300.

Pages containing these sections from the First Semester 2010 CMR with corrections (**underlined in bold**) follow:

### ***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 to a maximum **uranium** activity in the first semester 2010 of 120 pCi/L (April 2010). Uranium activities exceeded the 20 pCi/L cleanup standard in sample from 12 wells in the Qal/WBR HSU during the first semester 2010. All 12 wells are proximal to the landfills and have historically shown  $^{235}\text{U}/^{238}\text{U}$  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 immediately 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. 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 first semester 2010 samples from well W-PIT7-2305, screened in both the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs, also exceeded the 20 pCi/L cleanup standard. <sup>235</sup>U/<sup>238</sup>U isotopic ratios in these samples also indicated some added depleted uranium.

Uranium activities in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU have decreased from a historic maximum of 51.45 pCi/L in 1998 to a maximum uranium activity in the first semester 2010 of 36.5 pCi/L (June 2010). Both the historic and first semester 2010 maximum tritium 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<sub>1</sub>/Tnbs<sub>0</sub> HSU well that historically and currently yields ground water containing uranium in excess of the cleanup standard. However, the historic and first semester 2010 isotope ratio data indicate that the uranium in the NC7-25 ground water is natural. Ground water samples from wells screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU have not shown a depleted uranium mass ratio, indicating that depleted uranium has not migrated downward into the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU.

As is the case for Building 850 portion of OU 5, uranium analyses for first semester 2010 were performed primarily by alpha spectroscopy with selected samples analyzed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS).

#### ***2.5.5.2.3. Nitrate Concentrations and Distribution***

Nitrate was detected at concentrations at or above the 45 mg/L cleanup standard in samples from eight Pit 7 Complex area wells during first semester 2010. These wells are located downgradient and northeast of the Pit 7 Complex area. In particular, Qal/WBR HSU wells, NC7-16, NC7-21, and NC7-34 yielded February 2010 samples with reported nitrate concentrations of 290, 210, and 150 mg/L, respectively. These results are suspect as the subsequent May 2010 samples yielded nitrate concentrations of 39, 40, and 27 mg/L, respectively. These subsequent results are equivalent to historic nitrate concentrations observed at these wells.

Other than the wells that exhibited unusual nitrate concentrations as described above, the maximum first semester 2010, nitrate concentration in Qal/WBR HSU wells in the Pit 7 Complex area was 48 mg/L in the January 2010 and April 2010 samples from wells NC7-63 and W-PIT7-2309, respectively. These wells are located immediately downgradient of Pits 3 and 5, respectively.

Other than the wells that exhibited unusual nitrate concentrations as described above, the maximum first semester 2010 nitrate concentration detected in the Pit 7 Complex was 68 mg/L in an April 2010 sample from well NC7-47 screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU. This well is located about 4,000 ft downgradient/northeast of the Pit 7 Complex landfills.

Historic data indicate that ground water nitrate concentrations in the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs are limited in extent and relatively stable. Overall, other than the unusual data described above, the distribution and concentrations of nitrate in ground water are generally similar to what has been observed in previous years.

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

During first semester 2010, perchlorate was detected at concentrations exceeding the 6 µg/L cleanup standard in ground water samples from wells immediately 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 to a maximum first semester 2010 **perchlorate concentration** of 27 µg/L (January 2010). Both the historic and first semester 2010 maximum **perchlorate concentrations** were detected in samples from well W-PIT7-2306, located immediately downgradient of Pit 3. Eleven other wells completed in the Qal/WBR HSU yielded samples containing perchlorate in excess of the 6 µg/L cleanup standard and define an area that extends southeast about 1,200 ft from the middle of Pit 3.

Samples from three Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU wells, K7-03, NC7-25, and NC7-68, contained perchlorate at concentrations in excess of the 6 µg/L cleanup standard 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 during **2010** and will continue to be closely monitored.

#### **2.5.5.2.5. Volatile Organic Compound Concentrations and Distribution**

During the first semester 2010, VOCs were detected in ground water samples from four Pit 7 Complex area wells completed in the Qal/WBR HSU, one well completed in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU, and two wells completed across both HSUs.

Total VOC concentrations in the Qal/WBR HSU ground water in the Pit 7 Complex area have decreased from a historic maximum of 21.2 µg/L in 1995 to a maximum first semester 2010 **total VOC concentration** of 11.8 µg/L (January 2010). The maximum first semester 2010 **total VOC concentration** was detected in a sample from Qal/WBR HSU well W-PIT7-2307. This sample contained 8.3 µg/L of TCE; exceeding the TCE 5 µg/L cleanup standard, and 3.5 µg/L of 1,1-DCE; below the 1,1-DCE 6 µg/L cleanup standard. The sample collected from this well in June 2010 contained 9 µg/L of total VOCs (6.4 and 2.6 µg/L of TCE and 1,1-DCE, respectively).

The maximum total VOC concentration in a sample from a well screened in the Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU was 0.88 µg/L (K7-03, April 2010). The maximum first semester 2010 total VOC concentration in a sample from a well screened in both the Qal/WBR and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSUs was 1.2 µg/L (K7-01, May 2010).

The data indicate that the extent of VOCs in ground water is limited to the area immediately downgradient of Pit 5. TCE is the only VOC detected in samples from Pit 7 Complex area wells that exceeds the cleanup standard of 5 µg/L. Individual VOC concentrations are below cleanup standards in all wells sampled during the first semester 2010, except for well W-PIT7-2307 that contained TCE at concentrations at slightly above the cleanup standard.



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