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2013 Annual Compliance Monitoring Report Lawrence Livermore National Laboratory Site 300

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2013 Annual
Compliance Monitoring Report
Lawrence Livermore National Laboratory
Site 300

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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 2013. The report is submitted in compliance with the Compliance Monitoring Plan (CMP)/Contingency Plan (CP) for Environmental Restoration at Lawrence Livermore National Laboratory Site 300 (Dibley et al., 2009a) and CMP/CP Addendum (MacQueen et al., 2013).

During the reporting period of January through December 2013, approximately 11 million gallons of ground water and 100 million cubic feet of soil vapor were treated at Site 300, removing approximately 11 kilograms (kg) of VOCs, 120 grams (g) of perchlorate, 1,400 kg of nitrate, 170 g of Research Department Explosive (RDX), 1.7 g of a mixture of tetrabutyl orthosilicate (TBOS) and tetrakis (2-ethylbutyl) silane (TKEBS) and 24 g of total uranium (Table Summ-1).

Since remediation began in 1991, approximately 418 million gallons of ground water and 820 million cubic feet of soil vapor have been treated, removing approximately 590 kg of VOCs, 1.4 kg of perchlorate, 14,000 kg of nitrate, 1.9 kg of RDX, 9.5 kg of TBOS/TKEBs, and 0.041 kg of total uranium (Table Summ-2).

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

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

2.1. General Services Area OU 1

2.2. Building 834 OU 2

2.3. Pit 6 Landfill OU 3

2.4. High Explosives Process Area (HEPA) OU 4

2.5. Building 850/Pit 7 Complex OU 5

2.6. Building 854 OU 6

2.7. Building 832 Canyon OU 7

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

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

Treatment facility operations and maintenance issues that occurred during the second semester 2013 and influent and effluent analytical data collected during the second semester 2013 are included in this report. Treatment facility pH data collected during the second semester 2013 are presented in Appendix A. Ground and surface water monitoring analytical data and ground water elevation measurements for the entire calendar year 2013 are presented in Appendices B and C, respectively. The Institutional Control Monitoring performed in 2013 is included in Appendix D. No soil samples were collected during 2013 drilling operations, however, surface soil samples were collected for polychlorinated biphenyls, therefore analytical data for soil samples is presented in Appendix E. New wells and boreholes installed during 2013 are presented in Table 2-1. An acronym list is located in the Table Section of this report.

In accordance with the 2009 CMP/CP requirements, post-only concentration maps and isoconcentration contour maps depicting primary and secondary contaminant of concern (COC) data are presented in the annual CMR report along with hydraulic capture zones for all hydrostratigraphic units (HSUs).

Total VOC isoconcentration contour maps were constructed by contouring the sum of the results of the following VOCs: trichloroethene (TCE); tetrachloroethene (PCE); cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); carbon tetrachloride; chloroform; 1,1-dichlorethane (1,1-DCA); 1,2-dichlorethane (1,2-DCA); 1,1-dichloroethene (1,1-DCE); 1,1,1-trichloroethane (1,1,1-TCA); trichlorofluoromethane (Freon 11); 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113); 1,1,2-trichloroethane (1,1,2-TCA); and vinyl chloride. The individual VOCs that make up these total VOC concentrations are also posted on these maps. VOC concentrations presented in the text are total VOCs described above unless a specific VOC is indicated. Isoconcentration contour maps and post-only maps for the primary COCs were constructed using second semester 2013 data. Isoconcentration contour maps and post-only maps for the secondary COCs were constructed using first semester 2013 data. To create a snapshot in time, hydraulic capture zones and extents of saturation are based on ground water elevation data collected during the same semester as the same COC data. For collocated wells, the highest concentration was used for contouring.

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

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

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 was abandoned debris burial trenches that received craft shop debris. Leaching of solvents in the debris resulted in the release of VOCs 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 Maximum Contaminant Level (MCL) 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 was conducted for five years after treatment facility shutdown to determine if VOC concentrations rise or "rebound" above MCL cleanup standards. The results of the monitoring, that indicated that VOC concentrations had remained below cleanup standards in the five-year post shutdown monitoring period, were presented at the February 24, 2012 Remedial Project Manager's (RPM) Meeting. The regulatory agencies agreed that cleanup of the Eastern GSA was complete, monitoring and reporting could cease, and that close out documentation should be submitted. Therefore, the Eastern GSA is no longer be discussed in the CMRs.

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 three to four feet deep and two feet 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 2.0 to 3.0 gpm. The Central GSA GWTS began receiving partially treated water from the Building 830-Distal South (830-DISS) facility at the end of the first semester 2007, increasing the flow rate to approximately 5.0 to 6.0 gpm. The current GWTS configuration includes particulate filtration, air stripping to remove VOCs from extracted water, and GAC to treat vapor effluent from the air stripper. Treated ground water is discharged to the surrounding natural vegetation using misting towers. Treated vapors are discharged to the atmosphere under permit from the San Joaquin Valley Unified Air Pollution Control District.

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

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

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; compliance summary; and sampling plan evaluation and modifications.

2.1.1.1. GSA Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes and rates and operational hours for the second semester of 2013 are summarized in Table 2.1-1. The total volume of ground water and vapor extracted and treated and masses removed during 2013 is presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and masses removed are summarized in Table Summ-2. Analytical results for influent and effluent samples collected during second semester of 2013 are presented in Table 2.1-2. The pH measurement results are presented in Appendix A.

2.1.1.2. GSA Operations and Maintenance Issues

The following maintenance and operational issues interrupted continuous operations of the Central GSA GWTS and SVTS during the second semester of 2013:

- Compressor maintenance was performed on September 4.
- Ground water extraction from well W-7I was shut off on September 4 to correct totalizer issues. Soil vapor extraction was shut off on September 11 for a rebound test. Extraction of both ground water and soil vapor in well W-7I was restarted on September 16. On September 25, extraction well W-7I was shut down due to construction of the Central GSA misting tower road crossing and remained offline for the remainder of the reporting period.
- On September 24, extraction well W-875-07 was shut down to check water levels and was restarted on October 7.
- The systems were offline from October 27 to 29 due to a site power outage.

- The GWTS was found offline on November 11 due to a sump level alarm and restarted.
- The GWTS was found offline on December 5. Upon inspection, freeze damage to the water and air lines was observed. The system remained offline for the remainder of the operating period until the damaged lines could be repaired. The soil vapor system remained in operation.

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 2013. The Central GSA SVTS system operated in compliance with San Joaquin Valley Air Pollution Control District permit limitations.

2.1.1.4. GSA Facility Sampling Plan Evaluation and Modifications

The Central GSA treatment facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The treatment facility sampling and analysis plan is presented in Table 2.1-3. 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.

2.1.2. GSA Surface Water and Ground Water Monitoring

The sampling and analysis plans for ground water monitoring at the Central GSA is presented in Table~~s~~ 2.1-4. This table delineates and explains deviations from the sampling plan and indicates any additions that were made to the CMP. The sampling and analysis plans for the three Eastern GSA offsite water-supply wells and for the three Eastern GSA wells retained for CMP monitoring downgradient of the Central GSA have been incorporated into Table 2.1-4.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; nine required analyses were not performed because the wells were dry or there was insufficient water in the wells to collect the samples and five required analyses were not performed due to inoperable pumps. The pumps in wells CON2, W-35A-11, W-7A, and W-7C were not operable during second quarter. The pump in well W-35A-06 was not operable during fourth quarter. The pump in well CON2 was replaced in May 2013. The pumps in wells W-7A and W-7C were replaced in August 2013. The pump in well W-35A-11 was replaced in November 2013.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

For the Central GSA, ground water elevations and the potentiometric surface contour map for the Qt-Tnsc$_1$ and Qal-Tnbs$_1$ HSUs, including hydraulic capture zones, are presented on Figure 2.1-2.

2.1.3. GSA Remediation Progress Analysis

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

2.1.3.1. GSA Mass Removal

The monthly ground water and soil vapor mass removal estimates for the second semester of 2013 are summarized in Table 2.1-5. The total mass removed during the 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 Central GSA, VOCs are the only COCs in ground water and soil vapor. During the first semester 2013, the following VOCs were detected: TCE, PCE, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE and, Freon 11. TCE is the most prevalent VOC detected in Central GSA ground water. Of the six VOCs detected in ground water, only TCE and PCE were detected in ground water above their respective MCLs. The three primary HSUs in the Central GSA are: the Qt-$Tnsc_1$ HSU, the $Tnbs_1$ HSU and the Qal-$Tnbs_1$ HSU.

Total VOC concentration data are contoured and individual VOC concentrations are posted for the Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSUs on Figure 2.1-2. There are no secondary COCs in the Central GSA. Eastern GSA wells W-26R-06 and W-26R-11 are shown on Figure 2.1-1, but not used in the contouring because these wells are located in or near the former Eastern GSA Debris Burial Trench source area which has already achieved the cleanup standards. The future VOC trends in these wells will be used to measure Central GSA performance. Because each CMR map is representative of contaminant concentrations during a particular semester, the maximum concentration shown on a given CMR map may not match the maximum concentration for 2013 described in the text.

A VOC plume is present in Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSU ground water in the Central GSA. Prior to remediation, the maximum total VOC concentration detected in Central GSA ground water was 272,000 µg/L (Building 875 dry well pad area extraction well W-875-07, 1992). The 2013 maximum total VOC concentration is also located in the Building 875 dry well area and was 450 µg/L in extraction well W-7I (January). While the majority of VOCs detected in the Building 875 dry well area well samples consists of TCE, other VOCs detected in this area during 2013 included PCE, 1,1-DCE, cis-1,2-DCE and trans-1,2-DCE. Of these VOCs, only TCE and PCE were present above their respective MCL cleanup standards. Several Building 875 dry well pad area wells were not sampled during 2013 due to insufficient water.

During 2013, TCE soil vapor concentrations in the Building 875 dry well area (W-7I, W-875-07, W-875-08) ranged from 0.027 to 0.72 parts per million on a volume per volume basis ($ppm_{v/v}$). These vapor concentrations have decreased significantly from the historic maximum TCE concentration of 600 $ppm_{v/v}$ that was measured in extraction well W-875-07 in 1994.

Outside the Building 875 dry well area, the majority of VOCs detected during 2013 consisted of TCE, with minor concentrations of PCE, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE and Freon 11. Of these VOCs, only TCE and PCE were present above their MCL cleanup standards. During 2013, total VOC concentrations (primarily TCE with minor PCE) in downgradient monitor well

W-CGSA-1736 at the eastern edge of the Central GSA VOC plume decreased from a historic maximum of 14 µg/L in 2002 to a concentration of 5 µg/L (December).

During 2013, VOCs were also detected in two offsite monitor wells, W-35A-01 and W-35A-10. In monitor well W-35A-01, VOCs were detected at 2013 maximum concentration of 78 µg/L (June) consisting of TCE (72 µg/L), PCE (4.3 µg/L), cis-1,2-DCE (0.68 µg/L) and 1,1-DCE (1.3 µg/L). Of these VOCs, only TCE was detected above its MCL cleanup standard. The historic maximum VOC concentration detected in monitor well W-35A-01 was 545 µg/L (1991). Because VOC concentrations in this well vary depending on sampling/purging method used, the standard sampling method is utilized that includes removing three casing volumes prior to sampling. Historically this sampling method yields the highest VOC results. In monitor well W-35A-10, VOCs were detected at a 2013 maximum concentration of 18 µg/L (June) consisting of TCE (9.4 µg/L) and Freon 11 (8.6 µg/L). Of these VOCs, only TCE was detected above its MCL cleanup standard. The historic maximum VOC concentration detected in monitor well W-35A-10 was 86 µg/L (1994).

2.1.3.3. GSA Remediation Optimization Evaluation

At the Central GSA, ground water extraction continues to capture the highest concentrations in ground water. Remediation efforts have reduced VOC concentrations in Central GSA ground water from a historic maximum of 272,000 µg/L in 1992 (W-875-07) to a 2013 maximum concentration of 450 µg/L (W-7I, January). At the eastern edge of the VOC plume, VOC concentrations continue to decrease in monitor well W-CGSA-1736.

Ground water remediation continues to reduce VOC concentrations in the two offsite wells in which VOCs are currently detected. Wells W-35-01 and W-35A-10 are located within 50 and 100 feet of the site boundary, respectively. Monitor well W-35A-01 is within the hydraulic capture zone of the CGSA extraction wellfield. While monitor well W-35A-10 is not within the hydraulic capture zone of the CGSA extraction wellfield, VOC concentrations continue to decline and TCE concentrations in the sample collected in December 2013 (4.7 µg/L) dropped below the 5 µg/L cleanup standards in the sample collected in December 2013.

During 2013, 240 g of VOCs were removed from ground water and 470 g of VOCs were removed from soil vapor at the Central GSA Treatment Facility.

The third GSA Five-Year Review (Valett et al., 2011) recommended drilling and installing one new extraction well (W-CGSA-2708) to increase hydraulic capture of VOCs and contaminant mass removal in the northern plume area. In lieu of connecting this extraction well to the Central GSA ground water extraction and treatment system, a new treatment facility (CGSA-North) will be constructed due to the dense infrastructure in the area that prevented constructing a pipeline from the new extraction well to the CGSA treatment facility. Well W-CGSA-2708 had a 2013 maximum total VOC concentration of 15 µg/L (June) and is expected to yield up to about 0.5 gpm. During 2013, two new injection wells were installed, W-CGSA-2907 and W-CGSA-2908 upgradient of planned extraction well W-CGSA-2708. These new wells were completed in the vadose zone portion of the $Qt\text{-}Tnsc_1$ HSU. Initial tests indicate that these wells have sufficient combined capacity to accept a total of 1 gpm of ground water extracted from W-CGSA-2708. The wells were developed and tested during early 2014 and design and construction of the CGSA-North treatment facility is expected to begin in 2014.

2.1.3.4. GSA OU Remedy Performance Issues

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

2.2. Building 834 OU 2

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

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

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

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

Since 2005, a long-term enhanced *in situ* bioremediation treatability test has been taking place at the distal T2 Area. This testing has included biostimulation to transform ground water from oxidizing to reducing conditions and bioaugmentation with KB-1^{TM}, a natural non-pathogenic microbial consortium capable of complete dechlorination of TCE to ethene. This long-term test is described in Sections 2.2.3.3 and 2.2.3.4.

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

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

2.2.1.1. Building 834 OU Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes and rates and operational hours for the second semester of 2013 are summarized in Table 2.2-1. The total volumes of ground water and vapor extracted and treated and masses removed during 2013 are presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and masses removed are summarized in Table Summ-2. Analytical results for influent and effluent samples collected during the second semester of 2013 are presented in Tables 2.2-2 through 2.2-4. The pH measurement results are presented in Appendix A.

2.2.1.2. Building 834 OU Operations and Maintenance Issues

The following maintenance and operational issues interrupted continuous operations of the Building 834 GWTS and SVTS during the second semester of 2013:

- The SVTS compressor and blower were serviced on September 4.
- The systems were shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- The systems were offline from October 27 to 29 due to a site power outage.
- The systems were shut down on December 2 to prevent freeze damage 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 Air Pollution Control District permit limitations.

2.2.1.4. Building 834 OU Facility Sampling Plan Evaluation and Modifications

The Building 834 treatment facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.2-5. 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 were made during this reporting period.

2.2.2. Building 834 OU Ground Water Monitoring

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

During this reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; ninety-two required analyses in 29 wells were not performed because the wells were dry or there was insufficient water in the wells to collect the samples.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

The ground water elevation contour map for the Tpsg HSU is presented on Figure 2.2-2. Ground water elevations for the Tps-Tnsc$_2$ HSU are posted on Figure 2.2-3.

2.2.3. Building 834 OU Remediation Progress Analysis

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

2.2.3.1. Building 834 OU Mass Removal

The monthly ground water and soil vapor mass removal estimates for the second semester of 2013 are summarized in Table 2.2-7. The total mass removed during the 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 (primarily TCE but also PCE, cis-1,2-DCE, 1,1,1-TCA and chloroform) are the primary COCs detected in ground water; TBOS/TKEBs and nitrate are the secondary COCs. These COCs have been identified in two shallow HSUs: (1) the Tpsg perched water-bearing gravel zone, and (2) the underlying Tps-Tnsc$_2$ perched horizon.

Total VOC concentration data collected primarily in July and August are contoured for the Tpsg HSU (Figure 2.2-4) and posted for the Tps-Tnsc$_2$ HSU (Figure 2.2-3 where detections exceeding applicable MCL cleanup standards are identified in bold text). Secondary ground water COC concentrations collected in the first semester are posted for the Tpsg HSU (Figure 2.2-5 and Figure 2.2-6) and Tps-Tnsc2 HSU (Figure 2.2-3). Because each CMR map is representative of contaminant concentrations during a particular semester, the maximum concentration shown on the CMR map may not match the maximum concentration for 2013 described in the text.

2.2.3.2.1. VOCs Concentrations and Distribution

Although the overall extent of VOCs in the Building 834 OU ground water and soil vapor has not changed significantly, the maximum concentrations have decreased by more than one order-of-magnitude since remediation began in the mid 1990s. VOCs detected in Building 834 area ground water consist primarily of TCE and cis-1,2-DCE. Other VOCs including PCE, 1,1-DCE, 1,1,2-TCA, trans-1,2-DCE, Freon 113, vinyl chloride and chloroform as well as ethane and ethene have also been detected, albeit in much smaller concentrations during 2013. The compounds cis-1,2-DCE, vinyl chloride, ethene and ethane are the breakdown products of TCE microbial dechlorination under anaerobic conditions.

Core Area

The Building 834 core area continues to exhibit the highest VOC concentrations in ground water and soil vapor. VOC concentrations and distribution in ground water and soil vapor in the Tpsg and Tps-Tnsc$_2$ HSUs in the Building 834 core area are discussed below.

Tpsg HSU

Twenty-five wells (16 monitor and nine dual extraction) are screened in the Tpsg HSU, where active remediation has reduced total VOC ground water concentrations from a historic maximum of 1,100,000 µg/L (all TCE, W-834-D5, 1988) to a 2013 maximum of 60,000 µg/L (July) in nearby extraction well W-834-C5. The VOC composition in this well was nearly equal concentrations of TCE (37,000 µg/L) and cis-1,2-DCE (23,000 µg/L). Since 2005, VOC concentrations in W-834-C5 exhibit a seasonal fluctuation ranging from 66,000 µg/L in summer months to 15,000 µg/L in winter months.

The historic maximum TCE concentration of 1,100,000 µg/L in W-834-D5 (1988) declined during 2013 to 1,300 µg/L (March). In 2013, the highest TCE detection was 37,000 µg/L in W-834-C5 (July) declining from a historic maximum in this well of 108,000 µg/L (2000).

In the core area, cis-1,2-DCE and vinyl chloride are biodegradation products of TCE in wells that contain TBOS/TKEBS as co-contaminants. The historic maximum cis-1,2-DCE detection of 540,000 µg/L in extraction well W-834-D4 (1990) declined in 2013 to 6,800 µg/L (July). The 2013 maximum cis-1,2-DCE of 23,000 µg/L was detected in W-834-C5 (July), the same well that contained the maximum 2013 total VOC concentration. During 2013, the only vinyl chloride detections above the reporting limit in core area Tpsg HSU wells, were observed in wells W-834-D3 (59 µg/L, August) and W-834-D5 (9.1 µg/L, July). Very low concentrations of ethene (0.66 µg/L) suggest at least partial degradation under biotic or abiotic processes to a benign end product.

The historic maximum PCE concentration was 10,000 µg/L in monitor well W-834-D3 (1993). During 2013, PCE had decreased to below the reporting limit in this well (February). The 2013 maximum detection of PCE was 130 µg/L (W-834-D13, March). Although 1,1,1-TCA was detected at 33,000 µg/L in extraction well W-834-J1 (1991), this compound was not detected above the reporting limit in this or any other well in the Building 834 OU.

During 2013, TCE soil vapor concentrations from the core area SVE wells ranged from 0.12 to 6.8 ppm$_{v/v}$. The highest detection (6.8 ppm$_{v/v}$) is representative of ongoing vapor extraction operations. Higher vapor concentrations could be measured after an extended rebound period. These TCE vapor concentrations have decreased by three orders-of-magnitude from a pre-remediation maximum core area concentration of 3,200 ppm$_{v/v}$ (extraction well W-834-D4, 1989). Well W-834-D4 is located approximately 10 feet from well W-834-D5, where the historic maximum ground water VOC concentration in the Tpsg HSU was detected.

Tps-Tnsc$_2$ HSU

In the core area, underlying the Tpsg HSU, the Tps-Tnsc$_2$ HSU continues to have the highest VOC ground water concentrations in the Building 834 OU and at Site 300. Five wells (four monitor wells and one dual extraction well, W-834-2001) are screened in the Tps-Tnsc$_2$ HSU where the historic maximum total VOC detection was 250,000 µg/L (mostly TCE, 2002) and the 2013 maximum total VOC detection was 210,000 µg/L (entirely TCE, duplicate sample in July). Both maxima are from the same monitor well, W-834-A1. This latter result is within the range of concentrations measured in this well during recent years.

The historic maximum PCE concentration was 7,900 µg/L (W-834-A1, 2001) and the 2013 maximum PCE concentration was 1,000 µg/L, detected in the same well (July). Except for a small PCE detection (18 µg/L) from extraction well W-834-2001 (November), PCE was below the reporting limit in two of the three remaining core area wells screened in this HSU (the third was dry and not sampled)

The historic maximum chloroform concentration is 42 µg/L (W-834-A1 and W-834-U1, 2000). During 2013, chloroform was not detected in any core area Tps-$Tnsc_2$ HSU wells.

The 2013 maximum cis-1,2-DCE concentration was 4,300 µg/L (monitor well W-834-U1, February) in a sample collected toward the end of the treatment facility freeze protection shutdown period; a July sample from the same well had 3,900 µg/L. The historic maximum cis-1,2-DCE concentration in this HSU was 11,000 µg/L also from W-834-U1 (2009). This well has shown a decreasing VOC concentration trend since 2000.

In 2014, vinyl chloride was not detected above the reporting limit, in any Tps-$Tnsc_2$ HSU well in the core area.

During 2013, TCE soil vapor concentrations from the one core area SVE well screened in the Tps-$Tnsc_2$ HSU well W-834-2001 ranged from 0.51 to 3.1 $ppm_{v/v}$. The highest detection (3.1 $ppm_{v/v}$) is representative of ongoing vapor extraction operations. The historic maximum TCE vapor concentration from this well was 30 $ppm_{v/v}$ taken in April 2011, and representative of rebound conditions following a prolonged period of treatment facility shutdown.

Leachfield Area

VOC concentrations and distribution in ground water and soil vapor in the Tpsg and Tps-$Tnsc_2$ HSUs in the Building 834 leachfield area are discussed below.

Tpsg HSU

In the leachfield area, six wells (three monitor and three dual extraction) are screened in the Tpsg HSU. Total VOCs in this HSU have decreased from a pre-remediation maximum of 179,200 µg/L (mostly TCE, extraction well W-834-S1, 1988) to 2013 concentration of 4,300 µg/L (mostly TCE, March) in the same well. The 2013 maximum total VOC concentration for all leachfield area Tpsg HSU wells was 14,000 µg/L (entirely TCE) detected in monitor well W-834-2113 (February) declining from a historic maximum of 49,000 µg/L (entirely TCE, 2008). This well is located between leachfield area extraction wells W-834-S1 and W-834-S13.

The historic maximum PCE detection was 6,300 µg/L (W-834-S1, 1986) declining to a 2013 maximum PCE detection of 65 µg/L (March) observed in the same well.

The historic maximum cis-1,2-DCE detection was 3,900 µg/L (2003) in extraction well W-834-S13. During 2013, cis-1,2-DCE had declined to 6.9 µg/L (July) in this well. During 2013, the maximum cis-1,2-DCE detection was 240 µg/L (W-834-S1, April).

The historic maximum chloroform detection was 950 µg/L (W-834-S1, 1989); during 2013, chloroform was detected in only one sample, slightly above the reporting limit (0.65 µg/L, W-834-S1, November) in all leachfield area Tpsg HSU wells.

During 2013, TCE soil vapor concentrations in the leachfield area Tpsg HSU ranged from 0.48 to 1.3 $ppm_{v/v}$, significantly lower than the 710 $ppm_{v/v}$ maximum pre-remediation concentration measured in 2004 in well W-834-S13. The highest detection (1.3 $ppm_{v/v}$) is representative of ongoing dual extraction operations, not rebound conditions, as it was collected from extraction well W-834-S1 after 9 months of treatment facility operations.

Tps-Tnsc₂ HSU

In the leachfield area, the underlying Tps-$Tnsc_2$ HSU (monitored by two wells, W-834-S8 and -S9), exhibits VOCs concentrations significantly lower than in the overlying Tpsg HSU or in the core area. The historic maximum total VOC concentration in Tps-$Tnsc_2$ HSU ground water was 16,000 µg/L (entirely TCE, W-834-S8, 1992) significantly declining to a 2013 maximum total VOC concentration of 3,100 µg/L (mostly TCE, same well, February).

PCE has declined from a historic maximum of 170 µg/L (W-834-S8, 1993) to a 2013 maximum of 30 µg/L (same well, February).

Cis-1,2-DCE has fallen from a historic maximum of 130 µg/L (W-834-S8, 1991) to a 2013 maximum of 46 µg/L (same well, February).

The compound 1,1,1-TCA has declined from a historic maximum of 260 µg/L (W-834-S8, 1991) to levels below the reporting limit in 2013.

Chloroform has decreased from a historic maximum of 6.1 µg/L (W-834-S8, 1993) to levels below the reporting limit during 2013.

The Tps-$Tnsc_2$ HSU, in the leachfield area, has exhibited declining VOC trends since monitoring began in 1989.

Distal Area

VOC concentrations and distribution in ground water in the Tpsg, Tps-$Tnsc_2$, and $Tnbs_1$ HSUs in the Building 834 distal area are discussed below.

Tpsg HSU

The distal area contains 20 monitor wells completed in the Tpsg HSU. Since 2005, this HSU (in the T2 area) has been the target of a long-term enhanced *in situ* bioremediation treatability study, further discussed in Section 2.2.3.4 of this report.

VOC concentrations in this area have decreased from a historic maximum of 86,000 µg/L (entirely TCE) in well W-834-T2A (1988) to a 2013 TCE maximum of 6,900 µg/L in the same well (January).

PCE has decreased from a historic maximum of 160 µg/L in well W-834-S6 (1987) to 2013 maximum of 14 µg/L, W-834-T2A (January). Except for this well and one other well (W-834-1833, 8.5 µg/L, January) all distal area Tpsg HSU wells were below the PCE reporting limit in 2013.

Cis-1,2-DCE has decreased from a historic maximum concentration of 6,200 µg/L in W-834-T2 (2008) to a 2013 maximum of 1,100 µg/L in the same well (August).

1,1,1-TCA has decreased from a historic maximum of 200 µg/L in well W-834-T2D (1991) to below the reporting limit in all wells during 2013.

During 2013, chloroform decreased from a historic maximum concentration of 270 µg/L (monitor well W-834-M1, 1999) to 0.85 µg/L (February 2013) in the same well. During 2013, chloroform was detected in only one well above the reporting limit (0.85 µg/L, monitor well W-834-M1, February), far below its MCL cleanup standard of 80 µg/L.

During 2013, the only vinyl chloride detections above the reporting limit in the distal area Tpsg HSU wells, were observed in wells W-834-T2 (380 µg/L, January and 650 µg/L, August), W-834-1824 (23 µg/L, January) and W-834-1825 (7.3 µg/L, August).

The Tpsg HSU, in the distal area, has exhibited declining VOC trends since monitoring began in 1989.

Tps-Tnsc$_2$ HSU

The underlying Tps-Tnsc$_2$ HSU is monitored by well W-834-2119, which contained a 2013 maximum total VOC concentration of 15,000 µg/L (all TCE, August). Since monitoring began in 2005, VOC concentrations in this well have been relatively stable in a range between 6,300 µg/L to 16,700 µg/L.

Tnbs$_1$ HSU

In the distal area, the deeper Tnbs$_1$ HSU is monitored by well W-834-T1. VOCs have not been detected since 1986 and 1987 when very low concentrations (<4 µg/L) were detected immediately following well installation and were likely due to some cross contamination from shallow soil, during drilling.

2.2.3.2.2. TBOS/TKEBS Concentrations and Distribution

TBOS/TKEBS concentrations in ground water have decreased from a historic maximum of 7,300,000 µg/L (core area Tpsg HSU monitor well W-834-D3, 1995) to a first semester 2013 maximum of 13,000 µg/L (same well, February). This compound is a light, non-aqueous phase liquid that is found exclusively in the core area, with the highest concentrations in the Tpsg HSU. TBOS/TKEBS concentrations differ from one sampling event to the next, probably because of varying amounts of free-phase TBOS/TKEBS in the subsurface. Historically, floating product has been observed intermittently in some core area wells; however, no floating product was observed during 2013. Wells that contain TBOS/TKEBS as co-contaminants with TCE, generally exhibit the highest concentrations of degradation products, such as cis-1,2 DCE and vinyl chloride.

Because TBOS/TKEBS concentrations in Tpsg HSU wells in the leachfield and distal areas have historically been below reporting limits, sampling for TBOS/TKEBS in the leachfield and distal areas are performed biennially, with approximately half the wells sampled during even numbered years and half sampled during odd numbered years. In the leachfield and distal area wells sampled during the 2013, TBOS/TKEBS concentrations were below reporting limits, with the exception of one well. In the leachfield area, a July sample from monitor well W-834-S10, screened in the Tpsg HSU had 14 µg/L of TBOS/TKEBS, slightly above the reporting limit of 10 µg/L.

The concentration and extent of TBOS/TKEBS in ground water are greater in the Tpsg HSU than in the underlying Tps-Tnsc$_2$ HSU. The historic maximum TBOS/TKEBS detection in this HSU is 110 µg/L (W-834-U1, 2009); during the first semester 2013, TBOS/TKEBS was not detected in the Tps-Tnsc$_2$ HSU and remains below the reporting limit in guard wells W-834-T1 and W-834-T3.

2.2.3.2.3. Nitrate Concentrations and Distribution

In 2013, nitrate concentrations in ground water exceeded the 45 mg/L MCL cleanup standard in the Building 834 core, leachfield and distal areas in the Tpsg HSU. During 2013, nitrate in Tpsg HSU ground water ranged from a maximum concentration of 320 mg/L (February) in monitor well W-834-M1 (located about 400 feet east of the leachfield area) to below the 0.22 mg/L reporting limit.

In the core area, nitrate concentrations in the Tpsg HSU varied spatially and temporally due to denitrification associated with the ongoing intrinsic *in situ* biodegradation of TCE. The introduction of oxygen into the subsurface during SVTS operation subdued intrinsic biodegradation in some portions of the core area (denitrification occurs under oxygen-depleted not oxygenated conditions).

In the Tps-Tnsc$_2$ HSU, nitrate concentrations in ground water exceeded the 45 mg/L MCL cleanup standard in (1) one core area well (W-834-1711, 81 mg/L), (2) two leachfield area wells (W-834-S8, 120 mg/L and W-834-S9, 84 mg/L), (3) one distal area well (W-834-2119, 84 mg/L), and (4) one well south of the distal area (W-834-T5, 87 mg/L). All of these detections were within the historical range of nitrate concentrations observed in these wells since 2006. All other Tps-Tnsc$_2$ HSU wells were below the 0.5 mg/L reporting limit.

Although nitrate concentrations in ground water have decreased from a historic maximum of 749 mg/L (monitor well W-834-K1A, 2000), the continued presence of elevated nitrate indicates that an ongoing source of nitrate to ground water exists, likely due to a combination of both natural and anthropogenic sources. During 2013, nitrate was not detected in guard wells W-834-T1 and W-834-T3.

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 the first semester 2013, diesel concentrations were measured in ground water from W-834-U1 at 650 µg/L (February) and W-834-2001 at 2,800 µg/L (July). It is noteworthy that the 2012 sample collected from W-834-2001 had 4,800 µg/L of diesel; the historic maximum diesel concentration was 3,900,000 µg/L in the same well (2004). Diesel concentrations measured in ground water vary from one sampling event to the next, likely due to varying amounts of free-phase product in the subsurface. No floating product was detected in ground water during 2013.

During 2013, perchlorate was detected in ground water from monitor well W-834-2118 at a maximum concentration of 5.5 µg/L (February). This concentration was slightly above the 4 µg/L reporting limit but below the 6 µg/L MCL cleanup standard. Perchlorate concentrations in well W-834-2118 have decreased from a historic maximum of 11 µg/L in 2005. During 2013, attempts to sample ground water for perchlorate from monitor wells W-834-S7 and W-834-A2 were unsuccessful due to insufficient water or dry conditions. Ground water from well W-834-S7 has historic perchlorate concentrations ranging from 8.8 to 11 µg/L (above the MCL cleanup level of 6 µg/L); ground water from well W-834-A2 has not been analyzed for perchlorate, due to insufficient water or dry conditions. Semi-annual ground water monitoring for perchlorate will continue for monitor wells W-834-2118, W-834-S7 and W-834-A2.

2.2.3.3. Building 834 OU Remediation Optimization Evaluation

During 2013, 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 7,460 g of VOCs removed during 2013, 6,900 g were removed in the vapor phase. In both ground water and soil vapor, about twice as much VOC mass was removed in 2012 (1,200 g and 14,000 g, respectively) compared with 2013 (560 g and 6,900 g, respectively), even though the actual volume of treated ground water and soil vapor were essentially the same for both years due to lower VOC concentrations in ground water and soil vapor. In 2013, the total nitrate mass removed was 34 kg and the total TBOS/TKEBS mass removed was 1.7 g, similar to previous years. Table Summ-1 lists the mass removed by each individual treatment facility.

Core Area

Dual extraction operations in the core area continue to dewater the Tpsg HSU, especially (1) south of wells W-834-J1 and W-834-J2 and north of W-834-M1, and (2) between W-834-B4 and W-834-D15. TCE biodegradation continues within the core area where significant amounts of TBOS/TKEBS are present and, when hydrolyzed, serves as an electron donor for biodegradation. Historically, the primary biodegradation byproduct has been cis-1,2-DCE, although vinyl chloride and trace detections of ethene have also been historically detected in some wells, especially in well W-834-D3. Cis-1,2-DCE and vinyl chloride are degradation products of intrinsic anaerobic biodegradation of TCE, in the core area. Low concentrations of ethene (0.66 µg/L) suggest at least partial degradation to a benign end product.

In 2013, both cis-1,2-DCE and vinyl chloride were observed in core area ground water, at maximum concentrations of 23,000 µg/L (W-834-C5, July) and 59 µg/L (W-834-D3, August), respectively. Ethane and ethene were not measured in core area wells, in 2013. A post freeze protection evaluation is been planned for 2014, monitoring water levels and water chemistry parameters (including oxidation-reduction potential [ORP]) after the prolonged freeze protection shutdown period from December 2013 to February 2014.

During 2013, the treatment system was restarted on February 12, after having been off since mid-December 2012 to protect against freeze damage. Ideally, data regarding the accumulation of VOCs, TCE, cis-1,2-DCE, and vinyl chloride during the shutdown period could serve as indicators of *in situ* biodegradation. Typically, increases in cis-1,2-DCE are expected during the treatment facility shutdown period when subsurface conditions become anaerobic. Field oxidation reduction potential (ORP) measurements of ground water during the February 2013 sampling episode indicated reducing conditions at W-834-D3 (-212 mV), W-834-D14 (-152 mV), and W-834-J2 (-33 mV), although wells W-834-C5, W-834-D3 and W-834-1709 have historically yielded the highest concentrations of cis-1,2-DCE.

The Tpsg HSU extraction wellfield within the core area continues to adequately capture the highest VOC concentrations in ground water. Per the recommendations presented in the third Five-Year Review Report for the Building 834 Operable Unit (Valett et al., 2012), VOC concentrations in monitor well W-834-C5 and nearby well W-834-B4 will continue to be observed closely during the next five years. If these wells exhibit increasing VOC trends, installation of extraction wells in the vicinity of these wells may be considered. Since both wells were installed in 2000, VOCs in (1) W-834-C5 have fluctuated seasonally with no apparent increasing or decreasing long-term trend and (2) W-834-B4 has remained generally stable.

Leachfield Area

In the leachfield area, the extraction wellfield continues to capture some portions of the VOC plume in Tpsg HSU ground water. However, the areas with the highest concentrations (in the vicinity of monitor well W-834-2113) are not fully captured. In accordance with recommendations presented in the Building 834 Five Year Review, the leachfield area will undergo an extraction wellfield expansion by converting W-834-2113 from a monitor to extraction well during fiscal year 2015.

VOC concentration trends in the underlying Tps-$Tnsc_2$ HSU will also continue to be monitored closely during the next five years. Per the recommendations presented in the Building 834 Five Year Review, if wells W-834-A1 and W-834-2119 exhibit increasing VOC trends, installation of additional extraction wells in this area may be considered. Since installation in 2000, VOC concentrations in W-834-A1 have hovered around 200,000 µg/L with no notable increasing or decreasing trend. Since the well was constructed in 2005, VOC concentrations in W-834-2119 have remained generally flat, in a range between 7,000 to 16,700 µg/L.

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

2.2.3.4. T2 Treatability Study

Since 2005, the Tpsg HSU in the distal area has been the target of a long-term enhanced *in situ* bioremediation treatability study, including biostimulation using sodium lactate and bioaugmentation using KB-1, a consortium of dechlorinating bacteria that contain Dehalococcoides. This treatability study continued during 2013 in the form of post-biostimulation rebound monitoring. The primary objective of this pilot-scale treatability study was to assess the performance of enhanced *in situ* bioremediation of TCE at concentrations greater than 10,000 µg/L in a water-bearing zone typical of TCE contaminant source areas at Site 300. Since 2005, progress of this test has been reported semi-annually in the CMRs. A detailed description of the test results, including procedures, performance assessment, conclusions and recommendations were submitted as Appendix A of the Building 834 Five-Year Review (Valett et al., 2012).

In the T2 area, Tpsg HSU well W-834-1833 had notable VOC concentrations in 2013 of 4,100 µg/L (entirely TCE, January). This continues a steady decline from a historic maximum total VOC concentration of 21,000 µg/L (comprised entirely of TCE in 2004 in this well). Ethene and ethane were at or below the reporting limit.

During 2013, concentrations of cis-1,2-DCE and vinyl chloride were highest in well W-834-T2 at 1,100 µg/L and 650 µg/L, respectively (August). Ethene was detected in this well at 360 µg/L, in January (not measured in August). The total VOC concentration in this sample was 1,760 µg/L, declining steadily from 30,000 µg/L (entirely TCE) in 2004. The trend shows the dechlorination of TCE to its degradation end product ethene through bioaugmentation with KB-1.

In 2013, well W-834-1824 had 125 µg/L total VOCs comprised of 68 µg/L TCE, 34 µg/L cis-1,2-DCE and 23 µg/L vinyl chloride; ethene was detected at 3.1 µg/L and ORP measured in the field during sampling was -148 mV (January). In 2004, this well yielded 26,000 µg/L total VOCs (mostly TCE). The trend also shows the dechlorination of TCE to its degradation end product ethene through bioaugmentation with KB-1.

In 2013, well W-834-1825 had 80 µg/L total VOCs comprised of 54 µg/L TCE, 19 µg/L cis-1,2-DCE and 7.3 µg/L vinyl chloride; ORP measured in the field during sampling was -126 mV (August). In January, ethene was detected in this well at 100 µg/L with an ORP of -81 mV. In 2004, this well yielded 19,000 µg/L total VOCs (mostly TCE). The trend also shows the dechlorination of TCE to its degradation end product ethene through bioaugmentation with KB-1.

During 2013, the highest total VOC concentration detected in T2 area Tpsg HSU wells was W-834-T2A with 6,940 µg/L (mostly TCE) in January, continuing a steady decline from 86,000 µg/L in 1988. Although this well was outside the treatment zone of the treatability test, the 2013 sample contained 0.48 µg/L ethene and 22 µg/L ethane. The presence of ethane indicates continued biodegradation of ethene under highly anaerobic conditions most likely in the T2 treatment zone upgradient of W-834-T2A.

The cumulative 2013 data presented above, especially the continued presence of ethene, and the overall reduction in total VOCs, and redox conditions indicate that enhanced *in situ* bioremediation of TCE continues in the T2 area, particularly in the vicinity of wells W-834-T2, W-834-1824 and W-834-1825. Initially, VOCs exhibited some rebound in the treatment zone for several months following the end of biostimulation in 2008 but now they exhibit a decreasing trend. Total VOCs outside and downgradient from the T2 treatment zone continue to exhibit a decreasing trend. For example, W-834-2117, located upgradient of the T2 treatment zone had a 2013 total VOC concentration of 6,200 µg/L (February) declining steadily from 22,000 µg/L in 2005. Well W-834-2118, located downgradient of the T2 treatment zone yielded a 2013 maximum of 230 µg/L total VOCs (February) down from 600 µg/L in 2005.

2.2.3.5. Building 834 OU Remedy Performance Issues

In the core area, the Tpsg HSU continues to be dewatered by dual extraction operations. Otherwise, during the reporting period, there were no new issues that affect the performance of the cleanup remedy for the Building 834 OU. Although the remedy continues to be protective of human health and the environment, and effective in cleaning up the Tpsg HSU, it has not significantly decreased VOC concentrations in the underlying Tps-$Tnsc_2$ HSU beneath the core area. Per the recommendations presented in the Building 834 Five Year Review, VOC trends are being monitored in Tps-$Tnsc_2$ HSU wells and installation of additional extraction wells in this HSU may be considered.

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 shop and laboratory equipment 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 feet east of the Pit 6 Landfill. They provide water for the nearby Carnegie State Vehicular Recreation Area and are monitored on a monthly basis.

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

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

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

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring and post-closure requirements with the following exceptions; sixty-two required analyses in eight wells and one spring were not performed because the wells were dry or there was insufficient water to collect the samples and twelve required analyses were not performed due to inoperable pumps in K6-04 and K6-25. The pumps in wells K6-04 and K6-25 were not operable during first and third quarter. The pump in well K6-04 was removed in third quarter and the well will be sampled without a pump in the future. The pump in well K6-25 was replaced in January 2014. Four samples from Carnegie water supply well CARNRW2 could not be collected during fourth quarter because the unit was offline at the time of sampling. Wells EP6-08 and K6-36 have been dry for the past several reporting periods. Beginning in 2013, nearby wells EP6-07 (near EP6-08) and K6-35 (near K6-36) now serve as detection monitor wells and are sampled for the same constituents when EP6-08 and K6-35 are dry. Well EP6-07 (for EP6-08) and K6-35 (for K6-36) were successfully sampled in 2013 for all the required annual and semi-annual detection monitoring constituents that normally apply to EP6-08 and K6-36. Wells EP6-07 and K6-35 will be sampled for Detection Monitoring analytes in 2014 if wells EP6-08 and K6-36 remain dry.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

The ground water elevation contour map for the Qt-Tnbs$_1$ HSU is presented on Figure 2.3-2.

2.3.2. Pit 6 Landfill OU Remediation Progress Analysis

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

2.3.2.1. Pit 6 Landfill OU Contaminant Distribution and Concentration

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

As part of the recent Five-Year Review for OUs 3 (Pit 6 Landfill) and 8 (Buscheck et al., 2013) the Qt-$Tnbs_1$ HSU was formally divided into the Qt-$Tnbs_1$ North HSU (portion north of the Corral Hollow-Carnegie Fault Zone) and the Qt-$Tnbs_1$ South HSU (portion within the Corral Hollow-Carnegie Fault Zone). A deeper water-bearing zone ($Tnbs_1$ Deep HSU) occurs beneath a low permeability-confining layer at an approximate depth of 170 feet within the $Tnbs_1$ stratigraphic unit in the northern fault block. Based on evaluations of historical water elevation hydrographs, monitor wells EP6-07, K6-27, K6-34 and K6-35, which were previously designated as $Tnbs_1$ Deep HSU wells, are now designated as Qt-$Tnbs_1$ North HSU wells. The main criterion for reinterpreting the Qt-$Tnbs_1$ North HSU designation for these wells is that their long-term hydrographs exhibit a common hydraulic response to pumping from the nearby CARNRW water-supply wells. Transducers in guard wells K6-34 and W-PIT6-1819 continuously monitor water levels in the $Tnbs_1$ Deep HSU. During 2013, water level data from these wells indicated an ongoing hydraulic response from routine pumping in nearby water-supply wells CARNRW1 and CARNRW2 (approximately 200 to 400 ft to the east).

Total VOC concentration and tritium activity data are contoured for the Qt-$Tnbs_1$ HSU based on data collected during the second semester of 2013 and are presented on Figures 2.3-3 and 2.3-4, respectively. Secondary COC maps are not presented due to the fact that perchlorate was not detected during 2013 and nitrate was detected above its MCL in only one well. Because each CMR map is representative of contaminant concentrations during a particular semester, the maximum concentration shown on the CMR map may not match the maximum concentration for 2013 described in the text.

2.3.2.1.1. VOC Concentrations and Distribution

The VOC COCs in Pit 6 Landfill ground water identified in the Site-Wide ROD included chloroform, 1,2-DCA, cis-1,2-DCE, trans-1,2-DCE, PCE, 1,1,1-TCA and TCE. In the 2013 Five-Year Review for OUs 3 (Pit 6 Landfill) and 8, 1,2-DCA, cis- and trans-1,2-DCE, PCE, and 1,1,1-TCA were removed as COCs in Pit 6 ground water. Per the Five-Year Review, these VOCs will no longer be discussed in this section unless it is detected in a well. Only TCE and cis-1,2-DCE were detected in five Pit 6 Landfill ground water monitor wells at concentrations above the 0.5 µg/L reporting limit during 2013. Only TCE was detected at a concentration above its 5 µg/L MCL cleanup standard in one well (5.8 µg/L, Qt-$Tnbs_1$ South HSU monitor well EP6-09, January 2013). Cis-1,2-DCE concentrations are below the reporting limit in 28 of the 30 wells currently monitored, and are and have been below its cleanup standard since 1993 in the one well in which it is currently detected.

In the Qt-$Tnbs_1$ North HSU, TCE concentrations have decreased from a historic maximum of 1.4 µg/L (monitor well K6-36, 2001) to below the 0.5 µg/L reporting limit during 2013. No other VOCs were detected in the Qt-$Tnbs_1$ North HSU during 2013. Due to insufficient water, ground water samples have not been collected from monitor wells EP6-08 (since April 2008) and K6-24 (since January 2011). In 2012, to help resolve this problem, two new monitor wells were drilled in the Qt-$Tnbs_1$ HSU with screens at greater depths in saturated $Tnbs_1$, north of the fault, in the vicinity of EP6-08 and K6-24. As shown on Figure 2.3-1, well W-PIT6-2816 is located 30 feet east-southeast of well EP6-08 and W-PIT6-2817 is located 50 feet east-southeast of well K6-24. Sampled semi-annually (first and third quarters beginning in 2013), VOCs have not been detected above the reporting limit in these wells since installation and during 2013.

In the Qt-$Tnbs_1$ South HSU, TCE concentrations have decreased from a historic maximum of 250 µg/L (monitor well K6-19, 1988) to 1.6 µg/L (July 2013, K6-19) and a 2013 maximum concentration of 5.8 µg/L (monitor well EP6-09, January). During 2013, TCE was detected in four wells in the Qt-$Tnbs_1$ South HSU (monitor wells EP6-09, K6-16, K6-18 and K6-19) at concentrations above the reporting limit, barely exceeding the 5 µg/L MCL cleanup standard in only one well, EP6-09 (5.8 µg/L in January and 4.9 µg/L in July). During 2013, only two Qt-$Tnbs_1$ South HSU wells had detectable cis-1,2-DCE at 2.4 µg/L (monitor well K6-01S, January) and 0.8 µg/L (monitor well K6-18, July); both significantly below the 6 µg/L MCL cleanup standard. The presence of cis-1,2-DCE, a common anaerobic degradation product of TCE, suggests that some natural dechlorination may be occurring. Historic maximum cis-1,2-DCE concentrations for these wells are 9.8 µg/L (K6-01S, 1992) and 0.9 µg/L (K6-18, 2008).

TCE (and all VOCs) were not detected in the $Tnbs_1$ Deep HSU during 2013. During 2013, VOCs were not detected in guard wells W-PIT6-1819, K6-17, K6-22 and K6-34 nor from the two active CARNRW water-supply wells and two inactive CARNRW water-supply wells.

2.3.2.1.2. Tritium Concentrations and Distribution

Tritium was detected above the 100 picoCuries per liter (pCi/L) reporting limit in samples from four wells completed in both the Qt-$Tnbs_1$ North and Qt-$Tnbs_1$ South HSUs. Tritium has never been detected in Pit 6 Landfill ground water at activities exceeding the 20,000 pCi/L MCL cleanup standard.

In the Qt-$Tnbs_1$ North HSU, tritium activities have decreased from a historic maximum of 2,150 pCi/L (monitor well K6-36, 2000) to a 2013 maximum of 234 pCi/L (monitor well W-PIT6-2817, July). Well K6-36 has not been sampled since 2006 due to insufficient water. However, in an adjacent monitor well K6-35 (screened in a deeper interval) tritium was not detected above the 100 pCi/L reporting limit since 2009. Tritium activity isocontours on Figure 2.3-4 reflect current data including wells W-PIT-6-2816 and W-PIT6-2817, located downgradient of Pit 6, in the northern fault block.

In the Qt-$Tnbs_1$ South HSU, tritium activities have decreased from a historic maximum of 3,420 pCi/L (monitor well BC6-13, 2000) to a 2013 maximum of 271 pCi/L (monitor well K6-19, January); the activity level in K6-19 dropped in July to 209 pCi/L. The historic maximum tritium activity in well K6-19 is 2,520 pCi/L (1999). Well BC6-13, which is screened from 0 to 5 feet below ground surface and was used to monitor for contaminants in Spring 7, has been dry since 2000.

Tritium was not detected above 100 pCi/L in the $Tnbs_1$ Deep HSU during 2013. The historic maximum tritium activity in this HSU is 1,680 pCi/L (monitor well K6-26, 1999), well below its 20,000 pCi/L MCL cleanup standard.

During 2013, tritium activities were detected thrice in guard well W-PIT6-1819 at 123 pCi/L (January), 122 pCi/L (April) and 149 pCi/L (July); in October 2013, the tritium activity was less than the reporting limit (<100 pCi/L) in this well. Prior to 2013, tritium activities in well W-PIT6-1819 ranged from <100 pCi/L to 295 pCi/L (2007). This well is used to define the downgradient extent of tritium in ground water with activities above the 100 pCi/L background level. It is located approximately 100 feet west of the Site 300 boundary within the Carnegie SVRA residence area and about 200 feet west of the CARNRW1 and CARNRW2 water-supply wells. During 2013, tritium was not detected: (1) in guard wells K6-34, K6-22 or K6-17 nor (2) at activities above the 100 pCi/L reporting limit in any of the monthly ground water samples from the four CARNRW offsite wells.

2.3.2.1.3. Perchlorate Concentrations and Distribution

In the 2013 Five-Year Review for OUs 3 (Pit 6 Landfill) and 8, perchlorate was removed as a COC in Pit 6 ground water. Per the Five-Year Review, perchlorate will no longer be discussed in this section unless it is detected in a well. During 2013, perchlorate was not detected at or above the 4 µg/L reporting limit in any Qt-Tnbs$_1$ North, Qt-Tnbs$_1$ South, or Tnbs$_1$ Deep HSU ground water samples, including samples collected from guard wells and the CARNRW water-supply wells.

2.3.2.1.4. Nitrate Concentrations and Distribution

During 2013, nitrate was detected in samples collected from wells completed within the Qt-Tnbs$_1$ North and South HSUs.

In the Qt-Tnbs$_1$ North HSU, nitrate was detected in two wells during 2013. Guard well W-PIT6-1819 contained 2.1 mg/L (January) and monitor well W-PIT6-2817 yielded 0.62 mg/L of nitrate. Nitrate concentrations in these two Qt-Tnbs$_1$ North HSU wells were well below its 45 mg/L MCL cleanup standard and within the range of background. Nitrate was not detected in ground water samples from any wells completed in the Qt-Tnbs$_1$ North HSU at concentrations above the MCL cleanup standard or outside the range of nitrate background levels.

In the Qt-Tnbs$_1$ South HSU, nitrate was detected in ground water above the 45 mg/L MCL cleanup standard in one well, monitor well K6-23 at concentrations of 150 and 180 mg/L in January and July, respectfully. The historic maximum nitrate concentration detected in well K6-23 is 240 mg/L (2000). This well consistently yields ground water nitrate concentrations in excess of the MCL cleanup standard and is located in close proximity to the Building 899 septic system, which has been shown to be a likely source of the nitrate at this location (Dibley et al., 2013a).

During 2013, nitrate was detected in only one Tnbs$_1$ Deep HSU above the 0.5 mg/L reporting limit (EP6-09, 12 mg/L). Nitrate has never been detected in this HSU above its 45 mg/L MCL cleanup standard.

During 2013, nitrate was detected in guard well W-PIT6-1819 at 2.1 mg/L (January) but was below the 0.5 mg/L reporting limit in July. Nitrate was not detected in: (1) guard wells K6-34, K6-22 or K6-17, (2) water-supply well CARNRW1, or (3) inactive water-supply well CARNRW3 above the reporting limit. During 2013, nitrate was detected in water-supply well CARNRW2 (2.6 mg/L, March) and inactive water-supply well CARNRW4 (11 mg/L, February) at concentrations below the MCL clean standard.

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 in reducing contaminant concentrations, and (2) detect any new chemical releases from the landfill. In general, the primary ground water COCs (VOCs and tritium) at the Pit 6 Landfill OU continue to decline and ground water levels beneath the landfill remain approximately 50 ft below the buried waste. Ground water elevations have decreased beneath two key monitor wells located north of the fault (wells EP6-08 and K6-24). Two new wells (W-PIT6-2816 and W-PIT6-2817) were installed in the vicinity of these wells in 2012 with screens deeper in the Qt-Tnbs$_1$ HSU. Beginning in 2013, routine samples (semi-annually for primary COCs and annually for secondary COCs) were collected from these new wells.

In general, VOCs in ground water near Pit 6 continue to exhibit decreasing trends and the VOC plume extent is generally stable to decreasing. Concentrations of the VOC COCs 1,2-DCA, trans-1,2-DCE, PCE and 1,1,1-TCA are all below reporting limits in all Pit 6 wells. Concentrations of cis-1,2-DCE have been below its 6 µg/L cleanup standard since 1993. TCE concentrations in ground water remain below the 5 µg/L MCL cleanup standard in samples from all Pit 6 Landfill OU wells except for one well, EP6-09, where it was detected slightly above the 5 µg/L cleanup standard during the first semester 2013 (5.8 µg/L, January) and declined below the cleanup standard during the second semester (4.9 µg/L, July). As recommended in the recent Five-Year Review for OUs 3 and 8 (Buscheck et al., 2012), TCE concentrations will be monitored in ground water from well EP6-09 over the next five years and if concentrations increase or remain above 5 µg/L, remedial measures such as pump-and-treat or enhanced *in situ* bioremediation will be considered for this well.

Tritium activities in ground water continue to decrease toward background levels and remain far below the 20,000 pCi/L MCL cleanup standard. During 2013, the maximum tritium activity observed in Pit 6 wells was detected in well K6-19 at 271 pCi/L in January dropping to 209 pCi/L in July, in the same well. These low activities indicate that the MNA remedy for tritium in ground water at the Pit 6 Landfill OU 3 continues to be effective.

Perchlorate concentrations in Pit 6 area ground water have decreased from a maximum of 65.2 µg/L (following the 1998 El Niño in well K6-19) to below its reporting limit (4 µg/L) in all Pit 6 Landfill OU wells. Perchlorate concentrations have remained below its reporting limit (and 6 µg/L MCL cleanup standard) in all Pit 6 wells since March 2009.

Nitrate continues to be consistently detected in a single Pit 6 well (K6-23) above its 45 mg/L MCL cleanup standard. During 2013, nitrate detections in this well were 150 mg/L (January) and 180 mg/L (July). As stated above, well K6-23 is located in close proximity to the Building 899 septic system, which is the likely source of the nitrate at this location.

2.3.2.3. Pit 6 Landfill OU Performance Issues

Currently, there is very little contamination above ground water cleanup standards at the Pit 6 Landfill OU. Based on these results, the remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

2.4. High Explosives Process Area (HEPA) OU 4

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

Six GWTSs operate in the HEPA: Building 815-Source (815-SRC), Building 815-Proximal (815-PRX), Building 815-Distal Site Boundary (815-DSB), Building 817-Source (817-SRC), Building 817-Proximal (817-PRX), and Building 829-Source (829-SRC). A map of the HEPA

OU showing the locations of monitor and extraction wells and treatment facilities is presented on Figure 2.4-1.

The 815-SRC GWTS began operation in September 2000 removing VOCs (primarily TCE), HE compounds (RDX and High Melting Explosive [HMX]), and perchlorate from ground water. Ground water is extracted from wells W-815-02 and W-815-04, with a current combined flow rate of approximately 1.2 gpm. The current GWTS configuration includes two ion-exchange resin columns connected in series for perchlorate removal, and three aqueous-phase GAC canisters (also connected in series) for VOC and HE compound removal. The treated effluent is injected into well W-815-1918 for *in situ* denitrification in the $Tnbs_2$ HSU. In December 2012, W-815-2803 was added to the extraction wellfield and connected to the 815-SRC treatment facility. This extraction well has a flow rate of <0.5 gpm.

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

The 815-DSB GWTS began operation in September 1999 removing low concentrations (less than 10 µg/L) of TCE from ground water extracted near the Site 300 boundary. Ground water is extracted from wells W-35C-04, W-6ER, and W-815-2608 at a combined flow rate of approximately 3 to 4 gpm. The current GWTS configuration includes a Cuno filter to remove particulates and three aqueous-phase GAC canisters connected in series for TCE removal. The treated effluent is discharged to an infiltration trench.

The 817-SRC GWTS began operation in September 2003 removing HE compounds (RDX and HMX) and perchlorate from ground water. Well W-817-01 extracts ground water from a very low yield portion of the $Tnbs_2$ aquifer. It pumps ground water intermittently using solar power at current flow rates ranging from 40 to 160 gallons per month. The current GWTS configuration includes a Cuno filter to remove particulates, two ion-exchange resin columns connected in series for perchlorate removal, and three aqueous-phase GAC canisters (also connected in series) for HE compound removal. Treated ground water is injected into upgradient injection well W-817-06A where an *in situ* natural denitrification process reduces the nitrate to nitrogen in the $Tnbs_2$ HSU.

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

The 829-SRC GWTS began operation in August 2005 removing VOCs, nitrate, and perchlorate from ground water. The GWTS configuration included two ion-exchange columns containing ion-exchange resin connected in series for perchlorate removal, three aqueous phase GAC canisters (also connected in series) for VOC removal, and a biotreatment unit to treat nitrate. However, the biotreatment unit was not effectively removing nitrate. An Explanation of Significant Difference (ESD) (Ferry et al., 2010) was submitted to the regulatory agencies in 2010. The ESD documented the decision to use ion-exchange treatment media to remove nitrate from ground water, rather than the existing biotreatment unit. Modifications to 829-SRC were initiated in 2010 and were completed June 2011. Solar power was used to extract ground water from well W-829-06 at a flow rate of approximately 1 to 10 gallons per day (gpd). The configuration included two ion-exchange resin columns connected in series for perchlorate and nitrate removal and three aqueous phase GAC canisters (also connected in series) for VOC removal. Treated effluent was injected into upgradient well W-829-08. During startup testing of the 829-SRC facility following system upgrades, methylene chloride was detected in the system effluent above the discharge limit of 0.5 µg/L. Methylene chloride was not a contaminant of concern in the area or detected in the facility influent. Investigations determined that the ion-exchange resin contained VOCs left over from the manufacturing process. Apparently, low production, intermittent flow conditions can allow residual VOCs in the resin to diffuse into the water surrounding the resin beads. At constant, higher flow treatment systems, VOCs do not diffuse out of the ion-exchange resin at measurable concentrations, or at concentrations that impact the effectiveness of the GAC to remove these compounds. The intermittent flow and very low production at 829-SRC resulted in stagnation of the extracted ground water in the ion-exchange resin vessels that promotes dissolution of these organic residues. DOE proposed and the regulatory agencies agreed to discontinuing ground water treatment at 829-SRC and treating ground water extracted from W-829-06 at the 815-SRC ground water treatment system at the July 18, 2013 Remedial Project Manager's Meeting. This change was implemented in September 2013 as described in Section 2.4.1.5.

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

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

2.4.1.1. HEPA OU Facility Performance Assessment

The monthly ground water discharge volumes, extraction flow rates, and operational hours in the second semester of 2013 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 2013 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 collected during the second semester of 2013 are presented in Tables 2.4-7 through 2.4-9. The pH measurement results are presented in Appendix A.

2.4.1.2. HEPA OU Operations and Maintenance Issues

The following maintenance activities and operational issues occurred at the 815-SRC, 815-PRX, 815-DSB, 817-SRC, 817-PRX, and 829-SRC GWTSs during the second semester 2013:

815-SRC GWTS

- Extraction well W-815-04 was restarted temporarily on July 22 for testing and was back online on July 23.
- The GWTS was shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- The GWTS was offline from October 27 to 29 due to a site power outage.
- Interlock checks were performed on October 30.
- The GWTS was shut down from November 11 to November 19 to replace spent granular activated carbon and ion-exchange resin treatment media. The flow meter for extraction well W-815-04 was replaced while the GWTS was offline.

815-PRX GWTS

- The GWTS was shut down on August 1 to repair a small leak (drips) at the threaded adaptor for the check valves in the influent pipeline. Upon inspection, the locking ring on well W-815-08 pipeline union also showed signs of cracking. The union and threaded adaptor were repaired and the facility restarted the same day.
- The GWTS was shut down from October 23 to 24 to perform maintenance.
- The GWTS was offline from October 27 to 29 due to a site power outage.
- Interlock checks were performed on October 30.
- The GWTS was shut down from November 11 to November 18 to replace spent granular activated carbon treatment media. The pressure gauge for extraction well W-818-08 was replaced while the GWTS was offline.
- The GWTS was shut down on December 3 to prevent freeze damage and remained offline for the remainder of the reporting period.

815-DSB GWTS

- The GWTS was shut down on October 20 and was restarted the next day after the fuses were removed, checked and reinstalled for the flow meter and level transducer at extraction well W-6ER.
- The GWTS was offline from October 27 to 29 due to a site power outage.
- The GWTS was found offline on December 9. No issues were identified and the system was restarted.

817-SRC GWTS

- The GWTS shut down on August 12 due to electrical issues. New batteries and a charge controller were installed. The GWTS was restarted on August 14.
- Maintenance was performed on August 19.

- The GWTS was shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- The GWTS was shut down on December 3 to prevent freeze damage and remained offline for the remainder of the reporting period.

817-PRX GWTS

- The GWTS operated intermittently at the beginning of the reporting period for system cleaning/GAC change out. The GWTS was restarted on July 17. The system was shut down temporarily on July 22 to repair a broken pipe union. The system was again offline temporarily for maintenance on August 13.
- The GWTS was shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- The GWTS was offline from October 27 to 29 due to a site power outage.
- Extraction well W-817-2308 was shut down on December 3 to prevent freeze damage and remained offline for the remainder of the reporting period.

829-SRC GWTS

- The GWTS was shut down on June 17 for system cleaning/GAC change out after continued detection of VOCs throughout the system related to ion-exchange resin problems.
- The system was restarted on July 8, with all processed water being discharged to a collection tank.
- The GWTS was shut down on September 19 to implement the switch to the effluent collection system and treatment at 815-SRC GWTS (see Section 2.4 and 2.4.1.5).
- The extraction system was shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- Ground water extraction was halted on October 31 so that the accumulated water in the storage tank could be transferred to the 815-SRC for treatment. The water transfer was performed on November 4 and ground water extraction resumed on November 5.
- The extraction well (W-829-06) was shut down on December 3 to prevent freeze damage and remained offline for the remainder of the reporting period.

2.4.1.3. HEPA OU Compliance Summary

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

The 829-SRC GWTS operated during the first part of the reporting period, but with the effluent being discharged to a collection vessel. Results of samples collected during this period indicated that organic constituents from the ion-exchange resins were still leaching out of the resin beads and into the water within the columns. However, no VOCs were detected in the effluent treated water that was being collected. Therefore, this system remained within compliance 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 monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.4-10. The only modifications made to the plan included the following:

1) Modification of monitoring requirements for 829-SRC due to the discontinuation of ground water treatment at this location. Since water extracted at this system began being treated at the 815-SRC GWTS, only influent samples will be collected.

2.4.1.5. HEPA OU Treatment Facility and Extraction Wellfield Modifications

The only modification made within the HEPA OU during the reporting period was the discontinuation of ground water treatment at 829-SRC. The regulatory agencies granted permission to discontinue treatment of extracted ground water from the single extraction well, W-829-06, at 829-SRC at the July 18, 2013 Remedial Project Manager's Meeting. All treatment media vessels were removed from this system. Water extracted from well W-829-06, is being pumped directly to a collection tank. The tank is outfitted with shutdown switches to prevent over filling of the collection tank. When full, the water is transported to 815-SRC for treatment. All equipment related to injection of treated water to the injection well W-829-08 has been removed. This well has been converted to a monitor well.

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; forty required analyses in nine wells and one spring were not performed because the wells were dry or there was insufficient water to collect the samples, five required analyses were not performed due to unsafe conditions at monitor well W-815-05 (area around well has been eroded), and nineteen required analysis were not performed due to inoperable pumps in six wells. The pumps in wells W-35C-06, W-6ES, W-806-06A, and W-827-03 were not operable during first quarter. The pumps in wells W-35C-06, W-6ES, and W-827-03 were replaced in May, April, and August 2013, respectively. The pump in well W-806-06A is scheduled for testing during the first quarter of 2014. Third quarter samples could not be collected from water supply well WELL20 because the pump was down while LLNL performed maintenance and fourth quarter samples could not be collected from water supply well WELL18 because the pump was offline while damage caused by freezing temperatures was repaired.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

Ground water elevations for the Tpsg-Tps and $Tnsc_{1b}$ HSUs are posted on Figures 2.4-2 and 2.4-8, respectively. The ground water elevation contour map including hydraulic capture zones for the $Tnbs_2$ HSU are presented on Figure 2.4-3.

2.4.3. HEPA OU Remediation Progress Analysis

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

2.4.3.1. HEPA OU Mass Removal

The monthly ground water mass removal estimates for the second semester of 2013 are summarized in Tables 2.4-12 through 2.4-17. The total mass removed during the 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-ADNT, perchlorate and nitrate are secondary COCs. Most of the HEPA ground water contamination occurs in the $Tnbs_2$ HSU. Some COCs (TCE, RDX, HMX, perchlorate and nitrate) have also been detected in perched ground water of the Tpsg-Tps HSU in the vicinity of Buildings 815 and 817. Minor concentrations of VOCs, perchlorate and nitrate are also present in perched ground water located in the $Tnsc_{1b}$ HSU beneath the former Building 829 Waste Accumulation Area (WAA). The WAA is located in the northwest portion of HEPA. No contamination has been detected in the Upper and Lower $Tnbs_1$ HSUs in the HEPA OU. Figure 2.4-1 shows the location of wells in the HEPA OU.

Total VOC concentration data are contoured for the $Tnbs_2$ HSU (Figure 2.4-4) and posted for Tpsg- Tps and $Tnsc_{1b}$ HSUs on Figures 2.4-2 and 2.4-8, respectively. Isoconcentration contour and posted concentration maps for the secondary COCs are presented on: (1) Figure 2.4-2 for the Tpsg- Tps HSU, (2) Figures 2.4-5 through 2.4-7 for the $Tnbs_2$ HSU, and (3) Figure 2.4-8 for the $Tnsc_{1b}$ HSU located in the Building 829 former burn pit area. Because each CMR map is representative of contaminant concentrations during a particular semester, the maximum concentration shown on the CMR map may not match the maximum concentration for 2013 described in the text.

2.4.3.2.1. VOC Concentrations and Distribution

VOC concentrations and distribution in ground water in the Tpsg-Tps and $Tnbs_2$ HSUs in the HE Process Area are discussed below.

Tpsg-Tps HSU

VOCs have been detected in the sands and gravels of the Tpsg-Tps HSU that consist of mainly TCE, but also carbon tetrachloride, total-1,2-DCA, cis-1,2-DCE, chloroform and 1,1-DCE. Overall, these VOC concentrations have been stable or decreasing over time.

During 2013, the maximum total VOC concentration detected in samples from Tpsg-Tps wells was 36 µg/L in 817-PRX extraction well W-817-2318 (March). The maximum historic concentration of total VOCs detected in this HSU is 450 µg/L in monitor well W-815-01 in 1992. Limited recharge has led to insufficient water for sampling in some wells screened in the Tps-Tpsg HSU, including well W-815-01, which has not been sampled since 1999. VOCs have remained below the 0.5 µg/L reporting limit in Tpsg-Tps well W-35C-05, located near the site boundary.

TCE is the main VOC detected in the Tpsg-Tps HSU. However, as described in the first paragraph of this section, other VOCs have also been detected. During 2013, concentrations of 1,1-DCE below its 6 µg/L MCL cleanup standard were detected in four samples collected from monitor well W-809-01. This well is screened in the Tpsg-Tpgs HSU and is located near the Building 815 source area.

During 2013, chloroform was detected below the MCL cleanup standard at low concentrations of 1.6 µg/L or less in three Tpsg-Tps monitor wells: W-809-01, W-814-01 and W-815-1928. Other trihalomethanes, including bromodichloromethane (W-815-1928; 0.8 µg/L; March and 0.7 µg/L; September), have also been detected at concentrations below the MCL cleanup standards in monitor well W-815-1928. This well may have been impacted by a leaking chlorinated water source (e.g., leaking pipe) and water has been observed discharging at the surface near this well.

Carbon tetrachloride, cis-1,2-DCE and 1,2-DCA were detected only at one location in the Tpsg-Tps HSU during 2013, monitor well W-814-01. This well is located near the former Building 814 lagoon. During 2013, carbon tetrachloride was detected in well W-814-01 on two occasions, at concentrations greater than or equal to the 0.5 µg/L State MCL, but below the 5 µg/L Federal MCL. In 2013, 1,2-DCA was detected in well W-814-01 during two sampling events at concentrations slightly above the 0.5 µg/L MCL cleanup standard. In 2013, cis-1,2-DCE was detected in well W-814-01 at a concentration of 1.0 µg/L, significantly below the 6 µg/L MCL cleanup standard during two sampling events.

Tnbs$_2$ HSU

In the Tnbs$_2$ HSU, the VOC plume is detached and has migrated from its source near Building 815. As a result, the highest VOC concentrations are found downgradient of Building 815 in the 815-PRX extraction wellfield. Total VOC concentrations in Tnbs$_2$ HSU ground water have decreased from a historic maximum of 110 µg/L in extraction well W-818-08 (1992) to a 2013 maximum of 45 µg/L in nearby monitor well W-818-11 (September).

During 2013, TCE was the main VOC detected in Tnbs$_2$ HSU, although 1,1-DCE, bromodichloromethane and chloroform were also detected. During 2013, concentrations of 1,1-DCE significantly below its 6 µg/L MCL cleanup standard were detected in several wells screened in the Tnbs$_2$ HSU. During 2013, both chloroform and bromodichloromethane were detected in the Tnbs$_2$ HSU in monitor well W-827-02 at low concentrations that were significantly below the 80 µg/L MCL cleanup standard.

In February 2013, methylene chloride was detected in ground water at a concentration of 0.5 µg/L in Tnsc$_2$ HSU monitor well W-35C-07. This concentration is significantly below the 80 µg/L MCL cleanup standard.

VOCs continue to be detected in ground water from the Tnbs$_2$ HSU at the southern end of Building 832 Canyon. This contamination probably originates from sources located in both the Building 832 Canyon OU and the HEPA OU. In June 2007, monitor well W-830-2216 was connected to the 830-DISS treatment facility as an extraction well. Since pumping began, VOC concentrations have steadily decreased from a historic maximum of 20 µg/L in 2007 to a 2013 maximum of 7.9 µg/L (April). A similar decrease in VOC concentrations has been observed in nearby monitor well W-830-13. During 2013, VOCs detected in wells W-830-2216 and W-830-13 were comprised entirely of TCE.

During 2013, TCE was detected at concentrations below the 5 µg/L MCL cleanup standard in four routine samples collected from $Tnbs_2$ onsite guard wells W-815-2110 and W-815-2111 located near the Site 300 boundary. The maximum TCE concentration in these onsite guard wells during 2013 was 1.8 µg/L in guard well W-815-2110 (June). VOCs were not detected in samples taken from any other onsite or offsite HEPA $Tnbs_2$ HSU guard wells. In addition, VOC concentrations were below the 0.5 µg/L reporting limit in all 32 routine and duplicate samples collected monthly from offsite water-supply well GALLO1. Duplicate GALLO1 samples are collected monthly for quality assurance/quality control purposes. Both the routine and duplicate samples were collected on the same date and sent to different laboratories for analysis.

At the 829-SRC treatment facility, VOC concentrations in ground water collected from extraction well W-829-06 ($Tnsc_{1b}$ HSU) have decreased from a historic maximum of 1,013 µg/L in 1993 to a 2013 maximum of 13 µg/L (June and November). During 2013, VOCs detected in extraction well W-829-06 were comprised primarily of TCE at concentrations ranging from below the 5 µg/L MCL cleanup standard (3.3 µg/L) in March to above the cleanup standard (13 µg/L) in June and November. Chloromethane was detected at a concentration 0.83 µg/L in one sample collected from extraction well W-829-06; this concentration is significantly below the cleanup standard. VOCs have never been detected in ground water from nearby monitor well W-829-1940 or in nearby monitor wells screened in the Lower $Tnbs_1$ HSU.

2.4.3.2.2. HE Compound Concentrations and Distribution

In the HEPA, HE compounds are present in the Tpsg-Tps and $Tnbs_2$ HSUs. In the Tpsg-Tps HSU, RDX was detected at a 2013 maximum concentration of 110 µg/L in monitor well W-809-04 (March). This is the first RDX detection in this monitor well. During 2013, RDX was also detected in monitor well W-815-1928 at a concentration of 78 µg/L (March). The cause of these recent detections is unknown; however, it is possible that an underground water pipeline leak may be mobilizing residual contaminants in the vadose zone near these wells.

During 2013, HMX was detected in the Tpsg-Tps HSU at a maximum concentration of 21 µg/L (March) in monitor well W-809-04 and in well W-815-1928 at a concentration of 14 µg/L (March). RDX and HMX were not detected at concentrations above the 1 µg/L cleanup standard in any other wells screened in the Tpsg-Tps HSU during 2013. However, because this HSU is only periodically saturated, many Tpsg-Tps monitor wells are frequently dry. The historic maximum RDX concentration detected in Tpsg-Tps HSU ground water is 350 µg/L (1998) in monitor well W-815-01; this well has been dry during all sampling attempts since 1999.

In the $Tnbs_2$ HSU, the historic maximum RDX ground water concentration was 204 µg/L detected in 1992 in 817-SRC extraction well W-817-01. This well had a 2013 maximum RDX concentration of 44 µg/L (February and April). Although concentrations of HE compounds initially exhibited a steadily decreasing trend, since 2000, stable RDX concentration trends have been observed in most $Tnbs_2$ HSU wells located near the 815-SRC and 817-SRC treatment facilities.

During 2013, the maximum RDX concentration in ground water collected from the $Tnbs_2$ HSU was 100 µg/L (September) in monitor well W-809-03; this well is located near injection well W-815-1918. RDX was not detected above the 1 µg/L reporting limit in the March 2013 sample collected from this well. During 2013, RDX concentrations in 815-SRC extraction well

W-815-04 decreased to 34 µg/L (August) and RDX concentrations in 815-SRC extraction well W-815-02 decreased to 47 µg/L (July).

The connection of a new extraction well to the 815-SRC facility (W-815-2803) during the second semester 2012 may be contributing to the decrease RDX concentrations observed in extraction wells W-815-02 and W-815-04 in 2013. Well W-815-2803 was installed to increase hydraulic capture of HE compounds and perchlorate in the 815 source area. During 2013, RDX concentrations detected in ground water in this extraction well were 23 µg/L (January) and HMX concentrations detected in ground water were 2.8 µg/L (January).

Overall, the leading (southwestern) edge of the RDX plume has remained relatively stable. However, RDX was detected for the first time in monitor well W-818-01, located on the southeast edge of the plume, at a concentration of 4.1 µg/L (March). In 2013, RDX was not detected in 815-PRX extraction wells W-818-08 and W-818-09. RDX was also not detected at concentrations above the 1 µg/L cleanup standard in any $Tnbs_2$ HSU guard wells during 2013.

HMX detections in the $Tnbs_2$ HSU have occurred near the 815-SRC and 817-SRC treatment facilities. HMX concentrations in $Tnbs_2$ HSU ground water have decreased from a historic maximum of 57 µg/L in 1995 (well W-817-01) to a 2013 maximum concentration of 23 µg/L in the same well (February). HMX was also detected during 2013 at lower concentrations in the $Tnbs_2$ HSU in several ground water samples collected from 815-SRC wells, including extraction well W-815-02 and monitor well W-809-03.

During 2013, 4-ADNT was detected in ground water at a maximum concentration of 14 µg/L (March) in Tpsg-Tps monitor well W-809-04. 4-ADNT was also detected in nearby $Tnbs_2$ monitor well W-809-03 at a concentration of 13 µg/L (September). This HE compound was not detected in any other wells located in the HEPA during 2013. The maximum historic concentration of 4-ADNT detected in the HEPA OU was 24 µg/L (extraction well W-817-01, 1997). In 2013, HE compounds such as 4-ADNT were only detected in wells where RDX was also present.

2.4.3.2.3. Perchlorate Concentrations and Distribution

During 2013, the maximum perchlorate concentration detected in Tpsg-Tps HSU ground water was 18 µg/L in monitor well W-6CS (March). This concentration is a new historic maximum for the Tpsg-Tps HSU. It is also a historic maximum concentration for this well (former maximum concentration in W-6CS, 6.3 µg/L, March, 2012). Previously, the historic maximum perchlorate concentration detected in this HSU was 17 µg/L in the 817-PRX extraction well W-817-2318 in 2008.

In the $Tnbs_2$ HSU, perchlorate concentrations have decreased from a historic maximum of 50 µg/L (extraction well W-817-01, 1998) to a 2013 maximum of 31 µg/L in the same well (February). Perchlorate concentrations near 817-SRC extraction well W-817-01 remain stable relative to historical trends. Southeast of the 817-PRX treatment facility, the leading edge of the perchlorate plume expanded slightly and perchlorate was detected just above the reporting limit in monitor well W-6G (4.1 µg/L, March 2013). The previous perchlorate detection in this well occurred in March 2007 at 5.7 µg/L. Just beyond the southern edge of the current perchlorate plume, perchlorate was not detected above the reporting limit in monitor well W-818-06 during 2013. In March 2011, perchlorate was detected in this well at a concentration of 4.3 µg/L.

Perchlorate concentrations reached a 2013 concentration of 10 µg/L (September) in monitor well W-809-03 after increasing in 2002 due to the mobilization of perchlorate by injection of treated ground water into nearby 815-SRC injection well W-815-1918. During 2013, a perchlorate concentration of 13 µg/L (January) was detected in ground water collected from the recently installed well W-815-2803. This well was converted to an 815-SRC extraction well in December 2012. Perchlorate was not detected in any of the $Tnbs_2$ HSU guard wells during 2013.

Perchlorate concentrations in $Tnsc_{1b}$ HSU extraction well W-829-06 have decreased from a historic maximum of 29 µg/L (2000) to a 2013 maximum of 12 µg/L (November). Perchlorate was not detected above its reporting limit in monitor well W-829-1940 during 2013.

2.4.3.2.4. Nitrate Concentrations and Distribution

During 2013, the maximum nitrate concentration detected in ground water from the Tpsg-Tps HSU well W-6CS was 700 mg/L (March). Because there are no known nitrate sources near this well such as septic systems or other Site 300 operations, the source of this nitrate is unknown. It is possible that a pre-Site 300 sheep ranch discovered in a historic photo of the area may be the source of this localized elevated nitrate. Ground water sampled from all other wells screened in this HSU had significantly lower nitrate concentrations. During 2013, the maximum nitrate concentration found in other wells screened in this HSU was 130 mg/L in 817-PRX extraction well W-817-2318 (March).

During 2013, nitrate concentrations in ground water collected from the $Tnbs_2$ HSU ranged from <0.5 mg/L in the vicinity of the Site 300 boundary to a maximum of 140 mg/L in monitor well W-817-2609 (March). Well W-817-2609 was installed in 2010 to monitor remediation south of the 817-PRX treatment facility. During 2013, nitrate was not detected above the reporting limit in 24 samples collected from offsite water-supply well GALLO1, including duplicate samples. Duplicate samples are routinely collected as part of DOE/NNSA's quality assurance program. Nitrate was not detected above the 45 mg/L MCL cleanup standard in ground water from any of the $Tnbs_2$ HSU guard wells sampled during this reporting period.

During 2013, the maximum nitrate concentration detected in ground water collected from the $Tnsc_{1b}$ HSU was 75 mg/L (extraction well W-829-06, June). The nitrate concentration detected in monitor well W-829-1940 during 2013 was 37 mg/L (March).

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

2.4.3.3. HEPA OU Remediation Optimization Evaluation

Remediation at the HEPA OU is managed by balancing ground water extraction at the site boundary with pumping upgradient in the source and proximal areas. This strategy is designed to capture the leading edge of the VOC plume while minimizing the migration of multiple, co-mingled plumes from the source areas. Overall, the spatial extent of the total VOC, perchlorate and nitrate plumes in the HEPA did not change significantly during 2013.

Contaminants in the Tpsg-Tps HSU, although limited in areal extent, include VOCs, perchlorate, HE compounds and nitrate. To remediate this HSU, efforts have been focused in the area with the highest concentrations located near 817-PRX extraction well W-817-2318. This extraction well removes ground water from the Tpsg-Tps HSU near Spring 5. Although remediation efforts are hampered by limited recharge, low ground water yield and dry conditions, concentrations of all COCs in the Tpsg-Tps HSU continue to decline with a few exceptions. Contaminants near Tpsg-Tps HSU monitor wells W-815-1928 and W-809-04 may have been mobilized by a nearby water source that has been observed in the past discharging at the surface near monitor well W-815-03. The source of this water is unknown, but could be a clean water pipeline leak.

HE compounds RDX and HMX were also detected for the first time in Tpsg-Tps HSU monitor well W-809-04. This well is located downgradient of monitor well W-815-1928. As recommended in the HEPA Five-Year Review Report (Helmig et al., 2011), an additional monitor well will be drilled in fiscal year 2014 in the Tpsg-Tps HSU. The purpose of this well is to help determine contaminant concentrations in the deeper portions of the Tpsg-Tps HSU near monitor well W-815-01.

In the $Tnbs_2$ HSU, extraction wells W-818-08 and W-818-09 continue to capture the areas with the highest VOC concentrations. This extracted groundwater is treated at the 815-PRX treatment facility. During the early part of 2011, extraction flow rates were increased slightly at this facility, resulting in a larger zone of hydraulic capture. COC concentration trends in these wells remained stable during 2013, as these wells continue to capture contaminants from upgradient sources.

Extraction well flow rates at the 817-PRX facility are limited by the injection capacity of the two treated effluent injection wells: W-817-02 and W-817-2109. To maximize injection capacity, treated ground water is now injected under pressure. This allowed for a moderate increase of 0.5 gpm in flow rate from W-817-03 for a total treatment facility rate of 2 gpm.

Extraction wells W-6ER, W-35C-04, and W-815-2608 capture VOCs along the southern site boundary at the leading edge of the plume and upgradient of offsite water-supply well GALLO1. VOC concentration trends in all three 815-DSB extraction wells remain stable. Although total VOC concentrations in new extraction well W-815-2608 remain low (< 2 µg/L), the extraction well increased hydraulic capture and total VOC mass removed at the 815-DSB treatment facility. In the future, however, the flow rate from this well may be adjusted to optimize VOC mass removal while minimizing the amount of clean water that is within the hydraulic capture zone of this well. This interpretation is based on the hydrographs from nearby clean guard wells W-6H and W-6J, which show a hydraulic response to W-815-2608 extraction well pumping. No other VOCs are present above the reporting limit in this extraction well.

The overall footprint of the RDX plume in the $Tnbs_2$ HSU did not change significantly during 2013. RDX concentrations continue to fluctuate above and below the 1 µg/L reporting limit near the leading edge of the plume. It is possible that continued pumping of 815-PRX extraction wells W-818-08 and W-818-09 has influenced the leading edge of the RDX plume resulting in a detection of 4.1 µg/L (March) in monitor well W-818-01, located upgradient from these extraction wells. In addition, HMX was detected for the first time in well W-6CD at a concentration 1.3 µg/L (March 2013). Additional samples will be collected during 2014 to confirm whether this result is representative. RDX and HMX were also detected for the first time in Tpsg-Tps monitor well W-809-04. This well is located in the 815-SRC area where an unknown water source (leaking pipe) was observed discharging at the surface.

Since 2005, RDX concentrations have exhibited a transient increase in monitor well W-809-03, possibly due to the mobilization of residual RDX in the vadose zone near 815-SRC injection well W-815-1918. Both RDX and HMX were detected in this well during 2013. Since

2008, RDX concentration trends have remained stable in 815-SRC extraction wells W-815-02 and W-815-04.

Perchlorate concentrations in the $Tnbs_2$ HSU have decreased steadily since monitoring for this COC began in 1998 and the extent of the plume has decreased near the 815-SRC and 817-SRC treatment facilities. Historically, the 817-SRC (W-817-01) and 817-PRX (W-817-03 and W-817-04) extraction wells have had the highest perchlorate concentrations in the HEPA. Although perchlorate in monitor well W-809-03 increased recently due to the possible mobilization of this contaminant in the vadose zone by the injection of water into W-815-1918, this trend appears to have stabilized. Nitrate concentrations in the confined portions of the $Tnbs_2$ HSU near the Site 300 boundary continue to be near or below the reporting limit, demonstrating the continued effectiveness of monitored natural attenuation (MNA) of nitrate even under pumping conditions.

The 829-SRC GWTS was a low-flow facility that extracts and treats perched ground water located beneath the WAA in the $Tnsc_{1b}$ HSU. During the first semester 2013, treated ground water was diverted to a portable water tank rather than being injected in well W-829-08 to allow for additional resin and GAC loading evaluations. During the second semester 2013, a decision was made to transport treated and extracted ground water to the 815-SRC treatment facility where it is injected into W-815-1918. Well W-829-08 is now a monitor well and will be sampled per compliance monitoring requirements.

Throughout the reporting period, pumping from HEPA extraction wells has been effective in capturing COCs and preventing further migration of contaminated ground water towards the Site 300 southern boundary. During this time, VOCs were not detected at offsite water-supply well GALLO1 and VOCs in onsite guard wells W-815-2110 and W-815-2111 remained stable at very low concentrations. Upgradient and downgradient pumping will continue to be balanced so that hydraulic capture at the Site 300 boundary is maintained without accelerating migration from upgradient sources. TCE concentrations in onsite guard wells near the site boundary have remained stable for the past three years and, as discussed above, TCE concentrations in the new 815-DSB extraction well W-815-2608 also remain low and stable. Close monitoring of VOC concentrations in the southern site boundary area will also continue, especially near offsite water-supply well GALLO1.

During 2013, the total VOC mass removed from all HEPA treatment facilities was 151 g; the total perchlorate mass removed was 92 g; the total RDX removed was 173 g. Table Summ-1 lists the mass removed by each individual HEPA treatment facility. Nitrate in the $Tnbs_2$ HSU undergoes *in situ* biotransformation to benign nitrogen gas by anaerobic-denitrifying bacteria.

2.4.3.4. HEPA OU Remedy Performance Issues

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

2.5. Building 850/Pit 7 Complex OU 5

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

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

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

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

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

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

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

1. A subsurface drainage network on the western hillslope.

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

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

The Pit 7-Source (PIT7-SRC) GWTS began operation in May 2010. Three existing monitor wells, NC7-25, NC7-63 and NC7-64, were converted to extraction wells and three wells were drilled to serve as extraction wells (W-PIT7-2305, W-PIT7-2306 and W-PIT7-2307). Three additional wells, W-PIT7-2703, W-PIT7-2704, and W-PIT7-2705, were added to the extraction wellfield in 2012. The GWTS removes uranium, VOCs, nitrate, and perchlorate from ground water in wells within the Quaternary alluvium/Weathered bedrock (Qal/WBR) HSU (NC7-63, NC7-64, W-PIT7-2306, W-PIT7-2703, W-PIT7-2704 and W-PIT7-2705), $Tnbs_1$/$Tnbs_0$ bedrock HSU (NC7-25), and both HSUs (W-PIT7-2305 and W-PIT7-2307). The GWTS extracts ground water at an approximate combined flow rate of 0.2 gpm. The current GWTS configuration includes three ion-exchange resin canisters for the removal of uranium followed by three ion-exchange resin canisters containing a perchlorate-selective resin that is also effective in removing nitrate. Ground water that has been treated to remove uranium, perchlorate, and nitrate is then piped through three aqueous-phase GAC canisters to remove VOCs. The treated water, which still contains tritium, is discharged to an infiltration trench.

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

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

2.5.1. Building 850 Area of OU 5 Ground Water Monitoring

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

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; sixty-six required analyses in eleven wells and two springs were not performed because the wells were dry or there was insufficient water to collect the samples, seven required analysis were not performed due to the bioremediation treatability study, and twenty-eight required analyses were not performed due to an inoperable pump in wells K1-01C and NC2-17. The pump was replaced in well K1-01C in July and December 2013 when it failed again. The pump was replaced in well NC2-17 in September 2013.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

Ground water elevation contour maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs within the OU are presented on Figures 2.5-2 and 2.5-3, respectively. Ground water elevations in both HSUs have generally declined since spring 2011 due to lower than average rainfall during water years 2012 and 2013.

2.5.2. Building 850 Area of OU 5 Remediation Progress Analysis

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

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

In the Building 850 area of OU 5, tritium and perchlorate are the primary COCs detected in ground water; depleted uranium and nitrate are secondary COCs. These constituents have been identified within the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs. The distribution of tritium in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs, based on data collected during second semester 2013 (primarily the fourth quarter), is contoured on Figures 2.5-4 and 2.5-5, respectively. The distribution of perchlorate in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs, based on data collected during first semester 2013 (primarily the second quarter), is contoured on Figures 2.5-10 and 2.5-11, respectively. Concentrations of uranium and nitrate in Qal/WBR and $Tnbs_1/Tnbs_0$ ground water, based on data collected during first semester 2013 (primarily the second quarter), are presented on Figures 2.5-6 through 2.5-9. The COC data presented on Figures 2.5-4 through 2.5-11 represent specific time periods during 2013, and therefore, some of the data discussed in the text, for example, fourth quarter 2013 perchlorate data from the *in situ* bioremediation treatment zone downgradient of the Building 850 Firing Table, are not displayed on the figures.

2.5.2.1.1. Tritium Activities and Distribution

During 2013, the only ground water samples with tritium activity exceeding the 20,000 pCi/L MCL cleanup standard were collected from Qal/WBR HSU monitor well NC7-70 (27,600 pCi/L, January, and 24,000 pCi/L, December), located approximately 20 feet downgradient (east) of the Building 850 Firing Table. During 2012, five wells (NC7-28, NC7-61, NC7-70, W-850-05 and W-850-2417) located downgradient of the firing table contained ground water with tritium activities that exceeded the 20,000 pCi/L MCL cleanup standard. The maximum tritium activities in ground water downgradient of Building 850 have decreased from a historic maximum of 566,000 pCi/L (monitor well NC7-28, 1985) to the 2013 maximum of 27,600 pCi/L in NC7-70 (January). Well NC7-28 is located about 225 feet east and downgradient of well NC7-70. The 2012 maximum tritium activity of 38,300 pCi/L also occurred in a sample from well NC7-70 (May). Overall, tritium activities continue to decline in most portions of the Building 850 plume with the exception of a slight increasing trend seen in ground water tritium activities in wells in the farthest downgradient portion of the plume near Pit 1.

Wells W-PIT2-2301 and W-PIT2-2302, both screened in the Qal/WBR HSU and located in Elk Ravine downgradient of the Pit 2 Landfill, did not contain sufficient water for sampling during 2013. All samples collected in 2012 from these wells yielded tritium activities within background range (<100 pCi/L). Given the background activities of tritium in the Qal/WBR HSU samples from previous years, tritium from Building 850 is apparently not present in this HSU downgradient of the Pit 2 Landfill.

During 2013, the extent of tritium exceeding the 20,000 pCi/L MCL cleanup standard was limited to one well (NC7-70) located immediately downgradient of the Building 850 Firing Table. The extent of ground water with tritium in excess of background is stable (similar to that of previous years). However, the extent of tritium in ground water above the cleanup standard continues to decrease.

2.5.2.1.2. Uranium Concentrations and Distribution

During 2013, uranium analyses were performed primarily by alpha spectroscopy with selected samples analyzed by Inductively Coupled Plasma - Mass Spectrometry (ICP-MS). High precision uranium isotope data (uranium-235/uranium-238 [$^{235}U/^{238}U$] atom ratio) for determining the presence of depleted uranium are only available by ICP-MS analysis. The presence of depleted uranium is indicated by a $^{235}U/^{238}U$ atom ratio of less than 0.007. Historic uranium isotope data indicate that distributions of ground water containing some added depleted uranium extend downgradient about 1,200 feet within the Qal/WBR HSU, and 700 feet within the $Tnbs_1/Tnbs_0$ HSU, from the Building 850 Firing Table and have remained relatively stable.

Total uranium activities in ground water samples from two wells in the Building 850 area, wells NC7-28 and W-850-2315, exceeded the 20 pCi/L MCL cleanup standard during 2013. The maximum 2013 total uranium activity, a new historic maximum, was 24 pCi/L in the January sample from well NC7-28, located immediately downgradient of the Building 850 firing table. Subsequent samples, collected in May and December, had total uranium activities of 9.8 pCi/L and 4.6 pCi/L, respectively. Historically, well NC7-28 has yielded the highest uranium activities at Building 850. Well NC7-28 is located immediately downgradient of ethyl lactate injection wells W-850-2417 and NC7-70. Prior to ethyl lactate injection, which began in September 2011, uranium activity in the July 2011 ground water sample from this well was 9.8 pCi/L. After ethyl lactate injection began, uranium activities in samples from this well have ranged between 2 pCi/L and 24 pCi/L. Injection of ethyl lactate into ground water lowers the pH of the ground water and creates reducing conditions. Short-term decreases in total uranium activity in ground water are a product of the reducing conditions that lower the solubility of uranium. Uranium activities rebound as dissolved oxygen concentrations rise, and uranium activities in excess of pre-injection activities may result due to the lowered pH that increases uranium solubility and may mobilize depleted and natural uranium sorbed/precipitated onto aquifer mineral surfaces. The other well with ground water total uranium activities exceeding the 20 pCi/L MCL cleanup standard during 2013 was W-850-2315. The total uranium activity in the April ground water sample from well W-850-2315 was 21 pCi/L. The uranium isotopic composition in ground water sampled from this well indicates natural uranium only. Well W-850-2315 is completed in the $Tnbs_1/Tnbs_0$ HSU and is located 1,400 feet south-southeast (cross-gradient) of Building 850. In 2012, well W-850-2315 yielded the highest uranium activity in the Building 850 area (20 pCi/L, May).

Although depleted uranium has been detected in Qal/WBR and $Tnbs_1/Tnbs_0$ HSU ground water downgradient of the Pit 2 Landfill and from wells in the $Tnbs_1/Tnbs_0$ HSU north of the Pit 2 Landfill, total uranium activities in recent years have been well below the 20 pCi/L MCL cleanup standard. During 2013, the Qal/WBR HSU wells downgradient of Pit 2, W-PIT2-2301 and W-PIT2-2302, were not sampled due to insufficient water and declining water levels during drought conditions. Of the $Tnbs_1/Tnbs_0$ HSU wells located downgradient of Pit 2, NC2-08 and K2-01C, the ground water sample from well NC2-08 contained 2.7 pCi/L of natural uranium, and well K2-01C was not sampled due to an inoperable pump. The 2013 ground water samples from $Tnbs_1/Tnbs_0$ HSU wells W-PIT2-1934 and W-PIT2-1935, located north of Pit 2, contained 3.9 pCi/L and 2.7 pCi/L, respectively. The $^{235}U/^{238}U$ atom ratio of the sample from well W-PIT2-1934 indicates some added depleted uranium; however, this most recent result continues an increasing trend toward a natural ratio.

2.5.2.1.3. Nitrate Concentrations and Distribution

Nitrate was detected at concentrations at or above the 45 mg/L MCL cleanup standard in samples from ten Building 850 area wells during 2013. The 2013 maximum nitrate concentration was 190 mg/L, a new historic local maximum, in the April ground water sample from monitor well NC7-29. The 2012 maximum nitrate concentration of 180 mg/L (May) was also detected in a ground water sample from monitor well NC7-29. Well NC7-29, screened in the $Tnbs_1/Tnbs_0$ HSU, is located south and cross-gradient of Building 850. Nitrate concentrations in ground water at the two *in situ* bioremediation treatment zone wells upgradient of well NC7-61, monitor wells NC7-28 and W-850-2417, were below the 0.5 mg/L reporting limit in samples collected in May and December as a result of denitrification related to ethyl lactate injection in well W-850-2417 (see Section 2.5.2.2 for details on the treatability study). Following the injection of ethyl lactate into well NC7-70 during August and September of 2013, nitrate concentrations in samples from this well, located upgradient of wells NC7-28 and W-850-2417, decreased from 32 mg/L (January) to below the 0.5 mg/L reporting limit (December).

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

2.5.2.1.4. Perchlorate Concentrations and Distribution

During 2013, perchlorate concentrations exceeding the 6 µg/L MCL cleanup standard were detected in ground water samples from 22 wells east and south (downgradient) of Building 850 and south and east (downgradient) of Pit 1 and Pit 2 in and immediately north of Elk Ravine. Perchlorate concentrations are similar to or have decreased slightly from 2012. Wells downgradient of the Building 850 Firing Table, with the exception of three wells (NC7-28, W-850-2417, and NC7-70) located within the *in situ* bioremediation treatment zone, continue to exhibit the highest perchlorate concentrations in the Building 850 area. The 2013 maximum perchlorate concentration of 52 µg/L was detected in the July sample from well NC7-70. During August and September of 2013, the *in situ* bioremediation treatment zone area was expanded by injection of ethyl lactate into this well. Perchlorate concentrations in ground water samples collected from NC7-70 following ethyl lactate injection (September and December) were below the 4 µg/L reporting limit. The next highest 2013 perchlorate concentration of 44 µg/L was detected in the February sample from well NC7-61, located 550 feet east of the firing table and directly downgradient of the *in situ* bioremediation treatment zone and screened in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs. Perchlorate concentrations in routine and duplicate ground water samples collected from well NC7-61 during 2013 ranged from 39 µg/L to 44 µg/L. Within the *in situ* bioremediation treatment zone area, all ground water samples from wells NC7-28 and W-850-2417, with the exception of the February sample from well NC7-28 that contained 5.8 pCi/L of perchlorate, and all ground water samples collected from well NC7-70, after ethyl lactate injection into the well during August and September, contained perchlorate at concentrations below the 4 µg/L reporting limit. During the fourth quarter of 2013, perchlorate concentrations in ground water samples from all wells located upgradient (west) of well NC7-61 were below the 4 µg/L reporting limit.

During 2013, the extent of ground water containing perchlorate concentrations in excess of the 6 µg/L MCL cleanup standard remained the same as in 2012, except for the area southeast of Pit 2 where perchlorate concentrations in samples from wells NC2-05A and NC2-06 have declined below the 6 µg/L MCL cleanup standard and the Building 850 firing table source area where the three wells within the perchlorate biotreatment zone have been reduced below the 4 µg/L reporting limit.

2.5.2.1.5. HE Compound Concentrations and Distribution

During 2013, ground water samples from 22 wells located in or downgradient of the Building 850 Firing Table were collected and analyzed for HE compounds, including HMX and RDX, at a reporting limit, generally, of 1 µg/L. Contract laboratory reporting limits were higher in the past, varying from 5 to 20 µg/L. The lower reporting limits have enabled definition of the extent of HMX and RDX in Qal/WBR HSU ground water. The source appears to be the Building 850 Firing Table.

Of the 22 wells sampled for HE compounds during 2013, only ground water samples from wells NC7-61 and NC7-10 contained RDX at concentrations that exceeded the 1 µg/L cleanup standard. All samples collected from well NC7-61 in 2013 (January, April, August and December) contained RDX at concentrations exceeding the 1 µg/L cleanup standard with a maximum concentration of 4.2 µg/L in the routine and duplicate samples collected in January. Only the October duplicate sample collected from well NC7-10 exceeded the 1 µg/L cleanup standard with a concentration of 2.1 µg/L. RDX was not detected at concentrations above the reporting limit in the routine samples collected from well NC7-10 in April and October. In 2012, two wells, W-850-2417 and NC7-61, exceeded the 1 µg/L RDX cleanup standard with maximum concentrations of 5.3 µg/L (July) and 5.1 µg/L (July), respectively. During 2013, RDX was not detected at concentrations above the reporting limit in wells W-850-2417 and NC7-28, and the RDX concentration in well NC7-61 had decreased. The decrease in RDX concentrations at these wells is likely related to degradation of RDX caused by reducing conditions created following ethyl lactate injection into well W-850-2417 during September and October of 2011, and April 2012. All of the wells discussed above are located downgradient (east) of the Building 850 Firing Table with well NC7-61 and NC7-10 located approximately 500 and 800 feet downgradient of the Building 850 Firing Table, respectively.

During 2013, all samples collected during the first and second semesters from four wells contained HMX above the reporting limit with the maximum of 8.1 µg/L detected in NC7-61. These concentrations are all significantly below the Regional Tapwater Screening Level for HMX (780 µg/L). Due to insufficient water for sampling, the extent of HMX in ground water has decreased from its 2010 limit, when NC7-54 was last sampled and yielded HMX (located approximately 900 feet downgradient of the Building 850 Firing Table), to the vicinity of Qal/WBR HSU well NC7-10, located approximately 800 feet downgradient of the Building 850 Firing Table. Sampling of monitor well NC7-54 in the future will determine whether the extent has truly diminished.

During first semester 2013, nitrobenzene was detected at concentrations above the reporting limit for the first time in ground water samples from the Building 850 Area. The April sample from well NC7-61 and the May samples from wells NC7-28 and W-850-2417 contained nitrobenzene with concentrations of 3.5 µg/L (duplicate sample analysis result, routine sample result was 2.7 µg/L), 4.1 µg/L, and 4.3 µg/L, respectively (the laboratory reporting limit ranged from 1.5 to 1.8 µg/L). During first semester 2013, nitrobenzene was only detected in Building 850 Area ground water samples analyzed by BC Laboratories, Inc. A further discussion of nitrobenzene in ground water samples can be found in Section 6.5 (Analytical Quality Control). During second semester 2013, nitrobenzene was not detected in ground water samples from any wells in the Building 850 Area.

HE compounds were not detected above the reporting limit in ground water samples from wells screened in the $Tnbs_1$/$Tnbs_0$ HSU downgradient of Building 850 or from wells screened in the underlying $Tnsc_0$ HSU. The distribution of HE compounds in ground water at Building 850 is less extensive compared to observations made since 2008, when regular sampling and analysis for these chemicals commenced.

During 2013, HE compounds in ground water extend about 800 feet downgradient (east) of the Building 850 Firing Table.

2.5.2.2. Building 850 Area of OU 5 Remediation Optimization Evaluation

Data collected during 2013 continue to support that natural attenuation (dispersion, radioactive decay and a decreasing source term) continues to be effective in reducing tritium activities in ground water to levels below the 20,000 pCi/L MCL clean up standard. The highest tritium activities in ground water continue to be located directly downgradient of the tritium sources at the Building 850 Firing Table and continue to decline. The extent of the 20,000 pCi/L MCL cleanup standard tritium activity contours in both the Qal/WBR and $Tnbs_1$/$Tnbs_0$ HSUs continues to diminish. During 2013, only well NC7-70 contained ground water with a tritium activity that exceeded the 20,000 pCi/L MCL cleanup standard, compared to five wells in 2012. In general, the footprint of the ground water tritium plume remains stable and activities continue to decline and are significantly below historic highs throughout the Building 850 plume. The leading edge of the tritium plume is stable, within the Site 300 interior, and is expected to completely attenuate within the boundaries of Site 300.

During 2013, two wells in the Building 850 area had total uranium activities that exceeded the 20 pCi/L MCL cleanup standard. Samples from wells NC7-28 and W-850-2315 contained total uranium activities of 24 pCi/L (January) and 21 pCi/L (April), respectively. For well NC7-28, January was the second time, the first time being in February 2008, that the total uranium activity exceeded the 20 pCi/L MCL cleanup standard since the well was first sampled in 1989. Subsequent samples collected in May and December from well NC7-28 contained 9.8 pCi/L and 4.6 pCi/L of total uranium, respectively. Well W-850-2315 is completed in the $Tnbs_1$/$Tnbs_0$ HSU and is located 1,400 feet south-southeast and cross-gradient of Building 850, and samples from this well, when analyzed by ICP-MS, have always yielded $^{235}U/^{238}U$ atom ratios indicative of natural uranium. During 2013, the overall extent of total uranium activities at Building 850 has not changed significantly. The monitoring-only strategy for uranium at Building 850 continues to be protective given that: (1) total uranium activities in ground water in and downgradient from Building 850 for the most part remain below the 20 pCi/L MCL cleanup standard, and (2) the areal extent of depleted uranium has not changed during the period of monitoring. Temporal trends in $^{235}U/^{238}U$ isotope ratios from past samples have remained stable.

During 2013, the overall extent and maximum concentrations of nitrate and perchlorate in ground water are also similar to those observed in 2012. Within the *in situ* perchlorate bioremediation treatment zone, perchlorate and nitrate concentrations in ground water samples from wells NC7-28 and W-850-2417 remained below reporting limits. Following injection of ethyl lactate into well NC7-70 during second semester 2013, perchlorate and nitrate concentrations in ground water from NC7-70 also decreased to below the 4 µg/L and 0.5 mg/L reporting limits, respectively.

2.5.2.3. Building 850 Area of OU 5 Enhanced Bioremediation Treatability Study

The *in situ* perchlorate bioremediation treatability study commenced at Building 850 during the second semester 2011. The objective of this study is to evaluate the efficacy of *in situ* enhanced bioremediation methods in reducing perchlorate concentrations in Building 850 ground water. Prior to starting the test, perchlorate-bearing ground water was extracted from well W-850-2417 located directly downgradient of the Building 850 Firing Table, and was placed in an aboveground storage vessel. From mid-September to mid-October 2011, four five-gallon slugs of ethyl lactate, followed by a 50-gallon slug of the extracted perchlorate-bearing ground water, were injected into well W-850-2417. The 50 gallons of injected ground water mixed with and diluted the ethyl lactate, hastening its transport into the treatment zone. Nearby downgradient well NC7-28 and deeper well W-850-2416 were monitored to evaluate bioremediation performance.

In 2011, reducing conditions, as indicated by low dissolved oxygen concentrations (<1 mg/L) and negative ORP, were measured in the treatment zone with *in situ* sensors within days of injection in well W-850-2417, and in less than 3 weeks at performance monitor well NC7-28. These reducing conditions continued through the end of 2011. The test remained in a monitoring and rebound mode through April 2012, when dissolved oxygen concentrations and ORP measurements indicated that reducing conditions no longer existed in the treatment zone. In April 2012, two individual slugs of 2.5 gallons of ethyl lactate were followed by two slugs of 45 to 50 gallons of contaminant-bearing water previously extracted from well W-850-2417. Reducing and oxygen-depleted conditions were again observed in the treatment zone within days to weeks.

Monitoring results indicate that microbial reduction significantly reduced perchlorate concentrations in wells W-850-2417 and NC7-28. Perchlorate concentrations in injection well W-850-2417 decreased from pre-test 2011 maximum of 74 µg/L to post-injection 2011 maximum of 13.6 µg/L. By February 2012, perchlorate concentrations in well W-850-2417 had further decreased to 8.2 µg/L, and perchlorate concentrations in all subsequent samples collected during the remainder of 2012 and throughout 2013 have been below the 4 µg/L reporting limit. Perchlorate concentrations in downgradient performance monitor well NC7-28 decreased from a pre-test 2011 maximum of 71.3 µg/L to below the 4 µg/L reporting limit in the 2011 post-injection samples. Perchlorate concentrations in well NC7-28 remained below reporting limits in all samples (with the exception of the February 2013 sample containing 5.8 µg/L) collected during 2012 and 2013.

Although not specifically targeted for bioremediation, nitrate concentrations and uranium activities were also monitored in the injection well W-850-2417 and performance monitor well NC7-28. Nitrate concentrations in wells W-850-2417 and NC7-28 decreased from pre-test 2011 maximum concentrations of 52 mg/L and 57 mg/L, respectively, to below the 0.44 mg/L reporting limit following ethyl lactate injection in 2011. Nitrate concentrations remained below 0.44 mg/L to 1 mg/L reporting limits in all samples (with the exception of the January 2013 sample from well NC7-28 with a nitrate detection of 0.54 mg/L) collected from these wells during 2012 and 2013. Total uranium activities in wells W-850-2417 and NC7-28 also decreased from pre-injection 2011 maximum activities of 9.1 pCi/L and 9.8 pCi/L, respectively, to 2011 post-injection activities of 3.5 pCi/L and 2 pCi/L, respectively. During 2012 and 2013, the maximum uranium activity detected in samples from well W-850-2417 was 4.0 pCi/L, well below the pre-injection 2011 maximum activity. Uranium activities in well NC7-28 increased throughout 2012 and reached a maximum activity of 24 pCi/L (a new historic maximum) in the January 2013 ground water sample. The uranium activities in the May and December 2013 samples from well NC7-28 decreased to 9.8 pCi/L and 4.6 pCi/L, respectively. Following ethyl lactate injection, decreasing uranium activities appear to result from concurrent reduction of U^{+6} species in ground water to U^{+4} species, which form insoluble mineral solids. Later increases likely arise from a combination of dissolution of natural U under low pH conditions and oxidation of reduced uranium from solids on mineral surfaces back into solution, coupled with arrival of pre-existing dissolved uranium from upgradient.

To increase the volume of the *in situ* bioremediation treatment zone, slugs of ethyl lactate and extracted ground water were injected into well NC7-70 during August and September of 2013. Prior to the ethyl lactate injection, during March 2013, fluorescein, a non-toxic tracer, was injected into NC7-70 with slugs of ground water extracted from the well to independently track the migration of injected fluids along the flow path from well NC7-70 downgradient through the treatment zone to wells W-850-2417 and NC7-28. As of December 2013, the tracer had not been detected in any of the downgradient wells. Prior to the injection of ethyl lactate, the perchlorate concentration in the July ground water sample from well NC7-70 was 52 µg/L. Following ethyl lactate injection, the perchlorate concentrations in samples collected in September and December were below 4 µg/L reporting limit, nitrate concentrations decreased from 32 mg/L (January) to below the 0.5 mg/L reporting limit (December), and uranium activities decreased from 1.3 pCi/L (January) to 0.12 pCi/L (December). The regulatory agencies will be kept apprised of the results of the fluorescein injection and overall treatability study.

2.5.2.4. Building 850 Area of OU 5 Remedy Performance Issues

There were no new issues that affect the performance of the MNA cleanup remedy for tritium in the Building 850 area during this reporting period. The remedy for tritium continues to be effective and protective of human health and the environment, and to make progress toward cleanup. Perchlorate, uranium and RDX distribution in ground water downgradient of the Building 850 Firing Table will continue to be closely monitored and reported. The *in situ* bioremediation treatability study analytical results will continue to be evaluated. The results of this evaluation will be presented in future CMRs. The performance of this technology with respect to uranium and RDX remediation or stabilization will also continue to be evaluated.

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

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

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

The monthly ground water discharge volumes and rates and operational hours for the second semester of 2013 are summarized in Table 2.5-2. The total volume of ground water extracted and treated, and masses removed during 2013 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 collected during the second semester of 2013 are presented 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 2013:

- The GWTS was shut down on July 1 for well recovery. The system was returned to operation on July 2 operating from all wells except W-PIT7-2307.
- The GWTS was offline from July 8 to July 9 due to a faulty tank float switch.
- The GWTS was shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- Extraction well wells W-PIT7-2704 and W-PIT7-2306 remained off-line to allow water levels to recover for sampling.
- The system was offline from October 27 to 29 due to a site power outage.

2.5.3.3. Pit 7 Complex Area of OU 5 Compliance Summary

PIT7-SRC GWTS operated within compliance with the RWQCB Substantive Requirements for Wastewater Discharge throughout the reporting period.

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

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

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

No modifications were made to the system 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; fifty-two required analyses in thirteen wells were not performed because the wells were dry or there was insufficient water in the wells to collect the samples.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

Ground water elevation contour maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs within the OU, based on data collected during second semester 2013, are presented on Figures 2.5-2 and 2.5-3, respectively. Ground water elevations in both HSUs have generally declined since spring 2011 due to lower than average rainfall during water years 2012 and 2013.

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

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

2.5.5.1. Pit 7 Complex Area of OU 5 Mass Removal

The monthly ground water mass removal estimates for the second semester of 2013 are summarized in Table 2.5-9. The total mass removed during the 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 $Tnbs_1/Tnbs_0$ HSUs. The distribution of tritium in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs, based on data collected during second semester 2013 (primarily the fourth quarter), is contoured on Figures 2.5-4 and 2.5-5, respectively. The distribution of perchlorate in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs, based on data collected during first semester 2013 (primarily the second quarter), is contoured on Figures 2.5-10 and 2.5-11, respectively. Concentrations of uranium and nitrate in Qal/WBR and $Tnbs_1/Tnbs_0$ ground water, based on data collected during first semester 2013 (primarily the second quarter), are presented on Figures 2.5-6 through 2.5-9. The COC data presented on Figures 2.5-4 through 2.5-11 represent specific time periods during 2013; therefore, some of the data discussed in the text are not displayed on the figures.

2.5.5.2.1. Tritium Activities and Distribution

Commingled plumes of tritium in ground water extend from Pit 3 and Pit 5 Landfill sources. The Pit 7 Landfill is not an apparent source of tritium to ground water as most of the tritium-bearing experiments at Site 300 were conducted prior to its opening in 1979 (Taffet et al., 2008) and monitor well NC7-48, located directly downgradient of Pit 7 and upgradient of Pit 3, has generally yielded ground water samples that contain tritium activities within background ranges. The ground water samples collected from well NC7-48 in April and October 2013 contained less than 100 pCi/L of tritium.

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 (NC7-63, 1998) to a 2013 maximum activity of 144,000 pCi/L (monitor well NC7-51, duplicate sample collected in July). The 2012 maximum tritium activity of 233,000 pCi/L was also from monitor well NC7-51 (January). Well NC7-51 is located about 40 feet northeast of Pit 5 and 60 feet east of Pit 3. Overall, most tritium activities in Qal/WBR ground water have declined slightly since 2012. In the Qal/WBR HSU, the region of ground water containing tritium in excess of the MCL cleanup standard extends about 1,300 feet southeast from the northern edge of Pit 3. The extent of the 20,000 pCi/L MCL cleanup standard ground water tritium activities in the Qal/WBR HSU in the Pit 7 Complex area is similar to that observed for 2012.

Tritium activities in the $Tnbs_1/Tnbs_0$ HSU ground water in the Pit 7 Complex area have decreased from a historic maximum of 770,000 pCi/L in 1999 to a 2013 maximum of 206,000 pCi/L (April). Both the historic and 2013 maximum tritium activities were detected in extraction well NC7-25, located about 250 feet downgradient (northeast) of the Pit 3 Landfill. In general, tritium activities in the $Tnbs_1/Tnbs_0$ HSU are similar or have declined slightly compared to 2012 measurements. The highest tritium activities in $Tnbs_1/Tnbs_0$ HSU in Pit 7 Complex area ground water, in excess of the 20,000 pCi/L MCL cleanup standard, continue to extend about 800 feet northeast of Pit 3 and Pit 5. The extent of tritium in excess of the 20,000 pCi/L MCL cleanup standard in the $Tnbs_1/Tnbs_0$ HSU in the Pit 7 Complex area is also similar to 2012 observations.

Overall, the extent of tritium in ground water with activities in excess of the 100 pCi/L background levels remains stable, and is similar to that observed in 2012.

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 (monitor well NC7-40, 1998) to a 2013 maximum of 106 pCi/L (extraction well NC7-64, April). The 2012 maximum activity of 94 pCi/L was also detected in NC7-64. The maximum historic uranium activity detected in NC7-64 is 252 pCi/L (1998). The ground water sample collected from well NC7-64 in October contained 98 pCi/L. Well NC7-64 is located directly downgradient (east) of Pit 3. Uranium activities exceeded the 20 pCi/L MCL cleanup standard in samples from 10 wells in the Qal/WBR HSU during 2013. During 2013, several other wells (W-PIT7-1903, W-PIT7-1917 and W-PIT7-1919) that have consistently contained ground water with uranium activities exceeding the 20 pCi/L MCL cleanup standard were unable to be sampled due to being dry or containing insufficient water for sampling. All of the wells with uranium activities exceeding the 20 pCi/L MCL cleanup standard are proximal to the landfills and have historically shown $^{235}U/^{238}U$ isotopic ratios indicating some depleted uranium. The extent of uranium in excess of the MCL cleanup standard in the Qal/WBR HSU is confined to an area directly east of Pit 3 and another area that extends about 500 feet southeast from the center of Pit 5. The spatial extent of shallow ground water impacted with depleted uranium has been stable since the mid-1990s. Areas of depleted uranium in ground water are bounded by wells that exhibit ground water isotope mass ratios indicative of natural uranium. Sorption and ion-exchange are likely responsible for slowing the migration of depleted uranium in ground water compared to conservative contaminants such as tritium.

The maximum uranium activity in a 2013 sample from a well screened in both the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs was 22 pCi/L in the October sample from extraction well W-PIT7-2307.

Uranium activities in the $Tnbs_1/Tnbs_0$ HSU have decreased from a historic maximum of 51.45 pCi/L in 1998 to a 2013 maximum of 35 pCi/L (October). Maximum uranium activities in the bedrock were detected in samples from extraction well NC7-25, located about 250 feet downgradient (northeast) of the Pit 3 Landfill. Extraction of ground water from well NC7-25 began in August 2012 to increase uranium mass removal, and so far, uranium activity and

$^{235}U/^{238}U$ atom ratio data have not been affected by ground water extraction. Well NC7-25 is the only $Tnbs_1/Tnbs_0$ HSU well that historically and currently yields ground water containing uranium in excess of the MCL cleanup standard, and all historic and current $^{235}U/^{238}U$ atom ratio data indicate that the uranium in NC7-25 ground water is natural. Ground water samples from wells screened in the $Tnbs_1/Tnbs_0$ HSU have not shown depleted uranium mass ratios, indicating that depleted uranium has not migrated downward into the $Tnbs_1/Tnbs_0$ HSU.

As is the case for the Building 850 portion of OU 5, uranium activity analyses for 2013 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

During 2013, nitrate was detected at concentrations at or above the 45 mg/L MCL cleanup standard in samples from three Pit 7 Complex area monitor wells, K7-01, NC7-47 and W-PIT7-13. Well K7-01 is located immediately downgradient of Pit 5 and wells NC7-47 and W-PIT7-13 are located downgradient and northeast of the Pit 7 Complex area.

The 2013 maximum nitrate concentration detected in the Pit 7 Complex area was 64 mg/L in the April sample from $Tnbs_1/Tnbs_0$ HSU well NC7-47, located northeast and far downgradient of Pit 3. Well NC7-47 was also the location of the 2012 maximum nitrate concentration of 65 mg/L. The 2013 maximum nitrate concentration in the Qal/WBR HSU was 43 mg/L (April) from extraction well NC7-64, located immediately downgradient of Pit 3.

Historic data indicate that nitrate concentrations in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSU ground water are limited in extent and relatively stable. The distribution and concentrations of nitrate in ground water during 2013 are generally similar to what was observed in 2012.

2.5.5.2.4. Perchlorate Concentrations and Distribution

During 2013, perchlorate was detected at concentrations exceeding the 6 µg/L MCL cleanup standard in 15 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 (extraction well W-PIT7-2306, 2009) to a 2013 maximum concentration of 14 µg/L, in the October sample from extraction well W-PIT7-2305, located immediately downgradient of Pit 5. The Qal/WBR HSU wells that yielded samples containing perchlorate in excess of the 6 µg/L MCL cleanup standard define an area that extends southeast about 1,000 feet from the middle of Pit 3.

Samples from four $Tnbs_1/Tnbs_0$ HSU wells, K7-03, NC7-25 ($Tnbs_1/Tnbs_0$ HSU extraction well), NC7-68 and W-PIT7-2309, contained perchlorate in excess of the 6 µg/L MCL cleanup standard and define an area that extends about 400 feet downgradient (northeast) of Pits 3 and 5. The maximum concentration of 12 µg/L was measured in the April sample from extraction well NC7-25.

The overall extent of perchlorate at concentrations exceeding the 6 µg/L MCL cleanup standard in ground water in the Pit 7 Complex area did not change significantly from 2012 to 2013. However, due to small concentration decreases in samples from wells W-PIT7-13 and NC7-52, the extent of perchlorate with concentrations exceeding the 4 µg/L reporting limit in the $Tnbs_1/Tnbs_0$ HSU decreased in 2013.

2.5.5.2.5. VOC Concentrations and Distribution

The VOC COCs in Pit 7 Complex Area ground water include TCE and 1,1-DCE. VOCs were detected in ground water samples from five Pit 7 Complex area wells during 2013: two wells completed in the Qal/WBR HSU (monitor well NC7-51 and extraction well W-PIT7-2703), one completed in the $Tnbs_1/Tnbs_0$ HSU (monitor well K7-03), and two completed in both HSUs (monitor well K7-01 and extraction well W-PIT7-2307). TCE at concentrations above the 0.5 µg/L reporting limit, but below the MCL cleanup standard of 5 µg/L, was present in samples from wells W-PIT7-2307, NC7-51, K7-01, and K7-03. 1,1-DCE was only detected in samples from extraction well W-PIT7-2307 at concentrations above the 0.5 µg/L reporting limit, but below the MCL cleanup standard of 6 µg/L. Well W-PIT7-2703 contained only chloroethane at a concentration slightly above the 0.5 µg/L reporting limit. There is no Federal or State MCL for chloroethane. During 2012, VOCs were also detected in Qal/WBR HSU extraction wells W-PIT7-2306 and W-PIT7-2704. Neither of these wells were sampled during 2013 due to insufficient water.

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 1995 (monitor well NC7-51, comprised of 15 µg/L of TCE and 6.2 µg/L of 1,1-DCE) to a 2013 maximum of 1.2 µg/L (NC7-51, April, comprised entirely of TCE). The 2012 maximum of 6.2 µg/L (comprised of 4.5 µg/L of TCE and 1.7 µg/L of 1,1-DCE) was collected from extraction well W-PIT7-2306; this well was not sampled during 2013 due to insufficient water.

The 2013 maximum total VOC concentration in a Pit 7 Complex well was 6.6 µg/L (comprised of 4.8 µg/L of TCE and 1.8 µg/L of 1,1-DCE) in extraction well W-PIT7-2307 (June). The total VOC concentration in the October sample from W-PIT7-2307 decreased to 5.5 µg/L (comprised of 4.2 µg/L of TCE and 1.3 µg/L of 1,1-DCE). During 2013, the ground water level remained below the Qal/WBR contact and entirely in the $Tnbs_1/Tnbs_0$ HSU. Well W-PIT7-2307 was the only well sampled in the Pit 7 Complex area that contained concentrations of 1,1-DCE above the 0.5 µg/L reporting limit during 2013.

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 Pit 7 Complex wells sampled during 2013, and have been since 2011, when extraction wells W-PIT7-2306 and W-PIT7-2307 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 at the PIT7-SRC facility began in March 2010. A wellfield expansion in the second semester of 2012 added wells W-PIT7-2703, W-PIT7-2704 and W-PIT7-2705 to the Pit 7 extraction wellfield. In addition to the new extraction wells, extraction of groundwater from NC7-25, screened in the $Tnbs_1/Tnbs_0$ bedrock HSU, was initiated and the pump intake in well W-PIT7-2307 was raised to target the Qal/WBR HSU. During 2013, the PIT7-SRC facility operated nearly continuously following the wellfield expansion of 2012. Almost 99,000 gallons of water were extracted and treated during 2013. The combined average pumping rate from extraction wells to the treatment facility increased from 0.14 gpm during 2012 to 0.21 gpm during 2013. Well W-PIT7-2305 contributed approximately 77% of the flow to the PIT7-SRC facility at an average long-term extraction rate of 0.16 gpm.

Concentrations of COCs in well W-PIT7-2305 ground water have fluctuated since pumping started in 2010, but have shown decreases from pre-pumping conditions to present. For example:

- Tritium activities decreased from 73,900 pCi/L (January 2010) to 35,600 pCi/L (October 2013).
- Uranium activities decreased from 21 pCi/L (January 2010) to 16 pCi/L (October 2013). Since 2008, the water from this well has contained only natural uranium.
- TCE concentrations were below the 0.5 µg/L reporting limit (January 2010), were reported at 0.63, 0.67 and 0.52 µg/L in May 2010, October 2010 and April 2011, respectively, and have remained below the 0.5 µg/L reporting limit since October 2011.

To increase uranium mass removal, pumping of $Tnbs_1/Tnbs_0$ HSU well NC7-25 was initiated in August 2012. The uranium in this well has always exhibited a natural $^{235}U/^{238}U$ atom ratio but has historically exceeded the uranium MCL cleanup standard. During 2013, approximately 1,600 gallons of water (approximately 2% of the flow to PIT7-SRC facility), at a long-term average flow rate of 0.004 gpm, were extracted and treated from well NC7-25. The results of analyses of ground water samples collected in April and October 2013 are essentially identical to those collected in previous years, the total uranium activities exceed the uranium MCL cleanup standard and the $^{235}U/^{238}U$ atom ratios indicate that the samples contain only natural uranium. The total uranium activity and $^{235}U/^{238}U$ atom ratio data will be monitored closely to assess the effect of ground water extraction from the $Tnbs_1/Tnbs_0$ HSU.

An assessment of water levels and ground water COC trends at well W-PIT7-2307 during the first year of ground water extraction and treatment at PIT7-SRC (March 2010 to March 2011) indicated that the extracted ground water from well W-PIT7-2307 was derived primarily from the $Tnbs_1/Tnbs_0$ bedrock HSU. Pumping was suspended in early March 2011 to avoid drawing contaminants from Qal/WBR HSU ground water into the $Tnbs_1/Tnbs_0$ HSU. In early February 2013, the pump intake was raised to target the Qal/WBR HSU. Approximately 200 gallons of water were extracted and treated during February and March of 2013 before water levels dropped below the pump intake. Due to lower than average rainfall received during rainfall years 2011-2012 and 2012-2013, water levels have remained below the pump intake. Since 2011, COC concentrations and activities in this well have remained constant or decreased slightly with the exception of uranium. Since October 2011, uranium activities in ground water samples from this well have exceeded the 20 pCi/L MCL cleanup standard and the $^{235}U/^{238}U$ atom ratios indicate a small component of depleted uranium. It may become necessary to re-evaluate the pumping scheme for this well if uranium activities exceeding the MCL persist.

Extraction well NC7-63 was offline during 2012 and the first semester 2013, due to insufficient water. Due to the lack of water and the extremely low yield, the decision was made to convert this well back to a monitor well and in June 2013 the pump was removed. Wells W-PIT7-2306 and W-PIT7-2704 also contained insufficient water for pumping during 2013.

With the addition of ground water extracted from the new extraction wells and well NC7-25, the long-term average flow rate to PIT7-SRC during 2013 was 0.21 gpm, compared to 0.14 gpm in 2012, a 50% increase. Approximately 97% of the extracted water was obtained from three wells: W-PIT7-2305 and new extraction wells W-PIT7-2703 and W-PIT7-2705. Mass removal of COCs, except for VOCs, also increased with the additional ground water extracted. The most significant increase was the mass of uranium removed. During the first semester of 2013, pumping of wells NC7-25, W-PIT7-2703 and W-PIT7-2705, all containing uranium with activities exceeding the 20 pCi/L MCL cleanup standard, resulted in the removal of an estimated 17 g of uranium compared to an estimated 2.6 g during the first semester 2012, a 650% increase. The total mass of uranium removed during 2013 was an estimated 24 g, with between 5 and 10% of the total mass being depleted uranium. The decrease in VOC mass removal was due to insufficient water for pumping in wells W-PIT7-2306 and W-PIT7-2704. The only VOCs removed during 2013 were from well W-PIT7-2307, which only yielded an estimated 200 gallons of ground water.

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

There were no new issues that affect the performance of MNA for tritium in the Pit 7 Complex area during this reporting period. MNA for tritium continues to be effective and protective of human health and the environment, and to make progress toward cleanup. The extraction and treatment of uranium, perchlorate, VOCs and nitrate continue to reduce the concentrations and masses of these contaminants in Pit 7 Complex ground water. As stated in the previous section, extraction well W-PIT7-2305 pumped the majority of ground water, and activities of uranium and tritium in samples collected from the well remain similar to 2012. Uranium activities in these samples remained below MCL cleanup standards. Continued operation of the PIT7-SRC facility and extraction from the three new extraction wells and well NC7-25 have increased the volume of extracted ground water and mass removed. However, sustainable yields from all the extraction wells are generally low (<0.1 gpm) and thus large increases in mass removal over time are not anticipated.

During 2013, tritium activities in treated effluent from PIT7-SRC were in the range of 42,200 pCi/L to 50,600 pCi/L. Performance monitor wells K7-01, NC7-16 and NC7-21, located near the effluent discharge trench continue to exhibit decreasing tritium trends. The tritium activities in these wells will continue to be closely monitored to assess any negative impacts to the distribution of tritium in ground water.

The performance summary of PIT7-SRC indicates that:

- Progress has been made in reducing COC concentrations towards cleanup standards: Uranium activities to date have remained relatively stable, and those in excess of MCL cleanup standards are limited in extent. TCE concentrations have dropped below the MCL cleanup standard. Perchlorate concentrations are stable to decreasing. Nitrate concentrations and distribution have decreased from historic maxima.
- The extent of uranium in excess of the MCL cleanup standard in the Qal/WBR HSU continues to be confined to an area immediately east of Pit 3 and another area that extends from Pit 5 southeast about 500 feet. The extents of both these regions have remained stable and similar to what has been observed over the last few years. The sample results from new extraction well W-PIT7-2704, completed at the northeast corner of Pit 5, indicate that the uranium in Qal/WBR HSU ground water in excess of the cleanup level is less extensive than previously depicted.
- Generally, tritium activities in wells downgradient of the infiltration trench are stable or decreasing, indicating that the discharge of tritium-bearing water is not adversely impacting downgradient ground water.

As discussed in the Remedial Design (RD) for the Pit 7 Complex (Taffet et al., 2008), the drainage diversion system design was not intended to capture 100% of the precipitation that falls in the Pit 7 Complex area. Rather, it was designed to divert excess surface water runoff and shallow subsurface recharge 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 minimize ground water contact with the pit waste and underlying contaminated bedrock. Thus, the drainage diversion system performance can best be evaluated during a future El Niño season or other period of very high rainfall.

Criteria indicating that the drainage diversion system is not operating as intended and corresponding recent performance include:

1. Ground water elevation responses to rainfall events observed in key monitoring wells are similar to those observed before the installation of the drainage diversion system:
    - Drainage diversion system performance is evaluated by 22 monitor wells outfitted in April 2010 with dedicated pressure transducers that measure ground water elevations.
    - Review of these data indicates that ground water elevation responses to rainfall are less than those observed prior to drainage diversion system installation in several wells. For example, in 2005, prior to installation of the drainage diversion system, ground water elevation in well NC7-17, located downgradient of the drainage diversion system at the south end of Pit 7, increased 5 inches per inch of rain received. In 2011, after installation of the drainage diversion system, ground water elevation increased less than 4 inches per inch of rain received for the same time period during the water year. These data indicate a 20% reduction in ground water elevation response to rainfall in well NC7-17 after installation of the drainage diversion system. Total precipitation received during water years 2004-2005 and 2010-2011 was greater than average and almost identical at 13.7 inches and 13.5 inches, respectively. Precipitation received during rainfall years 2011-2012 and 2012-2013 was below average and water elevation response evaluations have not been performed for these time periods.
2. Maximum ground water rises into the pit waste and underlying contaminated bedrock as indicated by ground water elevation data:
    - During and following the 2009-2010, 2010-2011, 2011-2012, and 2012-2013 rainfall seasons, ground water levels have remained well below the bottoms of the Pit 7 Complex Landfills. Ground water elevations in the Qal/WBR HSU have decreased since spring 2011 due to below average rainfall received during rainfall years 2011-2012 (approximately 7 inches) and 2012-2013 (approximately 8 inches). The small amount of rainfall received during the last three months of 2013 (approximately 1.6 inches) suggests that rainfall year 2013-2014 will also be below average.
3. Increasing trends in tritium, uranium, VOCs, or perchlorate activities/concentrations are observed over a period of at least four quarters in ground water samples from key wells downgradient of the landfills:
    - COC trends in Pit 7 Complex ground water are decreasing:
        - Tritium activities decreased from a historic maximum of 2,660,000 pCi/L in 1998 to a 2013 maximum tritium activity of 206,000 pCi/L.

- Uranium activities have decreased from a historic maximum of 781 pCi/L in 1998 to a 2013 maximum of 106 pCi/L.
- Nitrate concentrations have decreased from the historic maximum of 363 mg/L in 2003 to a 2013 maximum of 64 mg/L.
- Perchlorate concentrations have decreased from a historic maximum of 40 µg/L in 2009 to a 2013 maximum of 14 µg/L.
- Total VOC concentrations have decreased from a historic maximum of 21.2 µg/L in 1995 to a 2013 maximum of 6.6 µg/L, with concentrations of all VOC COCs below cleanup standards.

Based on the evaluation of data collected during 2013 against the performance criteria, the drainage diversion system appears to be operating as intended. However, it is important to note that the drainage diversion system is designed to divert recharge during peak events and has not yet been tested under the conditions for which it was designed.

2.6. Building 854 OU 6

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

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

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

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

The 854-PRX GWTS began operation in November 2000 removing VOCs, nitrate, and perchlorate from ground water. Ground water is currently extracted at an approximate flow rate of 1.5 gpm from well W-854-03, located southeast of the Building 854 complex. The GWTS configuration includes two ion-exchange resin columns connected in-series for perchlorate removal, three aqueous-phase GAC units connected in series for VOC removal, and an aboveground containerized wetland biotreatment for nitrate removal prior to being discharged into an infiltration trench.

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

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

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

2.6.1.1. Building 854 OU Facility Performance Assessment

The monthly ground water discharge volumes and rates and operational hours for the second semester of 2013 are summarized in Tables 2.6-1 through 2.6-3. The total volume of ground water treated and masses removed during 2013 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 collected during the second semester of 2013 are presented in Tables 2.6-4 and 2.6-5. The pH measurement results are presented in Appendix A.

2.6.1.2. Building 854 OU Operations and Maintenance Issues

The following maintenance activities and operational issues occurred at the 854-SRC GWTS and SVTS, and 854-PRX and 854-DIS GWTSs during the second semester of 2013:

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

- The GWTS was shut down from June 27 to July 1 to address software issues.
- Extraction well W-854-18A pump replacement was completed on July 10. The operating system strategy was updated on July 18 and the facility was restarted extracting from all wells. The extraction well W-854-18A was converted to a monitor well on August 13, due to insufficient water in this well to sustain flow.
- Extraction well W-854-02 was shut down for repairs on September 19 and was restarted on September 23. The system continued to operate on extraction well W-854-2218.
- The GWTS and SVTS were shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- The GWTS and SVTS were offline from October 27 to 29 due to a site power outage.
- The GWTS was off from November 19 to 20 due to system strategy uploading issues. Extraction well W-854-02 remained offline until November 25 due to a computer software issue that was resolved.
- The GWTS and SVTS were shut down on December 2 to prevent freeze damage and remained offline for the remainder of the reporting period.
- The pump in extraction well W-854-2218 was replaced due to a decrease in flow rate.

854-PRX GWTS

- The GWTS operated intermittently during the reporting period. The cause of intermittent system shut downs may have been caused by false alarms in the "Smart Relay" system. Adjustments were made and the system is being monitored.
- The replacement of the pump in extraction well W-854-03 was completed on July 10.
- The GWTS was shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- The GWTS was offline from October 27 to 29 due to a site power outage.
- The GWTS was shut down from November 11 to November 13 for a resin change-out.
- The GWTS was shut down on December 2 to prevent freeze damage and remained offline for the remainder of the reporting period.

854-DIS GWTS

- The GWTS shut down on August 7 due to failed batteries. New batteries were installed and the facility was restarted on August 8.
- The GWTS was shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- The GWTS was shut down on December 2 to prevent freeze damage and remained offline for the remainder of the reporting period.

2.6.1.3. Building 854 OU Compliance Summary

The 854-SRC, 854-PRX, and 854-DIS GWTSs all operated in compliance with the RWQCB Substantive Requirements for Wastewater Discharge. Nitrate concentrations in the 854-PRX GWTS extraction well and facility influent have continued to remain below the 45 mg/L nitrate cleanup standard since February 2009. The 854-SRC SVTS operated in compliance with San Joaquin Valley Air Pollution Control District permit limitations.

2.6.1.4. Building 854 OU Facility Sampling Plan Evaluation and Modifications

The Building 854 OU facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.6-6. There were no modifications to the plan during this reporting period.

2.6.1.5. Building 854 OU Treatment Facility and Extraction Wellfield Modifications

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

2.6.2. Building 854 OU Ground Water Monitoring

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

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions: thirty-six required analyses in seven wells and one spring were not performed because the wells were dry or there was insufficient water to collect the samples.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

A ground water elevation contour map for the $Tnbs_1/Tnsc_0$ HSU, based on data collected during second semester 2013, is presented on Figure 2.6-2. Ground water elevations measured during second semester 2013 are posted for the Qls and $Tnbs_1$ HSUs on Figure 2.6-6. Ground water elevations measured in both HSUs were similar to those observed in previous years.

2.6.3. Building 854 OU Remediation Progress Analysis

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

2.6.3.1. Building 854 OU Mass Removal

The monthly ground water mass removal estimates for the second semester of 2013 are summarized in Tables 2.6-8 through 2.6-10. The total mass removed during the 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 (TCE) and perchlorate are the primary COCs detected in ground water; nitrate is a secondary COC. These COCs have been identified primarily in the $Tnbs_1/Tnsc_0$ HSU. The distributions of VOCs and perchlorate in the $Tnbs_1/Tnsc_0$ HSU, based on data collected during second semester 2013 (primarily the fourth quarter), are contoured on Figures 2.6-3 and 2.6-4, respectively. Concentrations of nitrate in $Tnbs_1/Tnsc_0$ ground water, based on data collected during first semester 2013 (primarily the second quarter), are posted on Figure 2.6-5. Individual VOC and perchlorate concentrations, measured during second semester 2013, and nitrate concentrations, measured during first semester 2013, are posted for the Qls and $Tnbs_1$ HSUs on Figure 2.6-6. The COC data presented on Figures 2.6-3 through 2.6-6 represent specific time intervals during 2013; therefore, some data discussed in the text are not displayed on the figures. Hydraulic capture zones are presented on the $Tnbs_1/Tnsc_0$ HSU ground water elevation and total VOC and perchlorate maps (Figures 2.6-2, 2.6-3 and 2.6-4). The hydraulic capture zones depicted for extraction wells W-854-02, W-854-2218, W-854-03 and W-854-2139 are based upon porous media flow using conservative assumptions, and are realistic for the current flow rates from these wells. However, the response of monitor well W-854-11 to pumping of extraction well W-854-02 (854 Source Treatment Area) during hydraulic tests conducted in 1999 and 2000 suggests that flow is dominated by discrete fractures. The hydraulic capture zone for extraction well W-854-02 clearly extends much further upgradient than shown on Figures 2.6-2, 2.6-3 and 2.6-4, but due to the unknown extent, geometry, and interconnectedness of fractures, the hydraulic capture for this extraction well will continue to be depicted based upon an equivalent porous media. A more in-depth discussion of hydraulic capture in the Building 854 OU can be found in Attachments C-2 and C-3 of the Second Five-Year Review for the Building 854 OU (Valett et al., 2013).

2.6.3.2.1. VOC Concentrations and Distribution

During 2013, the maximum concentration of VOCs in $Tnbs_1/Tnsc_0$ HSU ground water was 94 µg/L (extraction well W-854-02, October). TCE comprises all of the VOCs observed in ground water at Building 854, except for low cis-1,2-DCE concentrations detected in samples from monitor well W-854-17 and extraction well W-854-2139, and one detection (0.5 µg/L) of trans-1,2-DCE in the November sample from SPRING11. During 2013, the maximum cis-1,2-DCE ground water concentrations samples from these wells were 2.1 µg/L (May) and 0.66 µg/L (April) for W-854-17 and W-854-2139, respectively, below the 6 µg/L MCL cleanup standard. Overall, VOC concentrations in the $Tnbs_1/Tnsc_0$ HSU have decreased nearly two orders of magnitude from a historic pre-remediation maximum of 2,900 µg/L (extraction well W-854-02, 1997).

Two VOC plumes exist in the $Tnbs_1/Tnsc_0$ HSU: a northern plume and a less extensive southern plume. The northern plume encompasses the 854-SRC and 854-PRX areas and is separated from the southern plume by a region where VOC concentrations are below the 0.5 µg/L reporting limit (at wells W-854-1902 and W-854-1822). The southern plume is in the vicinity of Well13, a former water-supply well. While the extent of VOCs impacting Building 854 ground water with concentrations above the 0.5 µg/L reporting limit has remained relatively stable 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 Building 854 source area; (2) the extent of the northern VOC plume with concentrations greater than 10 µg/L has decreased; and (3) VOC concentrations in the southern plume, although they fluctuate considerably, are decreasing.

VOCs were also detected in shallow perched ground water in monitor well W-854-10 (screened in the $Tnbs_1$ unit but above the $Tnbs_1/Tnsc_0$ HSU) located in the Building 854 source area during 2013 at 3.1 µg/L (May) and 1.1 µg/L (November). During 2013, as in previous years, VOCs were not detected in the sample from monitor well W-854-14, located near Building 858 and screened in a perched zone in the $Tnbs_{1,}$ also above the $Tnbs_1/Tnsc_0$ HSU, or in the sample from the one Qls monitor well, W-854-15, that contained water.

The maximum historic VOC (entirely TCE) vapor concentration within the Building 854 OU was measured in 854-SRC SVTS extraction well W-854-1834 (4.4 $ppm_{v/v,}$ November 2005). The maximum 2013 TCE vapor concentration for this well was 0.32 $ppm_{v/v}$, measured in the October 2013 sample collected during normal vapor extraction operation.

2.6.3.2.2. Perchlorate Concentrations and Distribution

The maximum perchlorate concentrations in $Tnbs_1/Tnsc_0$ HSU ground water are generally decreasing from the historic maximum of 27 µg/L in 2003 to a 2013 maximum of 16 µg/L (May). Both the historic and recent maximum perchlorate concentrations were detected in monitor well W-854-1823, located downgradient of the 854-PRX facility. Perchlorate at this location is not currently captured by any ground water extraction well(s).

The distribution of perchlorate in $Tnbs_1/Tnsc_0$ HSU ground water during 2013 is similar to that observed in previous years. During 2013, perchlorate was not detected in ground water samples from any well screened in the Qls HSU or perched $Tnbs_1$ water-bearing zones.

2.6.3.2.3. Nitrate Concentrations and Distribution

During 2013, the maximum nitrate concentration in Building 854 OU area ground water was 140 mg/L in the May ground water sample collected from monitor well W-854-14, screened in the Qls HSU. Four additional wells, extraction well W-854-02 and monitor wells W-854-2611 and W-854-45, all screened in the $Tnbs_1/Tnsc_0$ HSU, and monitor well W-854-05, screened in the Qls HSU, contained nitrate with concentrations of 54 mg/L, 53 mg/L, 63 mg/L, and 62 mg/L, respectively, exceeding the 45 mg/L MCL cleanup standard. All of the wells containing ground water with nitrate concentrations exceeding the 45 mg/L MCL cleanup standard were located in the vicinity of the Building 854 complex or Building 858. The distribution and concentrations of nitrate in ground water during 2013 are generally similar to what was observed in 2012.

2.6.3.3. Building 854 OU Remediation Optimization Evaluation

During 2013, the 854-SRC GWTS removed 120 g of VOC mass compared to 170 g during 2012. The decrease in VOC mass removal during 2013 is due to lower VOC concentrations in extraction wells W-854-02, W-854-18A, and W-854-2218, and reduced operation time, as explained in Section 2.6.1.2. Ground water extraction continues to adequately capture the highest VOC concentrations. Increased flow rates would increase the total volume of ground water treated and VOC mass removal at 854-SRC. During first semester 2013, the pumping strategy for extraction well W-854-02 was converted from fixed flow rate to level operation to attempt to increase the flow rate from this extraction well. Because of reduced operation time during 2013, the effectiveness of the new pumping strategy has yet to be determined. Due to the complexity of the fractured aquifer system, further hydraulic testing (scheduled for 2014) will be conducted to determine a pumping strategy that will increase mass removal. This facility also removed 5.6 g of perchlorate and 170 kg of nitrate during 2013.

During 2013, the 854-SRC soil vapor extraction well W-854-1834 yielded TCE vapor concentrations of 0.31 $ppm_{v/v,}$ 0.27 $ppm_{v/v}$, 0.24 $ppm_{v/v}$, and 0.32 $ppm_{v/v}$, in January, April, July, and October, respectively. During 2013, the 854-SRC SVTS removed 820 g of VOC vapor mass, compared to 930 g, removed during 2012. Despite low VOC vapor concentrations, VOC mass continues to be removed from the source area due to relatively high vapor flow rates. This VOC mass is volatilizing from vadose zone sources beneath the Building 854 source area and VOC vapors from the underlying dissolved VOC plume in $Tnbs_1/Tnsc_0$ ground water. Due to continued removal of VOC mass, DOE/LLNL plan to operate the 854-SRC SVTS until vapor concentrations remain below reporting limits after extended shutdown periods and SVE shutoff criteria have been met. Over the next five years, it will be determined if prerequisites to begin an SVE system shut-off evaluation have been attained as described in Appendix C of the Site 300 Site-Wide Record of Decision (U.S. DOE, 2008).

During 2013, the 854-PRX GWTS removed 24 g of VOC mass compared to 28 g of VOC mass during 2012. The reduction in VOC mass removal was mainly the result of fewer facility hours of operation due to freeze protection shutdown in January and hydraulic testing operations in February. Hydraulic testing of well W-854-03 during first semester 2013 indicated that a sustained flow rate of 5 gpm or more is possible. However, the results of an infiltration trench capacity test performed during first semester 2013 indicated that an infiltration rate of 5 gpm could eventually exceed the injection capacity of the trench. As discussed in the Second Building 854 OU Five-Year Review (Valett et al., 2013), DOE is planning to pump well W-854-03 at a flow rate of 3 gpm after well and facility upgrades are completed in 2014. It is expected that the increased flow rate will increase plume capture and mass removal. This facility also removed 9.8 g of perchlorate and 54 kg of NO_3 during 2013.

During 2013, the 854-DIS GWTS removed 0.92 g of VOC mass, compared to 1.6 g of VOC mass in 2012. The one extraction well at the 854-DIS GWTS (W-854-2139) pumps at a low average rate of less than 800 gallons per month because the formation around the well becomes rapidly dewatered and the well cannot sustain prolonged pumping. This facility also removed 0.13 g of perchlorate and 0.62 kg of NO_3 during 2013.

Samples for nitrate isotopic analysis and excess nitrogen measurement were collected from twenty wells and springs in the Building 854 OU between 2002 and 2013. Enriched nitrate isotopic composition, low nitrate concentration, and high proportion of excess N_2 to nitrate concentration provide strong evidence of denitrification in ground water from Tmss well W-854-1731. Denitrification is also indicated by the enriched nitrate isotopic composition of the ground water sample from Spring 11, although it may be the result of local surficial rather than subsurface ground water processes. In the $Tnbs_1/Tnsc_0$ HSU, the combined effects of the complex geologic and hydrogeologic conditions make data interpretation more challenging. The distribution of nitrate, nitrate isotopic compositions, and excess nitrogen concentration are best explained as being the result of some localized denitrification coupled with dilution due to dispersion and diffusion. The complete evaluation of the Building 854 OU nitrate data is presented in the Second Five-Year Review for the Building 854 OU (Valett et al., 2013).

2.6.3.4. Building 854 OU Remedy Performance Issues

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

2.7. Building 832 Canyon OU 7

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

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

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

The 832-SRC GWTS removes VOCs and perchlorate from ground water and the SVTS removes VOCs from soil vapor. The GWTS and SVTS began operation in September and October 1999, respectively. 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 two ion-exchange resin columns connected in series to remove perchlorate, and three aqueous-phase GAC units (also connected in series) to remove VOCs. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. A positive displacement rotary lobe blower is used to create a vacuum at selected wellheads through a system of piping manifolds. The contaminated vapors are treated using three vapor-phase GAC units connected in series. Treated soil vapors are then discharged to the atmosphere under a permit issued by the San Joaquin Valley 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. The 830-SRC GWTS currently extracts ground water from wells W-830-19, W-830-49, W-830-57, W-830-59, W-830-60, W-830-1807, W-830-2214, and W-830-2215 at a combined flow rate of approximately 5 to 7 gpm. The GWTS configuration includes a Cuno filter for particulate filtration, two ion-exchange resin columns connected in-series to remove perchlorate, and three in-series aqueous-phase GAC units to remove VOCs. In early 2010, the 830-SRC GWTS was modified so that ground water extracted from higher flow Upper $Tnbs_1$ HSU extraction wells (W-830-2215, W-830-60, and W-830-57) was routed around the 830-SRC ion-exchange canisters. Perchlorate has not been detected above the reporting limit (4 µg/L) since 2005 in these wells. This bypass is expected to improve the operation of the treatment facility by decreasing backpressure, allowing for increased ground water flow and mass removal rates. Ground water extracted from low-flow $Tnsc_{1a}$ well W-830-2214 still contains perchlorate above the discharge limit; this well does not bypass the perchlorate treatment system. Nitrate-bearing treated effluent is discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. Soil vapor is extracted from wells W-830-1807 and W-830-49 using a liquid ring vacuum pump at a current combined flow rate of approximately 30 to 33 scfm. The contaminated vapors are treated using three vapor-phase GAC units connected in series. Treated soil vapors are then discharged to the atmosphere under a permit issued by the San Joaquin Valley Unified Air Pollution Control District.

The 830-DISS GWTS began operation in July 2000, removing VOCs, perchlorate, and nitrate from ground water. The GWTS currently extracts ground water from wells W-830-51, W-830-52, W-830-53, and W-830-2216 at a combined flow rate of approximately 2 to 4 gpm. During a typical year, approximately 1 to 2.5 gpm of ground water is extracted from extraction wells W-830-51 and W-830-52 using natural artesian pressure and less than 0.5 gpm of ground water is extracted from well W-830-53 using natural artesian pressure. Currently, extracted ground water flows through ion-exchange canisters to remove perchlorate at the 830-DISS location. The water is piped to the Central GSA GWTS for VOC removal. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses.

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

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

2.7.1.1. Building 832 Canyon OU Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes, rates, and operational hours for the second semester of 2013 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 2013 are presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and mass removed are summarized in Table Summ-2. Analytical results for influent and effluent samples collected during the second semester of 2013 are presented in Tables 2.7-4 and 2.7-5. The pH measurement results are presented in Appendix A.

2.7.1.2. Building 832 Canyon OU Operations and Maintenance Issues

The following maintenance activities and operational issues occurred at the 832-SRC GWTS and SVTS, 830-SRC GWTS and SVTS, and 830-DISS GWTS during the second semester of 2012:

<u>830-SRC GWTS and SVTS</u>

- On July 18, the southern effluent misting tower was rebuilt to allow alternating misting of the treatment facility effluent between towers.
- The GWTS influent hose from the high flow ground water extraction wells to the GAC canisters was replaced after the system shut down on July 22 due to a pressure alarm. The system was restarted the same day following this repair. The SVTS was shut down on July 22 to make these repairs.
- The GWTS was shut down on July 29 to repair the overflow catch tank for the liquid ring pump. The system was restarted on July 30 after repairs were completed.
- Extraction wells W-830-1807 and W-830-49 were offline from August 5 to August 6 to install a new power supply. Extraction wells W-830-19 and W-830-59 were offline August 5 to August 12 to install a new power supply.
- The GWTS was shut down from August 13 to August 14 to repair the misting tower line. The system effluent discharge was switched to the south misting tower upon restart.
- The SVTS was running intermittently from August 5 to August 7; full-time operations resumed on August 7 after resolving problems with the overflow drain valve. The system was off temporarily on August 19 for maintenance.
- The GWTS and SVTS were offline from October 27 to 29 due to a site power outage and remained offline until November 4 while the spent GAC was replaced.
- The GWTS transfer pump for the valley wells (W-830-57, W-830-60, W-830-2214, and W-830-2215) was found offline on November 11 and was replaced on November 19. However the wells remained off while electrical components are replaced.
- The GWTS and SVTS were shut down on December 3 to prevent freeze damage and remained offline for the remainder of the reporting period.

<u>832-SRC GWTS and SVTS</u>

- The GWTS was shut down briefly on July 25 to repair a leak at the discharge pump.
- A small leak in the GWTS effluent discharge line was discovered on July 29. The GWTS was restarted on July 30 after repairs were completed. However, upon inspection of the discharge pipeline, more leaks were discovered. The GWTS was secured on

August 1 for repairs and was restarted on August 5 after several small leaks were repaired. The SVTS continued to operate.

- Extraction well W-832-11 stopped pumping on August 27 due to low water levels. Repairs were made to a cracked effluent tube and the well was brought back on-line.
- The GWTS and SVTS were shut down from October 16 through 20 as a result of the Government and Laboratory shutdown.
- The GWTS and SVTS were offline from October 27 to 29 due to a site power outage.
- Building 832-Source ground water and soil vapor extraction and treatment systems were shut down on December 2 to prevent freeze damage and remained offline for the remainder of the reporting period.

830-DISS GWTS

- Battery maintenance was performed on August 27.
- Extraction well W-830-2216 was shut down on December 3 to protect against freeze damage and remained offline for the remainder of the reporting period. The artesian extraction wells were shut off on December 5 due to the shut down of the Central GSA ground water treatment system. The wells will remain off until the Central GSA system is restarted.

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 Air Pollution Control District permit limitations.

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

The Building 832 Canyon OU treatment facility sampling and analysis plan complies with the monitoring requirements in the CMP/CP. The sampling and analysis plan is presented in Table 2.7-6. No modifications were made to any of the plans during this reporting period.

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

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

2.7.2. Building 832 Canyon OU Ground Water Monitoring

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

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; sixty-six required analyses in nineteen wells and two springs were not performed because the wells were dry or there was insufficient water to collect the samples and one required analyses for well W-832-09 was not performed due to an inoperable pump. The pump in well W-832-09 was replaced in August 2013.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

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

2.7.3. Building 832 Canyon OU Remediation Progress Analysis

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

2.7.3.1. Building 832 Canyon OU Mass Removal

The monthly ground water and soil vapor mass removal estimates for the second semester of 2013 are summarized in Tables 2.7-8 through 2.7-10. The total masses removed during the 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 (mostly TCE) are the primary COCs detected in ground water. Cis-1,2-DCE is a COC at both Buildings 830 and 832; chloroform and PCE are COCs at Building 830. Perchlorate and nitrate are secondary COCs. These constituents have been identified primarily in the Qal/WBR HSU (Figures 2.7-6, 2.7-10 and 2.7-13), $Tnsc_{1b}$ HSU (Figures 2.7-7, 2,7-11 and 2.7-14) and $Tnsc_{1a}$ HSU (Figure 2.7-8, 2.7-12 and 2.7-15). VOCs have also been detected at low concentrations in Building 832 Canyon in the $Tnbs_2$ and Upper $Tnbs_1$ HSUs (Figure 2.7-9).

2.7.3.2.1. VOC Concentrations and Distribution

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

Of the VOCs detected in the Building 830 area during 2013, only TCE was detected at concentrations above its respective MCL cleanup standard. VOC concentrations detected in soil vapor continue to decline in the Building 830 source area. VOC concentrations collected from dual extraction well W-830-1807 have decreased from a historic maximum of 35 $ppm_{v/v}$ in 2004 to a 2013 maximum of 1.0 $ppm_{v/v}$ (February). VOC concentrations detected in soil vapor collected from dual extraction well W-830-49 have decreased from a historic maximum of 259 $ppm_{v/v}$ in 2007 to a 2013 maximum of 1.4 $ppm_{v/v}$ (November).

VOCs detected in Building 832 area ground water consist primarily of TCE. During 2013, the other VOCs present above the reporting limit in the Building 832 source area were cis-1,2-DCE, chloroform, and Freon 11. Of these VOCs, only TCE was present in the

Building 832 area at concentrations above its MCL cleanup standard. VOC concentrations in soil vapor are also declining in the Building 832 source area. VOC concentrations detected in soil vapor samples collected from well W-832-15 have decreased from a historic maximum of 1.8 $ppm_{v/v}$ in 2001 to a 2013 maximum of 0.28 $ppm_{v/v}$ (November). VOCs detected in well W-832-12 have decreased from a historic maximum of 1.1 $ppm_{v/v}$ in 2008 to a 2013 maximum of 0.44 $ppm_{v/v}$ (November).

VOC concentrations and distribution are discussed by HSU below.

Qal/WBR HSU

Since remediation began in the Building 830 source area in 2000, VOC concentrations in Qal/WBR HSU ground water near 830-SRC have decreased by an order-of-magnitude from a historic maximum of 10,000 µg/L (well SVI-830-035, 2003) to a 2013 maximum concentration of 890 µg/L (well SVI-830-035, February). This concentration consisted entirely of TCE.

Since remediation began in the Building 832 source area in 1999, VOC concentrations in wells screened in the Qal/WBR HSU have decreased from a historic maximum of 1,800 µg/L (well W-832-18, 1998) to a 2013 maximum concentration of 100 µg/L in monitor well W-832-23 (February). Well W-832-23 is screened in the Qal/WBR and $Tnsc_{1b}$ HSUs. During 2013, ground water samples for VOC analyses were not collected from several wells located in the Building 832 source area because the water table dropped below the screens in these wells. During 2013, VOC concentrations in ground water samples taken from Qal/WBR HSU guard wells W-35B-01 and W-880-02, located south of Building 832 Canyon near the Site 300 southern boundary, were below reporting limits (<0.5 µg/L), except on one occasion. In June, PCE was detected in ground water samples collected from guard well W-880-02 at a concentration of 0.52 µg/L, slightly above the reporting limit. Beginning in 1999, TCE and PCE were routinely detected at concentrations slightly above the reporting limit in this guard well; however, since 2006, only PCE has been detected above the reporting limit. VOC concentrations in these two guard wells have decreased from a historic maximum of 1.9 µg/L in well W-35B-01 (2001).

$Tnsc_{1b}$ HSU

Since remediation began in 2000 in the Building 830 source area, VOC concentrations in ground water in the $Tnsc_{1b}$ HSU have decreased from a historic maximum of 13,000 µg/L in extraction well W-830-49 (2003) to a 2013 maximum of 2,500 µg/L in monitor well W-830-19 (April).

At the 830-DISS treatment facility, VOC concentrations in $Tnsc_{1b}$ HSU artesian wells W-830-51, W-830-52 and W-830-53, have decreased from a historic maximum of 170 µg/L (extraction well W-830-51, 2002) to a 2013 maximum of 28 µg/L in W-830-51 and W-830-52 (January). Farther south along Building 832 Canyon, the leading edge of the $Tnsc_{1b}$ VOC plume continues to be contained within Site 300 boundary based on total VOC concentrations below the 0.5 µg/L reporting limit in guard wells W-880-03, W-830-1730 and W-4C.

$Tnsc_{1a}$ HSU

Since remediation of the $Tnsc_{1a}$ HSU began in early 2007, VOC concentrations in ground water have generally decreased from a historic maximum of 1,700 µg/L (monitor well W-830-27, 1998) to a 2013 maximum of 1,100 µg/L in extraction well W-830-2214 (July). Although the current maximum concentration is less than the historic maximum in all $Tnsc_{1a}$

HSU wells, concentrations in extraction well W-830-2214 have been increasing since 2009. Because of the low yields and limited recharge of this extraction well, increased pumping and hydraulic capture from this well is not possible.

As recommended in the 2011 Five-Year Review (Helmig et al., 2011), a downgradient $Tnsc_{1a}$ well, W-830-2701, was installed in 2011. During 2013, VOC concentrations in ground water in W-830-2701 reached a maximum concentration of 16.1 µg/L (June). A step-drawdown hydraulic test was conducted at this well in April 2013 and the well will be connected to the 830-SRC treatment facility in 2014. During 2012, a new monitor well, W-830-2806, was installed southwest of the Building 830 source area and on the other side of Building 832 Canyon in the $Tnsc_{1a}$ HSU. During 2013, VOCs were not detected in ground water at this location.

Upper $Tnbs_1$ HSU

Since remediation began in the Upper $Tnbs_1$ HSU, VOC concentrations in ground water have decreased from a historic maximum of 100 µg/L (monitor well W-830-28, 1998) to a 2013 maximum of 32 µg/L in monitor well W-830-18 (August). This well is co-located with Upper $Tnbs_1$ HSU extraction well W-830-2215. During 2013, VOCs were not detected above the 0.5 µg/L reporting limit in Upper $Tnbs_1$ guard wells W-830-15 and W-832-2112. In October 2013, a new monitor well, W-832-2906, was installed in the Upper $Tnbs_1$ HSU downgradient of the 832 source area and north of extraction well W-830-57. In 2013, the maximum total VOC concentration detected in ground water in this well was 12 µg/L (December). The source of this contamination is under evaluation.

As described in the High Explosives Process Area section, well W-830-2216 extracts ground water from the $Tnbs_2$ HSU. Contamination in this well is probably due to a combination of sources located in the HEPA and Building 832 Canyon OUs. Since extraction began in 2007, VOC concentrations in extraction well W-830-2216 have been consistently declining. During 2013, the maximum concentration of TCE in extraction well W-830-2216 was 7.9 µg/L (April). In 2013, the maximum TCE concentration in nearby monitor well W-830-13 was 7.1 µg/L (April). TCE was the only VOC detected in W-830-2216 and W-830-13 during 2013. The extracted ground water is treated at the 830-DISS treatment facility.

2.7.3.2.2. Perchlorate Concentrations and Distribution

During 2013, the maximum perchlorate concentration detected in ground water in the Qal/WBR HSU was 13 µg/L (monitor well W-832-13, February); this well is located in the Building 832 source area. In 1998, perchlorate concentrations detected in Qal/WBR HSU ground water reached a historic maximum of 51 µg/L in monitor well W-830-34; this well is located in the Building 830 source area. The maximum perchlorate concentration detected in ground water near the Building 830 source area during 2013 was 5.1 µg/L (February) in extraction well W-830-1807. During 2013, perchlorate was not detected above the 4 µg/L reporting limit in Qal/WBR HSU guard wells W-35B-01 and W-880-02.

Monitor well W-832-12 is screened in the weathered portion of the $Tnsc_{1b}$ HSU and is shown on both the Qal/WBR and $Tnsc_{1b}$ HSU maps. This well had the maximum perchlorate concentration detected in ground water in the Building 832 source area during 2013. Historically, monitor well W-830-58 has contained the highest perchlorate ground water concentration (26 µg/L, 2001) in the $Tnsc_{1b}$ HSU. This well is located in the Building 830 source area and the perchlorate concentration in ground water collected from this well during 2013 was 6.2 µg/L (March). During 2013, the highest perchlorate concentration in ground water collected from wells located in the 830 source area was 9.4 µg/L (March) in monitor well W-830-25. Perchlorate was not detected above the reporting limit in $Tnsc_{1b}$ HSU guard wells W-830-1730, W-4C or W-880-03 during 2013.

During 2013, the maximum perchlorate ground water concentration detected in the $Tnsc_{1a}$ HSU was 8.2 µg/L in extraction well W-832-25 (March). The historic maximum perchlorate concentration (13 µg/L) was detected in 1999 in this same extraction well. Perchlorate was not detected above the 4 µg/L reporting limit in new monitor wells W-830-2806 and W-832-2906 during 2013.

During 2013, perchlorate was not detected above the reporting limit of 4 µg/L in any ground water samples collected from the Upper $Tnbs_1$ HSU.

2.7.3.2.3. Nitrate Concentrations and Distribution

During 2013, nitrate concentrations in ground water remained 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 2013, nitrate ground water concentrations detected in samples from the Qal/WBR HSU ranged from the <0.5 mg/L reporting limit in guard wells located near the site boundary to 160 mg/L in monitor well W-832-13 (February), located in the Building 832 source area. The historic maximum concentration of nitrate detected in the Qal/WBR HSU occurred in SVI-830-033 (240 mg/L, 2008). This piezometer is located in the Building 830 source area where the maximum nitrate concentration detected during 2013 was 120 mg/L (monitor well W-830-34, February).

Monitor well W-832-13 also represents the maximum nitrate concentration detected in ground water in the $Tnsc_{1b}$ HSU during 2013. This well is screened in the weathered bedrock portion of the $Tnsc_{1b}$ HSU. Historically, the highest nitrate concentrations in the $Tnsc_{1b}$ HSU have been detected in extraction well W-830-49 (501 mg/L, 1998). This well is located in the Building 830 source area where the maximum nitrate concentration detected during 2013 was 140 mg/L (March) in monitor well W-830-25. Nitrate concentrations in the $Tnsc_{1b}$ guard wells during 2013 ranged from <0.5 mg/L to 3.1 mg/L in well W-830-1730 (February), significantly below the 45 mg/L MCL cleanup standard.

During 2013, the maximum nitrate ground water concentration detected from the $Tnsc_{1a}$ HSU was 100 mg/L in 832-SRC extraction well W-832-25 (March). Historically, monitor well W-830-27 had the highest nitrate concentrations in the $Tnsc_{1a}$ HSU (160 mg/L, 2002). This well had a maximum nitrate concentration of 95 mg/L during 2013.

During 2013, nitrate in ground water was detected below the 0.05 mg/L reporting limit in new monitor well W-830-2806 and significantly below the 45 mg/L MCL at 4.1 mg/L (December) in monitor well W-832-2906.

During 2013, nitrate ground water concentrations detected in samples collected from the Upper $Tnbs_1$ ranged from <0.5 mg/L to 6.4 mg/L in monitor well W-830-28 (March). Historically, well W-830-28 has had the highest nitrate concentrations in the $UTnbs_1$ HSU (21 mg/L, 1997). Nitrate ground water concentrations were not detected above the 45 mg/L MCL cleanup standard in Upper $Tnbs_1$ HSU guard wells W-830-15 or W-832-2112 during 2013. 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

During 2013, ground water and soil vapor extraction wellfield operations continued in the Building 832 Canyon OU to prevent offsite plume migration, reduce source area concentrations and remove contaminant mass. The expansions of the 832-SRC and 830-SRC extraction wellfields over time 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 in some areas because these wells cannot maintain continuous operation. The low yields are due to a combination of geologic materials with low hydraulic conductivity, dewatering, and limited recharge.

Qal/WBR and $Tnsc_{1b}$ HSUs

In the Qal/WBR and $Tnsc_{1b}$ HSUs, the extraction wellfield targets the highest VOC plume concentrations emanating from the Building 832 and Building 830 source areas, but steep terrain and unstable canyon bottom soil conditions limit the availability of sites for new wells. Ground water extraction is further constrained by limited recharge and declining water levels in both source areas. During 2013, some extraction wells were offline for part of the reporting period due to pump repairs, treatment facility repairs, and/or freeze protection. No long-term impact is expected as a result of these shutdowns.

$Tnsc_{1a}$ HSU

Active remediation of the $Tnsc_{1a}$ HSU began in 2007 and the $Tnsc_{1a}$ extraction wellfield currently consists of two wells: W-830-2214, located near the 830-SRC treatment facility, and W-832-25, located downgradient of the 832-SRC treatment facility in the distal area of this plume. Since 2007, VOC ground water concentrations have remained stable in extraction well W-832-25. Since 2012, VOC concentrations have also been stabilizing in extraction well W-830-2214, although concentrations remain high. Water levels continue to decline in both the 830-SRC and 832-SRC areas, limiting continuous extraction from the $Tnsc_{1b}$ and $Tnsc_{1a}$ HSUs.

To increase hydraulic capture in the $Tnsc_{1a}$ HSU downgradient of extraction well W-830-2214, W-830-2701 was installed near Upper $Tnbs_1$ HSU extraction well W-830-60 in 2011. During 2013, VOC concentrations detected in this well reached a maximum concentration of 16.1 μg/L (June). The VOCs in this well are mainly TCE, but cis-1,2-DCE has also been detected at levels below its MCL cleanup standard. During 2013, perchlorate concentrations in W-830-2701 have been at the reporting limit of 4 μg/L and nitrate concentrations have been significantly below the 45 mg/L MCL cleanup standard. To determine hydraulic properties, a step-drawdown hydraulic test was conducted at well W-830-2701 in April 2013; this test indicated that the well can sustain a flow rate of 3 gpm. In 2014, the 830-SRC extraction wellfield will be expanded by connecting $Tnsc_{1a}$ HSU extraction well W-830-2701 to the facility. $Tnsc_{1a}$ HSU monitor well, W-830-2806, was installed west of well W-830-2701 during 2012. This is a clean well and no VOCs, perchlorate or nitrate were detected during 2013.

Upper $Tnbs_1$ HSU

Extraction wells in the Upper $Tnbs_1$ target areas with the highest total VOC concentrations. Since remediation began in this HSU, the overall extent of total VOCs has also decreased significantly and ground water samples collected from monitor well W-830-1832, which is located on the leading edge of the VOC plume, have been below the reporting limit since March 2010. Ground water in Upper $Tnbs_1$ guard wells W-830-15 and W-832-2112, located downgradient of well W-830-1832 and upgradient of water-supply Well 20, continues to show analytical results below the respective reporting limits for all COCs and significantly below the 45 mg/L MCL cleanup standard for nitrate.

In October 2013, a new Upper $Tnbs_1$ monitor well, W-832-2906, was installed downgradient of the 832 source area and to the north of extraction well W-830-57. During December 2013, TCE was detected at a maximum concentration of 12 µg/L in ground water in this well. The source of this contamination and its impact of the long-term performance of the cleanup remedy for the Building 832 Canyon OU are still being evaluated.

$Tnbs_2$ HSU

In the $Tnbs_2$ HSU, Building 832 Canyon remediation continues via extraction well W-830-2216. The source of contamination in this area probably stems from a combination of sources located in both the HEPA and the Building 832 Canyon areas. Decreasing concentration trends in this extraction well and nearby monitor well W-830-13 suggest that remediation has been effective in removing mass in this area.

Mass Removal

Near the 832-SRC treatment facility, concentration trends in extraction wells have remained stable for several years and declining water levels and low yields limit ground water extraction. As a result, soil vapor extraction accounts for most of the VOC mass extracted from this area. During 2013, 14 g of total VOC mass were removed by the 832-SRC GWTS and 47 g were removed by the 832-SRC SVTS.

A total of 1,171 g of VOC mass, 413 kg of nitrate and 12 g of perchlorate were removed from ground water in the Building 832 Canyon OU in 2013. Table Summ-1 lists the mass removed by each individual Building 832 Canyon OU treatment facility.

As remediation proceeds from the 832-SRC, 830-SRC and 830-DISS extraction wells, it is expected that concentrations in all Building 832 Canyon HSUs will continue to decline. Nevertheless, the presence of TCE in new Upper $Tnbs_1$ monitor well W-832-2906 presents a challenge for remediation in the Building 832 Canyon OU and the source of this contamination is under evaluation. VOC concentration trends in the Upper $Tnbs_1$ HSU will also continue to be monitored closely because pumping of water-supply Well 20 and backup water-supply Well 18 has the potential to influence the distribution of contaminants. After Site 300 begins using the Hetch-Hetchy reservoir as its main water supply, Well 20 will become a backup water-supply well and Well 18 will no longer be used.

2.7.3.4. Building 832 Canyon OU Remedy Performance Issues

During 2013, TCE was detected in Upper $Tnbs_1$ monitor well W-832-2906 at a maximum concentration of 12 µg/L (December); this well was installed in October 2013. The source of this contamination and its impact of the long-term performance of the cleanup remedy for the Building 832 Canyon OU are being evaluated. Otherwise, no new issues were identified during this reporting period that could impact the long-term performance of the cleanup remedy for the Building 832 Canyon OU. The remedy continues to make progress toward cleanup and to be protective of human health and of the environment.

2.8. Site 300 Site-Wide OU 8

The Site 300 Site-Wide OU is comprised of release sites at which no significant impacts to ground water and no unacceptable risk to human health or the environment are present. For this reason, a monitoring 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. Analytical results and ground water elevation measurements obtained during 2013 from the OU 8 locations are presented in Appendices B and C, respectively.

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 VOC 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, firing table, landfill, and monitor wells is presented on Figure 2.8-1.

2.8.1.1. Building 801 and Pit 8 Landfill Ground Water Monitoring

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

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

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; nine required analyses were not performed because well K8-05 was dry and eleven required analyses were not performed due to an inoperable pump in well K8-02B during the first and second quarters. The pump in well K8-02B was replaced in June 2013.

The approximate generalized ground water flow direction, ground water elevations, and individual VOC concentrations, nitrate, and perchlorate for the $Tnbs_1/Tnbs_0$ HSU are posted on Figure 2.8-1.

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

At Building 801, VOCs, comprised of chloroform, 1,2-DCA and TCE, are the primary COCs detected in ground water; perchlorate and nitrate are the secondary COCs. There are no COCs in ground water at the Pit 8 Landfill. The results of the detection monitoring of the Pit 8 Landfill are discussed in Section 3.2.

In the Building 801/Pit 8 Landfill area, five monitor wells are screened in the $Tnbs_1/Tnbs_0$ HSU.

During 2013, the maximum total VOC concentration detected in $Tnbs_1/Tnbs_0$ HSU ground water remain low at 5.5 µg/L (monitor well K8-01, May). Well K8-01 is downgradient of the Building 801 dry well VOC release site and upgradient of Pit 8. This detection of VOCs (measured in a duplicate sample) was comprised of 3.6 µg/L TCE and 1.9 µg/L 1,2-DCA; the routine sample (from the same well) contained 3.4 µg/L TCE and 1.7 µg/L 1,2-DCA. Of these COCs, only 1,2-DCA was detected above its MCL cleanup standard of 0.5 µg/L during 2013. However, the 2013 maximum 1,2-DCA concentration of 1.9 µg/L represents a decrease from the historic maximum 1,2-DCA concentration of 5 µg/L detected in this well in 1990. TCE was not detected above its 5 µg/L MCL cleanup standard and chloroform was not detected in any wells above its 0.5 µg/L reporting limit. Overall, 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 (well K8-01, 1990).

During the 2013, perchlorate was not detected above its 4 µg/L reporting limit in ground water samples from any Building 801/Pit 8 monitor wells.

Nitrate concentrations in ground water in the vicinity of Building 801/Pit 8 Landfill have been relatively stable over time. The 2013 maximum nitrate concentration was 67 mg/L (duplicate sample from monitor well K8-04, May) that statistically represents the historic maximum concentration detected in the area; however, the routine sample collected the same day from this well contained 63 mg/L. Both concentrations are within the range of 51 to 67 mg/L detected in this well since 2004. This detection in well K8-04 and a detection of 47 mg/L in monitor well K8-01 (duplicate sample, May; the routine sample collected the same day contained 43 mg/L) were the only 2013 detections in the Pit 8 area that exceeded the 45 mg/L MCL cleanup standard for nitrate. Nitrate concentrations detected in ground water during the first semester 2013 at the Building 801/Pit 8 Landfill are generally similar to previous years.

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

2.8.2. Building 833

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

2.8.2.1. Building 833 Ground Water Monitoring

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

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

The approximate generalized ground water flow direction, ground water elevations and individual VOC concentrations for the Tpsg HSU are posted on Figure 2.8-2.

2.8.2.2. Building 833 Contaminant Concentrations and Distribution

At Building 833, the VOCs TCE and cis-1,2-DCE are the primary COCs in ground water; there are no secondary COCs.

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 since 1993 has shown a decline in VOC concentrations in Tpsg HSU ground water.

In the Building 833 area, eight monitor wells are screened in the Tpsg HSU and one well (W-833-30) is screened in the deeper Lower $Tnbs_1$ HSU.

The historic maximum concentration of VOCs measured in the Tpsg HSU in the Building 833 area was 2,100 µg/L (entirely TCE) detected in monitor well W-833-03 in 1992. This well has not been sampled due to insufficient water since June 2000, when 20 µg/L of VOCs (entirely TCE), was detected. During 2013, the only Tpsg HSU well with sufficient ground water to retain a sample was W-833-33 that yielded a sample with 110 µg/L of VOCs (entirely TCE, March). In 2012, this well yielded a sample with 120 µg/L of VOCs (entirely TCE). The historic maximum VOC concentration detected in well W-833-33 is 170 µg/L (entirely TCE) in 2008. During 2013, the remaining six wells screened in the Tpsg HSU were either dry or did not contain enough water to collect a sample.

The other primary COC, cis-1,2-DCE, was not detected in any Building 833 area wells, during 2013. This compound has only been detected five times and most recently in 1993, all in well W-833-12. The historic maximum cis-1,2-DCE concentration was 58 µg/L, detected in 1993. This compound has not been detected in other Building 833 area wells, historically.

During 2013, VOCs were not detected in either routine or duplicate ground water samples collected in March and September from monitor well W-833-30, screened in the deeper Lower $Tnbs_1$ HSU, indicating that VOC contamination continues to be confined to the shallow Tpsg perched water-bearing zone.

TCE in Tpsg HSU ground water is the only COC remaining above its cleanup standard (5 µg/L) at Building 833.

2.8.3. Building 845 Firing Table and Pit 9 Landfill

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

2.8.3.1. Building 845 and Pit 9 Landfill Ground Water Monitoring

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

- Detect any future releases from the Pit 9 Landfill, and
- Detect any impacts to ground water from HMX and uranium in subsurface soil and rock.

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

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

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; eight required analyses were not performed due to an inoperable pump in well K9-04 during second quarter. The pump in K9-04 was replaced in June 2013.

The approximate generalized ground water flow direction, ground water elevations, HMX concentrations, uranium activities, and $^{235}U/^{238}U$ atom ratios for the $Tnsc_0$ HSU are presented on Figure 2.8-3.

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

In the Building 845 and Pit 9 Landfill area, four landfill detection monitor wells are screened in the $Tnbs_1/Tnbs_0$ HSU.

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 2013 were either below reporting limits or within the range of background concentrations. Because uranium and the HE compound HMX were identified as COCs in subsurface soil at Building 845/Pit 9 Landfill, ground water in this area is monitored for these constituents.

During 2013, HMX concentrations in ground water samples remained below the 1 µg/L reporting limit. Historically, HMX has not been detected above reporting limit since the four area monitor wells were installed in 1989.

During 2013, uranium activities in ground water samples remained very low (<1 pCi/L) and $^{235}U/^{238}U$ atom ratios indicate the presence of only natural uranium. The results of the detection monitoring of the Pit 9 Landfill are discussed in Section 3.2.

These 2013 data continue to indicate that there have been no releases from the Pit 9 Landfill nor impacts to ground water from HMX and uranium in subsurface soil.

2.8.4. Building 851 Firing Table

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

2.8.4.1. Building 851 Ground Water Monitoring

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

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

Ground water elevations, total uranium activities, and $^{235}U/^{238}U$ atom ratios for the Tmss HSU are posted on Figure 2.8-4.

2.8.4.2. Building 851 Contaminant Concentrations and Distribution

In the Building 851 Firing Table area, four monitor wells are screened in the Tmss HSU.

At the Building 851 Firing Table, uranium is the primary and only COC detected in ground water; there are no secondary COCs.

Uranium activities in Tmss HSU ground water in the Building 851 Firing Table area have always been well below the 20 pCi/L MCL cleanup standard for total uranium and within the range of background levels. Although background uranium activity at Site 300 may vary based on ground water age, major-ion chemistry, and aquifer lithology, single-digit uranium activities are clearly within the range of Site 300 background. However, ground water continues to be monitored to detect any impacts to ground water from uranium in subsurface soil and rock.

During 2013, the maximum total uranium activity detected in ground water samples (collected in June) from wells in the Building 851 area was 1.5 pCi/L in well W-851-08; the historic maximum uranium activity in this well was 2.06 pCi/L observed in 1993. June samples from the three remaining wells contained uranium activities at 0.12 pCi/L in well W-851-06, and below the reporting limit of <0.0627 in wells W-851-05 and W-851-07. The historic maximum uranium activity in Tmss HSU ground water at Building 851 was 3.2 pCi/L (well W-851-07, 1991); as mentioned previously, the 2013 activity for this well was below the reporting limit.

During 2013, the atom ratio of $^{235}U/^{238}U$ indicated the presence of only natural uranium in the samples from wells W-851-07 (0.0074) and W-851-08 (0.0072). Due to the low mass of ^{235}U in the sample (less than reporting limit) for wells W-851-05 and W-851-06, the reporting limit was used as the numerator in the $^{235}U/^{238}U$ ratio calculation, resulting in an atom ratio (which is not quantifiable) that includes the range of atom ratios including that of enriched uranium. In reality, the uranium is wholly natural in these samples. Overall, uranium activities in ground water are similar to previous years and remain well below the 20 pCi/L MCL cleanup standard and within the range of natural background levels.

3. Detection Monitoring, Inspection, and Maintenance Program for the Pits 2, 3, 4, 5, 6, 7, 8, and 9 Landfills and Inspection and Maintenance Program for the Drainage Diversion System and Building 850 CAMU

The Detection Monitoring Program is designed to detect any future releases of contaminants from the Pit 2, 3, 4, 5, 6, 7, 8, and 9 Landfills. This section presents the results for ground water detection monitoring of these landfills, and any landfill inspections or maintenance conducted during the reporting period. This section also includes any inspection and maintenance activities conducted for the Pit 7 Drainage Diversion System and Building 850 CAMU during the reporting period.

3.1. Pit 2 Landfill

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

3.1.1. Sampling and Analysis Plan Modifications

Detection monitoring of detection monitor wells located downgradient of the Pit 2 Landfill, is conducted annually for VOCs, nitrate, tritium, perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride. Detection monitoring wells for the Pit 2 Landfill include W-PIT2-1934, W-PIT2-1935, K2-01C, and NC2-08.

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

During the reporting period ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exception; twenty-four required analyses in four wells were not performed because the wells were dry or there was insufficient water in the wells to collect the samples and eleven required analyses were not performed due to an inoperable pump in K2-01C during second and fourth quarters. The pump in well K2-01C was replaced in August and December 2013 when it failed again.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

3.1.2. Contaminant Detection Monitoring Results

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

The maximum 2013 tritium activity within the $Tnbs_1/Tnbs_0$ HSU in the area immediately south of the Pit 2 Landfill was 3,330 ± 678 pCi/L (monitor well NC2-08, May). The maximum 2012 tritium activity of 3,520 pCi/L was also detected in a sample from well NC2-08. The historic maximum tritium activity of 49,100 pCi/L was detected in 1986 samples (January and August) from monitor well K2-01C. Due to inoperable pumps, well K2-01C was not sampled during 2013. Monitor wells W-PIT2-2301 and W-PIT2-2302, screened in the Qal/WBR HSU and located downgradient from Pit 2 Landfill, contained insufficient water for sampling during 2013. The 2012 samples from these wells did not contain tritium above the reporting limit/background activity (100 pCi/L). These data indicate that tritium activities in $Tnbs_1/Tnbs_0$ HSU ground water immediately downgradient of the landfill are decreasing and are currently a fraction of the historic maximum.

The maximum 2013 uranium activity detected in a ground water sample from the Pit 2 area was 3.9 pCi/L (monitor well W-PIT2-1934, May). The uranium activities in the ground water samples collected from the Pit 2 detection monitor wells are all within the range of natural uranium background. Prior to 2005, to maintain a wetland habitat for red-legged frogs (a Federally-listed endangered species) potable water was discharged within a drainage channel that extends along the northern and eastern margin of the Pit 2 Landfill. While this discharge occurred, increased uranium activities in wells in the Pit 2 area were observed. The release of depleted uranium from Pit 2 appears to have occurred during this time period as a result of this discharge. This discharge was discontinued in 2005 and since then, total uranium activities in ground water from $Tnbs_1/Tnbs_0$ HSU monitor wells W-PIT2-1934 and W-PIT2-1935, both located along the northern margin of the Pit 2 Landfill, have decreased. The samples collected from wells W-PIT2-1934 and W-PIT2-1935 during 2013 (May) and analyzed by mass spectrometry contained 3.9 pCi/L and 2.7 pCi/L of uranium, respectively. The sample from well

W-PIT2-1934 contained a small percentage of depleted uranium while the sample from well W-PIT2-1935 contained only natural uranium. Monitor wells W-PIT2-2301 and W-PIT2-2302, screened in the Qal/WBR HSU and located downgradient from Pit 2 Landfill, contained insufficient water for sampling during 2013. During 2012, ground water samples collected from these wells contained low activities of total uranium (0.69 pCi/L and 0.14 pCi/L, respectively).

During 2013, perchlorate was not detected above the 4 µg/L reporting limit in ground water samples from any of the Pit 2 detection monitoring wells. The other detection monitoring constituents: VOCs, nitrate, HE compounds, Title 26 metals, lithium, and fluoride concentrations/activities in samples collected during 2013 were either below reporting limits or within the range of background concentrations.

There was no evidence of new contaminant releases from the Pit 2 Landfill indicated by the 2013 ground water detection monitoring data.

3.1.3. Landfill Inspection Results

The Pit 2 Landfill was inspected on April 10 and October 8, 2013. No problems were identified.

3.1.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring was conducted during the second semester of 2013. No evidence of subsidence was detected.

3.1.5. Maintenance

No maintenance was necessary or conducted on Pit 2 during 2013.

3.2. Pit 6 Landfill

The Pit 6 Landfill was used from 1964 to 1973 to bury waste in nine unlined debris trenches and animal pits, including shop and laboratory equipment and biomedical waste. The Pit 6 Landfill was capped and closed in 1997 to prevent further leaching of contaminants that likely resulted from percolation of rainwater through the buried waste. Detection monitoring of the Pit 6 Landfill is conducted to identify any future releases to ground water in accordance with the requirements of the Pit 6 Post-Closure Plan.

3.2.1. Sampling and Analysis Plan Modifications

Detection monitoring of detection monitor wells located downgradient of the Pit 6 Landfill (EP6-06, EP6-08, EP6-09, K6-01S, K6-19, and K6-36) is conducted semi-annually for VOCs and tritium and annually for aromatic VOCs (benzene, toluene, ethylbenzene, and xylenes), beryllium, mercury, total uranium, gross alpha/beta, perchlorate, and nitrate. Wells EP6-08 and K6-36 have been dry for the past several reporting periods. Beginning in 2013, nearby wells EP6-07 (near EP6-08) and K6-35 (near K6-36) now serve as detection monitor wells and are sampled for the same constituents when EP6-08 and K6-35 are dry.

The sampling and analysis plan for the Pit 6 Landfill ground water Detection Monitoring Program is presented in Table 2.3-1.

During the reporting period ground water monitoring was conducted in accordance with the detection monitoring requirements with the following exceptions: twenty required analyses were not performed because wells EP6-08 and K6-36 were dry. However, well EP6-07 (for EP6-08) and K6-35 (for K6-36) were successfully sampled in 2013 for all the required annual and semi-annual detection monitoring constituents that normally apply to EP6-08 and K6-36.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

3.2.2. Contaminant Detection Monitoring Results

A map showing the locations of monitor wells at the Pit 6 Landfill is presented on Figure 2.3-1. A ground water elevation contour map for the Qt-$Tnbs_1$ HSU is presented on Figure 2.3-1. The distribution of total VOCs and tritium in the Qt-Tnbs1 HSU is presented on Figures 2.3-3 and 2.3-4, respectively. Analytical results for 2013 are summarized in Appendix B Table B-3.05 and physical parameters measured during 2013 sampling are included in Appendix B Table B-3.06. There was no evidence of a new contaminant release from the Pit 6 Landfill as indicated by the 2013 ground water detection monitoring data.

Data collected during the third quarter 2013 do not differ significantly from the previous quarter. Wells EP6-08 and K6-36 were once again dry and not sampled in 2013. Nearby wells EP6-07 and K6-35 did have water and were sampled for the required detection monitoring constituents, effectively replacing EP6-08 and K6-36.

Tritium and VOCs that were released to ground water from the landfill prior to its closure in 1998 continue to be detected. During 2013, tritium activities did not exceed the statistical limit of 317 pCi/L in ground water samples from downgradient detection monitor well (K6-19). The statistical limit for tritium in this well was revised from 100 pCi/L to 317 pCi/L, following a statistical analysis conducted in September 2013. Tritium activities in this well were lower in the third quarter (209 pCi/L) than the activities reported in the previous sample (271 pCi/L, January 2013), but were consistent with the range of recent tritium activities detected in this well in the past few years and are not considered to be indicative of a new release. Historically, tritium activities in well K6-19 have dropped since October 1999 from the maximum of 2,520 pCi/L. Since then, tritium activities have generally decreased (Campbell, 2007; Blake et al., 2011) and have always been well below the 20,000 pCi/L MCL. Tritium activities in the other Pit 6 detection monitoring wells were below the reporting limit, during 2013.

In 2013, VOCs were not detected in Pit 6 detection monitor wells above their applicable statistical limit. During the third quarter of 2013, no VOCs were detected in Pit 6 detection monitor wells above their applicable MCL cleanup levels. In well EP6-09, TCE declined to 4.9 µg/L in July (below its MCL cleanup level of 5 µg/L) from a 5.8 µg/L concentration in January. A previous sample collected from EP6-09 yielded 5.9 µg/L TCE (July 2012). The historic maximum TCE concentration in Pit 6 monitor wells, 250 µg/L (K6-19, 1988) has declined to 1.6 µg/L (same well, July). Further discussion of VOC distribution is presented in Section 2.3.2.1.1 of this CMR report.

The other detection monitoring constituents: (aromatic VOCs, beryllium, mercury, total uranium, gross alpha/beta, perchlorate and nitrate) in samples collected from the detection monitor wells during the third quarter 2013 were below reporting limits for aromatic VOCs, beryllium, mercury, perchlorate and nitrate; and below statistical limits for gross alpha/beta and total uranium.

There was no evidence of new contaminant releases from the Pit 6 Landfill indicated by the 2013 ground water detection monitoring data.

3.2.3. Landfill Inspection Results

Abri Engineering conducted the Pit 6 Landfill Annual Engineering Inspection during the first semester 2013. Inspection results were summarized in a May 2013 engineering inspection report. No problems were reported.

3.2.4. Annual Subsidence Monitoring Results

The annual subsidence monitoring inspection was conducted during the second semester 2013. No subsidence was observed.

3.2.5. Maintenance

A post-closure visual maintenance inspection was performed during the first semester 2013 by LLNL staff. With the exception of only a few minor maintenance procedures such as removing vegetation from the drainage system, this inspection demonstrated the continued functional and structural integrity of the cap, vegetative cover, and drainage system.

3.3. 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.

3.3.1. Sampling and Analysis Plan Modifications

Detection monitoring of detection monitor wells located downgradient of the Pit 8 Landfill, is conducted annually for VOCs, nitrate, tritium, perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride. Detection monitoring wells for the Pit 8 Landfill include downgradient wells K8-02B, K8-04, and K8-05. Data from wells K8-01 and K8-03B that are located upgradient from the Pit 8 Landfill and downgradient of the Building 801 release site are also used for comparative purposes.

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

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; nine required analyses were not performed because well K8-05 was dry and eleven required analyses were not performed due to an inoperable pump in well K8-02B during the first and second quarters. The pump in well K8-02B was replaced in June 2013.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

3.3.2. Contaminant Detection Monitoring Results

A map of the Building 801 Firing Table and Pit 8 Landfill showing building, firing table, landfill, and monitor well locations, ground water elevations, approximate ground water flow direction, and nitrate, perchlorate and individual VOC concentrations in the $Tnbs_1/Tnbs_0$ hydrostratigraphic unit is presented as Figure 2.8-1.

Historic and current data indicate that VOCs detected in ground water in the Pit 8 Landfill area are the result of releases from the former Building 801D dry well, which have migrated downgradient from Building 801 to the area beneath the landfill. Ground water samples collected from monitor wells K8-01 and K8-04 during 2013 contained concentrations of 1,2 DCA that exceeded the 0.5 µg/L MCL cleanup standard. The highest concentration (5.5 µg/L, May) of VOCs, comprised of 3.6 µg/L of TCE and 1.9 µg/L of 1,2-DCA, continues to be observed at monitor well K8-01, located immediately upgradient of Pit 8 and downgradient of Building 801. The presence of VOCs (2.39 µg/L, May), comprised of 1.5 µg/L of TCE and 0.89 µg/L of 1,2-DCA, in ground water samples from monitor well K8-04, immediately downgradient of the Pit 8 Landfill appears to be a continuation of the VOC plume originating at the Building 801 dry well and not indicative of a release from the Pit 8 Landfill.

The maximum 2013 nitrate concentration detected in a ground water sample from a well in the Pit 8 Landfill area was 67 mg/L in the duplicate sample collected from monitor well K8-04. During 2013, nitrate concentrations in ground water samples collected in May from monitor wells K8-01 and K8-04 exceeded the 45 mg/L cleanup standard for nitrate. Nitrate concentrations in samples from well K8-01 were 43 mg/L and 47 mg/L for routine and duplicate samples, respectively; nitrate has been observed in this well in an approximate range between 40 and 50 mg/L since 2004. Well K8-04 nitrate concentrations were 63 mg/L and 67 mg/L for routine and duplicate samples, respectively; nitrate in this well has been detected in an approximate range between 50 and 60 mg/L, since 2004. These nitrate results were generally similar to historical results, within the range of nitrate background levels at Site 300, and not indicative of a new release from the Pit 8 Landfill.

Tritium activities in ground water samples collected from wells in the Pit 8 Landfill area during 2013 were below the reporting limit (<100 pCi/L), except for samples from monitor well K8-01. Tritium activities in samples from well K8-01 were <100 pCi/L and 104 pCi/L for routine and duplicate samples collected in May, respectively, and 121 pCi/L and 176 pCi/L for routine and duplicate samples collected in November, respectively. These tritium activities are all within or very close to the range of background, when considering reported measurement error. As Well K8-01 is located upgradient of the Pit 8 Landfill, the tritium detections above the reporting limit are not indicative a release from the landfill.

The other detection monitoring constituents: perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride concentrations/activities in samples collected during 2013 from wells upgradient/cross-gradient and downgradient of the Pit 8 Landfill were either below reporting limits or within the range of background concentrations.

Of the constituents monitored during 2013 as part of the Detection Monitoring Program in $Tnbs_1/Tnbs_0$ HSU ground water from Pit 8 Landfill area wells, only 1,2-DCA and nitrate exceeded applicable cleanup standards.

There was no evidence of a new contaminant release from the Pit 8 Landfill indicated by the 2013 ground water detection monitoring data.

3.3.3. Landfill Inspection Results

The Pit 8 Landfill was inspected on April 10 and October 8, 2013. No subsidence was observed.

3.3.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring inspection was conducted during the second semester of 2013. No subsidence was observed.

3.3.5. Maintenance

No maintenance was necessary or conducted at Pit 8 during 2013.

3.4. 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.

3.4.1. Sampling and Analysis Plan Modifications

Detection monitoring is conducted in wells located downgradient of the Pit 9 Landfill, annually for VOCs, nitrate, tritium, perchlorate, HE compounds, uranium isotopes, Title 26 metals, lithium, and fluoride. Detection monitoring wells for the Pit 9 Landfill include K9-01, K9-02, K9-03, and K9-04.

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; eight required analyses were not performed due to an inoperable pump in well K9-04 during second quarter. The pump in K9-04 was replaced in June 2013.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

3.4.2. Contaminant Detection Monitoring Results

A Building 845 Firing Table and Pit 9 Landfill site map showing monitor well locations, ground water elevations, approximate ground water flow direction, and High Melting Point Explosive concentrations, uranium activities and $^{235}U/^{238}U$ isotope atom ratios in the $Tnsc_0$ hydrostratigraphic unit is presented as 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 2013 were either below reporting limits or within the range of background concentrations. There was no evidence of a new release from the Pit 9 Landfill during 2013.

3.4.3. Landfill Inspection Results

The Pit 9 Landfill was inspected on April 10 and October 8, 2013. No problems were reported.

3.4.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring inspection was conducted during the second semester of 2013. No subsidence was observed.

3.4.5. Maintenance

No maintenance was conducted at Pit 9 during 2013.

3.5. 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.

3.5.1. Sampling and Analysis Plan Modifications

Detection monitoring is conducted in wells located downgradient of the Pit 7 Landfill Complex 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 exceptions; one required analyses was not performed due to insufficient water to collect the sample.

Analytical results and ground water elevation measurements obtained during 2013 are presented in Appendices B and C, respectively.

3.5.2. Contaminant Detection Monitoring Results

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

The detection monitor wells are screened in the following HSUs:

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

Ground water extraction and treatment at the PIT7-SRC facility began in March 2010. Pumping on the extraction wells proximal to Pits 3 and 5 has an impact on the distribution and magnitudes of COC concentrations observed.

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

3.5.2.1. Tritium

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

The highest tritium activity detected in a 2013 ground water sample from a Pit 7 Complex detection monitor well was 73,700 pCi/L (October) in $Tnbs_1/Tnbs_0$ HSU well K7-03. Tritium activities in ground water samples from this well have generally been declining since the historic maximum activity 216,000 pCi/L in March 1993. The maximum 2012 ground water tritium activity in a sample from this well was 70,200 pCi/L (April).

Tritium activities in ground water samples from detection monitor well K7-01 have decreased from the historic maximum activity of 72,900 pCi/L in October 1999 to a 2013 maximum activity of 33,200 pCi/L detected in the duplicate October sample from this well. The tritium activity detected in the routine October sample was 32,800 pCi/L. Last year, a maximum tritium activity of 32,100 pCi/L was detected in the October 2012 sample from this well.

Tritium activities in samples from detection monitor well NC7-26 have decreased from a historic maximum activity of 30,000 pCi/L (May 1999) to a 2013 maximum activity of 1,730 pCi/L (April). The 2013 result is an increase over the 2012 maximum tritium activity of 740 pCi/L. However, during 2011, the maximum tritium activity in a sample from this well was 1,800 pCi/L.

Tritium activities in all samples collected during 2013 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, the extent of tritium in the $Tnbs_1/Tnbs_0$ and Qal/WBR HSUs in the Pit 7 Complex area are consistent with those observed in 2012, and tritium activities continue to decrease. No new release of tritium from the landfills is indicated by the 2013 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.

3.5.2.2. Uranium

Depleted uranium was previously released to ground water from sources in Pits 3, 5 and 7 (Taffet et al., 2008). Uranium activities were below the 20 pCi/L MCL cleanup standard in all detection monitor well samples collected during 2013. The maximum 2013 uranium activity in a sample from a detection monitor well was 16 pCi/L (June) from well K7-01. Uranium activities in ground water samples from this well have generally fluctuated within a few pCi/L of the 20 pCi/L MCL cleanup standard since the 1997-1998 El Niño. The historic maximum uranium activity detected in this well was 27 pCi/L (September 1984).

The next highest uranium activity in a 2013 detection monitor well sample was 6.9 pCi/L in the April 2013 sample from well NC7-48. Uranium activities in this well have declined from the historic maximum of 104.9 pCi/L detected after the 1997-98 El Niño (March 1998). Ground water samples from this well have historically contained depleted uranium.

The extent of uranium in Qal/WBR and $Tnbs_1/Tnbs_0$ ground water is similar to recent years and uranium activities in samples from all detection monitor wells have generally decreased from their historic maximum uranium activities. Ground water uranium data from 2013 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.

3.5.2.3. Nitrate

Ground water samples collected during 2013 from Pit 7 Complex detection monitor wells NC7-47 (April) and K7-01 (June) contained nitrate at concentrations of 64 mg/L and 46 mg/L, respectively, exceeding the 45 mg/L MCL cleanup standard. The nitrate concentration measured in a June 2013 duplicate sample from well K7-01 was 41 mg/L. Ground water samples from well NC7-47 have never contained any other COCs in excess of background concentrations. Overall, nitrate concentrations in the detection monitoring wells have remained stable, with occasional fluctuations, for the last decade. 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.

3.5.2.4. Perchlorate

Wells K7-01 (screened in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs) and K7-03 (screened in the $Tnbs_1/Tnbs_0$ HSU) are the only detection monitor wells from which ground water samples have historically contained perchlorate at concentrations in excess of the 4 µg/L reporting limit. Perchlorate concentrations in samples from these wells have decreased from the historic maximum of 25 µg/L at well K7-01 (July 2006) and 29 µg/L at well K7-03 (April 2005) to 9.9 µg/L (June 2013) and 7.6 µg/L (April 2013) of perchlorate, respectively. The overall extent of perchlorate at concentrations exceeding the 6 µg/L MCL cleanup standard in ground water in the Pit 7 Complex area did not change significantly from 2012 to 2013. However, due to small concentration decreases in samples from wells W-PIT7-13 and NC7-52, the extent of perchlorate with concentrations exceeding the 4 µg/L reporting limit in the $Tnbs_1/Tnbs_0$ HSU decreased in 2013. The 2013 data do not indicate any new releases of perchlorate from any of the landfills. A discussion of perchlorate that was previously released to ground water from the Pit 7 Complex landfills is presented in Section 2.5.5.2.4.

3.5.2.5. Volatile Organic Compounds

During 2013, VOCs were detected in samples from two detection monitor wells at concentrations above reporting limits. These samples from wells K7-01 (June) and K7-03 (April) contained 1.0 µg/L and 0.94 µg/L of TCE, respectively. The historic maximum VOC concentrations in samples from these wells were 20 µg/L (well K7-01, May 1985) and 15.2 µg/L (well K7-03, July 1985). VOC concentrations have generally been declining in samples from these wells since these 1985 maxima. The overall extent of VOCs in ground water in the Pit 7 Complex area did not change significantly from 2012 to present. The 2013 data do not indicate any new releases of VOCs from any of the landfills. A discussion of VOCs that were previously released to ground water from the Pit 7 Complex Landfills is presented in Section 2.5.5.2.5.

3.5.2.6. Title 26 Metals and Lithium

During 2013, Title 26 metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium and zinc) and lithium were not detected in ground water samples from the Pit 7 Complex area detection monitoring wells at concentrations in excess of background concentrations. These data did not indicate a release of metals from any of the landfills during 2013.

3.5.2.7. High Explosives (HE) Compounds

During 2013, 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 to 2 µg/L. These data did not indicate a release of HE compounds from any of the landfills during 2013.

3.5.2.8. Polychlorinated Biphenyls (PCBs)

During 2013, PCB compounds were not detected in ground water samples from the Pit 7 Complex area detection monitoring wells at concentrations in excess of the individual compound detection limits of approximately 0.5 µg/L. These data do not indicate a release of PCBs during the year from any of the landfills.

3.5.3. Landfill Inspection Results

The Pit 7 Landfill cap annual engineering inspection was conducted on April 23, 2013. The landfill cap was found to be in good condition and functioning as intended. Some animal burrows were observed on the Pit 7 cap and it was recommended that burrows greater than 6 inches in diameter be filled. The Pit 3 and 5 Landfill covers were not inspected during 2013.

3.5.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring of the Pit 7 Landfill was conducted during the second semester of 2013. No subsidence was observed.

3.5.5. Maintenance

Animal burrows with diameters greater than 6 inches were filled in during the second semester of 2013.

3.6. 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).

3.6.1. Drainage Diversion System Inspection Results

Monthly rainy season inspections were performed during 2013. The drainage diversion system was inspected on January 14, February 14, March 14, April 2 (post-season), October 15, November 14, November 25, and December 11. Sediment accumulation from a washed out fire trail and vegetative debris accumulations were noted in the southern settling basin, and vegetative debris was noted in the channels and rip-rap areas.

3.6.2. Drainage Diversion System Maintenance

Sediment was removed from the southern settling basin, grading was done to reduce the amount of sediment entering the settling basin, perforated pipes in the vegetated channels were flushed, and vegetative debris was removed from basins, channels and rip-rap areas during 2013.

3.7. 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).

3.7.1. Building 850 CAMU Inspection Results

The CAMU and associated drainage system components were inspected on January 7, April 2, October 2, and December 2, 2013. The December 2, 2013 inspection indicated that sediment had accumulated in a catch basin preventing flow of water into a drain leading to a culvert. Except for the December 2, 2013 inspection, the CAMU was found to be in good condition and no maintenance issues were observed.

3.7.2. Building 850 CAMU Maintenance

Other than removal of accumulated sediment that had accumulated in a catch basin, maintenance was not required during 2013. The sediment removal was completed in January 2014.

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 1×10^{-6} or the hazard index exceeded 1 in the baseline risk assessment. Institutional controls have been implemented to manage risks. The CMP/CP requires that the institution controls in place at Site 300 be evaluated annually. The completed Institutional Controls Monitoring Checklist for 2011 is presented in Appendix D.

4.1. Human Health Risk and Hazard Management

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

The onsite 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 (Dibley et al., 2009a) 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 2013:

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

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

- Outdoor Ambient Air Near Building 834D (Dibley et al., 2003 and 2004a)
- Outdoor Ambient Air Near Building 815 (Dibley et al., 2003 and 2004a)
- Outdoor Ambient Air in Building 854F (Dibley et al., 2003 and 2004a)
- Outdoor Ambient Air Near Building 830 (Dibley et al., 2003 and 2004a)
- Indoor Ambient Air Near Building 832F (Dibley et al., 2003 and 2004a, building demolished in 2005)
- Indoor Ambient Air in Building 854F (building demolished in 2005)
- Indoor Ambient Air in Building 854A (Dibley et al., 2005 and 2006)
- Indoor Ambient Air in Building 833 (Dibley et al., 2010b and 2011)

Institutional controls, such as restricting access to or activities in areas of elevated risk, remained in place during 2013 to prevent unacceptable exposure to contaminants during remediation for those buildings and areas that continue to show an unacceptable risk and/or hazard.

Between 2003 and 2005, inhalation risk and hazard resulting from transport of VOC vapors from ground water to the building foundations and subsequently into indoor ambient air was estimated using the Johnson-Ettinger Model (U.S. EPA, 2002). Between 2005 and 2011, the model results were updated to reflect the chemical-specific toxicity criteria referenced in the "Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air" (DTSC, 2005). In 2011, the toxicity values for a number of contaminants, including TCE, were updated by U.S. EPA. Also in 2011, the toxicity values for a number of contaminants were updated by the California Department of Toxic Substances.

The current inhalation risk and hazard resulting from transport of VOC vapors from ground water to the building foundations and subsequently into indoor ambient air was estimated using the Johnson-Ettinger Model (U.S. EPA, 2002, U.S. EPA, 2004 and U.S. EPA, 2011) after the cancer inhalation unit risk (IUR) and the non-cancer reference concentration (RfC) were updated based on the 2011 California Department of Toxic Substances criteria (DTSC, 2011). For TCE, the IUR was 4.1×10^{-6} per $(ug/m^3)^{-1}$ and the RfC was 2.0×10^{-3} mg/m^3. For Vinyl Chloride, the IUR was 7.8×10^{-5} per $(ug/m^3)^{-1}$ and the RfC was 1.0×10^{-1} mg/m^3. For PCE, the IUR was 5.9×10^{-6} per $(ug/m^3)^{-1}$ and the RfC was 3.5×10^{-2} mg/m^3.

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 2013. 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 2013 remained above 10^{-6} and/or the hazard quotient remained above 1 for the indoor ambient air exposure pathway evaluated at Building 834D. At Building 830, the estimated risk in 2013 was also above 10^{-6} and/or the hazard quotient was above 1 for the indoor ambient air exposure pathway evaluated. As a result, the building occupancy restrictions, 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. In addition, during 2013, active remediation using ground water and soil vapor extraction continued at both locations.

4.1.2. Spring Ambient Air Inhalation Risk Evaluation

4.1.2.1. VOC-Contaminated Springs

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

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

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

The risk and hazard management evaluation for Spring 3 was completed in 2009. The estimated risk has remained below 10^{-6} and the hazard index 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 2013:

- 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 2013, 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 2014 and air samples will be collected if water is present.

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

4.1.2.2. Tritium-Contaminated Springs

An unacceptable cumulative risk of 1×10^{-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 2009 CMP/CP indicated that the inhalation risk associated with tritium in surface water volatilizing into outdoor ambient air would be re-evaluated annually when surface water is present. The surface water will be sampled and analyzed for tritium semi-annually. The maximum activity will be compared to the current tritium vapor PRG for tap water.

The risk re-evaluation of Well 8 Spring could not be performed in 2013 due to lack of water in the spring. No samples were collected from Well 8 Spring in 2013. Sampling and risk re-evaluation will be conducted in 2014 if surface water is present. Workers do not occupy or plan to occupy the site in the near future, therefore site use restrictions will be maintained and the annual sampling continued until the activity remains below the PRG for two years.

4.1.3. Surface Soil Polychlorinated Biphenyl (PCB) Sampling

Discretionary surface soil samples were collected around the Building 802, 804, 845, and 851 Firing Tables and analyzed for PCBs in 2013. DOE agreed to perform the sampling at the firing tables to address a Tri-Valley Communities Against a Radioactive Environment comment received during the public comment process for the Action Memorandum for the Removal Action at the Building 850 Firing Table.

Twenty-five surface soil samples plus three Quality Control duplicates were collected around each firing table (see Appendix E Figures E-1 through E-4). Samples were submitted to an offsite laboratory for PCB analysis by EPA Method 8082. The results were compared to the PCB Regional Industrial Soil Screening Levels (RSLs) (last updated November 2012).

Analytical results are presented in Appendix E Table E-1. PCBs were detected in only one sample, located in the Building 802 Firing Table area. This sample contained the PCB cogener Aroclor-1254 at a concentration of 0.98 milligram per kilogram (mg/kg), slightly above the 0.74 mg/kg RSL. The results were presented at the September 5, 2013 Remedial Project Manager's Meeting and at the December 11, 2013 Technical Assistance Grant meeting. The results indicate that PCBs were not used in experiments similar to those conducted at the Building 850 Firing Table and do not pose an unacceptable human health or ecological risk.

4.2. Ecological Risk and Hazard Management

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

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

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

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

- Periodically evaluating available biological survey data from the Buildings 801, 851 and the HEPA to determine potential population-level impacts to ground squirrel and deer exposed to cadmium in surface soil in these areas, as well as re-evaluating the ecological hazard associated with cadmium in surface soil in these areas.
- Ensuring the integrity of the Pit 7 Complex landfill caps to prevent exposure to burrowing animals from uranium.
- Evaluating changes in existing contaminant and ecological conditions in OUs 1 through 8 every five years, including re-evaluating VOCs in burrow air in the event that ground water VOC concentrations increase to levels that previously posed a risk to burrowing animals.

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.

As part of the contingency plan presented in the 2009 CMP/CP, periodic review of available biological survey data (e.g., biological data collected when surveying ground-disturbing programmatic activities, biological monitoring data, surveys conducted for environmental impact statement [EIS] or environmental impact report [EIR] preparation, etc.) for the presence of new special-status species is required. Any new special-status species identified is to be evaluated for potential impact from the presence of contamination using the process laid out in the 2009 CMP/CP. The results of the periodic review are reported on in the annual CMRs.

The 2009 CMP/CP also requires evaluating changes in contaminant and ecological conditions in OUs 1 through 8 every five years. The most recent five-year ecological review was conducted under the 2002 CMP/CP (Ferry et al., 2002) and was reported on in the 2008 Annual CMR (Dibley et al., 2009b; referred to as the 2008 Five-Year Ecological Review). The 2008 Five-Year Ecological Review evaluated chemical data collected from January 1, 1999 through December 31, 2007, and ecological data collected from January 1, 1999 through December 31, 2008. As it has been five years since the 2008 Five-Year Ecological Review, a new five-year review was completed, and is described in Section 4.2.6. The five-year ecological review presented here evaluates chemical data collected from January 1, 2008 through

December 31, 2012, and biological data collected between January 1, 2009 and December 31, 2012. By adjusting the current review period for biological data, future five-year ecological reviews will have consistent biological and chemical data review periods.

The 2008 Five-Year Ecological review identified several new constituents in surface soil and surface water for which ecological hazard could not be adequately evaluated due to either a limited data set or the lack of background data. Many of these constituents have been addressed and reported on in subsequent CMRs, as described below. The remaining constituents will be addressed in future compliance monitoring reports, and added to the ecological risk and hazard management program as necessary.

4.2.2. Cadmium in Surface Soil

As described above, the 2009 CMP/CP required that available biological survey data be periodically reviewed to identify changes in the abundance of deer or ground squirrels over time that could indicate impacts to the populations in the Buildings 801 and 851 areas, and the HEPA from cadmium in surface soil. However, as reported on in the 2011 First Semester CMR, a review of the EPA Ecological Soil Screening Levels for cadmium (U.S. EPA, 2005) and a re-evaluation of the cadmium baseline ecological risk assessment conducted in the Site-Wide Remedial Investigation (SWRI) (Webster-Scholten et al., 1994) concluded that deer and ground squirrels are not at risk from cadmium in surface soil in these areas. Therefore, reviewing available biological survey data from the Buildings 801 and 851 areas and the HEPA to identify changes in the abundance of deer or ground squirrel over time has been discontinued.

The 2009 CMP/CP also required a re-evaluation of the ecological hazard associated with cadmium in surface soil in the Buildings 801 and 851 areas and the HEPA to determine if continuation of risk and hazard management measures are necessary as a result of potential impact to burrowing or ground dwelling special-status species. As described in the 2011 Annual CMR, the re-evaluation of ecological hazard associated with cadmium in surface soil in the Building 801 area and HEPA showed cadmium not to be an ecological hazard to burrowing or ground dwelling special-status species. Additional soil sampling was conducted in the Building 851 area in November 2012 to further evaluate the potential ecological hazard posed by cadmium in this area. As described in the 2012 Annual CMR, cadmium was found not to be an ecological hazard to burrowing or ground dwelling special-status species in this area. However, as discussed in the 2012 Annual CMR, an area that is currently used as a programmatic lay-down area behind Building 851 was not sampled due to its highly disturbed nature and poor habitat value. Should this area be retired from use as a lay-down area in the future, sampling for the presence of cadmium is recommended.

As a result of the review of the EPA Ecological Soil Screening Levels for cadmium (U.S. EPA, 2005), the re-evaluation of the cadmium baseline ecological risk assessment conducted in the SWRI, and the additional surface soil sampling conducted in the Building 801 and Building 851 areas and the HEPA, the presence of cadmium is no longer considered a potential ecological hazard to the deer and ground squirrel populations, nor a potential ecological hazard to burrowing or ground dwelling special-status species. Therefore, cadmium is no longer considered an ecological contaminant of concern in these areas, and is dropped from further consideration.

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

The 2009 CMP/CP requires the Pit 7 Complex landfills to be inspected and any burrows or holes in the cover filled to prevent unacceptable exposure of animals to uranium in the pit waste. This is done as part of the inspection and maintenance program for the Pit 7 Complex. Section 3.4.3 describes the quarterly landfill inspection results, Section 3.4.4 describes the annual subsidence monitoring results, and Section 3.4.5 describes any maintenance performed. Inspection of the Pit 7 Complex landfills is done annually by Abri Environmental Engineering. Several burrowing animal holes ranging approximately 2 to 8 inches in diameter were observed on the Pit 7 cap surface during the annual inspection conducted on April 23, 2013. Burrows greater than 6 inches were filled by LLNL personnel.

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

As reported in the 2010 First Semester CMR (Dibley et al., 2010c), the ecological hazard of several new constituents detected in surface soil and surface water could not be adequately evaluated in the 2008 Five-Year Ecological Review due to either a limited data set or the lack of a developed background value. In surface soil, the ecological hazard from potassium-40 was not evaluated due to the lack of a developed background level. As reported on in the 2012 Annual CMR, available Site 300 surface soil data were reviewed to determine if sufficient data were available to determine a Site 300 background level for potassium-40. A literature review and evaluation of almost 400 surface soil samples analyzed for potassium-40 at Site 300 showed potassium-40 to be at background levels. Therefore, potassium-40 is not considered an ecological contaminant of concern, and will not be considered further.

The 2008 Five-Year Ecological Review concluded that chloride, ortho-phosphate, total phosphorus, nitrate plus nitrite, ammonia nitrogen and uranium in several springs required additional evaluation to determine their potential ecological hazard. As reported in the 2010 First Semester CMR, additional evaluation showed that many of these constituents were within Site 300 background or the data were misinterpreted in the 2008 Five-Year Ecological Review, and thus were dropped from further consideration. Constituents that require additional evaluation include chloride in Spring 14 (HEPA OU, Figure 2.4-1), total phosphorus as P and ammonia in Spring 4 (Building 832 Canyon OU, Figure 2.7-1), and total uranium in Springs 10 and 11 (Building 854 OU, Figure 2.6-1).

The historical chloride concentrations detected in Spring 14 in samples collected through May 2001 periodically exceeded the maximum concentration observed in Site 300 background springs (210 mg/L). However, the chloride concentration in the most two recent samples (collected in December 2003 and March 2013) contained chloride concentrations at or below the background levels. While it appears that chloride in Spring 14 is not of ecological concern, chloride concentrations in this spring will be periodically monitored to ensure concentrations remain within background levels.

The single sample from Spring 4 analyzed for total phosphorus as P exceeded the maximum concentration observed in the Site 300 background springs. The maximum concentration of ammonia nitrogen (8.7 mg/L) in Spring 4 was detected in the most recent sample available that was analyzed for this constituent (June 2000). Ammonia nitrogen concentrations in background springs were not available at the time of the 2008 Five-Year Ecological Review. Spring 17, a Site 300 background spring, was sampled for ammonia nitrogen in August 2012. Ammonia nitrogen was detected in this spring at a concentration of 0.52 mg/L. Spring 4 will be sampled for ammonia nitrogen and total phosphorus at its next regularly scheduled sampling date.

The maximum total uranium concentration as mg/L (estimated from uranium-238 results) in Spring 10 and Spring 11 exceeded the Site 300 background concentration in the June 2002 sample, the most recent sample available for both springs at the time of the 2008 Five-Year Ecological Review. Both samples were analyzed for uranium isotopes using mass spectrometry, and results from both springs showed an 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.

Spring 11 was again sampled in August 2012. Spring 10 was dry at this time, and thus a sample could not be obtained. Spring 11 continues to show high concentrations of uranium (0.074 mg/L) compared to the Site 300 maximum background concentration of 0.028 mg/L (detected in Spring 16). The uranium-235/uranium-238 ratio was again 0.0072. Spring 16, a Site 300 background spring located in the same canyon as Springs 10 and 11, was dry, and therefore a sample could not be obtained from this spring. Both Springs 10 and 16 will be sampled for uranium when water is again available from these springs. Data from the additional spring sampling will be reported on in future compliance monitoring reports as they become available.

4.2.5. Identification and Evaluation of New Special-Status Species

Contingency actions that are described in the 2009 CMP/CP include periodically evaluating available biological survey data (e.g., pre-construction survey data, biological monitoring data, surveys conducted for EIR/EIS preparation) for the presence of new special-status species and reporting the results of the evaluation in the annual compliance monitoring reports. The 2010 Annual CMR was the first compliance monitoring report prepared under the 2009 CMP/CP. As biological data through 2008 had been evaluated in the 2008 Five-Year Ecological Review and presented in the 2008 Annual CMR, the 2010 CMR (the first CMR report prepared under the 2009 CMP/CP) contained an evaluation of biological data from surveys conducted for all ground disturbing activities and observations made by LLNL wildlife biologists collected in 2009 and 2010. For the years 2011 and 2012, data from surveys conducted for all ground disturbing activities and observations made by LLNL wildlife biologists were evaluated and reported on in the 2011 and 2012 Annual CMRs, respectively. As this current CMR contains a further evaluation of biological data collected from 2009 through 2012 as part of the 2013 Five-Year Ecological Review, new biological information collected during 2013 and 2014 will be evaluated and reported on in the 2014 Annual CMR.

4.2.6. 2013 Five-Year Ecological Review

As required by the 2009 CMP/CP, a five-year ecological review was conducted to evaluate changes in contaminant and ecological conditions in OUs 1 through 8. The purpose of this review is to determine if contaminant or ecological conditions have changed sufficiently to warrant re-evaluating the conclusions reached in previous ecological risk assessments. The current five-year ecological review reported here was conducted as outlined in the 2009 CMP/CP. Section 6.2.3 of the 2009 CMP/CP describes the process for evaluating changes in contaminant and ecological conditions. Section 10.1.4 of the 2009 CMP/CP describes the process for evaluating the presence of new contaminants.

Table 4.2-1 shows the COCs in the eight operable units covered by the 2009 CMP/CP. As required by the 2009 CMP/CP, for COCs historically present in ecologically relevant media (surface water, surface soil and subsurface soil to a depth of 6 ft), hazard indices are to be recalculated for COCs whose current maxima exceed either: (1) the historical maxima by 50%, or (2) the concentrations used in the most recent hazard re-evaluation, for ecological receptors identified for the specific OU. COCs with hazard indices greater than one are to be added to the ecological risk and hazard management process. In addition, the hazard index for the inhalation of VOCs in burrow air is to be re-calculated in the event that ground water VOC concentrations increase to levels that previously posed a risk to burrowing animals.

As required by the 2009 CMP/CP, for newly identified constituents in ecologically relevant media, a literature review is to be conducted and the areal extent evaluated to determine if the presence of the constituent is ecologically significant. If found to be potentially ecologically significant, the maximum concentration of the constituent is to be compared to relevant Federal or State ecological screening levels, as well as Site 300 background levels. If concentrations of these newly identified constituents exceed the ecological screening levels and Site 300 background levels, hazard indices are to be calculated for potentially impacted species in the OU in which the new constituent was detected. Toxicity quotients are to be calculated for any new ecologically significant constituent identified in surface water from springs that exceed Site 300 background and relevant ecological screening levels. Constituents with hazard indices or toxicity quotients greater than 1 are to be added to the ecological risk and hazard management process. For constituents whose concentrations did not exceed ecological soil screening levels or if hazard indices and toxicity quotients are less than 1, it is assumed that the constituent does not pose a risk to ecological receptors and that no ecological risk and hazard management are necessary. Figure 4.2-1 shows the process used to evaluate new constituents in ecologically relevant media.

Analytical data used in the current ecological review consists of data collected by the Environmental Restoration Department (ERD) as part of the Site 300 environmental investigations and compliance monitoring. While other LLNL organizations also collect environmental data (primarily the Environmental Functional Area), these data are collected for specific programs and reported to regulatory agencies as required. The cut-off date for chemical data for the current ecological review period is December 31, 2012. The cut-off date for chemical data in the 2008 Five-Year Ecological Review was December 31, 2007. Thus, the current review period consists of chemical data collected between January 1, 2008 and December 31, 2012.

All biological survey data (e.g., biological data collected when surveying ground-disturbing programmatic activities, biological monitoring data, surveys conducted for various regulatory reports) collected in and around OUs 1 through 8 were evaluated for changes in the presence and abundance of special-status species, as well as for non special-status species for which data were available. For completeness, changes in the presence and abundance of special-status species in OUs and areas not covered by the 2009 CMP/CP (such as the Building 812 OU [OU 9]), are also discussed, but clearly identified as not occurring in an OU covered by the 2009 CMP/CP. Any significant changes were considered in determining whether changes to the ecological risk and hazard management process were necessary. Unlike the chemical data, the cut-off date for biological data used in the 2008 Five-Year Ecological Review was December 31, 2008. Therefore, biological data collected between January 1, 2009 and December 31, 2012 were evaluated for this ecological review. Figure 4.2-2 shows the process used to evaluate new special-status species.

4.2.6.1. Evaluation of Changes in Ecological Conditions

To evaluate potential changes in ecological conditions in OUs 1 through 8, all available biological survey data for Site 300 obtained over the current biological review period (January 1, 2009 to December 31, 2012) were reviewed. This included:

- Evaluating available biological survey data (such as surveys conducted for ground-disturbing programmatic activities, biological monitoring data, and surveys conducted for various regulatory reports) to identify the presence of newly identified species at Site 300,
- Evaluating available biological survey data for changes in the presence and abundance of species over time, and
- Determining the locations and Operable Units in which newly identified species are likely to reside, as well as those species in which changes in presence or abundance has been observed.

Specifically, the evaluation focused on special-status species, defined as:

- Plant or animal species classified as candidate, threatened or endangered under the Federal or California Endangered Species Acts (ESA),
- California Fully Protected Species,
- U.S. Fish and Wildlife Service (FWS) Bird Species of Conservation Concern (U.S. FWS, 2008),
- California Species of Special Concern (California Department of Fish and Wildlife [CDFW], 2013); and
- Rare plants with a California Rare Plant Rank (CRPR) of 1 or 2 (California Native Plant Society [CNPS], 2013).

If sufficient data were available, potential changes in the relative abundance were analyzed. This analysis included both special-status species and more common species when information was available.

Habitats and species that were present, or species expected to occur or breed (e.g., suitable habitat present) in OUs 1 through 8 at the completion of the 2008 Five-Year Ecological Review were considered the baseline. Data used to develop this baseline came from the SWRI, the 1999 Site-Wide Feasibility Study (Ferry et al., 1999), studies conducted in 2002 for the Final Site-Wide Environmental Impact Statement (SWEIS) (U.S. DOE, 2005a), as well as an internal review of biological data collected from 1999 through 2008 conducted in support of the 2008 Five-Year Ecological Review (Paterson et al., 2009). The internal biological review included an evaluation of data presented in the above-mentioned documents, as well as data and observations collected by LLNL wildlife biologists.

Biological data collected during the current ecological review period included survey data collected by LLNL wildlife biologists to support development of a Natural Resources Management Plan (LLNL, 2011a), routine resource monitoring as reported in the Site Annual Environmental Reports (LLNL 2010, 2011b, 2012 and 2013), rare plant management and monitoring (Carlsen et al., 2012b; Carlsen and Paterson, 2013), surveys conducted for ground-disturbing programmatic activities, and focused, programmatic-specific surveys. An internal review of all available data was conducted, and a summary report prepared (Paterson and Woollett, 2014).

Current ecological conditions in OUs 1 through 8 through 2012 are summarized below and compared to the ecological conditions that existed through 2008. For completeness, changes in the presence or relative abundance of special-status species that are not within the boundaries of OUs covered by the 2009 CMP/CP are also discussed and clearly identified as not occurring in OUs covered by the 2009 CMP/CP. More detail can be found in Paterson and Woollett (2014).

4.2.6.1.1. Vegetation Communities

The most recent comprehensive vegetation surveys of Site 300 were conducted in 2002. Vegetation communities were mapped and categorized (Jones and Stokes, 2002a), and wetlands were delineated (Jones and Stokes, 2002b). The vegetation mapping recognized six major plant-type categories, based primarily on the classification in the List of California Terrestrial Natural Communities (recognized by the California Natural Diversity Data Base [CNDDB]). These were: (1) scrub and chaparral, (2) grass and herb dominated communities, (3) bog and marsh, (4) riparian and bottomland habitat, (5) broad-leafed upland tree dominated, and (6) coniferous upland forest and woodland. These major communities were further divided into the following vegetation types: coastal scrub, undifferentiated chaparral scrubs, native grassland, nonnative grassland, vernal pools, meadows and seeps not dominated by grasses, marsh, riparian forest and woodland, low to high elevation riparian scrub, oak woodlands and forests, and juniper woodlands. Some of these vegetation types were further subdivided, for example, the native grassland community was divided into a purple needlegrass and one-sided blue grass communities. Seasonal ponds, disturbed habitat and urban habitat were identified as separate categories, but were not included in the classification scheme. Forty-six wetlands were identified, with a total area of ~3.5 hectares (8.7 acres). Wetlands included vernal pools, freshwater seeps, and seasonal ponds. Wetlands that appeared to meet the criteria for federal jurisdictional totaled ~1.8 hectares (4.4 acres). The most recent published list of plant species was prepared for the Building 812 Baseline Risk Assessment Work Plan (Carlsen et al., 2012a). This list incorporated species identified by Jones and Stokes (2002a), species reported in earlier surveys conducted by BioSystems (BioSystems, 1986a and 1986b), as well as information from ongoing surveys by LLNL plant biologists. A total of 405 plant species have been identified at Site 300.

Changes in vegetation communities that occurred during the current review period included changes associated with remediation activities, habitat enhancement activities, wildfires and changes in the Site 300 prescribed burn regime. No changes in vegetation communities were associated with changes in contaminant conditions. Remediation activities that resulted in changes in vegetation communities included the Building 850 soil removal action (Dibley et al., 2010c), and the use of misting towers to discharge treated ground water in the Building 854, Building 832 Canyon and GSA OUs. The misting towers resulted in increased hydrophytic vegetation in the immediate vicinity of the towers. While this hydrophytic vegetation does not meet the regulatory definition of a wetland as it developed as a result of an artificial water source, it could attract amphibians (including special-status species) from nearby wetlands and provide a refuge for these species. No specific surveys for amphibians have been done in these areas. The Building 850 removal action resulted in the removal 17.8 acres of the existing grassland community, which served as upland habitat for the California tiger salamander (a federal and state threatened species) and the California red-legged frog (a federal threatened species, and a California Species of Special Concern). While upland habitat for these two special-status amphibian species was impacted by the remediation efforts, one of the primary objectives of this soil removal project was to mitigate hazard to ecological receptors (including the California tiger salamander and the California red-legged frog) associated with potential exposure to the polychlorinated biphenyl (PCB-), dioxin- and furan-contaminated soil. The area was reseeded after the project, and the grassland community is showing recovery.

Habitat enhancement activities included designing and planning improvements in amphibian habitat at Pool M3 (located on the northern boundary of the GSA OU [OU 1]), and physical improvements at Pool HC1 (located in the southwestern portion of the site outside of any OU) (Figure 4.2-3). Pool M3 is being enhanced as mitigation for loss of upland California tiger salamander and California red-legged frog habitat as a result of the Building 850 removal action. The completion of the enhancement project is scheduled for 2014. The Pool M3 habitat enhancement project includes the removal of accumulated sediment from the existing pool, development of an upstream sediment basin, and re-vegetation of the pool with native species. Enhancement of Pool HC1 began in 2006 to repair a nearby eroding fire-trail and improve habitat to benefit special-status amphibian species. Additional enhancement occurred in 2012 to further improve the habitat value of the pool to amphibians and reduce infiltration through the pool bottom.

Wetland surveys were also conducted at Pools M3 and HC1 during the current review period to more fully delineate wetlands at these pools. In 2010, no jurisdictional wetlands were identified at Pool M3, although 0.17 acres of jurisdictional waters (Waters of the U.S.) were identified at the project site (Paterson and Woollett, 2014). This area of jurisdictional waters was not identified in the 2002 wetland study (Jones and Stokes, 2002b). In 2011, 0.12 acres of potential jurisdictional wetlands and 0.10 acres of Other Waters were identified at Pool HC1. In 2002, 0.20 acres of potential wetlands were identified at this site. The decrease in wetland acreage at this location in 2011 compared to 2002 is most likely the result different study methodologies used between 2002 and 2011 (Paterson and Woollet, 2014), as well as changes in upstream (off-site) hydrology (J. Woollett, LLNL wildlife biologist, personal communication with T. Carlsen, January 7, 2014).

One additional wetland survey was conducted during the current review period in the Building 812 OU (OU 9, this OU is not covered by the 2009 CMP/CP). Two wetland communities were delineated in a small ravine (approximately 1.7 acres) located east of Pool CR and northwest of Pools M1a and M1b (Figure 4.2-3) known as the Building 812 Canyon. These two wetland communities covered 0.12 acres (Paterson and Woollett, 2014). An additional 0.04 acres downstream of the wetland habitat are considered non-wetland jurisdictional areas (Other Waters). The Building 812 Canyon was not studied as part of the 2002 wetland delineation.

Prescribed burns are conducted annually at Site 300, typically in early June, to protect programmatic areas from uncontrolled wildfires. Fire has a significant potential to control vegetation at Site 300. At Site 300, areas of perennial grasslands are most common where prescribed burns occur annually, and coastal scrub habitat does not typically occur where fires are too frequent (although this habitat type is adapted to periodic fires). During the current review period, two wildfires occurred in the eastern half of the site. In June 2009, a wildfire occurred in approximately 570 acres in the east central portion of the site to the eastern perimeter. In 2010, 120 acres within the boundary of the 2009 wildfire again burned. These fires did not include any area within OU 1 through 8. In June 2012, a prescribed burn was conducted in the area east of Building 801 (OU 8) to improve the success of big tarplant in this area. This area is not typically burned as part of the annual programmatic prescribed burns. The success of the big tarplant in response to this prescribed burn will be measured in the following years.

4.2.6.1.2. Special-Status Plants

Five special-status plant species are known to occur at Site 300 (Figure 4.2-4). Four of these special-status plant species—the federally endangered large-flowered fiddleneck (*Amsinckia grandiflora*), the big tarplant (*Blepharizonia plumosa*), the round-leaved filaree (*California macrophylla*), and the diamond-petaled California poppy (*Eschscholzia rhombipetala*)—were known to occur at Site 300 during the 2008 Five-Year Ecological Review. A fifth species, adobe navarretia *(Navarretia nigelliformis* ssp. *radians)* was found to occur at Site 300 during the current biological review period. All five species have a CRPR of 1B (CNPS, 2013), indicating these species are considered rare and endangered throughout their range.

Three uncommon plant species, California androsace (*Androsace elongata* subsp. *acuta*), stinkbells (*Fritillaria agrestis*), and hogwallow starfish (*Hesperevax caulescens*), occur in isolated locations at Site 300. These plants have a CRPR of 4 (CNPS, 2013). CRPR 4 includes plants of limited distribution that are not considered rare or endangered. The gypsum-loving larkspur *(Delphinium gypsophilum* ssp. *gypsophilum)*, a spring flowering perennial that also occurs in isolated areas throughout Site 300, was previously included on List 4. In 2012, the gypsum-loving larkspur was removed from List 4 because it is now considered too common for inclusion on this list (CNPS, 2013).

Large-flowered fiddleneck

The large-flowered fiddleneck is currently known to exist naturally in only two locations—at Site 300 at a site known as the Drop Tower and on nearby conservation property owned by the Contra Costa Water District. The Site 300 Drop Tower site is located in the southeast portion of the Building 854 OU (OU 6), outside of the immediate Building 854 area (Figure 4.2-4). A second Site 300 population occurs in Draney Canyon (a canyon in the southwestern portion of the site, outside of any OU), but no large-flowered fiddleneck have been observed at this location since a landslide that occurred at the population site in 1997. The Drop Tower native population has contained no large-flowered fiddleneck plants since 2008. This population has been in decline since 1997. In the previous review period, 9 plants were observed in 1999, with the population further declining to 0 plants in 2005. The population slightly rebounded after a wildfire in 2005, when 4 plants were observed in 2006 and 1 plant in 2007.

An experimental population of the large-flowered fiddleneck was established at the Site 300 Drop Tower site beginning in the early 1990s. The Drop Tower experimental population is maintained by periodically planting large-flowered fiddleneck seeds in established plots within the population. The size of the Drop Tower experimental population fluctuates as a result of these seed bank enhancement efforts. In December of 2011, 100 large-flowered fiddleneck seeds were planted in each of 18 plots in the experimental population, and the experimental population contained 553 large-flowered fiddleneck plants at flowering in April 2012. These plants were a result of seeds produced from plants present in the population in 2011 and previous years, as well as the 2011 seed bank enhancement efforts.

Big tarplant

Populations of big tarplant at Site 300 are widespread, particularly in the northern and southeastern portion of Site 300. While this species is extremely rare throughout its range, it can be abundant at Site 300, especially in or near areas where prescribed burns are routinely conducted and where wildfires have occurred. The distribution of big tarplant was mapped at Site 300 each fall from 2009 through 2012. As is typical with annual plant species, the abundance of big tarplant varies greatly between years depending on environmental conditions. For example in 2009, the Site 300 big tarplant population was estimated to contain no more than 22,000 individual plants while up to 225,500 big tarplants were found at Site 300 in 2010. It is estimated that between 6,702 and 28,974 individual big tarplants occurred at Site 300 in 2011, and between 100,008 and 161,155 individual big tarplants occurred at Site 300 in 2012. The distribution of big tarplant between 2009 and 2012 is similar to what was observed prior to 2008. Big tarplant is abundant surrounding Building 851 (OU 8), within and surrounding the Building 834 complex (OU 2), in the Building 832 Canyon (OU 7), and surrounding Building 801 (OU 8).

Diamond-petaled California poppy

The diamond-petaled California poppy is currently known to occur only at Site 300 and in one location in San Luis Obispo County. Until recently, only three isolated populations of this species were known to occur at Site 300. In 2012, a fourth population was discovered near the northern perimeter of Site 300. All four populations occur in undeveloped areas near the western perimeter of Site 300 and do not occur within any OU. As with the big tarplant and other annual plants, the number of diamond-petaled California poppy plants varies considerably from year to year as a result of changing environmental conditions. A spring census of the known populations has been conducted annually since 1998. The largest number of diamond-petaled California poppies ever recorded at Site 300 was observed during the current review period in 2012, when between 20,000 and 45,000 diamond-petaled California poppies were observed. In contrast, the lowest number of diamond-petaled California poppies ever recorded was also observed during the current review period, in 2011, when a total of only 46 plants were observed. The relatively large numbers of diamond-petaled California poppies in 2012 is likely attributable to the low annual grass cover in 2012, which was much less than average as a result of low rainfall that year.

Round-leaved filaree

Six populations of round-leaved filaree are known to occur at Site 300. All populations occur in the northwest portion of the site outside of any OU. This species thrives in the disturbed soils of the annually graded fire trails at Site 300, but also occurs in grasslands. Of the six known Site 300 populations, four occur on fire trails and two occur in grasslands. The extent of the six populations was mapped each spring between 2009 and 2012, and the size of each population was estimated. The six populations combined were estimated to contain approximately 5,300 round-leaved filaree plants in 2009; 7,000 plants in 2010; 5,000 plants in 2011 and 360 in 2012. As with other annual plant populations, the number of round-leaved filaree plants varies considerably from year to year as a result of changing environmental conditions.

<u>Adobe navarretia</u>

A herbarium specimen collected at Site 300 in 1986 was recently re-identified as the rare species, adobe navarretia *(Navarretia nigelliformis* ssp. *radians).* As a result, the Site 300 population of navarretia was entered into the CNDDB as adobe navarretia, and this re-identification was discovered while reviewing the CNDDB as part of this biological review. Adobe navarretia is a spring flowering annual plant with a CRPR of 1B. A more common subspecies of *Navarretia nigelliformis* ssp. *nigelliformis* was previously thought to occur at Site 300. Based on recorded observations of the Site 300 navarretia species (now considered to be the rare subspecies) in 1986 (BioSystems, 1986a) and 2002 (Jones and Stokes, 2002a), adobe navarretia is expected to occur in one location in the northwest corner of Site 300, outside of any OU.

4.2.6.1.3. Special-Status Animal Species

A complete list of special-status vertebrate and invertebrate species known to occur at Site 300, including state and federally listed species and other species of special concern are listed in Table 4.2-2. Figure 4.2-3 shows the distribution of pools and wetlands at Site 300 that are known and potential habitat for aquatic invertebrates and amphibians, Figure 4.2-5 shows the distribution of selected special-status terrestrial invertebrate and vertebrate species, and Figure 4.2-6 shows incidental raptor observations (other than burrowing owl observations, which are shown on Figure 4.2-5) at Site 300 that were mapped during the current review period.

4.2.6.1.4. Special-Status Invertebrates

<u>Branchiopods</u>

Branchiopod surveys of Site 300 pools were initially conducted in 2002 and 2003 in support of the SWEIS (Weber 2002 and 2003). These surveys did not detect any special-status branchiopods. Two branchiopod species that are not special-status, the California fairy shrimp (*Linderiella occidentalis*) and the California clam shrimp (*Cyzicus californicus*) were found in Pool A and several smaller pools located in the northwest corner of Site 300, outside any OUs (Figure 4.2-3). During the current review period, surveys for special-status branchiopods were conducted in the 2009-2010 wet season at the overflow area of Pool A, and at Pool M3 (located on the northern boundary of the GSA OU ([OU 1]). California linderiella was the only branchiopod observed, and it was only observed in the Pool A overflow (Paterson and Woollett, 2014).

<u>Valley elderberry longhorn beetle</u>

The only special-status invertebrate species known to occur at Site 300 is the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). This species was known at Site 300 at the time of the 2008 Five-Year Ecological Review. The presence of valley elderberry longhorn beetles was identified during surveys in 2002 for the SWEIS. Valley elderberry longhorn beetles were observed onsite in riparian habitat in the east central portion of Site 300 (within the Building 812 OU [OU 9], which is not covered by the 2009 CMP/CP), and offsite adjacent to the GSA OU (OU 1). No additional surveys for valley elderberry longhorn beetle were conducted during the current review period. In addition to OU 9 and offsite adjacent to OU 1, elderberry trees occur within the HEPA OU (OU 4), west of the Building 854 OU (OU 6), and in the southeastern portion of the Building 854 OU (OU 6) (Figure 4.2-5).

As a result of the significant progress made in protecting and restoring valley elderberry longhorn beetle habitat throughout its range, the valley elderberry longhorn beetle was proposed for delisting in October 2012. Known occurrences of valley elderberry longhorn beetle have increased from 10 occurrences within three counties at the time of the initial listing to 201 occurrences from 26 locations at the time of the delisting proposal (Paterson and Woollett, 2014). The review period for the delisting of the valley elderberry longhorn beetle was extended in January 2013. A final ruling on delisting the beetle has not been issued.

4.2.6.1.5. Special-Status Amphibians

Eight species of amphibians have been observed at Site 300 (LLNL, 2013). Four special-status amphibian species are known to occur at Site 300. These are the federally threatened California red-legged frog (*Rana draytonii*), the federal and state threatened California tiger salamander (*Ambystoma californiense*), and the California Species of Special Concern Western spadefoot toad (*Spea hammondii*) and Coast Range newt (*Taricha torosa torosa*). All four were known to occur at Site 300 at the time of the 2008 Five-Year Ecological Review.

Red-legged frog

A revision of the California red-legged frog critical habitat in 2010 resulted in all of Site 300 being designated as critical habitat for the red-legged frog (Paterson and Woollett, 2014). Most of the site is considered upland dispersal habitat. In addition, fourteen onsite pools and associated wetlands provide potential breeding or non-breeding aquatic habitat (Figure 4.2-3). Ongoing surveys are performed at Pools M1a and M1b (located in the Building 812 OU [OU 9], which is not covered by the 2009 CMP/CP). Adult red-legged frogs are found in these pools year-round. California red-legged frogs, as well as western toad and Sierra treefrog, were found to successfully reproduce at these pools. Although surveys in other Site 300 pools are conducted on a less regular basis, additional pools that were observed to support successful California red-legged frog reproduction during at least one breeding season during the current review period were Pools A, SVRA, CR and CP (Paterson and Woollett, 2014). Two of these pools were newly identified as breeding pools for California red-legged frog during the current review period. Pools CR (upstream of Pool M1a and M1b in OU 9) and Pool CP (south of the HEPA OU [OU 4]). Both sites are shallow water, spring-fed pools, with adequate cover to recruit a small percentage of metamorphs into the local population, and both sites are newly developed since the 2008 Five-Year Ecological Review.

Several Site 300 pools that formerly supported breeding populations of red-legged frogs failed to support breeding during the current review period for a variety of reasons (Paterson and Woollett, 2014). Pool SG is spring fed and has not produced sufficient water during this period. Pool O and Pool J supported California red-legged frog breeding during the previous review period, but did not support breeding in the current review period largely due to loss of the pool depth (as a result of sedimentation and pig grubbing). Feral pig wallowing and grubbing activities also caused the clay installed at the base of two restored pools, Pools HC1 and M2, to be exposed and lose integrity. Pool S typically requires an above-average annual rainfall year to fill. Pool OS is in a heavily developed area with generally insufficient rainfall input. Pool D and Pool H continue to be too small or shallow to support California red-legged frog breeding during average rainfall years. It is unknown if Pool M3 supported California red-legged frog breeding during the current review period. The pool has filled with sediment, greatly reducing the depth of the pool and making it less likely that the pool can retain water long enough for red-legged frog tadpoles to survive to metamorphosis. This pool is scheduled for restoration and enhancement in 2014.

California tiger salamander

Although the current (2005) critical habitat designation for California tiger salamander does not include any portion of Site 300, the species occurs at Site 300, and is known to successfully breed and utilize associated upland habitat in the southeastern and northwestern portions of Site 300 (Figure 4.2-3). These areas incorporate portions of the Building 850/Pit 7 Complex OU (OU 5), the HEPA OU (OU 4), the Building 832 Canyon OU (OU 7), the GSA OU (OU 1), and the very southern portion of the Building 834 OU (OU 2). Surveys for California tiger salamanders were infrequent during the current review period (Paterson and Woollett, 2014). Pool D, noted as a breeding site in the 2008 Five-Year Ecological Review, was largely dry during this period, except during 2010. Pools A and H were observed to have breeding tiger salamanders in February 2010. It is unknown if tiger salamander larvae were able to metamorphose at Pool H during the review period. The duration of inundation at Pool A was long enough in 2010 and 2011 for tiger salamander larvae to successfully mature. Pool M2 supported a breeding population in 2010 and 2011 before pig disturbance breached the previously installed clay liner in 2012.

Similar drying and/or disturbance events noted for the California red-legged frog adversely affected breeding tiger salamanders at Pools SG, OS, and M3. Although California tiger salamander larvae were observed in Pool M3 during the branchiopod survey, it is unknown if those larvae metamorphosed (Paterson and Woollett, 2014).

Western spadefoot

At the time of the 2008 Five-Year Ecological Review, Western spadefoot toads (a California Species of Special Concern) had been observed in pools located along the southern boundary of Site 300. No breeding surveys for western spadefoot toads were conducted during the current review period. Western spadefoot toads were incidentally observed in Pool M3, located on the northern boundary of the GSA OU (OU 1), during branchiopods surveys conducted in 2010. In 2010, eggs were observed in February, tadpoles were observed in March, and metamorphs were observed in May.

Coast Range newt

No site-wide surveys for the Coast Range newt (a California Species of Special Concern) were conducted at Site 300 during the review period, and no incidental observations were recorded. Coast Range newts were collected within the HEPA OU (OU 4) during the previous review period in 2005/2006 rainy season, during pitfall trapping that was conducted after closure of the HE ponds. Coast Range newts at Site 300 show a tendency to inhabit areas within 1 kilometer (km) of Corral Hollow Creek and near oak woodland habitat. This species is known to migrate over 2 km during the breeding season to aquatic habitats. The Coast Range newt is most likely to be found in the southern half of Site 300 because deep canyons are found in this portion of the site in close proximity to Corral Hollow Creek (Paterson and Woollett, 2014).

4.2.6.1.6. Special-Status Reptiles

Twenty-one species of reptiles have been observed at Site 300 (LLNL, 2013). Five special-status reptile species are known to occur at Site 300. These are the state and federally threatened Alameda whipsnake (*Masticophis laterialis euryxanthus*), and the California Species of Special

Concern Coast horned lizard (*Phrynosoma blainvillii*), San Joaquin coachwhip (*Masticophis flagellum ruddockii*), silvery legless lizard (*Anniella pulchra pulchra*), and Pacific pond turtle (*Actinemys marmorata*). All five species were known to occur at Site 300 at the time of the 2008 Five-Year Ecological Review.

Alameda whipsnake

The Alameda whipsnake is one of two subspecies of California whipsnake. The other subspecies, the chaparral whipsnake (*M. l. lateralis*), also occurs at Site 300. The range of both subspecies' overlap onsite and a federally protected intergrade species with morphological traits of each parent species occurs. The intergrade species was trapped as part of a study on the effects of prescribed burning beginning in 2002 during the previous review period (Paterson et al., 2009). The study area overlapped with the western perimeter of the Building 854 OU (OU 6).

The southwestern corner of Site 300 is designated as critical habitat for the Alameda whipsnake (Figure 4.2-5). All of the Pit 6 (OU 3) and Building 854 (OU 6) operable units, and the Building 851 portion of OU 8 are located within this critical habitat. The very southwestern corner of the Building 850 OU is also located within the whipsnake critical habitat. This species is most likely to occur within the larger patches of coastal sage scrub with rock outcrops and grassland adjacent to these coastal sage scrub patches, which is the snake's primary habitat (Figure 4.2-5). Much of the Building 854 OU is located within the 150 meter buffer surrounding the coastal scrub habitat, as is the HE Burn Pit portion of OU 4.

Coast horned lizard

The Coast horned lizard (a California Species of Special Concern) has also been observed throughout Site 300, typically observed during the annual fire trail and rare plant surveys conducted in the late spring, as this time period corresponds with the spring activity period of the species. During the previous review period, the lizard was observed near the Building 850/Pit 7 Complex OU (OU 5) and within the Building 854 OU (OU 6). During the current review period, the Coast horned lizard was again observed during the spring rare plant surveys in northwest portion of Site 300, northwest of the Building 850/Pit 7 Complex OU (OU 5). Additional incidental Coast horned lizard observations were also made during fire trail and other routine surveys in the current review period, but their locations have not been mapped. The distribution of Coast horned lizard is expected to be similar to that reported in the 2008 Five-Year Ecological Review (Paterson and Woollett, 2014).

San Joaquin coachwhip

As with the Coast horned lizard, the San Joaquin coachwhip (a California Species of Special Concern) has been observed throughout Site 300, typically observed during the fire trail surveys conducted annually in the late spring. During the previous review period, the species was recorded along the southern boundary of the site in the GSA (OU 1) and near the boundaries of the Pit 6 (OU 3) and HEPA (OU 4) operable units, as well within the Building 854 OU (OU 6) and near Pit 2 (OU 8). The majority of the observations were within grassland and coastal sage scrub habitats. No additional observations of the species were made during the current review period.

Silvery legless lizard

During the previous review period, the California legless lizard (a California Species of Special Concern) was observed during trapping for the Alameda whipsnake between 2002 and 2006 in coastal sage scrub habitat within the Building 854 OU (OU 6). Although no additional observations have been made since this time, the species is likely to occur within areas of coastal sage scrub.

Pacific pond turtle

The pacific pond turtle (a California Species of Special Concern) was observed at Pool O during the previous review period. This pool is located in the southwestern portion of Site 300 outside any of the OUs. No incidental observations of this species were made during the current review period. This species is found in a variety of aquatic habitats throughout its range including pools, lake, artificial water bodies, and rivers (Paterson and Woollett, 2014).

4.2.6.1.7. Special-Status Birds

One hundred and fourteen species of birds have been observed at Site 300 (LLNL, 2013). Special-status bird species are listed in Table 4.2-2. While all bird species listed in Table 4.2-2 were known at the time of the 2008 Five-Year Ecological Review, changes in regulatory status have occurred during the current review period (which are also noted on Table 4.2-2). The U.S. FWS list of Bird Species of Conservation Concern was first published in 2008. This category of special-status species was not used in the 2008 Five-Year Ecological Review. Bird Species of Conservation Concern includes species that without conservation actions are likely to become candidates for listing under the Federal ESA. Nine bird species that have been observed at Site 300 are now considered federal Bird Species of Conservation Concern. Four of these nine species (Allen’s hummingbird, rufous hummingbird, Costa’s hummingbird, and Nuttall’s woodpecker) are not included in other special-status categories (Paterson and Woollett, 2014).

CDFW Taxa to Watch are also included in Table 4.2-2. The Taxa to Watch list includes avian species that did not meet the criteria for inclusion on the current list of California Bird Species of Special Concern but were included on either (1) previous California Bird Species of Special Concern lists, (2) were previously state or federal threatened or endangered species that have been delisted, or (3) species that are California Fully Protected Species. These species are not considered special-status species; instead this list is considered a watch list of uncommon species. Six species that have been observed at Site 300 (double-breasted cormorant, osprey, ferruginous hawk, Cooper's hawk, sharp-shinned hawk, and the prairie falcon) are considered CDFW Taxa to Watch and do not have any other regulatory status (Paterson and Woollett, 2014).

Data on the specific locations of U.S. FWS Bird Species of Conservation Concern or the CDFW Taxa to Watch species observed at Site 300 is not available, and incidental observations have not been recorded during the current review period. Most of these species (particularly the raptors) would be expected to be wide-ranging.

Raptors

Several special-status raptor species are known to breed or regularly occur at Site 300, including the golden eagle (*Aquila chrysaetos*), white-tailed kite (*Elanus leucurus*), short-eared owl (*Asio flammeus*), and burrowing owl (*Athene cunicularia*). All were known to occur at Site 300 at the time of the 2008 Five-Year Ecological Review. Golden eagles, white-tailed kites, and red-tailed hawks (red-tailed hawks are not considered a special-status species) are expected to occur throughout the site, especially in grasslands, and short-eared owls are expected to occur site-wide near wetland habitat surrounded by grasslands. Incidental observations of red-tail hawk nests are shown on Figure 4.2-6. Red-tailed hawk nests were observed in the Building 854 OU (OU 6) and the Building 812 OU (OU 9) (this OU is not covered by the 2009 CMP/CP). The white-tailed kite (a California Fully Protected Species) established a nest during 2011 in the southern portion of the HEPA OU (OU 4) near the Site 300 boundary (Figure 4.2-6). Three fledgling kites were observed learning to fly in June (Paterson and Woollett, 2014). Golden eagles (adult, sub-adult and juvenile) forage at Site 300 year-round.

Burrowing owls (a California Species of Special Concern and a U.S. FWS Bird Species of Conservation Concern) are of particular interest, as they nest in the ground, and thus have a higher potential for exposure to contaminants compared to other raptors. Burrowing owls occupy breeding territories in grasslands located in the northern portion of Site 300. No site-wide burrowing owl surveys were conducted during the current review period. Incidental burrowing owl observations and nesting activity were made between 2009 and 2012, but their locations have not been mapped. Historic observations of burrowing owls recorded from 1999 through 2009 and observations from 2013 are shown on Figure 4.2-5. The distribution and abundance of burrowing owls at Site 300 is expected to be slightly diminished from that reported in the 2008 Five-Year Ecological Review (Paterson and Woollett, 2014). The burrowing owl appears to be declining within their central and southern coast breeding areas and are experiencing a modest breeding range retraction statewide. Burrowing owls are frequently observed throughout the Building 850/Pit 7 Complex OU (OU 5), and have been observed in the Building 854 OU (OU 6) and near the Building 851, Building 845, Building 801 and Pit 2 areas of OU 8.

In 2009, a nesting attempt by the Swainson's hawk (a California threatened species) occurred in the southern part of Paper Canyon (Figure 4.2-6). The nest site was located in an area southwest of the HE Burn Pit (OU 4) and northeast of Pit 6 (OU 3), outside of any OU. The timing of the nesting attempt overlapped with Site 300's annual prescribed burns designed to reduce grassland fuels around key facilities and protect infrastructure from dry season wildfire incidents. As a result, the Paper Canyon burn, serving as the western flank of fire protection to the HEPA, was not burned in 2009. Despite these protective measures, the Swainson's hawk nest attempt was observed to have failed (no recorded eggs laid) and the nest site soon abandoned (Paterson and Woollett, 2014). There was no known Swainson's hawk nesting attempts at Site 300 in 2010, 2011, or 2012.

Other Special-Status Bird Species

Other special-status bird species known to occur at Site 300 include the California endangered willow flycatcher (*Empidonax traillii*), and California Species of Special Concern yellow warbler (*Dendroica petechia brewsteri*), grasshopper sparrow (*Ammodramus savannarum*), loggerhead shrike (*Lanius ludovicianus*), and tricolored blackbird (*Agelaius tricolor*). All were known to occur at Site 300 at the time of the 2008 Five-Year Ecological Review. The willow flycatcher was captured in the previous review period during mist-netting in riparian habitat in the east central portion of the site in the Building 812 OU (OU 9, this OU is not covered by the 2009 CMP/CP). It is not known to nest at Site 300. Yellow warblers also occur in riparian habitat, with confirmed observations during the previous review period outside of the OUs covered by the 2009 CMP/CP. Grasshopper sparrows have been observed in localized groups in the northern third of the site. During the previous review period, loggerhead shrikes were observed throughout the site, in all OUs except the Pit 6 (OU 3) and Building 834 (OU 2) OUs. Loggerhead shrike nests have been recorded primarily in the southwestern portion of the site, with nests observed within the Building 854 OU (OU 6).

Annual surveys were conducted during the current review period to determine the nesting success of the known tricolored blackbird colony located in the east central portion of the site within the Building 812 OU (OU 9, this OU is not covered by the 2009 CMP/CP) (Figure 4.2-5). Tricolored blackbirds were observed to successfully nest in this colony in 2009, 2010 and 2011 (Paterson and Woollett, 2014).

Mammals

Thirty-three species of mammals have been observed at Site 300 (LLNL, 2013). Three special-status mammal species are known to occur at the site, the California Species of Special Concern American badger (*Taxidea taxus*), pallid bat (*Antrozous pallidus*), and Western red bat (*Lasiurus blossevillii*). Potential dens and suitable habitat for the federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*) occurs at Site 300, but this species has not been detected at Site 300 despite numerous surveys at the site and in the immediate vicinity. The American badger, the pallid bat and the Western red bat were known to occur at Site 300 at the time of the 2008 Five-Year Ecological Review.

No surveys for mammals were conducted during the current review period at Site 300, and no significant incidental observations were recorded. The American badger was observed in grasslands throughout the site during site-wide mesocarnivore studies conducted in 2002 **(**Clark et al., 2002). Badgers were observed during night spotlight surveys in the Building 850/Pit 7 OU (OU 5), the Building 854 OU (OU 6), west of the HEPA OU (OU 4), and north of the Pit 6 OU (OU 3), as well as throughout grasslands within OU 8 and outside of the OUs. A total of 10 badger sightings were made, and the authors concluded that Site 300 is supporting a healthy population of badgers.

The calls of the pallid bat and Western red bat were acoustically detected in surveys conducted throughout Site 300 in 2002 (Rainey and Pierson, 2004). No bats were captured in mist nets deployed in several locations throughout Site 300, and no roosting bats or bat sign indicating roosting were observed when examining examples of structures at Site 300 both day and night. The call of the pallid bat was detected in the GSA OU (OU 1), northwest of Pit 2 (OU 8) just north of the Building 850 OU boundary (OU 5), and in the riparian area in the east-central portion of the site (within OU 9, this OU is not covered by the 2009 CMP/CP). The call of the Western red bat was also detected in the GSA OU (OU 1), and northwest of Pit 2 (OU 8) just north of the Building 850 OU boundary (OU 5).

Summary of Changes in Ecological Conditions

The distribution of special-status plant and animal species at Site 300 during the current review period was not significantly different from that observed in the 2008 Five-Year Ecological Review. The breeding success of special-status amphibians at Site 300 during the current review period was impacted by lower than average rainfall during the 2008/2009 and 2011/2012 rainy seasons, pool sedimentation, and impacts to pool habitat caused by feral pigs. Despite this, California red-legged frog, California tiger salamanders, and Western spadefoot toads were able to successfully breed at locations that were able to sustain the longest period of inundation. In addition, two pools were newly used by California red-legged frogs as breeding pools during the current review period. Pool CR is located in the east central portion of the site in the Building 812 OU (OU 9, this OU is not covered by the 2009 CMP/CP), and Pool CP is located southeast of the HE Burn Pit (OU 4) and west of the HEPA (OU 4).

Several bird species and one plant species known to occur at Site 300 at the time of the 2008 Five-Year Ecological Review but had no special-status at the time were reclassified during the current review period. A herbarium specimen of the plant species navarretia collected from Site 300 in 1986 was recently re-classified as the rare plant, adobe navarretia. This reclassification was discovered as part of the records review conducted as part of this biological review (Paterson and Woollett, 2014). The adobe navarretia is expected to occur in the northwestern corner of the site outside of any OU.

Nine bird species that have been observed at Site 300 are now considered U.S. FWS Bird Species of Conservation Concern. Four of these species (Allen's hummingbird, rufous hummingbird, Costa's hummingbird, and Nuttall's woodpecker) are not included in other special status categories (Table 4.2-2). Six bird species that have been observed at Site 300 are also now considered CDFW Taxa to Watch and do not have any other regulatory status (double-breasted cormorant, osprey, ferruginous hawk, Cooper's hawk, sharp-shinned hawk, and the prairie falcon). Data on the specific locations of these bird species at Site 300 is not available, but most of these species (particularly the raptors), would be expected to be wide-ranging.

4.2.6.2. Evaluation of Ecologically Significant Changes in Contaminant Conditions

All surface soil, subsurface soil to 6 ft, and surface water samples collected by ERD between January 1, 2008 and December 31, 2012, and the analytes looked for in these samples, were reviewed. No subsurface soil samples were collected during the review period from OUs covered by the 2009 CMP/CP. Therefore the analysis is limited to analytes looked for in surface soil, surface water, and VOCs in ground water.

Surface Soil

Surface soil samples were collected from four areas within OUs covered by the 2009 CMP/CP: the Building 801 area within OU 8, the Building 851 area within OU 8, the HEPA (OU 4), and the Building 850 area (OU 5). A total of 122 surface soil samples were collected from the Building 850 OU as part of a removal action completed in 2010 (Dibley et al., 2010c). These samples were analyzed for PCBs, dioxins, and furans. Surface soil samples were collected from the Building 801 (six samples) and 851 (11 samples) areas of OU 8 and the HEPA OU (ten samples) as part of a 2009 CMP/CP required re-evaluation of the ecological hazard from cadmium in surface soil conducted in 2011 and 2012 (Dibley et al., 2012c and 2013). These samples were only analyzed for cadmium. The constituents looked for in the surface soil samples collected during the current review period are all considered surface soil COCs (Table 4.2-1).

For each area in which surface soil samples were collected during the current ecological review period (Building 801, Building 850, Building 851, and the HEPA), the maximum concentration reported for each COC was compared to the maximum concentration reported in surface soil samples from the same general area collected through December 31, 2007. For the Building 801 area, this included samples collected from most of the East Firing Area south to but not including the Building 812 area, and north to but not including the Building 865 area. For the Building 850 area, this comprised of samples collected in the vicinity of Building 850. For the Building 851 area, this included surface soil samples collected from the Building 851 and 854 areas. And finally, for the HEPA, this included surface soil samples collected from the HEPA and the Building 832 Canyon area. These areas were selected as they are ecologically relevant areas, and were areas used in earlier ecological hazard evaluations. In addition, the results of any remedial actions or ecological hazard evaluations utilizing the results of the samples collected during the evaluation period were reviewed to assist in interpreting the results of the current ecological review.

Table 4.2-3 shows the maximum concentration of COCs in surface soil samples collected during the current review period compared to the concentration of those COCs in surface soil samples collected through December 31, 2007. Cadmium was not detected in any surface soil sample collected during the current review period from the Building 801 and 851 areas and HEPA above the reporting level of 0.5 mg/kg, and thus concentrations reported in these samples did not exceed cadmium concentrations reported in surface soil samples collected from these areas through 2007. As reported in Dibley et al. (2012c) and (2013), cadmium in surface soil in these areas was found not to pose an ecological hazard.

The concentrations of PCBs, dioxins, furans and metals in surface soil samples collected from the Building 850 area during the current ecological review period generally did not exceed concentrations of these constituents detected prior to December 31, 2007 from the same area. The concentration of PCB 1254 in the current review period exceeded the previous review period by 44%, and the concentration of PCB 1260 in the current review period exceeded the previous review period by 250%. However, a removal action was completed at the Building 850 Firing Table in January 2010 (Dibley et al., 2010c). This removal action consisted of excavating all surface soil in the vicinity of Building 850 that exceeded the human health preliminary remediation goal (PRG) for PCBs at the time of the removal action (0.74 mg/kg) and the toxic equivalent concentration (TEC) relative to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) of 1.6×10^{-5} mg/kg (the PRG for TCDD). These PRGs were sufficiently low to protect ecological receptors. The excavated soil was solidified and consolidated in an onsite Corrective Action Management Unit (Dibley et al., 2010c). Surface soil with concentrations of cadmium posing a potential ecological hazard was also likely addressed as part of the removal action. Therefore, PCBs, dioxins, furans and metals in surface soil in the vicinity of Building 850 no longer pose an ecological hazard.

Surface Water

Surface water sampled during the current ecological review period consisted of sampling five springs located within OUs covered by the 2009 CMP/CP. The five springs were Spring 3 (Building 832 Canyon OU [OU 7], Figure 2.7-1), Well 8 Spring (Building 850 OU [OU 5], Figure 2.5-1), Springs 10 and 11 (Building 854 OU [OU 6], Figure 2.6-1), and Spring 14 (HEPA OU [OU 4], Figure 2.4-1). Two additional springs in the Building 812 area (Springs 6 and 17) and surface water associated with area drainages were also sampled during the current ecological review period as part of the Building 812 remedial investigation. As the Building 812 OU (OU 9) is not covered by the 2009 CMP/CP, and these samples were collected from within an area of active investigation, they are not considered here.

COCs evaluated in the springs were not limited to surface water COCs listed in Table 4.2-1. As ground water, surface soil and subsurface soil COCs all have the potential to impact surface water, they were also included in the surface water evaluation. Table 4.2-4 shows the maximum concentration of COCs in surface water samples collected during the current review period compared to the concentration of these COCs in surface water samples collected in the previous review period. Comparisons to relevant ecological screening levels and Site 300 background levels are also discussed in the notes section. Generally, the concentrations of COCs during the current review period are less than those detected in the previous review period, or greater by no more than 50%.

HMX was detected for the first time in the Well 8 Spring during the current review period. Detection limits for this COC in the previous review period were higher than the detected concentration in the current review period. While there are no ecological screening levels for HMX, the concentration is below the tap water screening level for human health (U.S. EPA, 2013). Similarly, *trans*-1,2-dichloroethene was detected for the first time in Spring 11 (OU 6) in the current review period. This COC was detected just above the detection limit used in both the previous and current review period. The concentration of this COC is below the California RWQCB fresh water aquatic habitat goal (CRWQCB, 2008).

While uranium activities in Spring 11 during the current review period were not more than 50% greater than activities detected in the previous review period, these activities are greater than the Site 300 background level, and greater than the ecological screening level established for the Building 812 ecological risk assessment (Carlsen et al., 2012a). The uranium isotopes in this spring exhibit natural ratios, suggesting a natural source of uranium.

Ground Water

The baseline ecological risk assessment (Webster-Scholten, 1994) identified TCE and PCE in burrow air in the Building 834 and Pit 6 areas to pose a potential risk to burrowing animals. This evaluation was conducted by modeling VOC concentrations in burrow air using VOC concentrations in subsurface soil samples to a depth of 12 ft. The effect of VOC concentrations in ground water on burrow air was not evaluated.

Burrow air in the Building 834 and Pit 6 areas was sampled quarterly for TCE and PCE between September 2003 and June of 2004 (Dibley et al., 2004b). The areas sampled were selected based on the availability of burrows. In the Building 834 area, burrows were sampled in the vicinity of Building 834J (near wells W-834-J1 and W-834-J2), Building B834G (the closest wells W-834-C2 and W-834-C4), and between Buildings 834B and 834F (the closest wells W-834-B2 and W-834-B3) (Figure 2.2-1). In the Pit 6 area, burrows were sampled in the vicinity of wells EP6-09, K6-01S, K6-01 and K6-19 (Figure 2.3-1). TCE and PCE was detected in burrow air in both areas, but at concentrations significantly below that predicted in the SWRI, and well below that necessary to result in a hazard quotient greater than 1 (Dibley et al., 2004b).

Although ground water concentrations were not specifically used in the SWRI modeling to estimate burrow air concentrations of VOCs, VOCs in ground water would have contributed to the VOC concentrations measured in the burrow air during the burrow air sampling. Table 4.2-5 shows the maximum concentrations of TCE and PCE in ground water in the Building 834 and Pit 6 wells in the vicinity of the sampled burrows between 2003 and 2004, and the concentration of these VOCs at the end of 2012. Concentrations of TCE and PCE have generally declined or remained stable between these two periods in both areas. Therefore, TCE and PCE in ground water in the Building 834 and Pit 6 areas do not pose a threat to burrowing animals in these areas.

Summary of Ecologically Significant Changes in Contaminant Conditions

There have been no ecologically significant changes in contaminant conditions in the current review period. There is currently no ecological hazard posed by COCs in surface soil in the OUs covered by the 2009 CMP/CP. Previously identified ecological hazards in surface soil have either been addressed through removal actions (such as PCBs at Building 854 and PCBs/dioxins and furans at Building 850), or re-evaluations have shown the COC not to be an ecological hazard (cadmium at Buildings 801 and 851, and the HEPA).

No new subsurface soil samples to a depth of 6 ft were collected during the current review period in OUs covered by the 2009 CMP/CP.

TCE and PCE concentrations in ground water in areas where burrow air was sampled for these COCs and shown not to be an ecological hazard (Building 834 and Pit 6) have generally decreased. Therefore, TCE and PCE in burrow air continue to pose no ecological hazard.

There have been no significant changes in COC concentrations in the Site 300 springs located in the OUs covered by the 2009 CMP/CP. With the exception of uranium in Springs 10 and 11, COC concentrations are either below ecological screening levels (ESLs) and/or below Site 300 background, and do not pose a ecological hazard. Uranium in Spring 11 continues to be detected at concentrations in excess of Site 300 background and greater than the ESL established for the Building 812 ecological risk assessment. Natural isotopic ratios suggest a natural source for uranium concentrations in this spring. Spring 10 is currently dry, and was not sampled for uranium during the current review period. Like Spring 11, uranium concentrations in Spring 10 in the previous review period exceeded Site 300 background and the Building 812 ESL, but showed natural isotopic ratios.

4.2.6.3. Evaluation of Ecologically Significant New Constituents

Surface Soil

Table 4.2-6 shows the constituents detected in surface soil during the current review period that were not looked for in the previous review period. The only new constituent detected in surface soil was 1,2,3,4,6,7,8,9-octachlorodibenzofuran, detected in surface soil in the Building 850 area. As discussed in Section 4.2.6.2, a removal action was completed at the Building 850 firing table in January 2010 (Dibley et al., 2010c), which effectively addressed any ecological hazard associated with this constituent.

Surface Water.

There where no new constituents detected in surface water during the current review period in springs covered by the 2009 CMP/CP.

Summary of Ecologically Significant New Constituents

No ecologically significant new constituents were detected in surface soil or surface water during the current review period. No new subsurface soil samples to a depth of 6 ft were collected during the current review period in OUs covered by the 2009 CMP/CP.

4.2.6.4. 2013 Five-Year Ecological Review Findings

Table 4.2-7 summarizes the current status of potential ecological hazards at Site 300. The findings of the current five-year ecological review are summarized below.

The distribution of special-status plant and animal species at Site 300 during the current review period is not significantly different from that observed in the 2008 Five-Year Ecological Review. Several bird species and one plant species known to occur at Site 300 at the time of the 2008 Five-Year Ecological Review but had no special status at the time were reclassified during the current review period. The plant species (adobe navarretia) does not occur within any OU. The newly classified special status bird species are expected to be wide-ranging throughout Site 300. While changes in abundance has been observed in California red-legged frogs, California tiger salamander and burrowing owls, these are a result of changing environmental conditions, and not a result of changes in contaminant conditions.

There have been no ecologically significant changes in contaminant conditions during the current review period. Previously identified ecological hazards in surface soil have been addressed either through removal actions (such as PCBs at Building 854 and PCBs/dioxins and furans at Building 850), or re-evaluations have shown the COC not to be an ecological hazard (cadmium at Buildings 801 and 851, and the HEPA). While there is currently no ecological hazard posed by COCs in surface soil in the OUs covered by the 2009 CMP/CP, investigation into uranium in the Building 812 OU (OU 9) is ongoing. In addition, uranium was detected in surface soil from the Building 851 area (OU 8) in 2013 (after the data cut-off date for the current review period). Investigation into uranium at Building 851 is planned.

TCE and PCE concentrations in ground water in areas where burrow air was sampled for these COCs and shown not to be an ecological hazard (Building 834 and Pit 6) have generally decreased. Therefore, TCE and PCE in burrow air continue to pose no ecological hazard.

There have been no significant changes in COC concentrations in the Site 300 springs located in the OUs covered by the 2009 CMP/CP. With the exception of uranium in Springs 10 and 11, COC concentrations are either below ESLs and/or below Site 300 background, and do not pose an ecological hazard. Uranium in Spring 11 continues to be detected at concentrations in excess of Site 300 background and greater than the ESL established for the Building 812 ecological risk assessment. Natural isotopic ratios suggest a natural source for uranium concentrations in this spring. Spring 10 is currently dry, and was not sampled for uranium during the current review period. Like Spring 11, uranium activities in Spring 10 in the previous review period exceeded Site 300 background and the Building 812 ESL, but showed natural isotopic ratios.

No ecologically significant new constituents were detected in surface soil or surface water during the current review period. No new subsurface soil samples to a depth of 6 ft were collected in OUs covered by the 2009 CMP/CP during the current review period. As mentioned above, although no ecologically significant new constituents were detected in surface soil through the current review period, uranium was detected in surface soil from the Building 851 area (OU 8) during 2013. Investigation into the uranium at Building 851 is planned.

5. Data Management Program

The management of data collected during second semester 2013 was subject to Environmental Restoration Department (ERD) data management process and standard operating procedures (Goodrich and Lorega, 2012). This data management process tracks sample and analytical information from 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. Data management and data retrieval is facilitated by a web-based system called, The Environmental Information Management System (TEIMS). 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 version 11.2.0.3 on Linux servers. General maintenance and refinements continued in both the database and the web application programming. Improvements and additions to the ERD data management process continued to be implemented in an ongoing effort to automate and upgrade the applications, including verifications, field measurement entry tool, the performance price adjustment tool, and water level collection process. An updated header and side bar have been implemented on many of the main web pages, with progress being made to upgrade all web pages. The Treatment Facility Real Time (TFRT) application, a high frequency data acquisition system for treatment facilities and associated extraction wells, continued to be improved extending options available to users and refining tools to improve usability. A diagnostics tool has been added to TFRT to notify appropriate staff of offline facilities. 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. ERD has used the TWiki based wiki for knowledge management since 2005. The migration from ERDTWiki to Confluence, an institutionally supported, commercial wiki developed by Atlassian, was completed in December 2013. Similarly the error tracking tool, OSCAR (Oracle Software Corrective Action Reporting), will soon be migrated to management by JIRA, also part of the Atlassian institutionally supported tool suite. An improvement in the ability of the TEIMS systems to authenticate for privileged users has been developed and will be implemented soon. Work is in progress to upgrade two of the servers supporting TEIMS. Both the software revision tracking and server monitoring programs have been upgraded and migrated to one of the new servers.

A tool was developed, along with documented procedures, to support ERD restoration program work plan development and project execution. The tool is used to compare planned versus actual analyses counts for sampling for ERD. Work also began on a tool to automate the annual creation of the necessary database tables and views required to assign the cost of an analysis from the contract analytical laboratory bid packages to the actual analysis of samples collected in the field.

6. Quality Assurance/Quality Control Program

LLNL conducted all compliance monitoring in accordance with the approved Quality Assurance Project Plan (QAPP) (Dibley, 1999) requirements for planning, performing, documenting, and verifying the quality of activities and data. The QAPP was prepared for CERCLA compliance and ensures that the precision, accuracy, completeness, and representativeness of project data are known and are of acceptable quality. The QAPP is used in conjunction with the LLNL ERD Standard Operating Procedures (SOPs), Operations and Maintenance Manuals (O&Ms), Work Plans, Sampling Plans, Integration Work Sheets (IWSs), and Site Safety Plans. Modifications to existing LLNL quality assurance/quality control (QA/QC) procedures, new QA/QC procedures that were implemented during this reporting period, self-assessments, quality issues and corrective actions, and analytical and field quality control are discussed in this section.

6.1. Modifications to Existing Procedures

Some ERD SOPs scheduled for release with the previous issue of Revision 14 remain in the review and update process as listed:

- 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 4.14: Mapping with the Trimble Pathfinder Pro XR GPS System.

The preceding list of SOPs, along with other procedures due for a triennial review will be reviewed, updated, approved, and released as Revision 15, when completed. There are approximately 29 procedures due for modifications.

6.2. New Procedures

New procedures, “Site 300 Treatment Media Inventory and Tracking Process” and “Site 300 Treatment Media Vessel Evacuation, Cleaning, and Filling Processes” are being developed and are also planned to be included in Revision 15. Up to this point, procedures affiliated with treatment facility processes such as “Carbon Canister Removal and Carbon Conditioning”, “Conditioning Treatment for Ion Exchange” and “Removing Carbonate Deposits from Portable Treatment Unit Air Strippers Using Citric Acid” have been included in the Operations and Maintenance Manual, Volume 1. As Volume 1 is being phased out, these procedures are being reformatted, reviewed, and updated to prepare them for inclusion in the ERD SOPs binder.

6.3. Self-assessments

ERD participates in self-assessments, both formal and informal. Assessments are conducted to evaluate work activities to procedural, QA, management, and Integrated Safety Management System (ISMS) practices. External regulatory agencies and management performs frequent assessments and management work observations, verifications, and inspections (MOVIs) of ERD work activities. There were a total of twenty-three assessments consisting of MOVIs, and regulatory inspections conducted for the Site 300 CERCLA program during 2013. Issues and deficiencies observed during assessments are tracked from inception to resolution using the institutional Issues Tracking System (ITS). There were no deficiencies associated with the assessments performed during this reporting period. Issues observed during analytical laboratory assessments are managed through the DOE Consolidated Audit Program process.

The IWSs are in the process of undergoing a triennial review, which consists of a complete review and approval of the safety document(s) by the Environmental, Safety, & Health team, the Facility Point of Contact, the Responsible Individual, and the Authorizing Individual. To date, all ERD IWSs have completed the triennial review and approval process except for three Site 300 IWSs that remain in the review process.

6.4. Quality Issues and Corrective Actions

Quality improvement, nonconformance, and corrective action reporting is documented using the Quality Improvement Form (QIF). QIF-11-003 that had remained opened from early 2011 was closed on August 27, 2013 after successfully developing and implementing corrective action. The QIF was generated to describe the event where methylene chloride was detected in the 829-SRC Treatment Facility effluent due to the usage of contaminated resin received from the vendor. Corrective action involved securing a new vendor to supply resin according to specific contractual parameters developed by ERD, and the development of in house standard operating procedures designed to implement testing and verification processes for material received, sampling methods, tracking the usage of material, and managing materials through proper inventory control.

Three QIFs were processed during 2013. QIF-13-001 was created due to a data anomaly reported by one of the radiological analytical laboratories. The anomaly was due to a sample log in and labeling error that occurred in the laboratory sample receiving area. The second QIF (QIF-13-002) produced during this reporting period was generated due to the receipt of suspect counterfeit items, such as fastening hardware (nuts, bolts, etc.). These items were received from the vendor for the construction of the Central General Services Area misting tower upgrade project. The items were discovered upon receipt and construction was delayed until items of acceptable quality were received. QIF-13-003 was the final QIF generated during 2013, and was written to document a problem with surrogates being reported along with target analytes for the TO15DIT analysis. Data users could have mistaken the surrogates as contaminants due to the manner in which the analytical laboratory was reporting the surrogate results. The laboratory successfully corrected the issue by identifying the surrogates as such and began reporting percent recoveries for the surrogates separately from the target compounds in the analytical report. All QIFs generated during the reporting period were successfully closed out.

6.5. Analytical Quality Control

Data review, validation, and verification are conducted on 100% of the incoming analytical data in accordance with ERD SOP 4.6: Validation and Verification of Radiological and Nonradiological Data Generated by Analytical Laboratories. 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.

A follow-up sampling event was carried out in July 2013 to examine the issue where EPA Method 8330 analytic results for collocated samples collected from well W-812-02 differed significantly between laboratories. As reported in the 2012 annual CMR, a sample collected on July 23, 2012 from well W-812-02 and submitted to BC Laboratories, Inc. for requested analysis code "E8330LOW" resulted in detections of HMX at 11 µg/L and nitrobenzene at 43 µg/L. The collocated sample also collected from W-812-02 on July 23, 2012 and submitted to Caltest Analytical Laboratory for "E8330LOW" resulted in no detections above the reporting limits for any of the 8330 compounds. A subsequent set of collocated samples collected from W-812-02 on January 24, 2013 resulted in detections of HMX at 11 µg/L and nitrobenzene at 49 µg/L reported by BC Laboratories and a detection of HMX only at 9.2 µg/L reported by Caltest Analytical Laboratory.

In July 2013, the follow up sampling event involved collecting collocated samples from well W-812-02 and submitting the samples to BC Laboratories, Inc. and Curtis & Tompkins, Ltd. for an EPA Method 8330 analysis. Prior to submitting samples, the laboratories were informed that EPA Contract Laboratory Program (CLP) level data packages for the 8330 analyses would be required for evaluation. The laboratories were also requested to take specific conductance measurements of the samples prior to analysis. The laboratories reported the following analytical results: BC Laboratories detected the explosive compound HMX at a concentration of 7.2 µg/L, and Curtis & Tompkins detected HMX at 7.0 µg/L. Nitrobenzene was not detected in any of the samples. There was not an appreciable difference in specific conductance or in the analytical results; therefore, any possible interference related to specific conductance was not taken into consideration. The CLP data packages were received from the laboratories and reviewed. Each laboratory performed the analysis according to method specifications including a second column confirmation. Verifying the usage of a confirmation column for the explosives analysis through examination of the CLP data package was important due to a Priority II finding resulting from the DOE Consolidated Audit Program audit performed in May 2013 in which it was learned that BC was not performing a second column confirmation for explosives analysis.

A possible improvement to the sample collection method was applied during the follow up sampling event. In order to collect the most homogeneous samples possible, the sampler was requested to only partially fill a 1 liter sample bottle before moving to the next and then continue filling bottles in this fashion until all sample bottles were filled. Routinely, the sampler completely fills a 1 liter sample bottle before moving to the next. This method of partially filling sample bottles may help minimize variability due to sample collection practices when splitting collocated samples between laboratories for analysis. Filling volatile organic analysis vials in this manner is performed according to procedure but the same practice has not been performed when filling larger sample bottles to be analyzed for non-volatile type tests. From a data analysis perspective, this concludes the examination of the EPA 8330 analytical results for samples collected from well W-812-02. There may be other contributing factors such as sampling methodologies, sample collection techniques or some other subsurface characteristic contributing to the variability sometimes seen in analytical results since the in depth data evaluation did not demonstrate any inconsistencies.

6.6. Field Quality Control

Detections of contaminants continue to periodically show up in field blank analysis even though the blank water is analyzed and declared free of contaminants prior to the laboratories providing it to ERD for use. The contaminants detected in the field blanks, are not the same contaminants detected in the associated sample; therefore, data qualifier flags have not been assigned to the data. Due to the sporadic nature of the field blank detections and the fact that the same contaminant has not shown up in the samples, it has not yet been viewed as an issue needing further investigation. Preliminary inquiries were made to ensure sampling staff was appropriately using the blank water provided by the laboratories. The staff was using the blank water according to procedure. No other quality control sample issues were encountered during the reporting period other than the few detections in the field blank samples.

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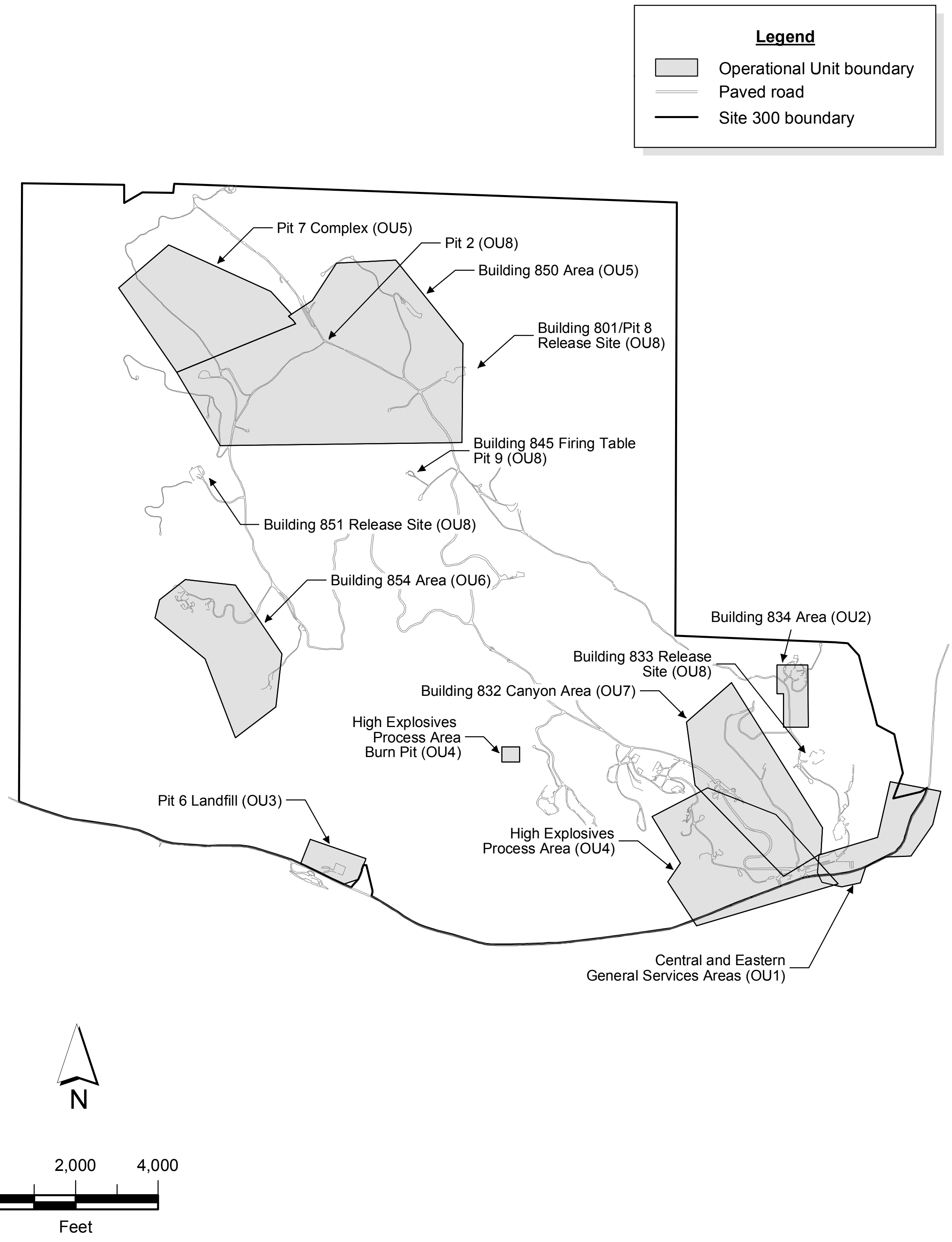

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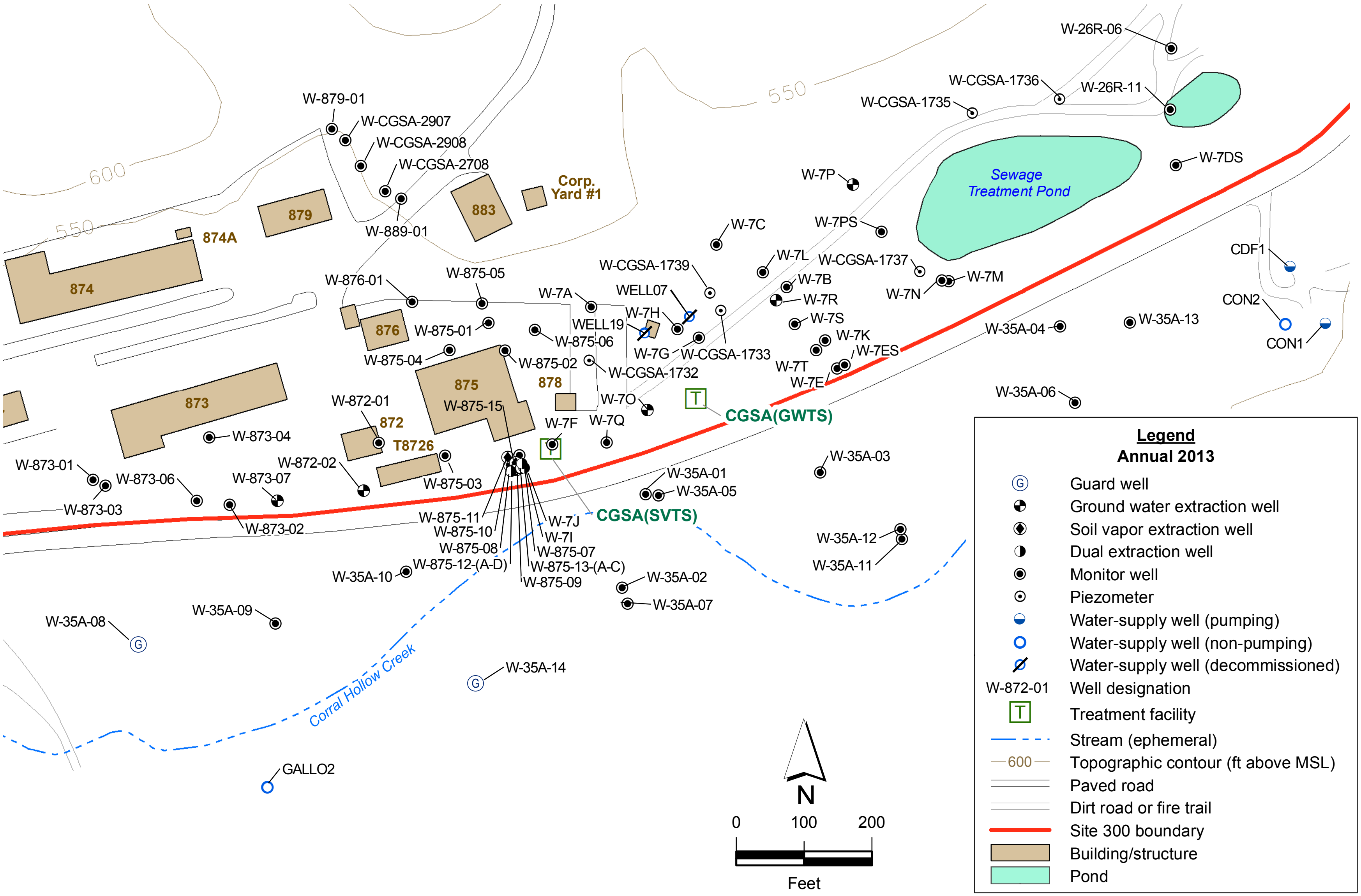

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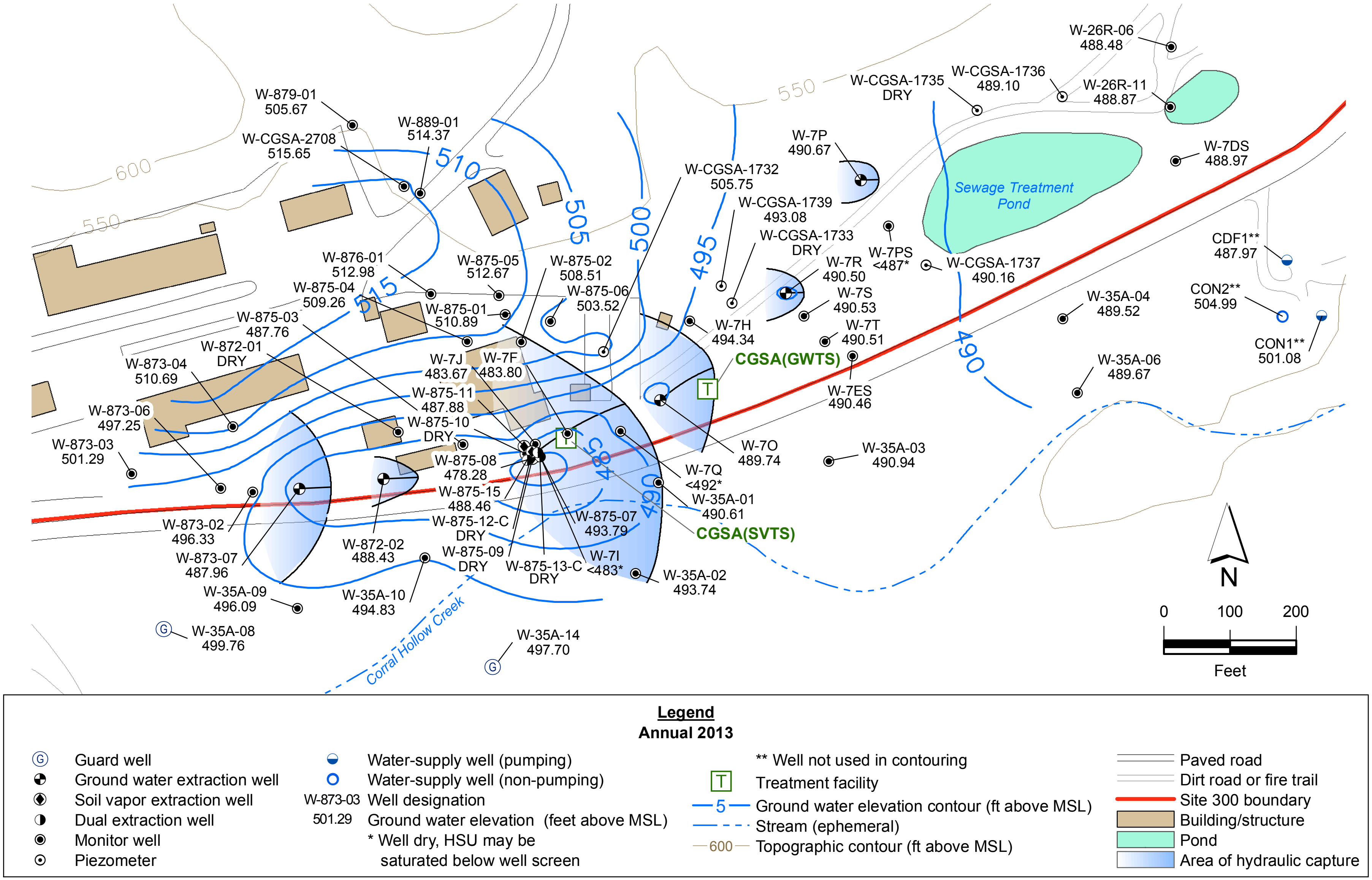

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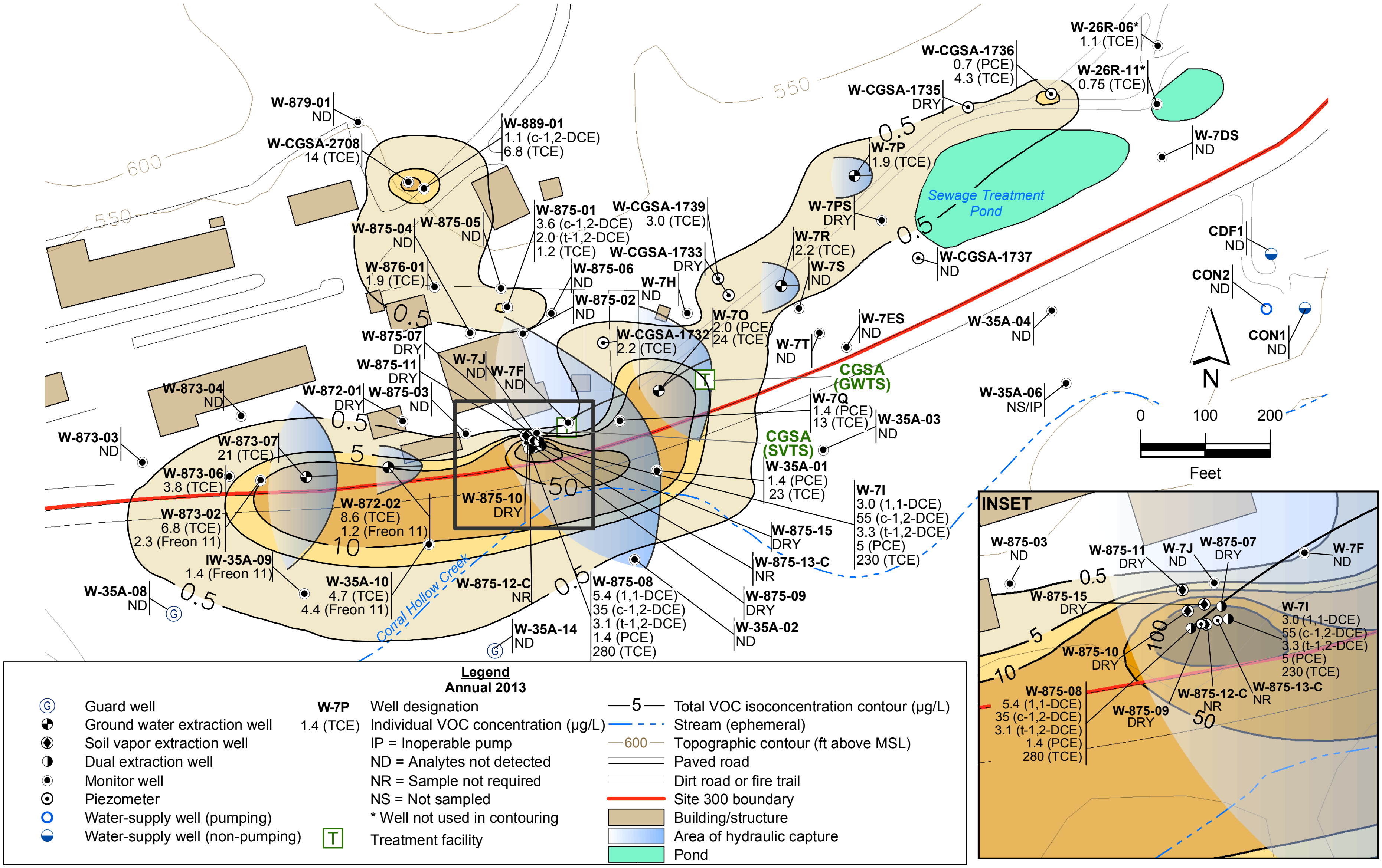

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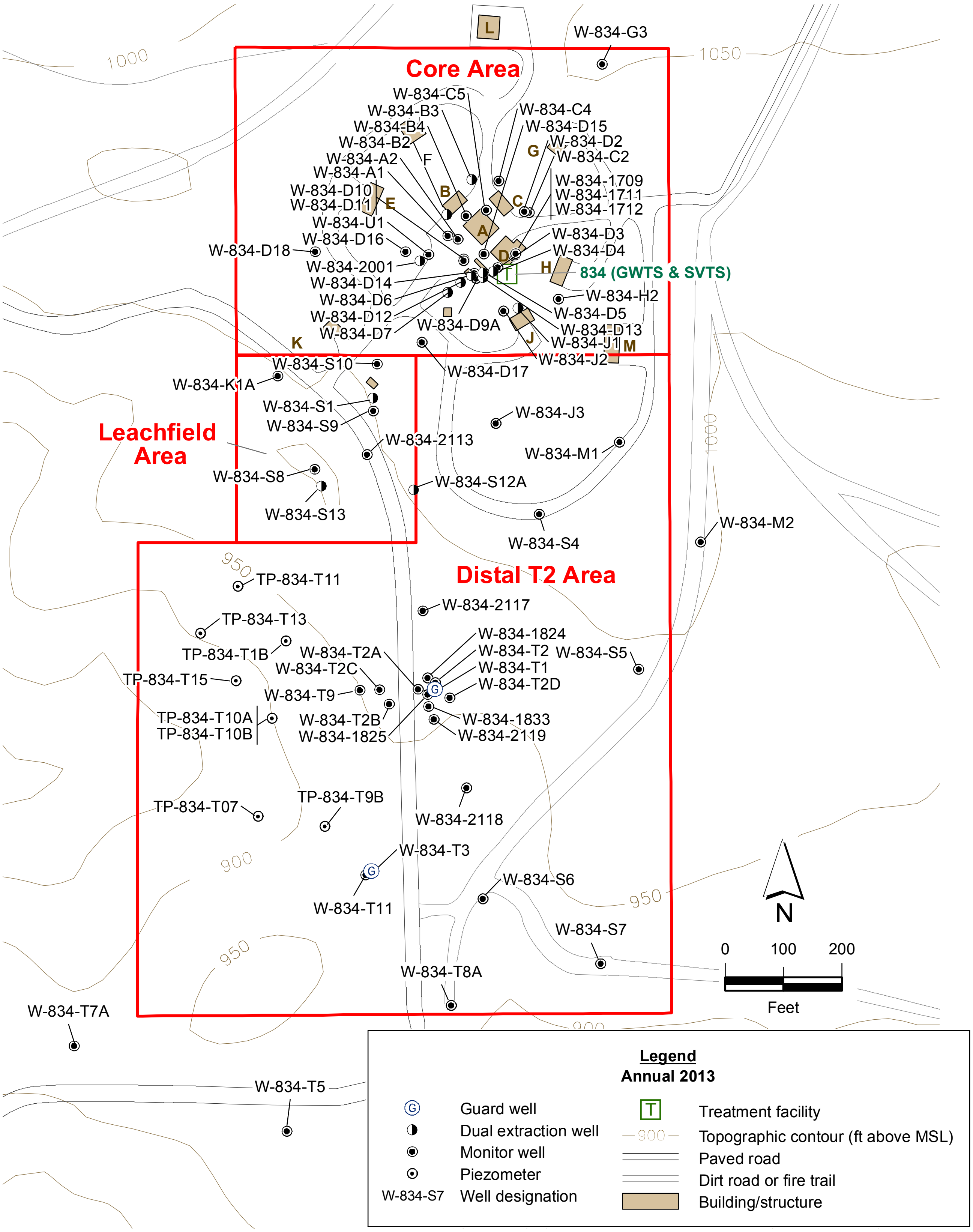

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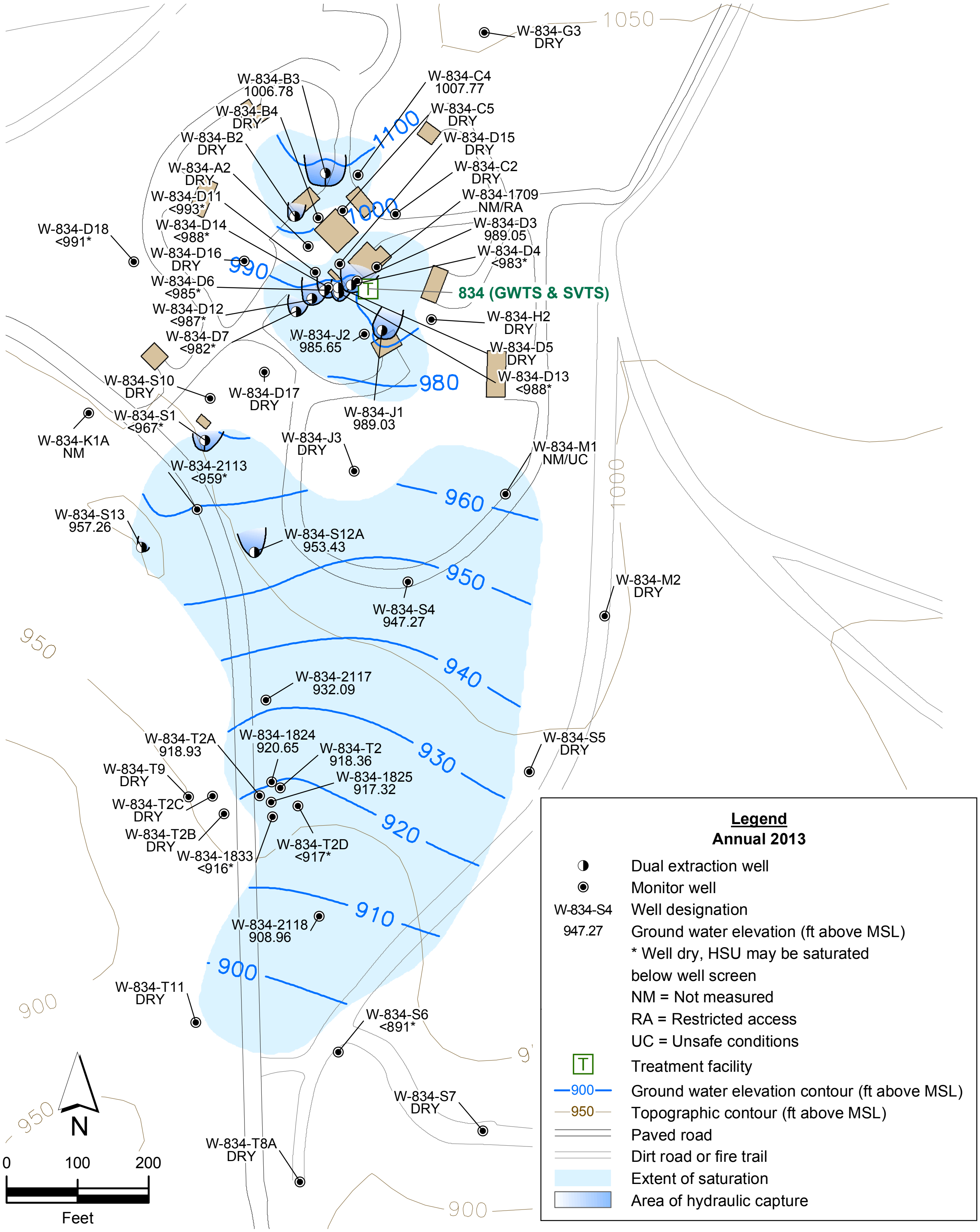

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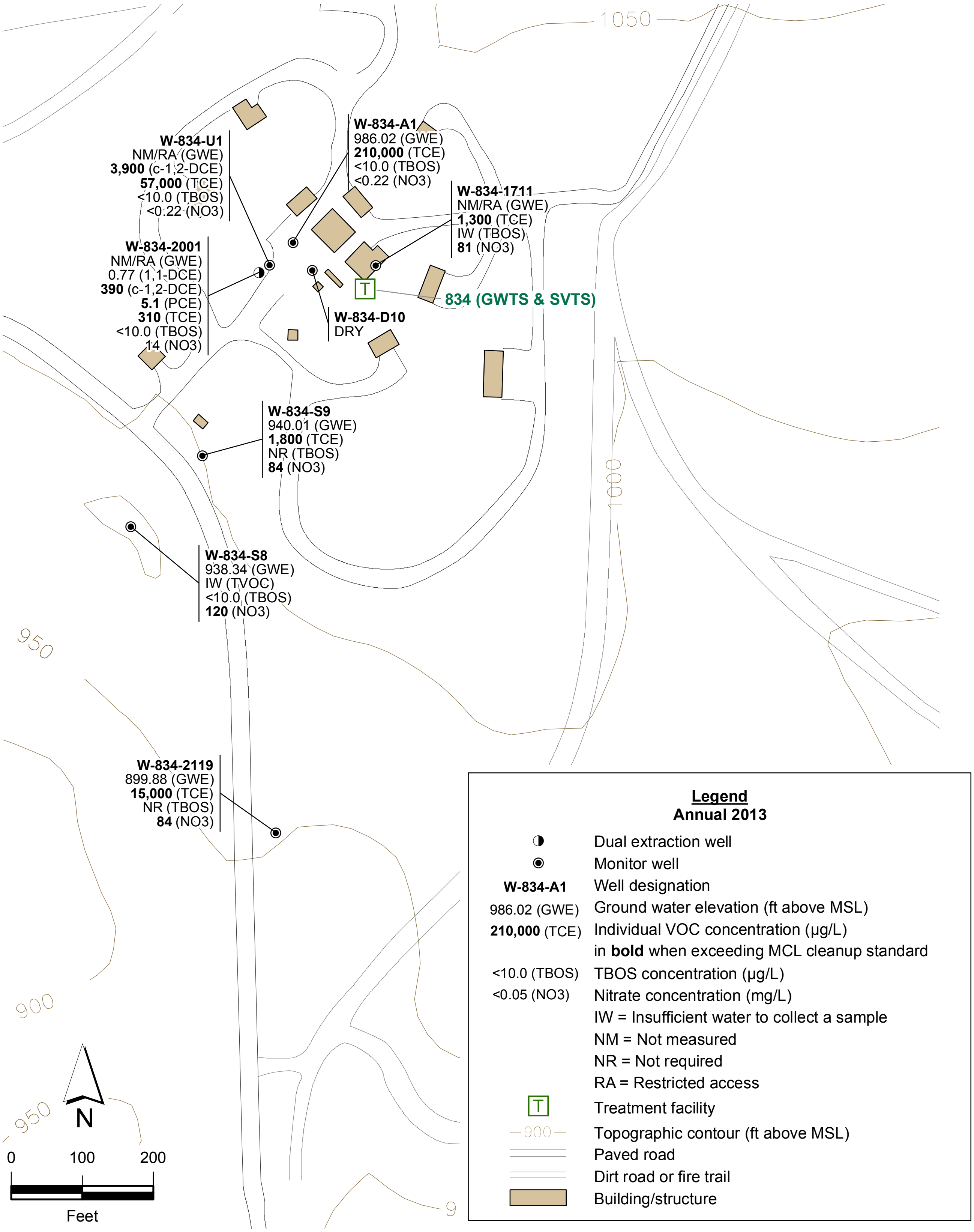

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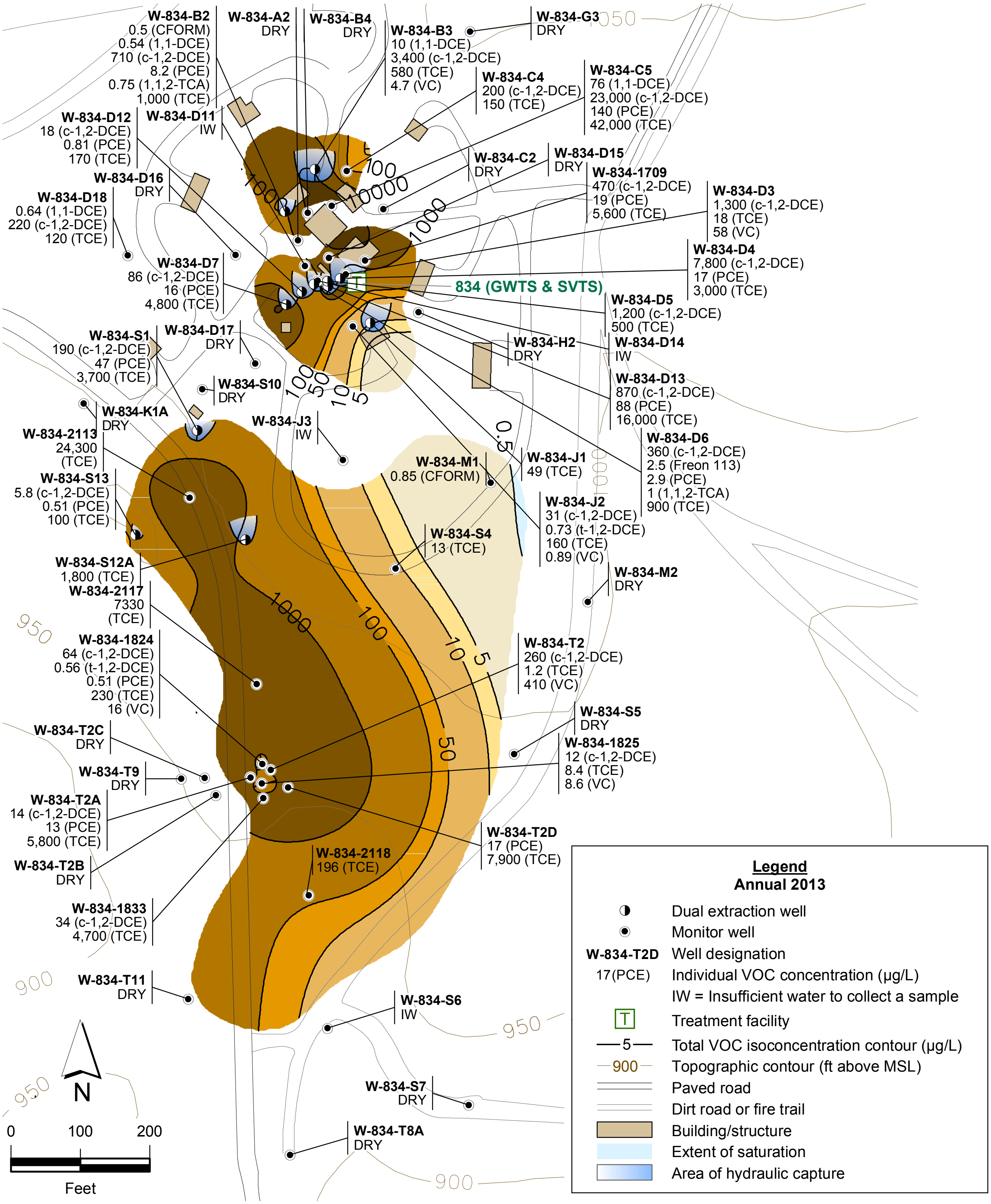

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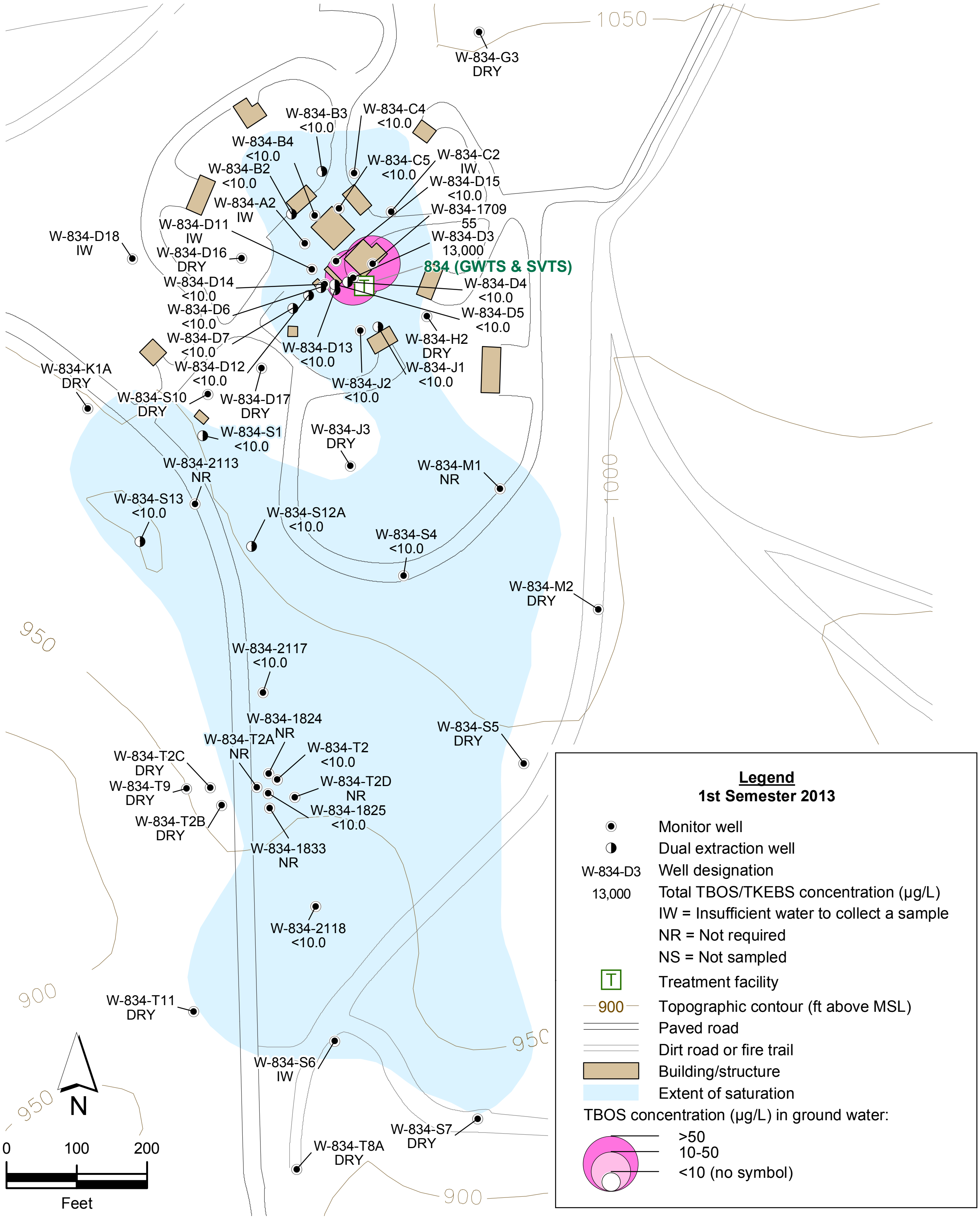

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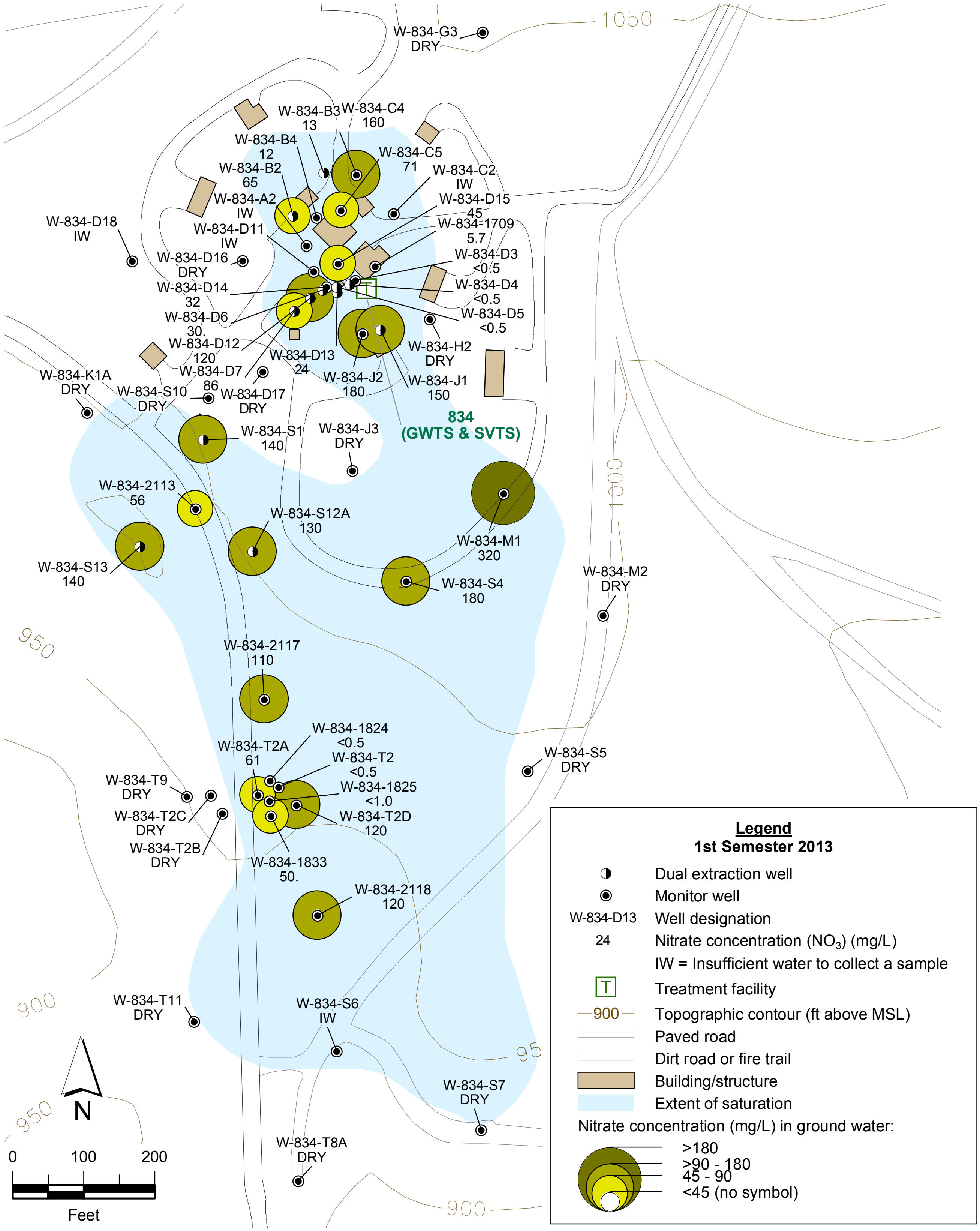

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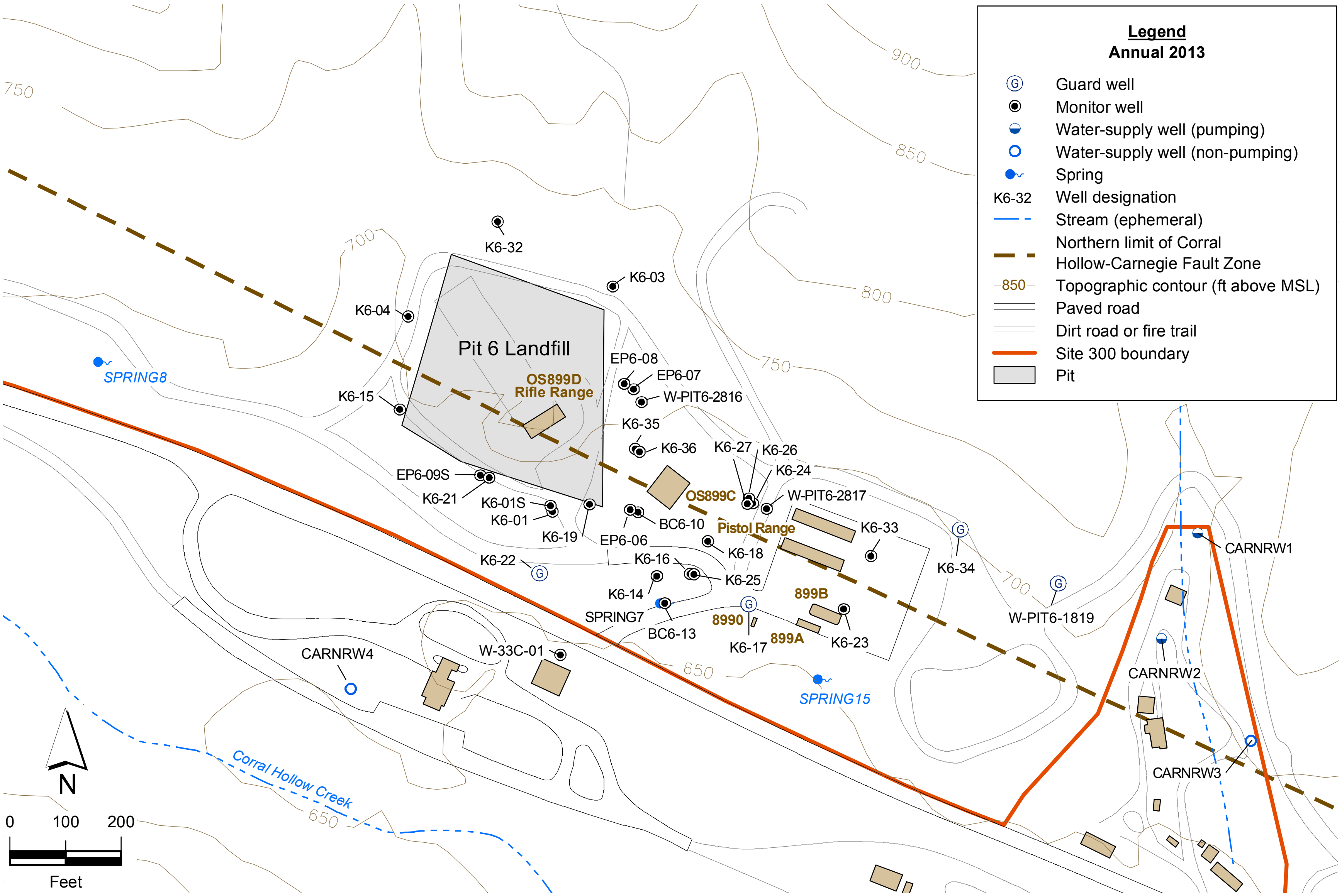

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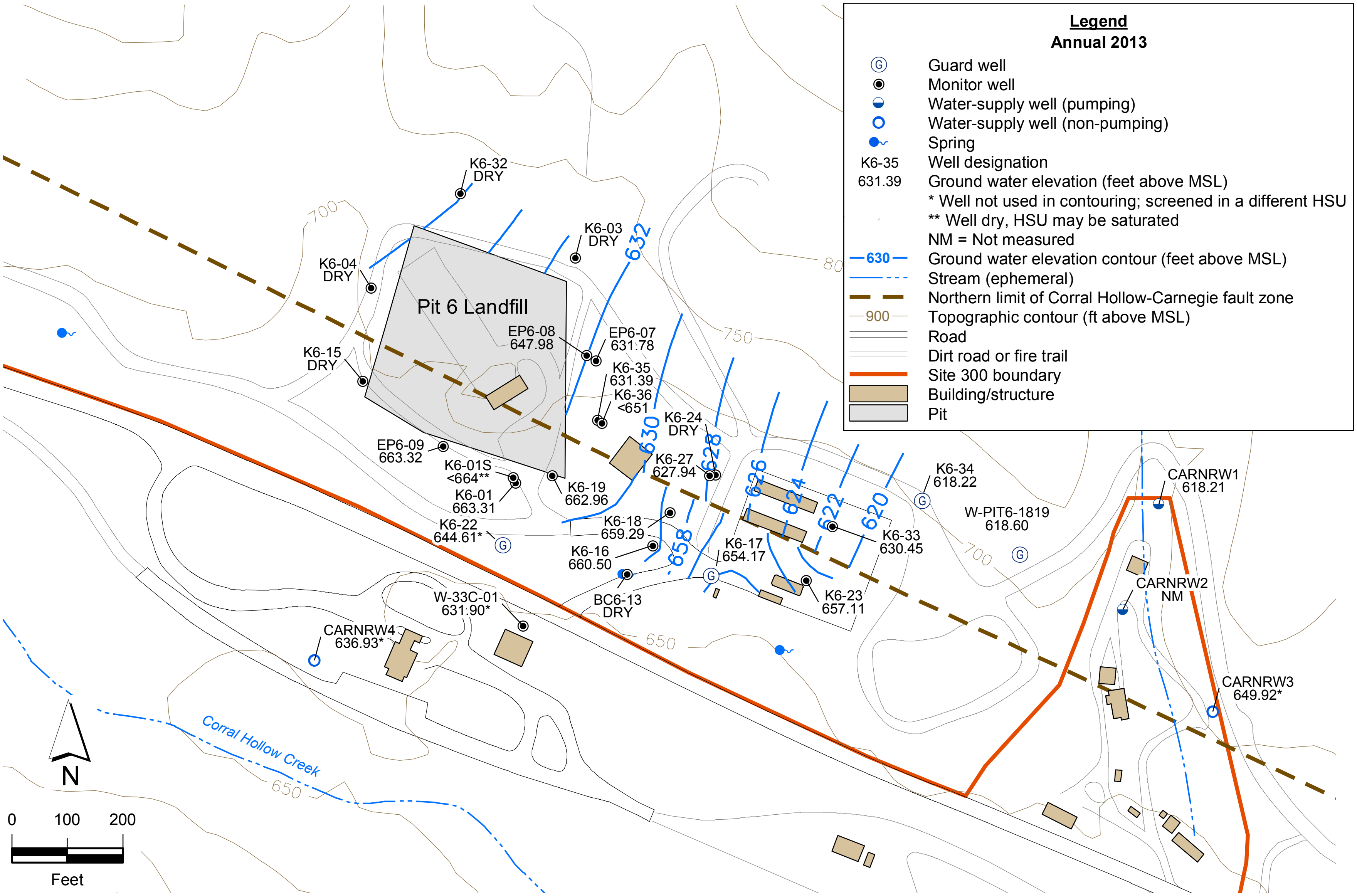

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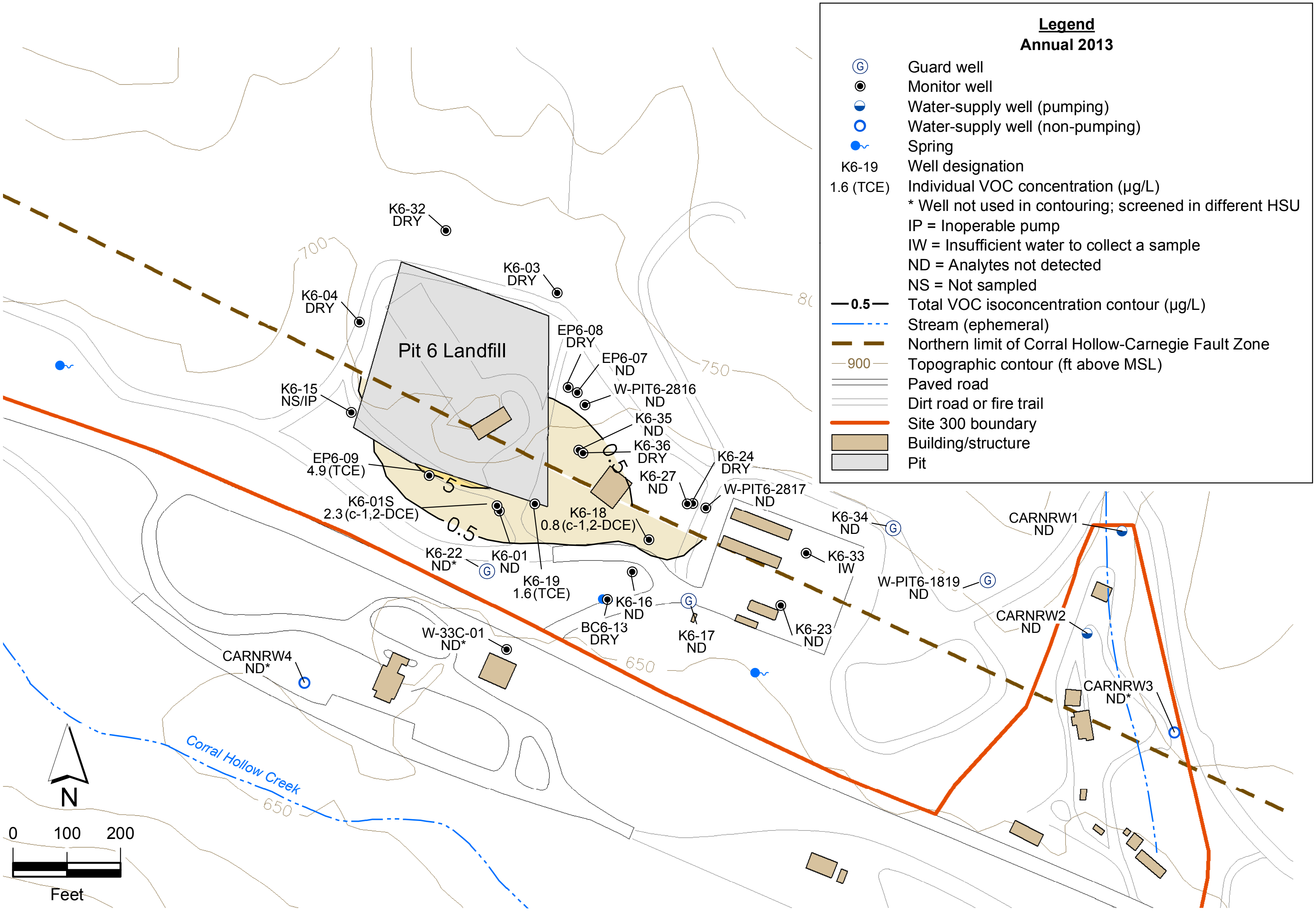

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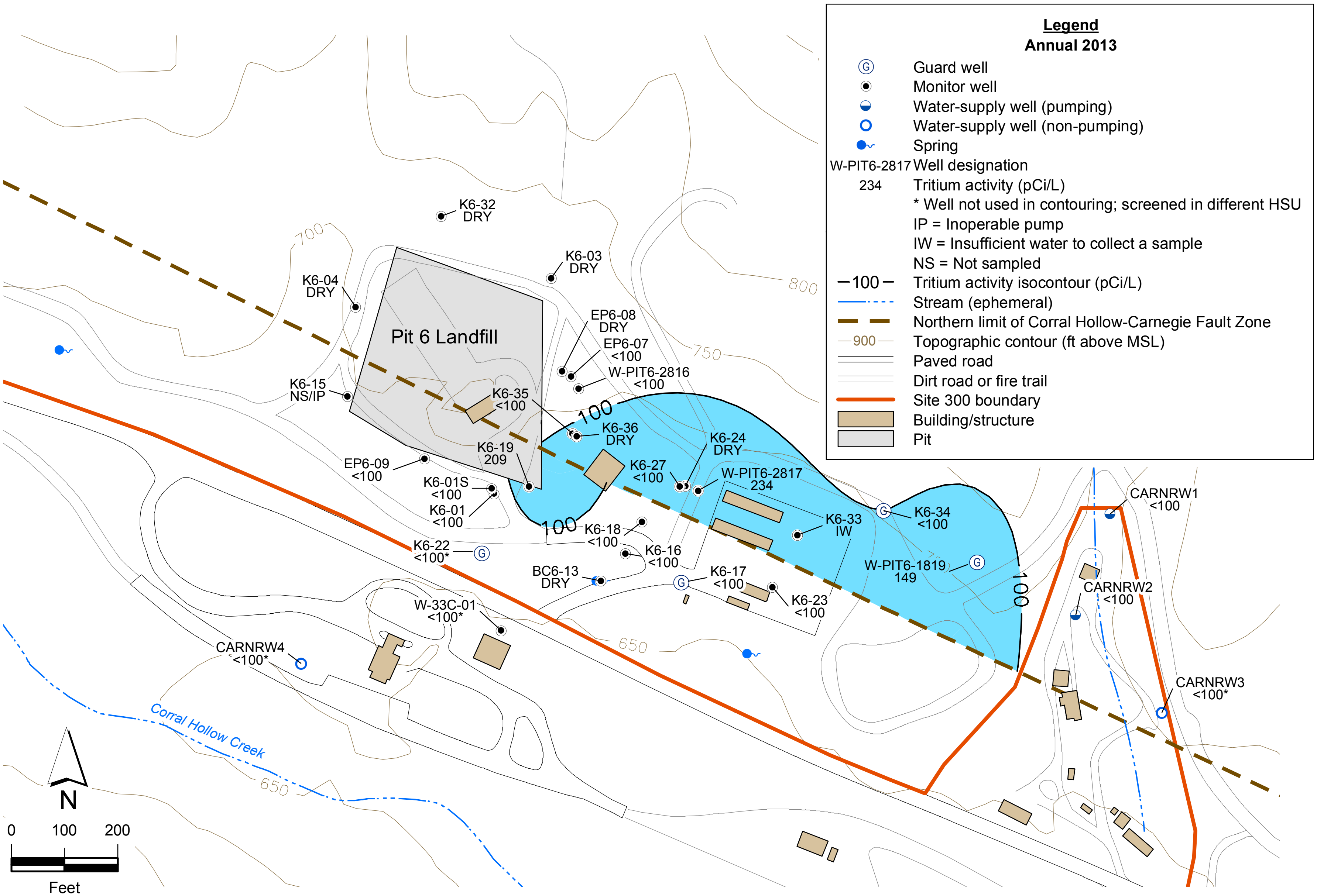

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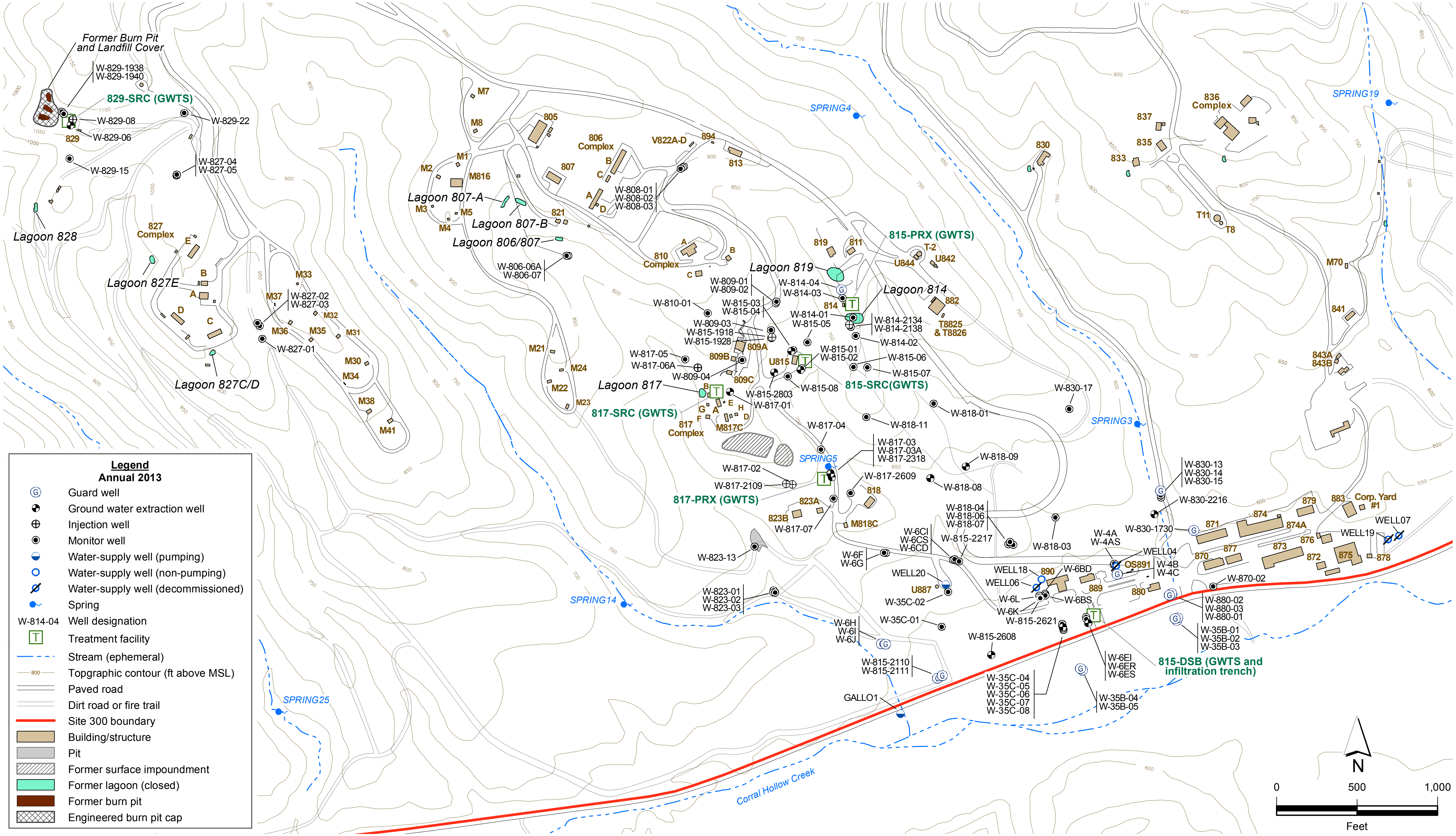

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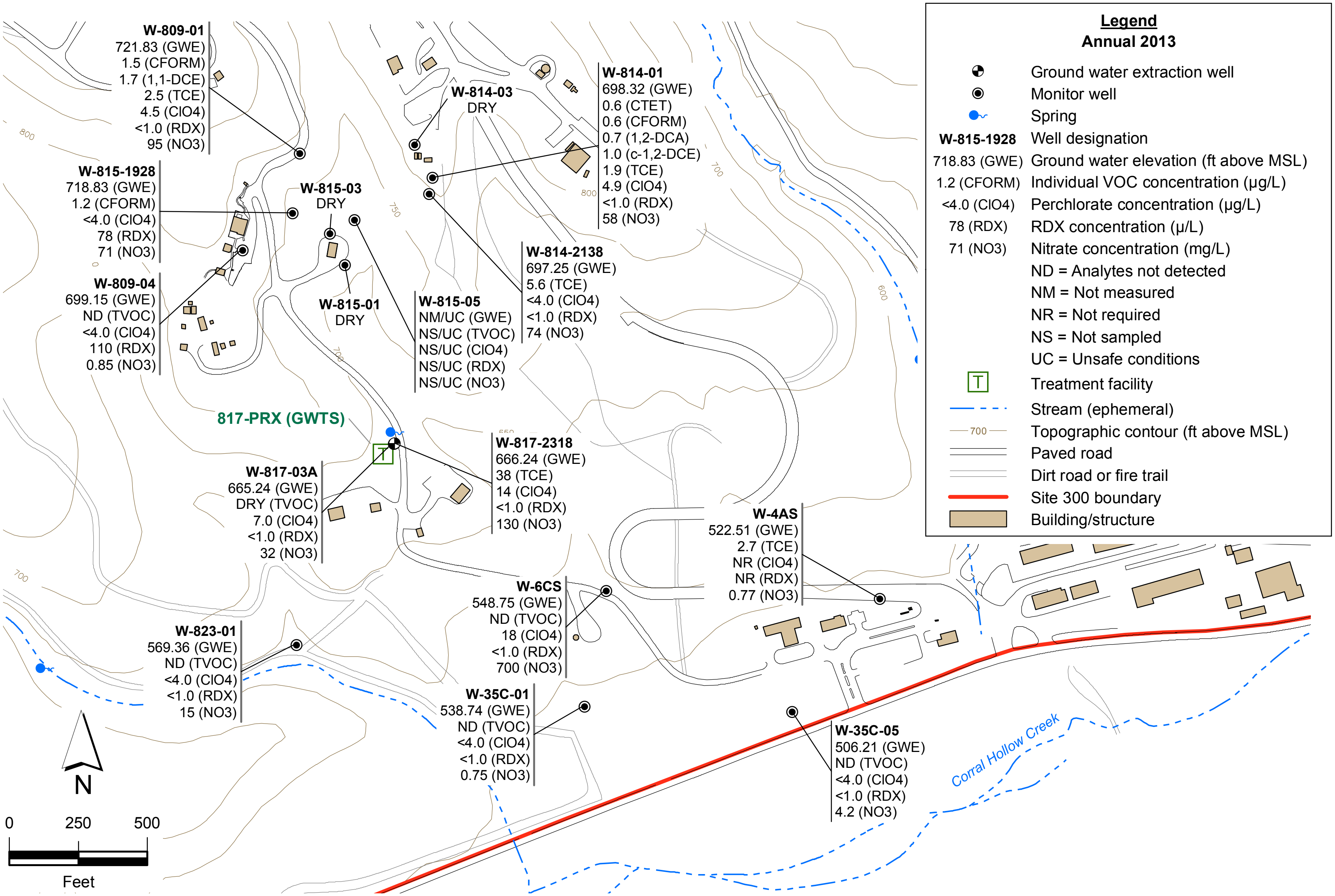

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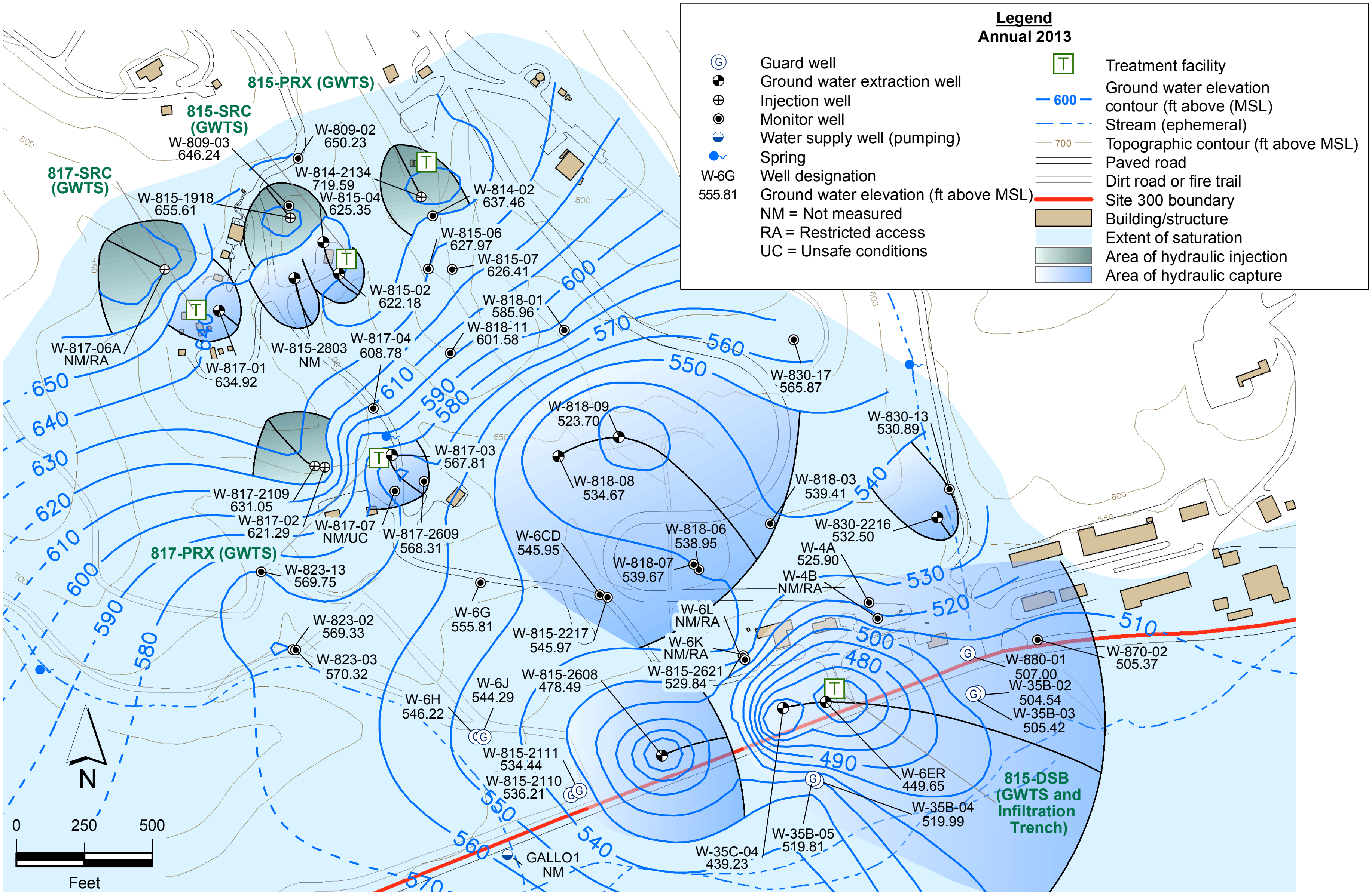

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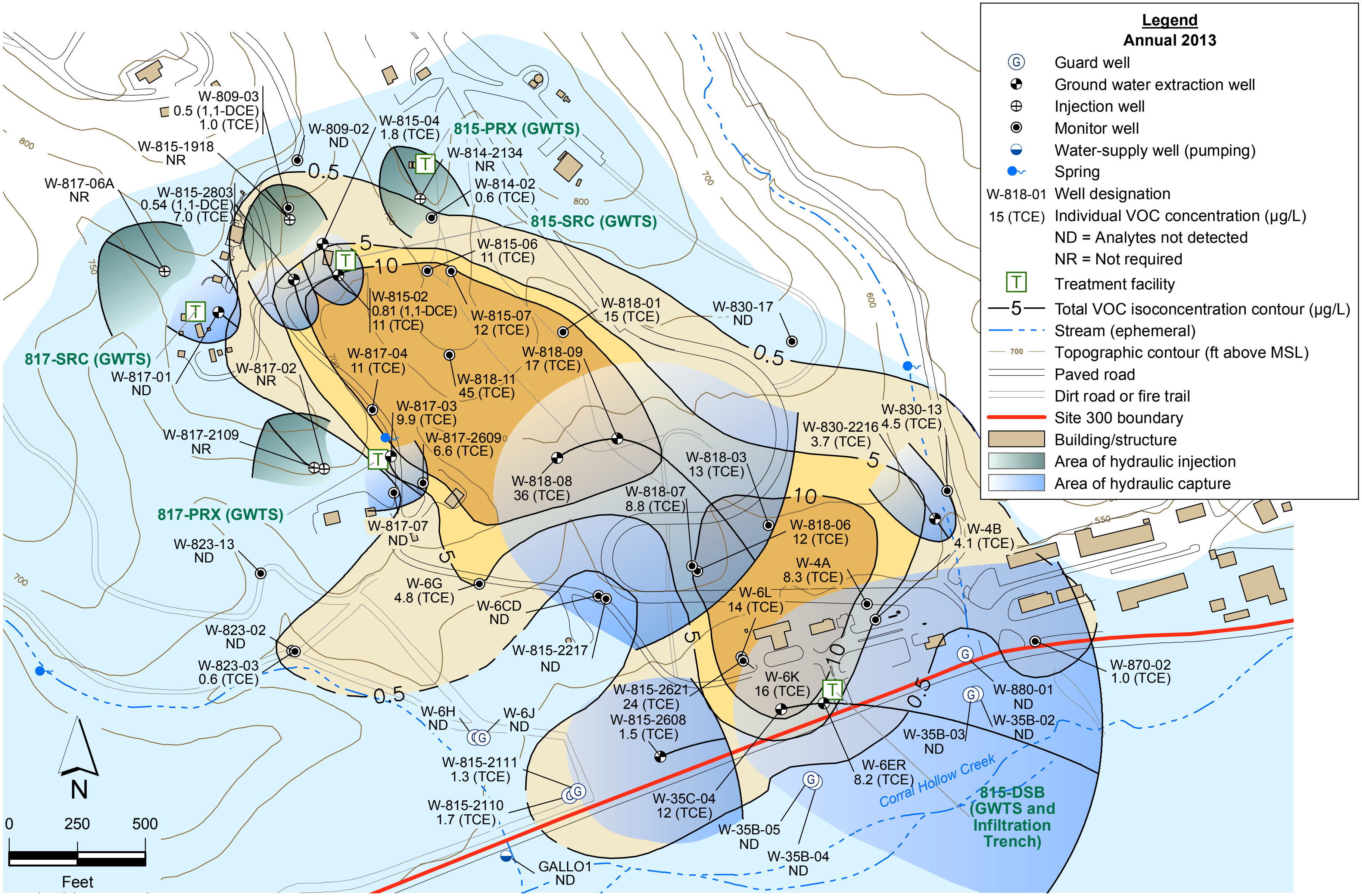

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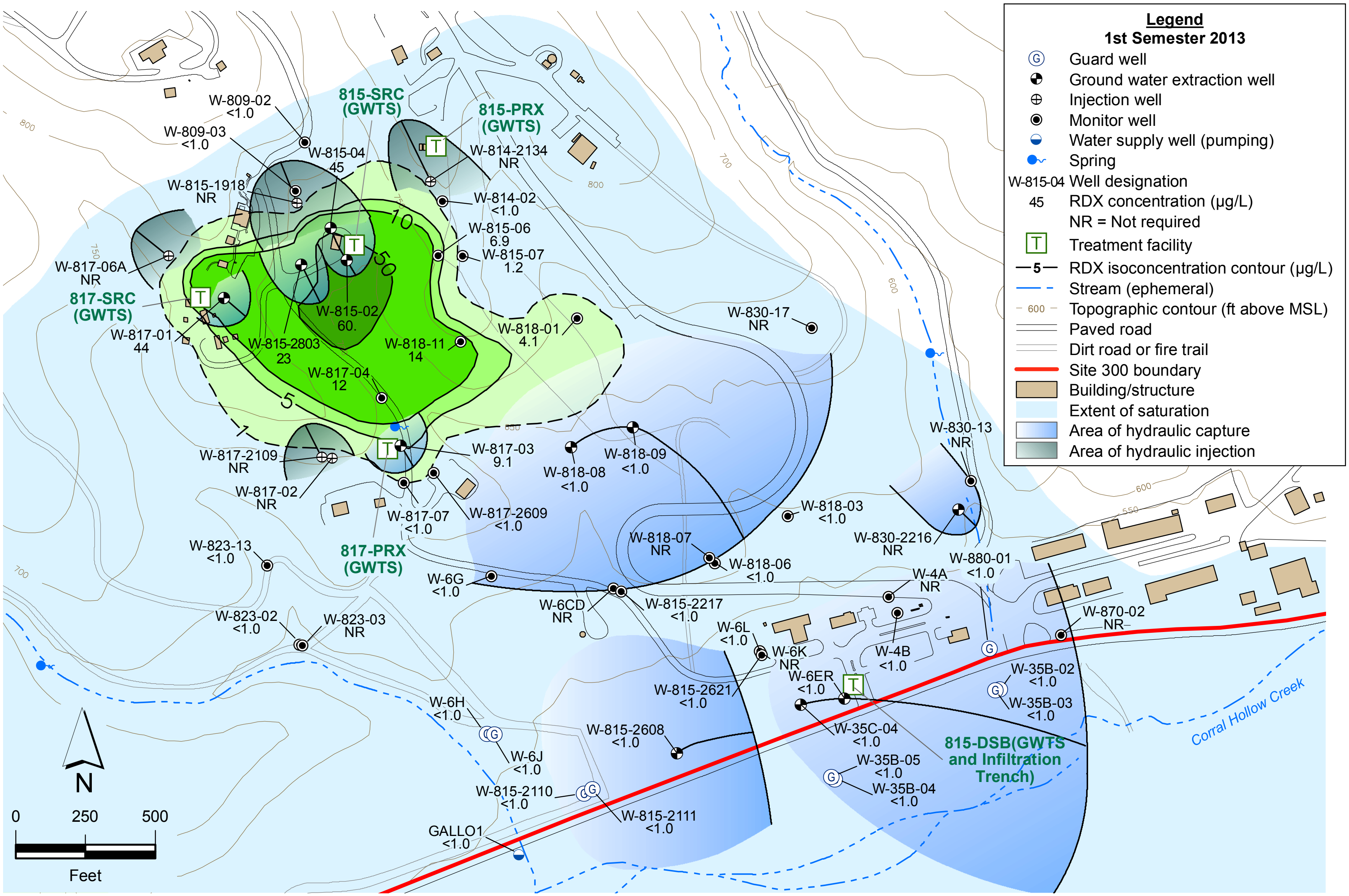

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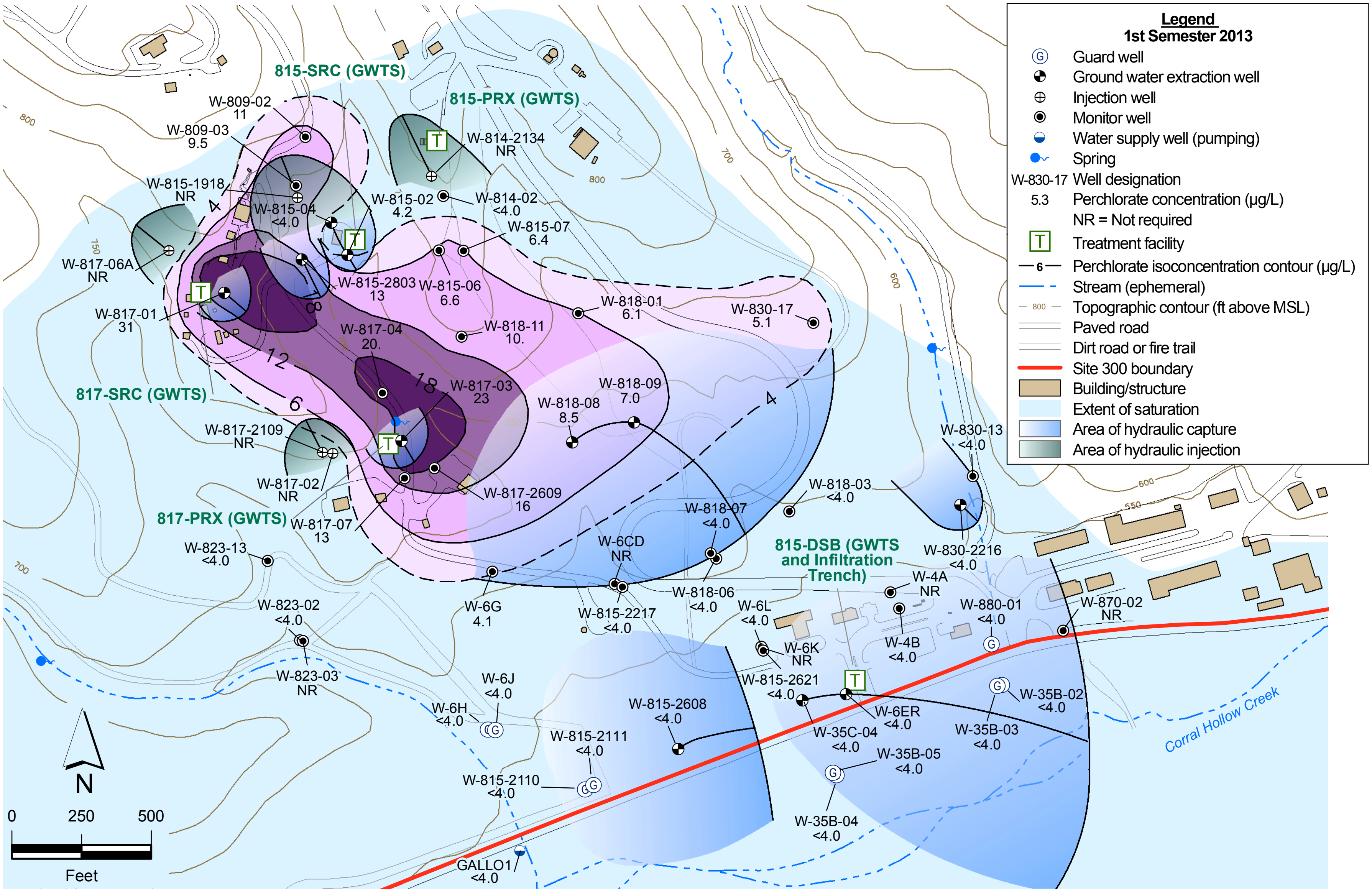

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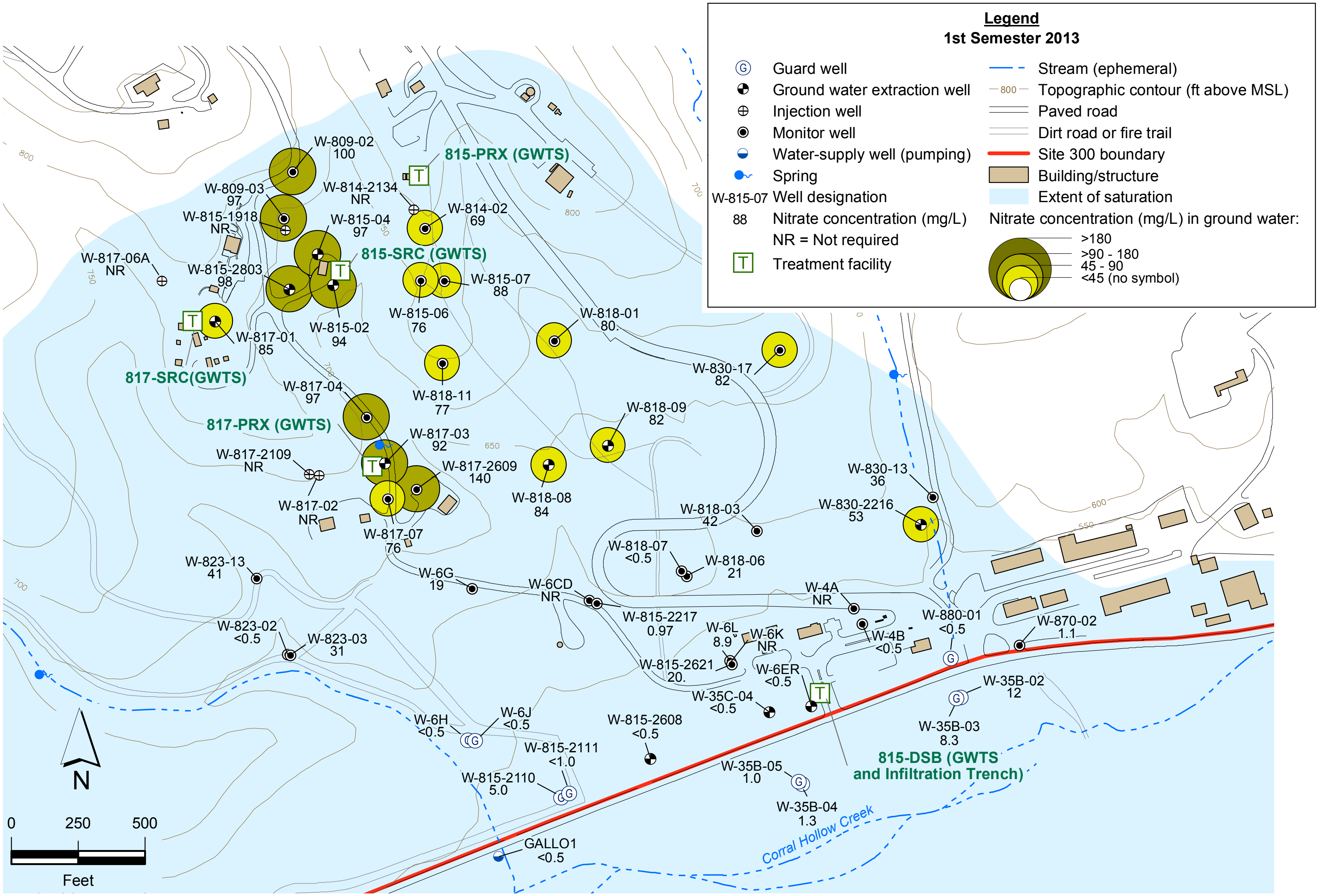

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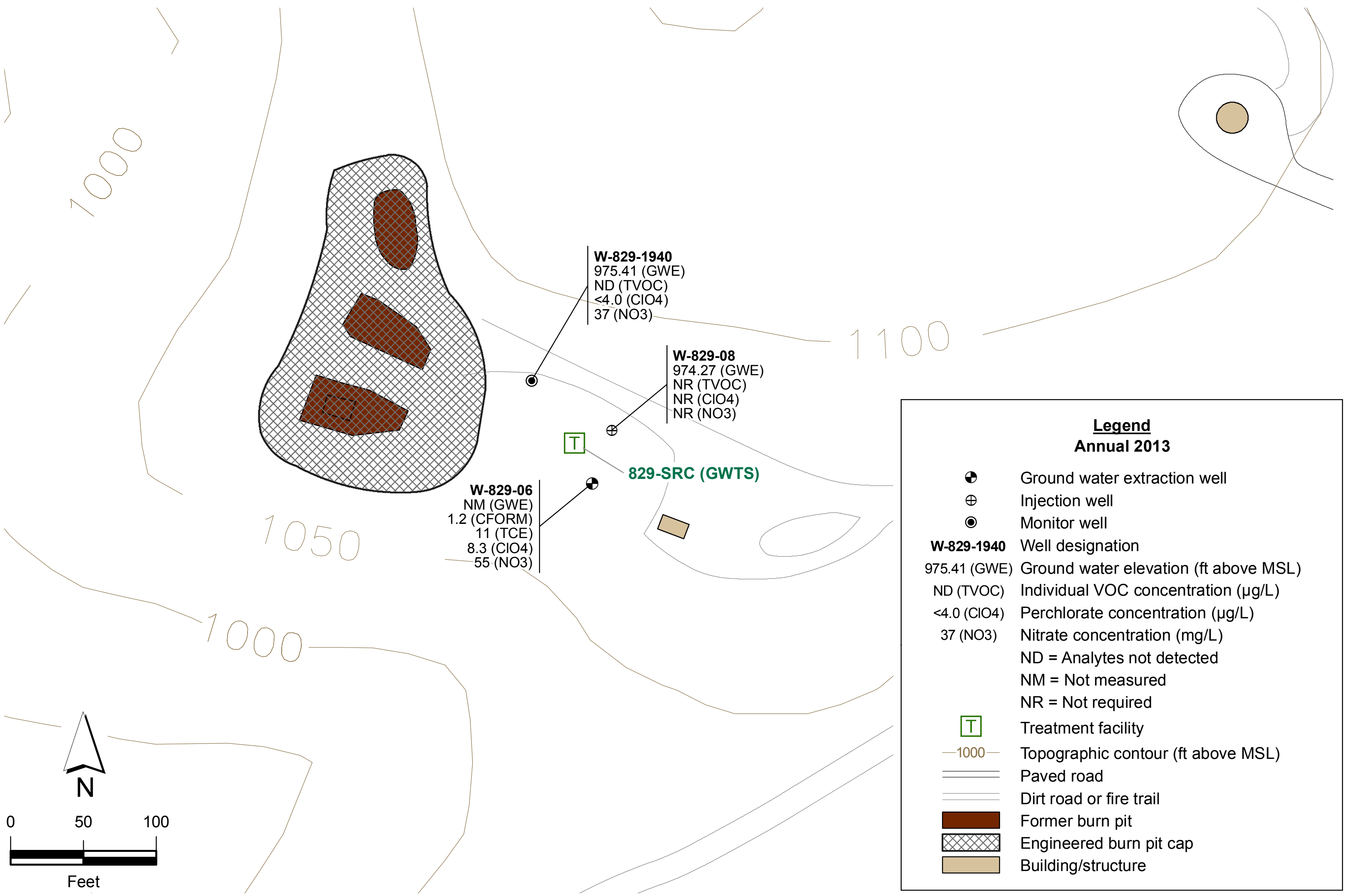

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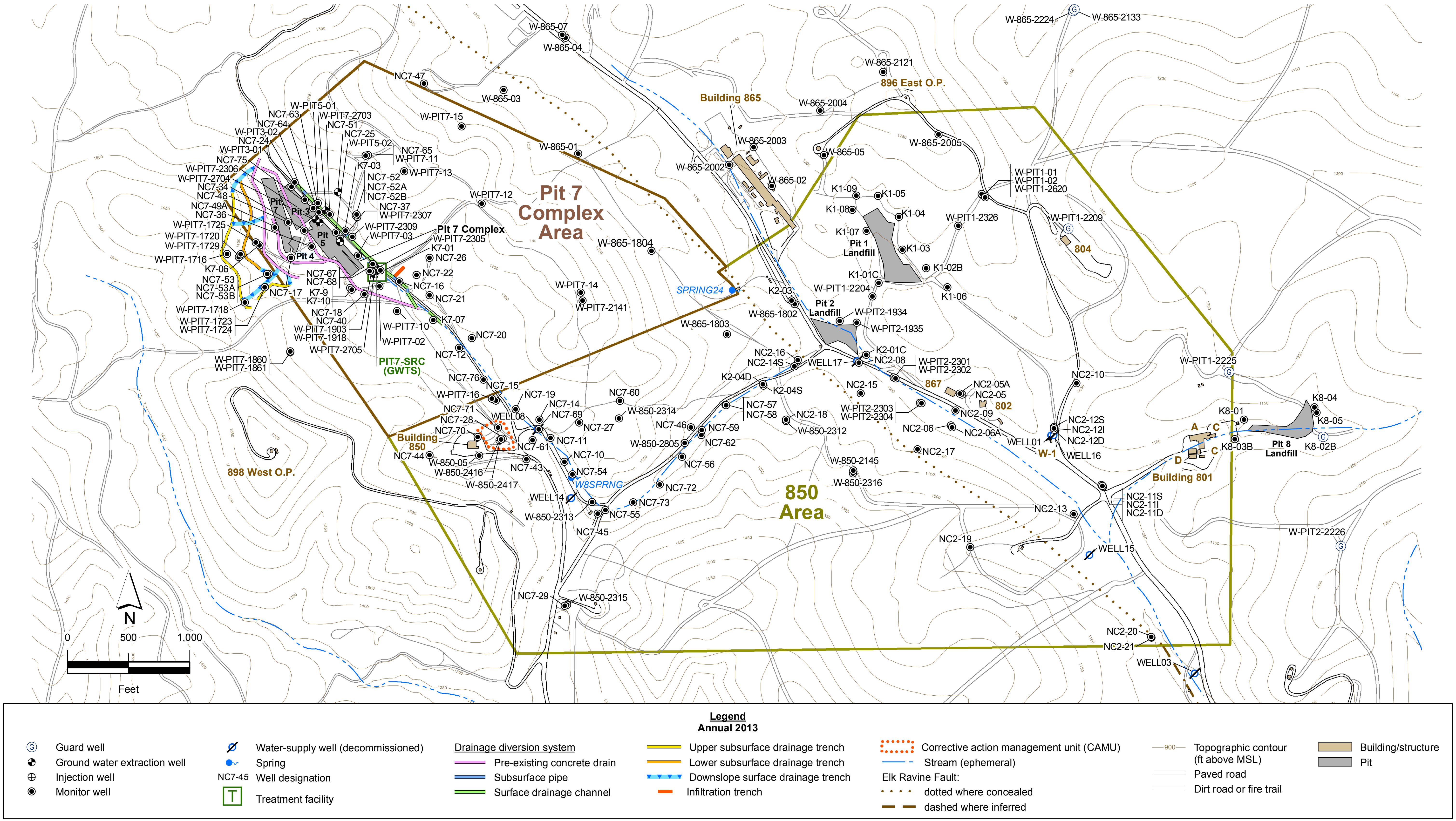

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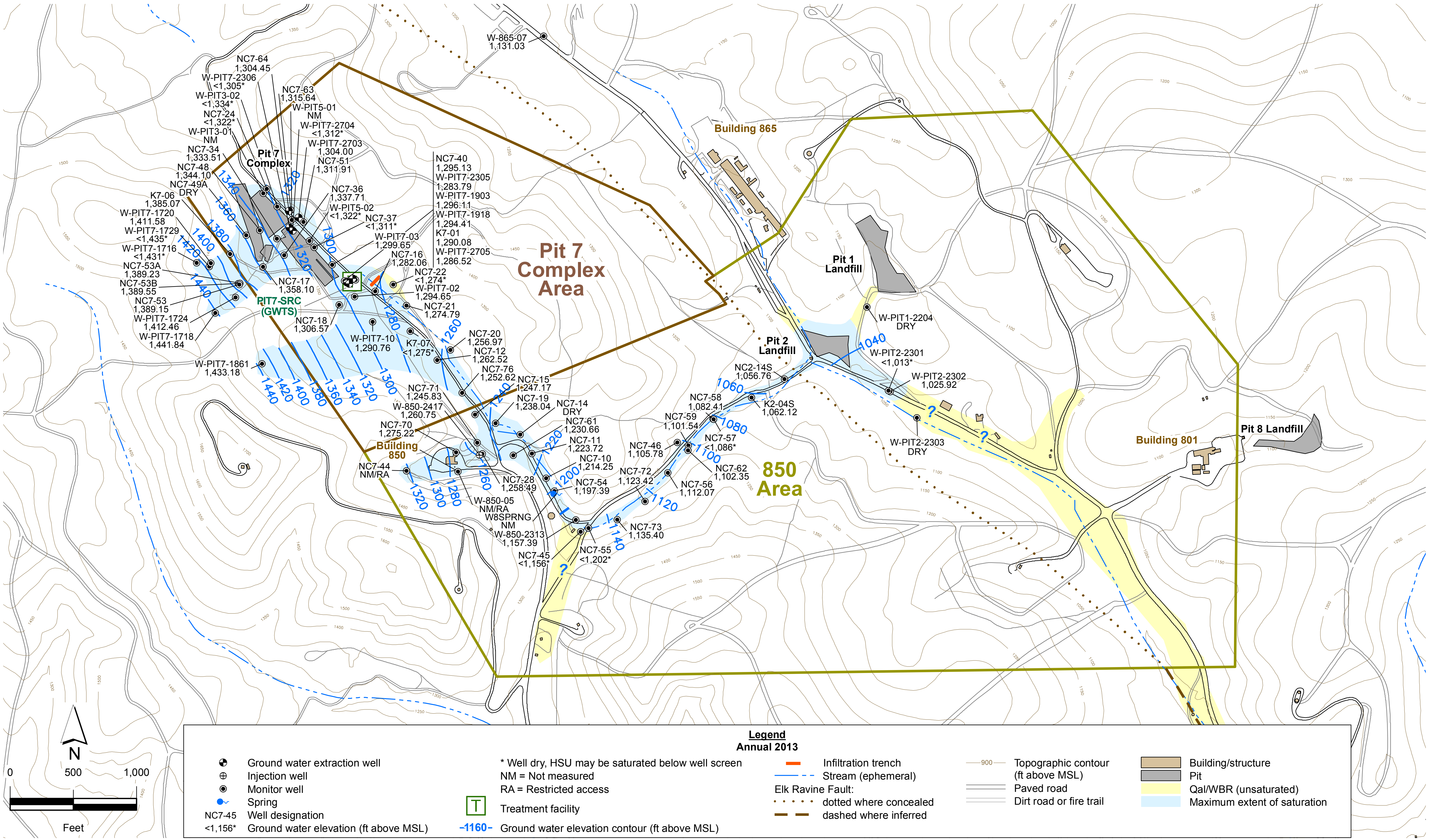

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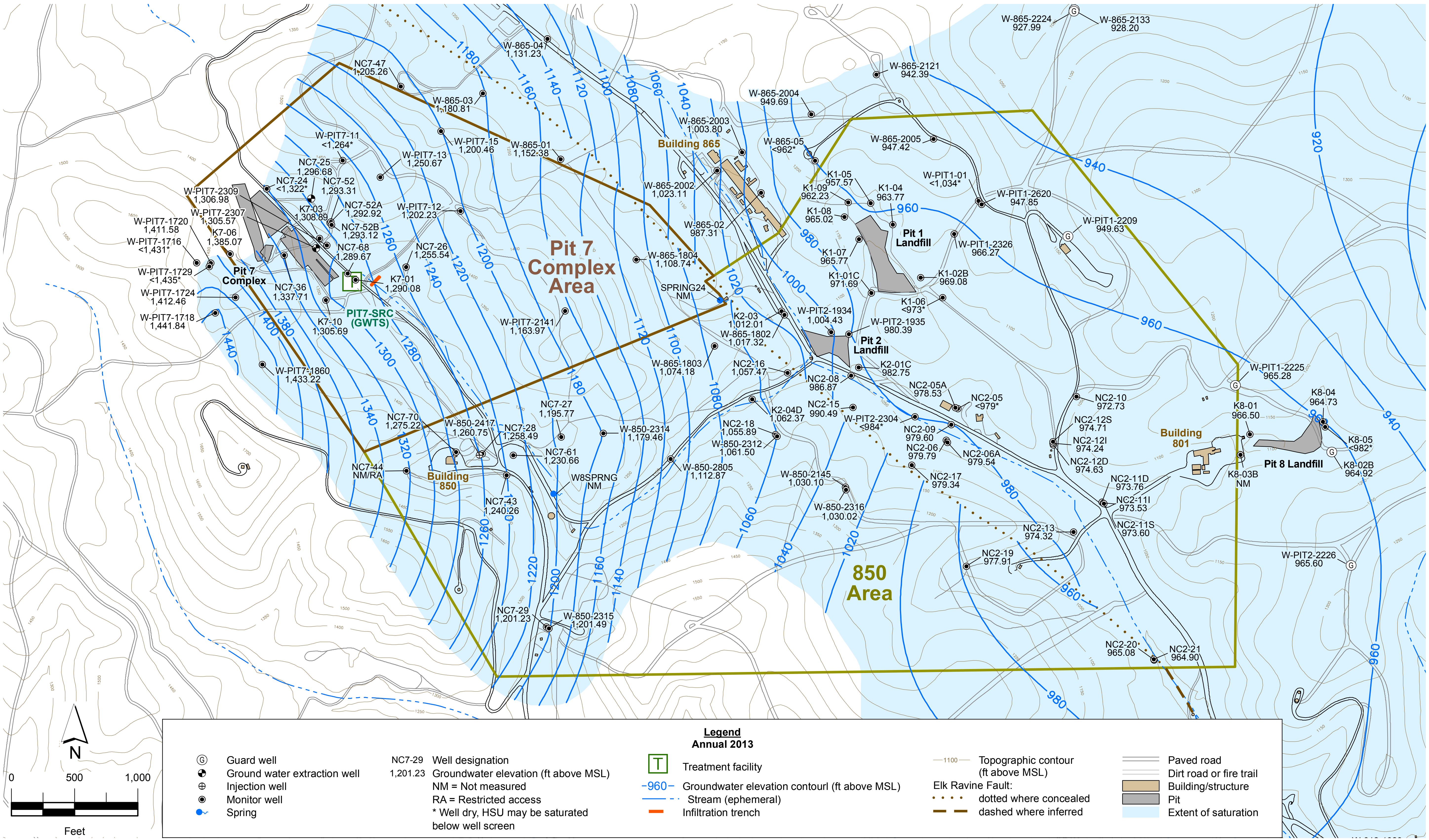

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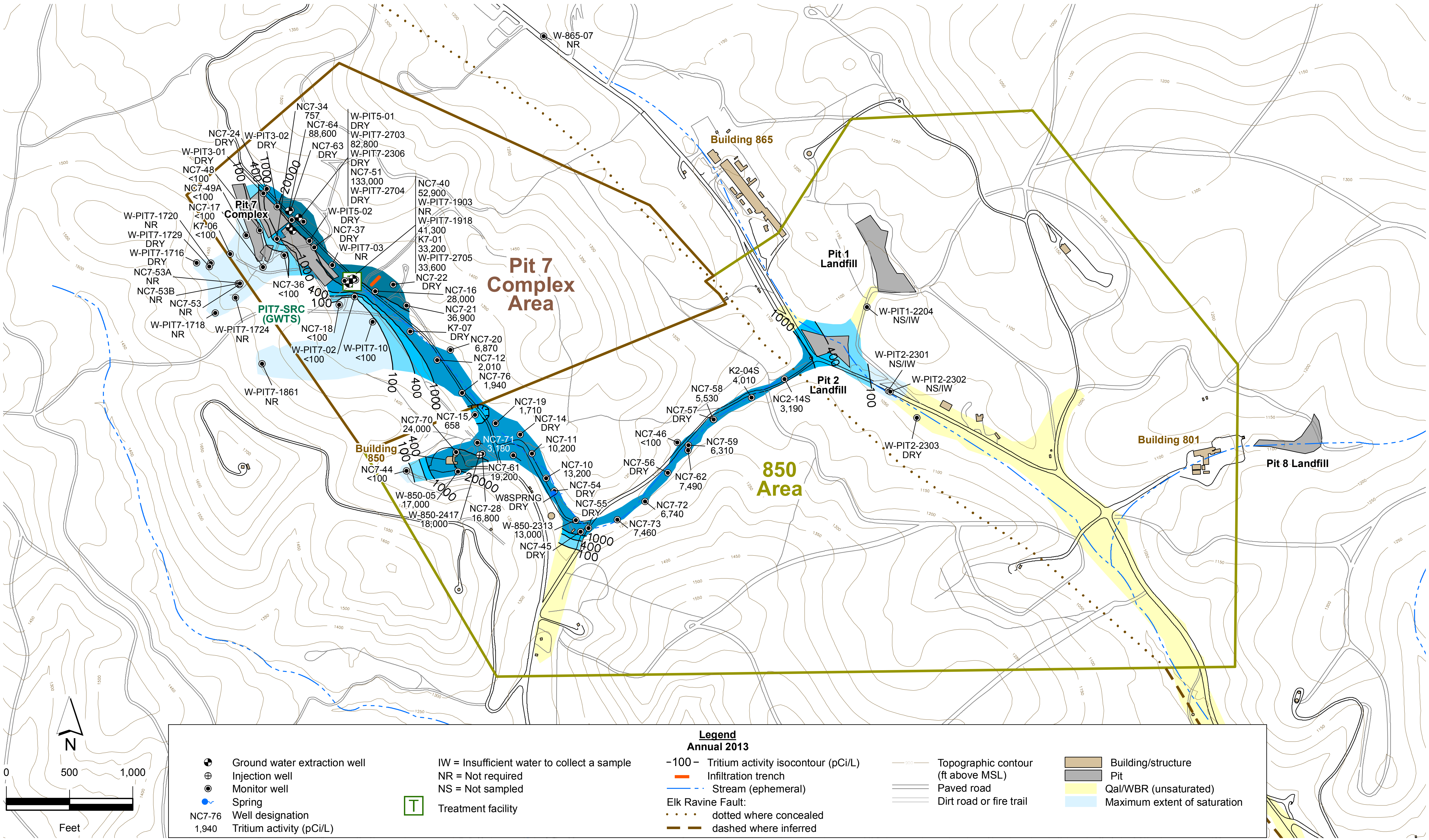

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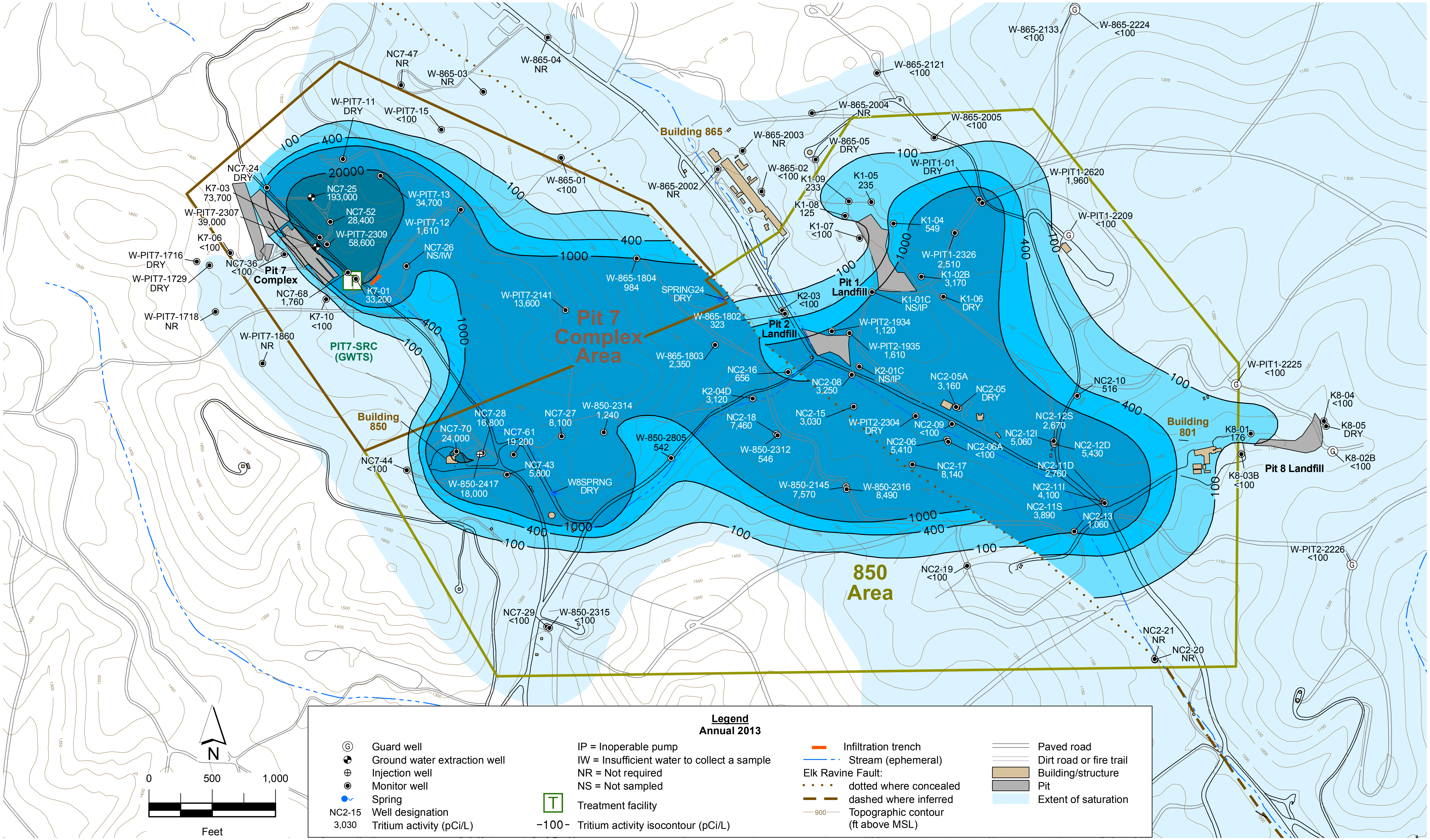

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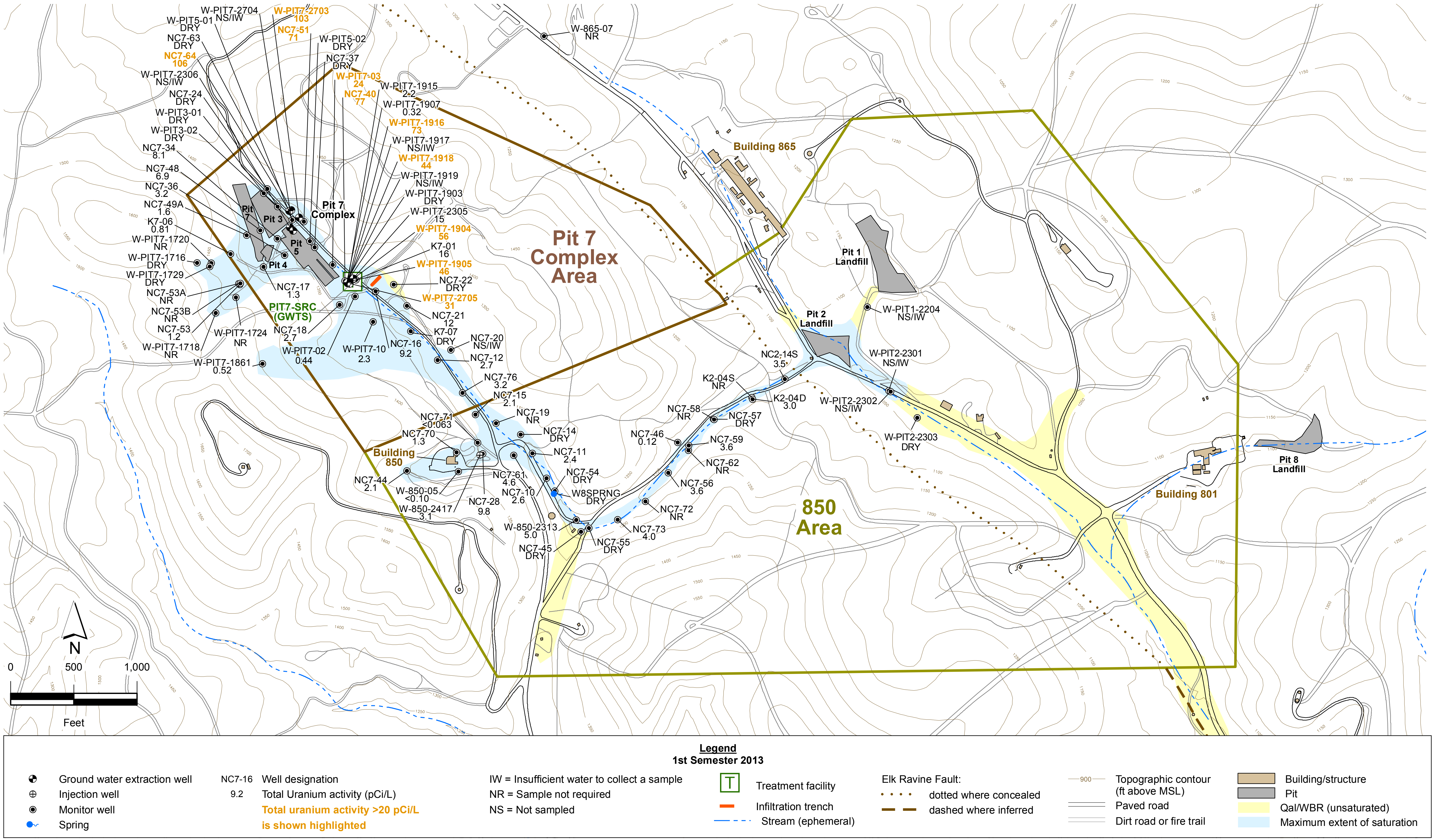

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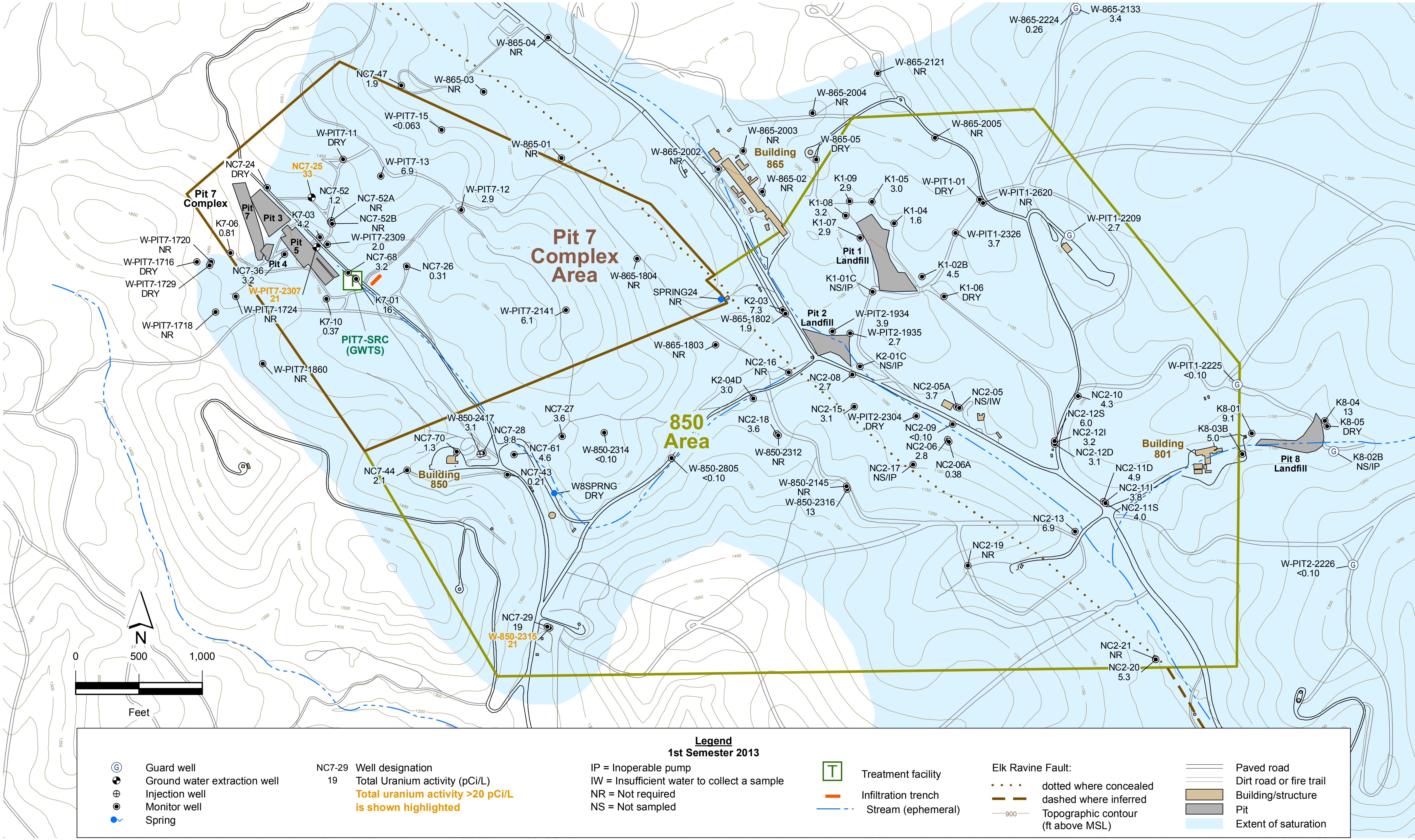

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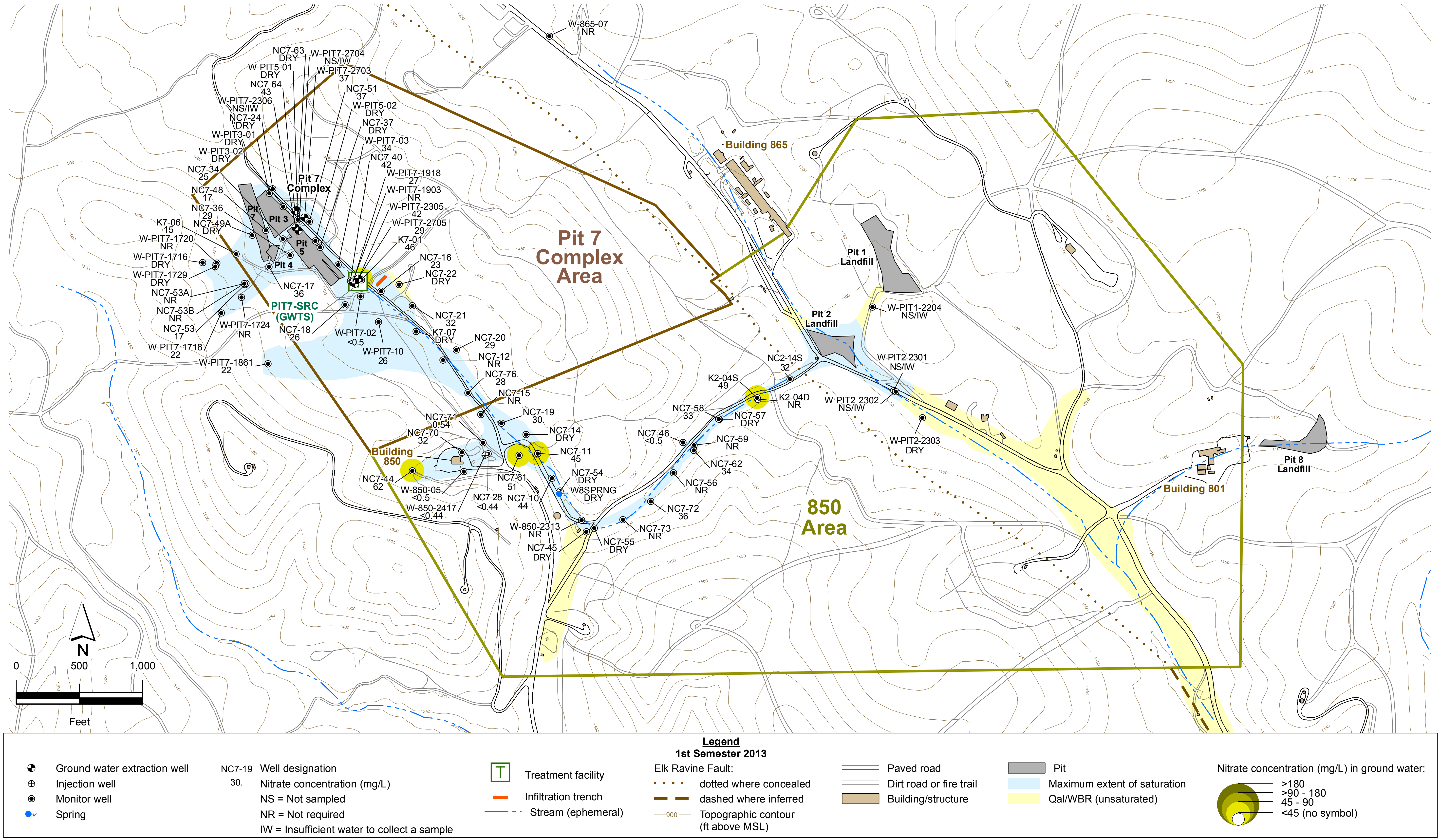

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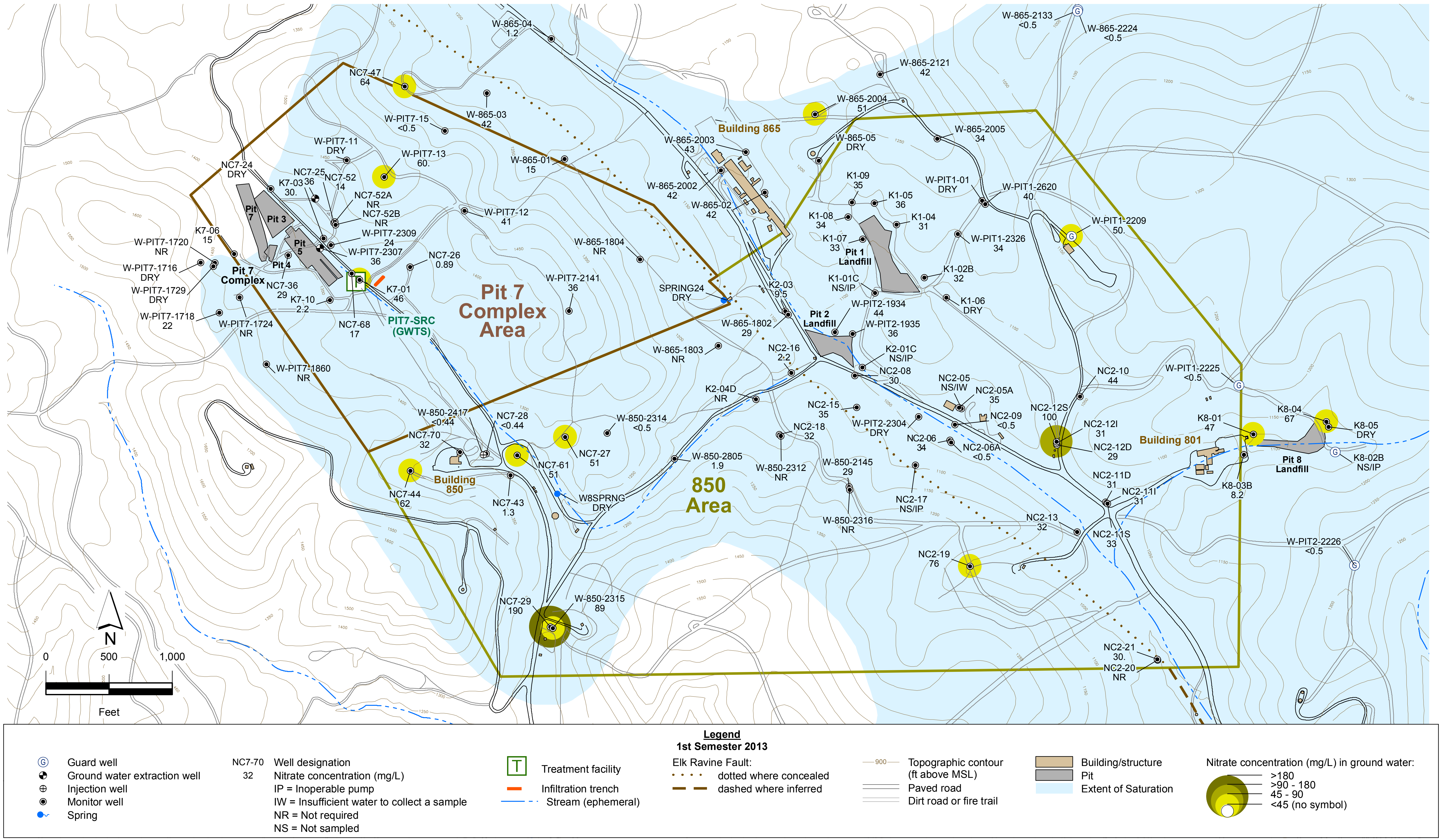

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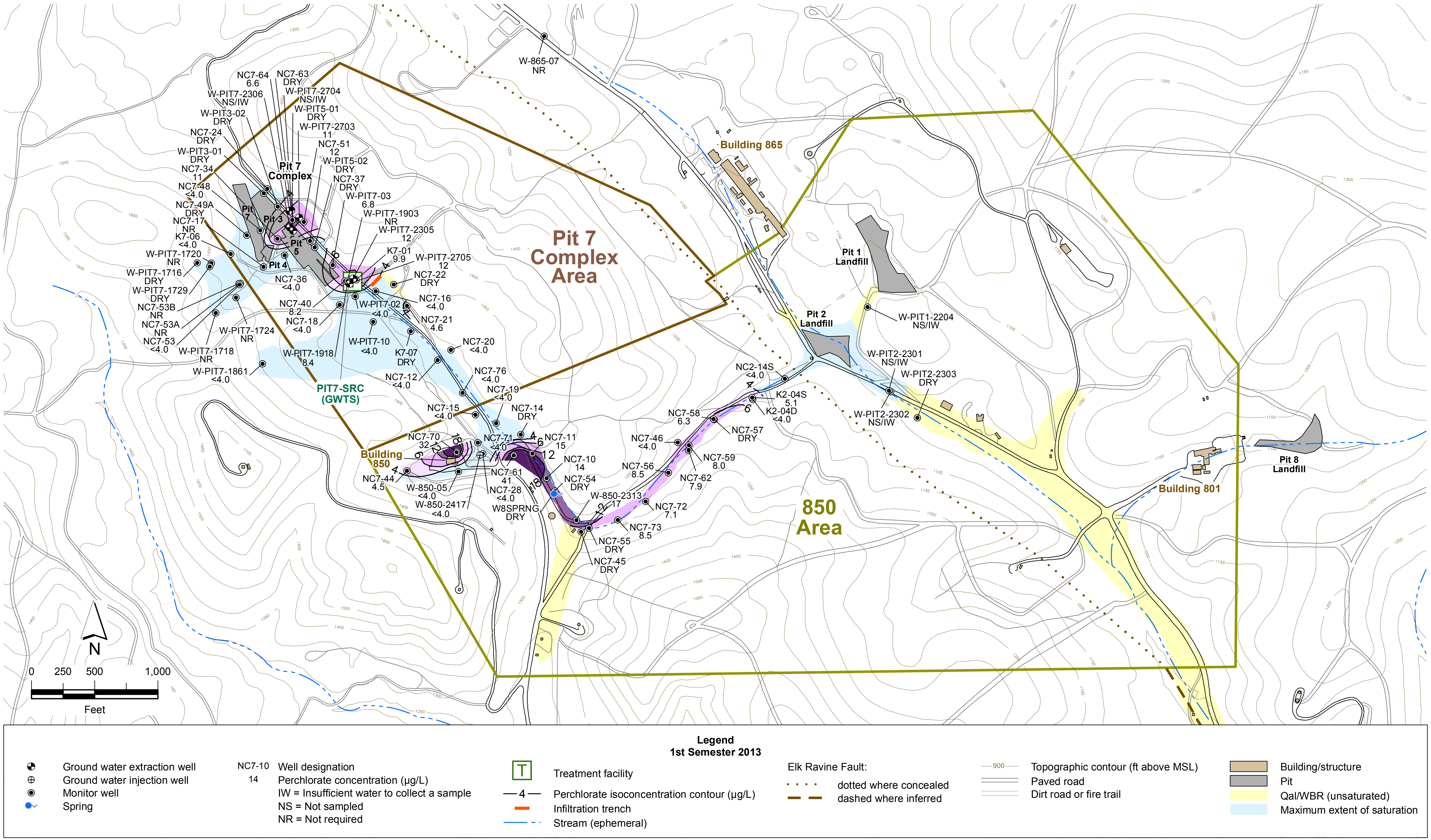

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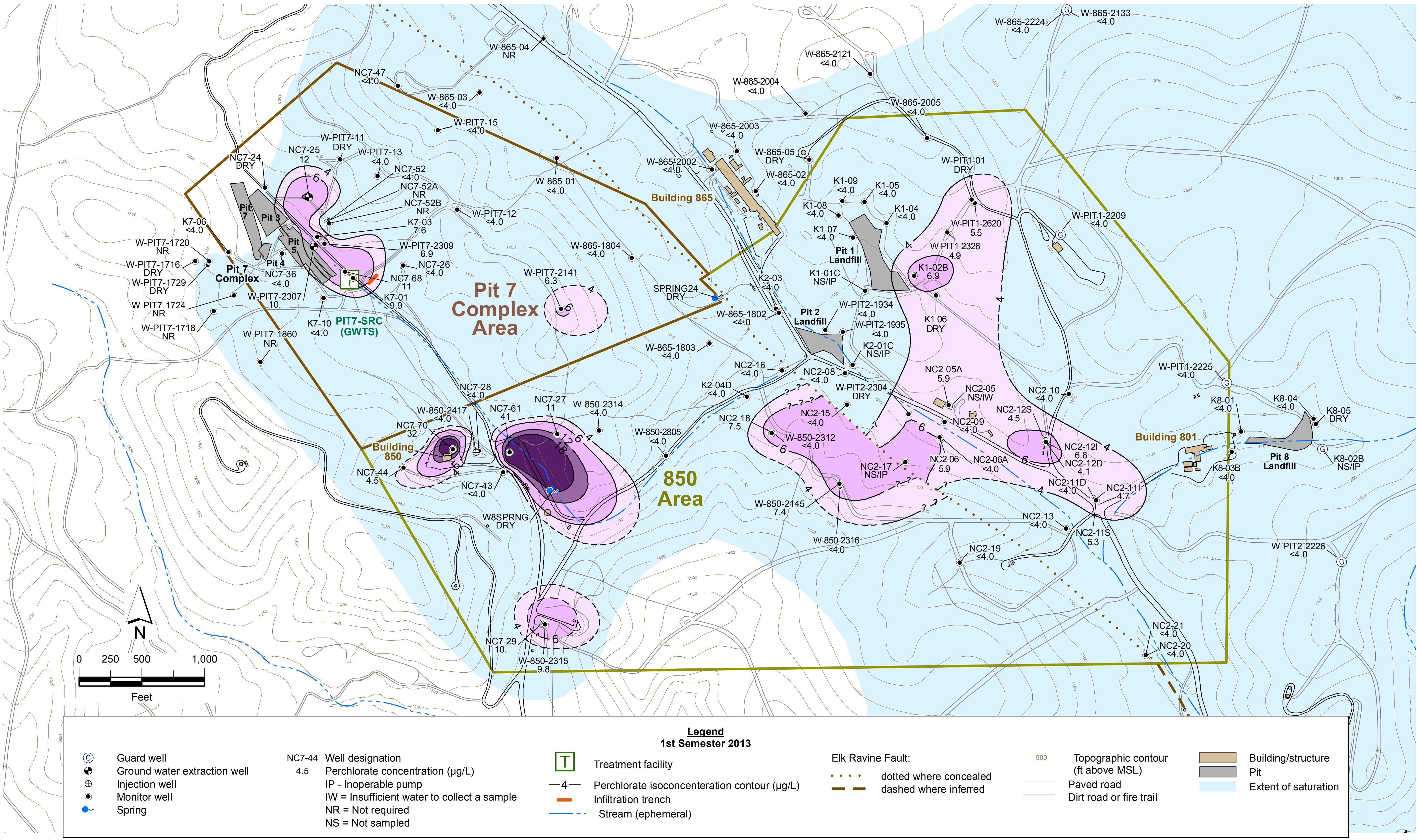

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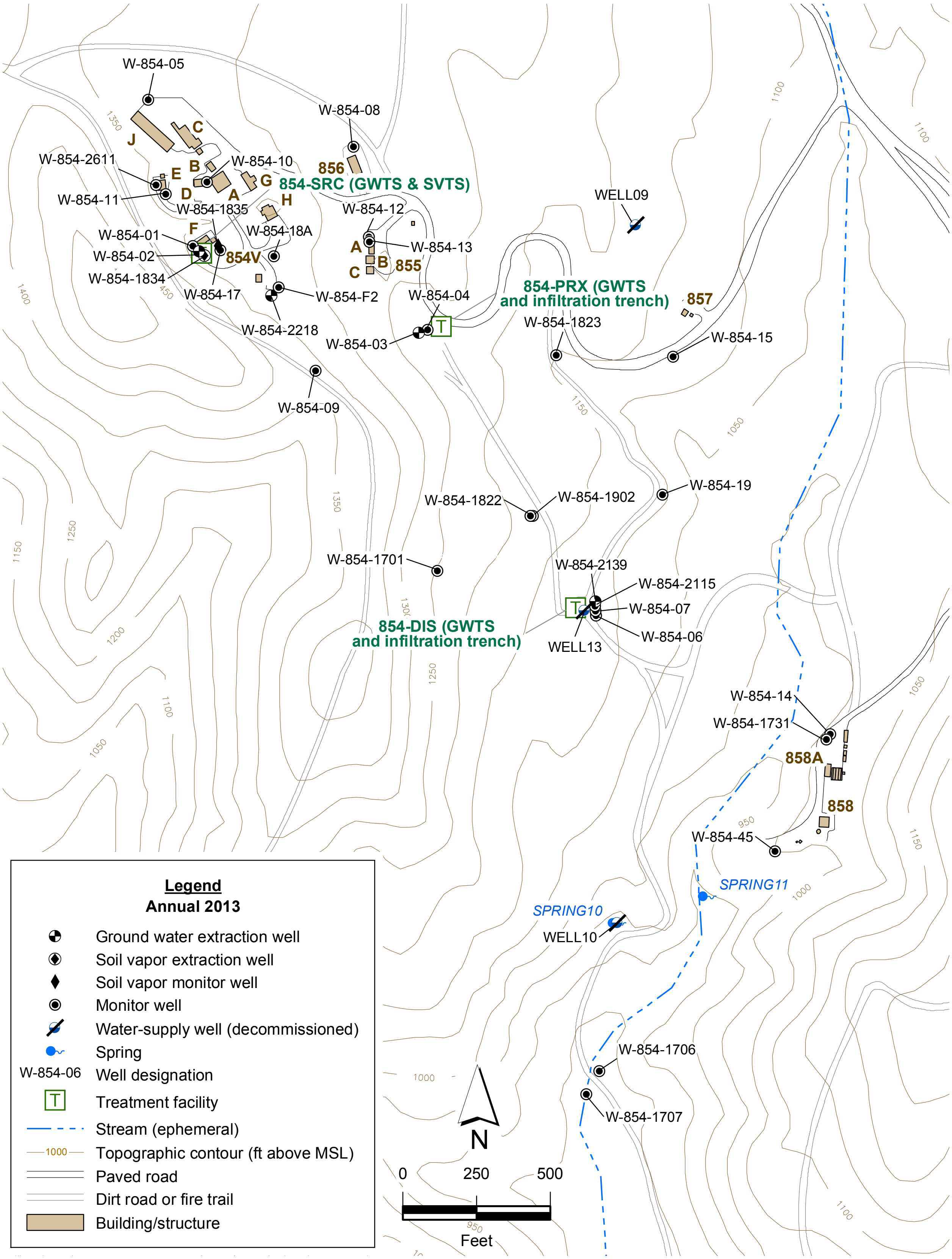

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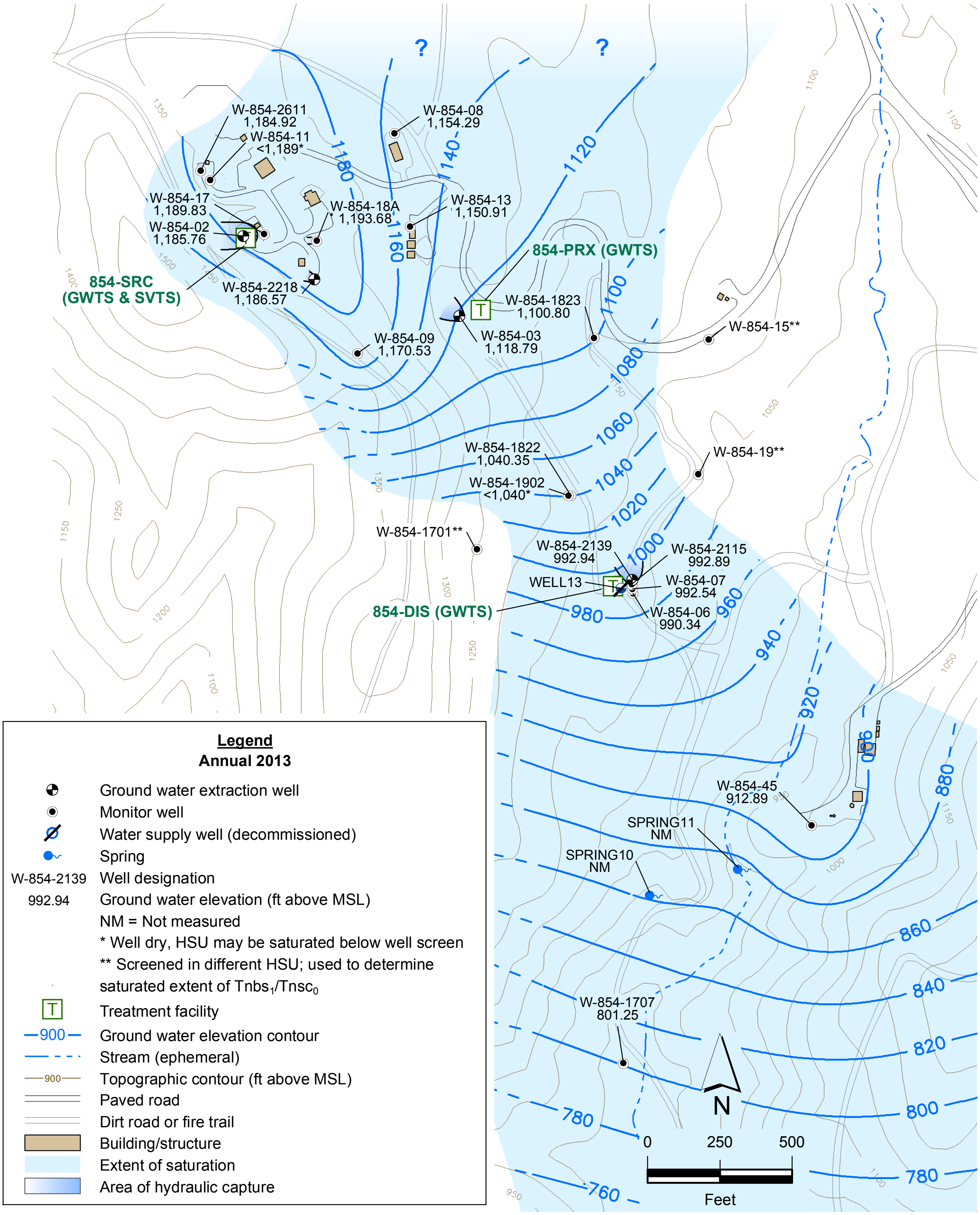

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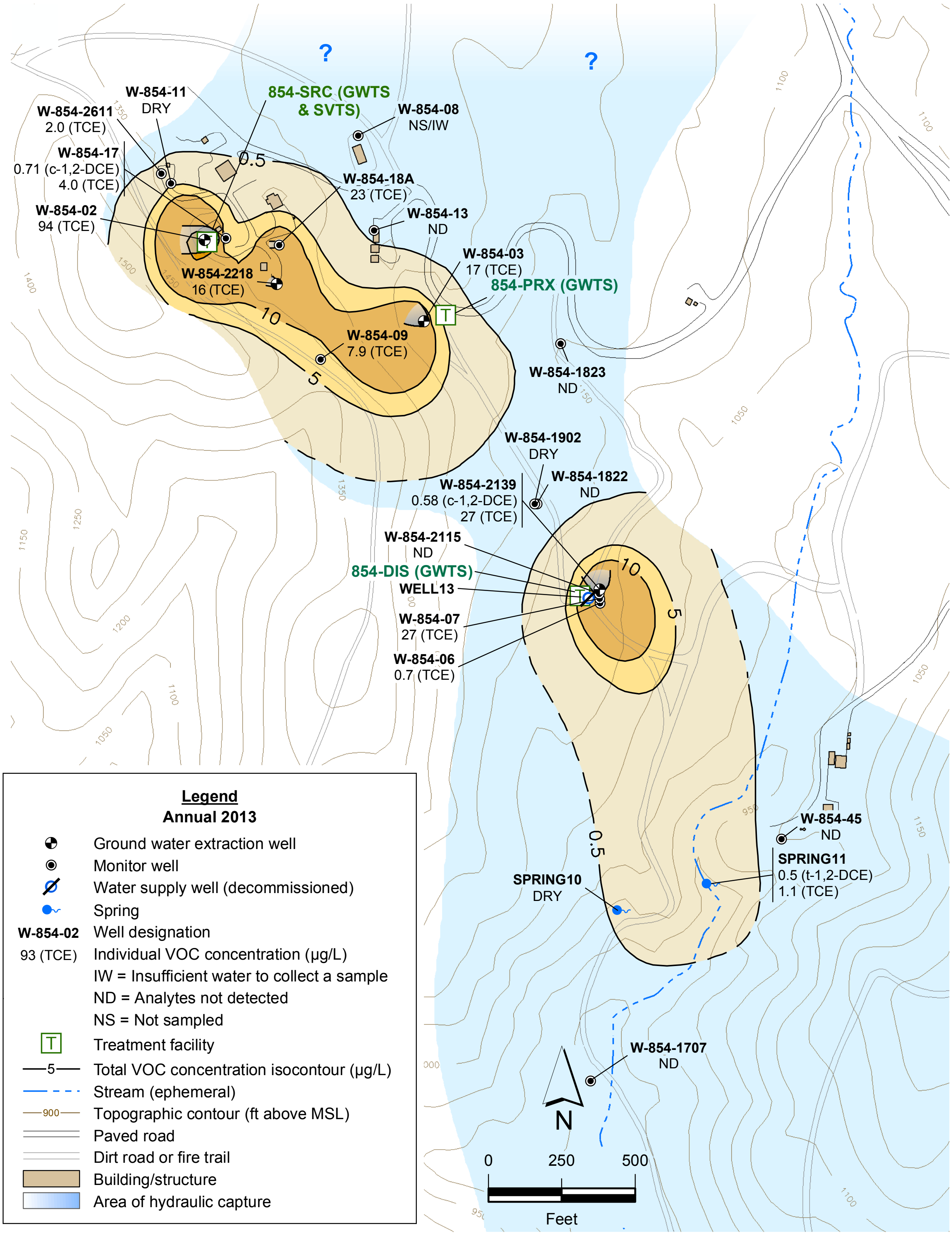


Figure 2.6-3. Building 854 Operable Unit total VOC isoconcentration contour map and individual VOC concentrations for the $Tnbs_1/Tnsc_0$ hydrostratigraphic unit.

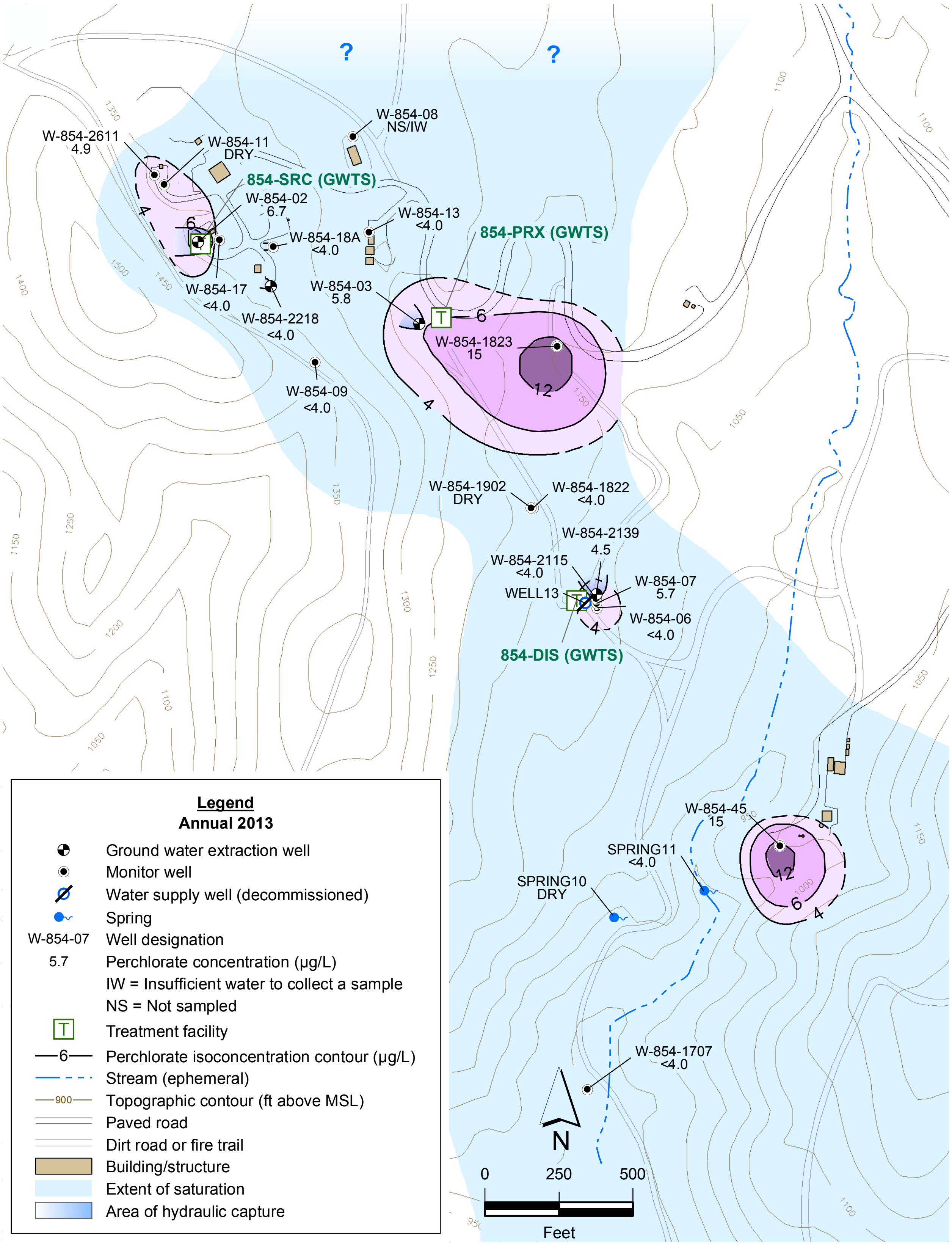


Figure 2.6-4. Building 854 Operable Unit perchlorate isoconcentration contour map for the Tnbs$_1$/Tnsc$_0$ hydrostratigraphic unit.

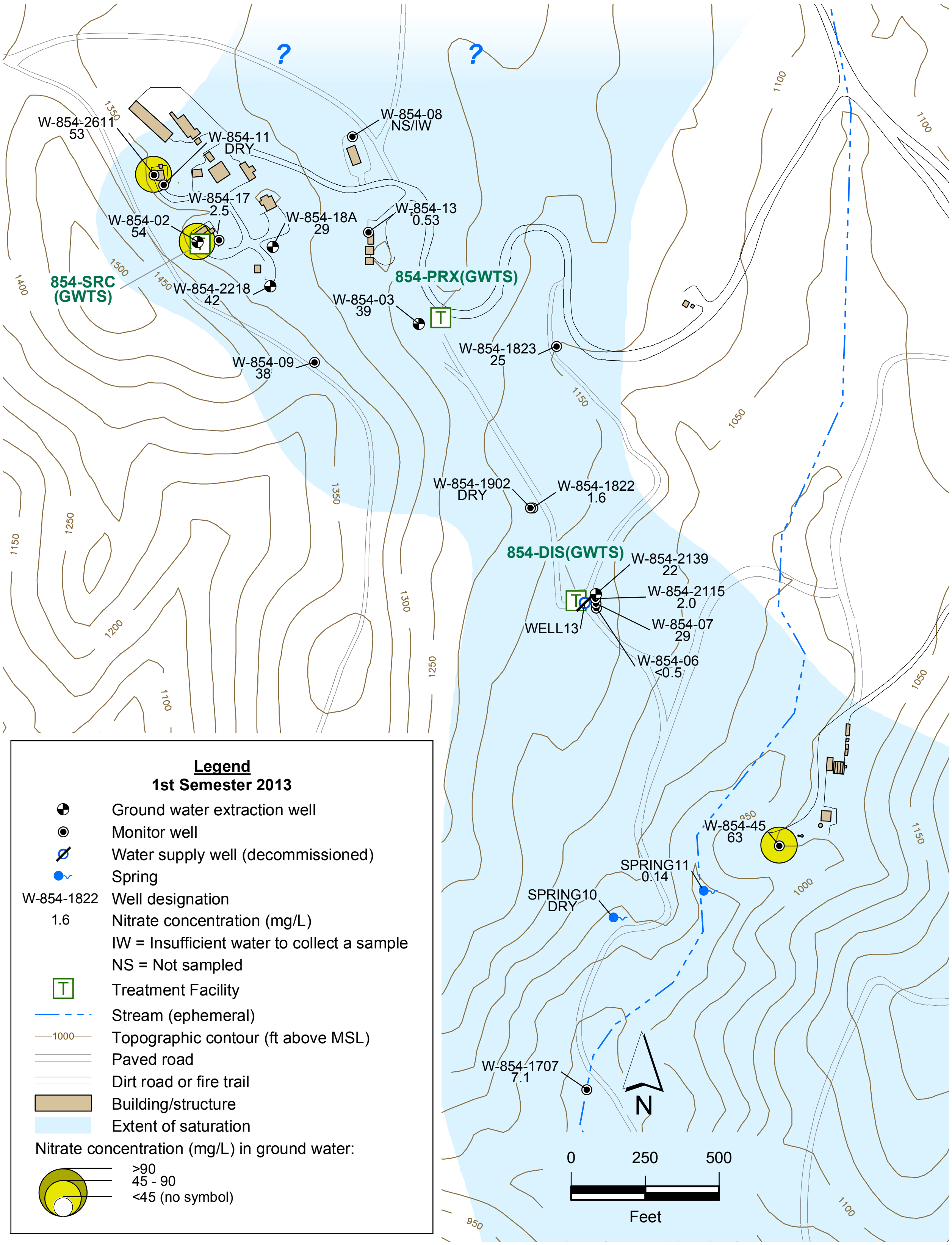


Figure 2.6-5. Building 854 Operable Unit map showing nitrate concentrations for the $Tnbs_1/Tnsc_0$ hydrostratigraphic unit.

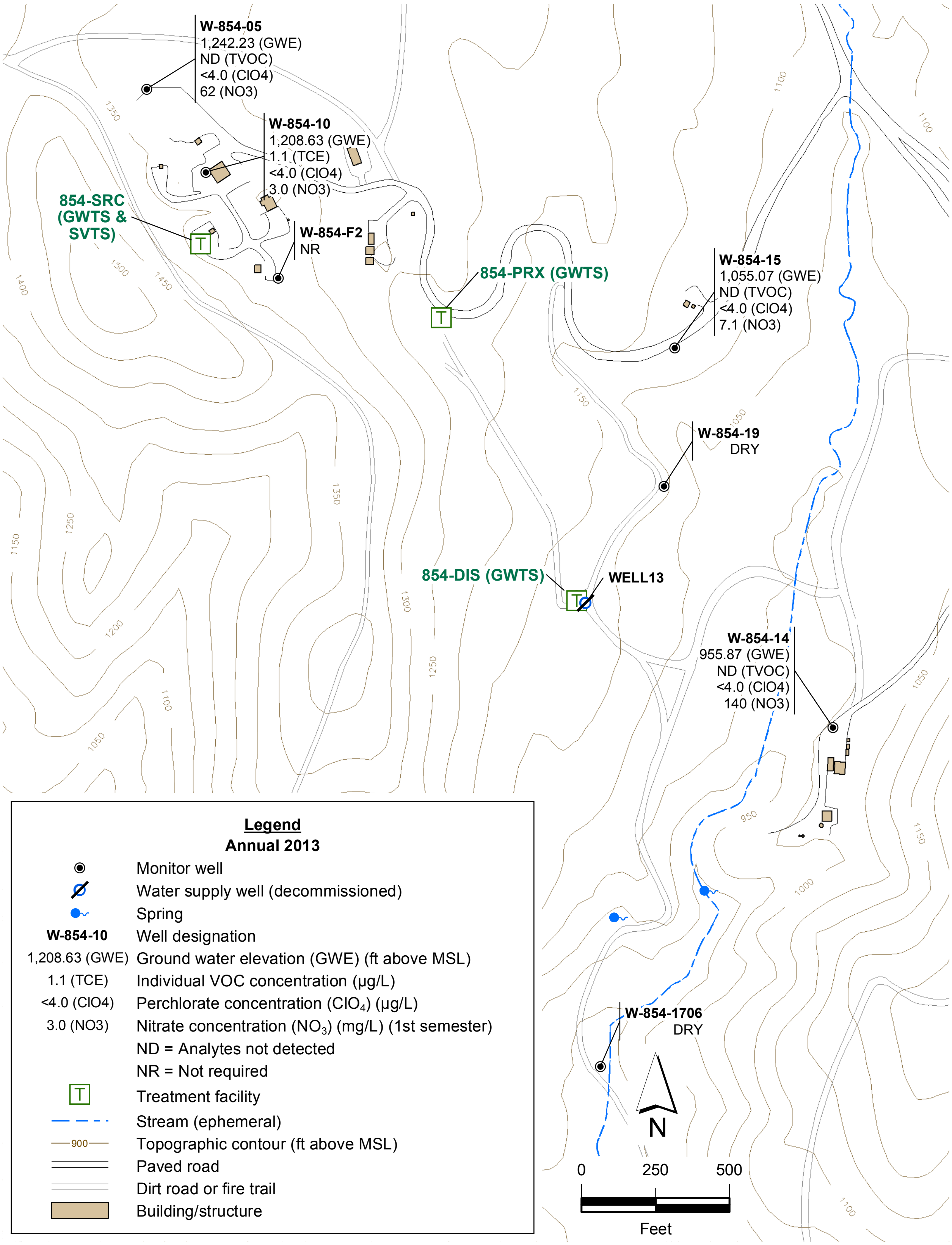


Figure 2.6-6. Building 854 Operable Unit map showing ground water elevations, individual VOC, perchlorate, and nitrate concentrations for the combined Qls and Tnbs$_1$ hydrostratigraphic units.

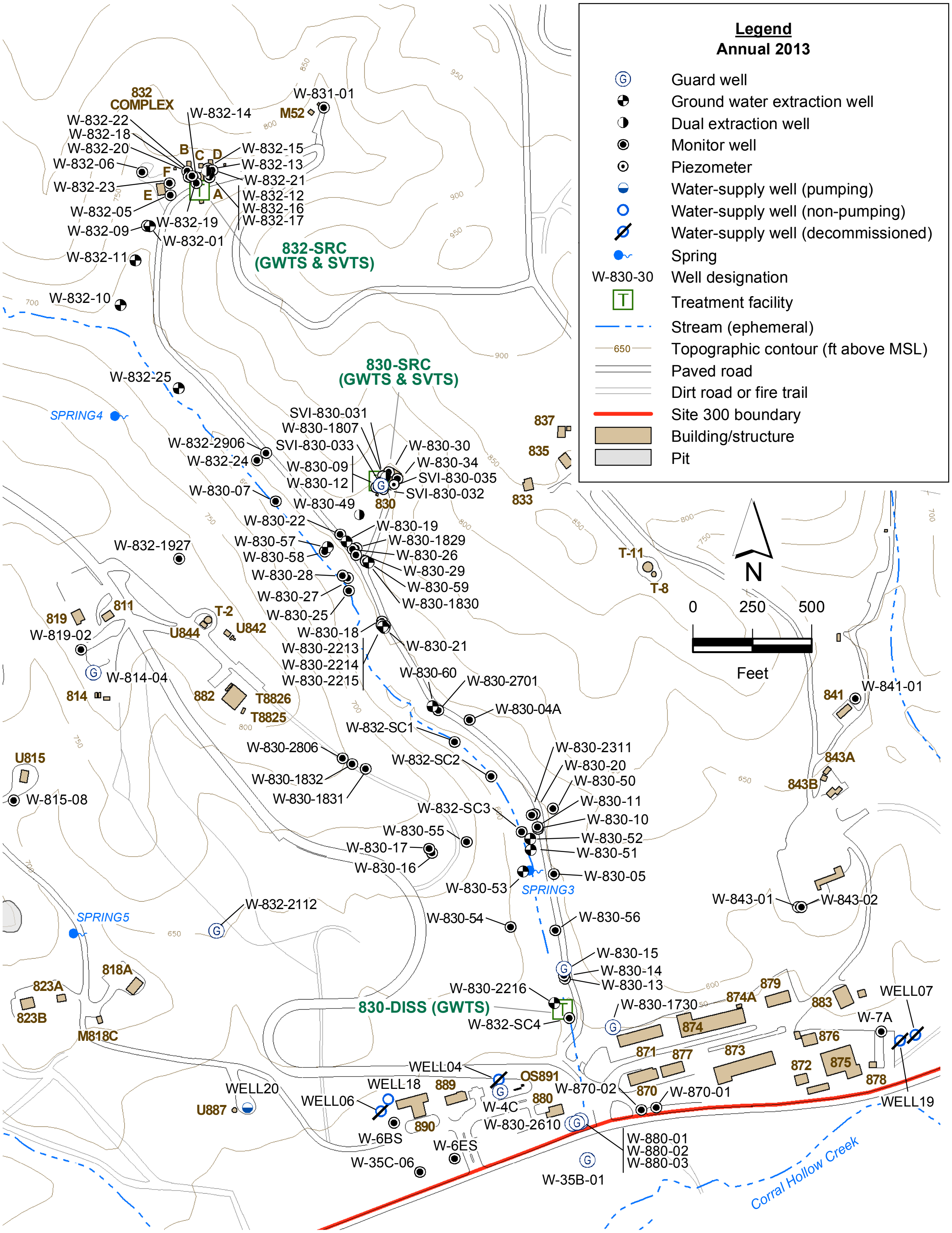


Figure 2.7-1. Building 832 Canyon Operable Unit site map showing monitor, extraction and water-supply wells, and treatment facilities.

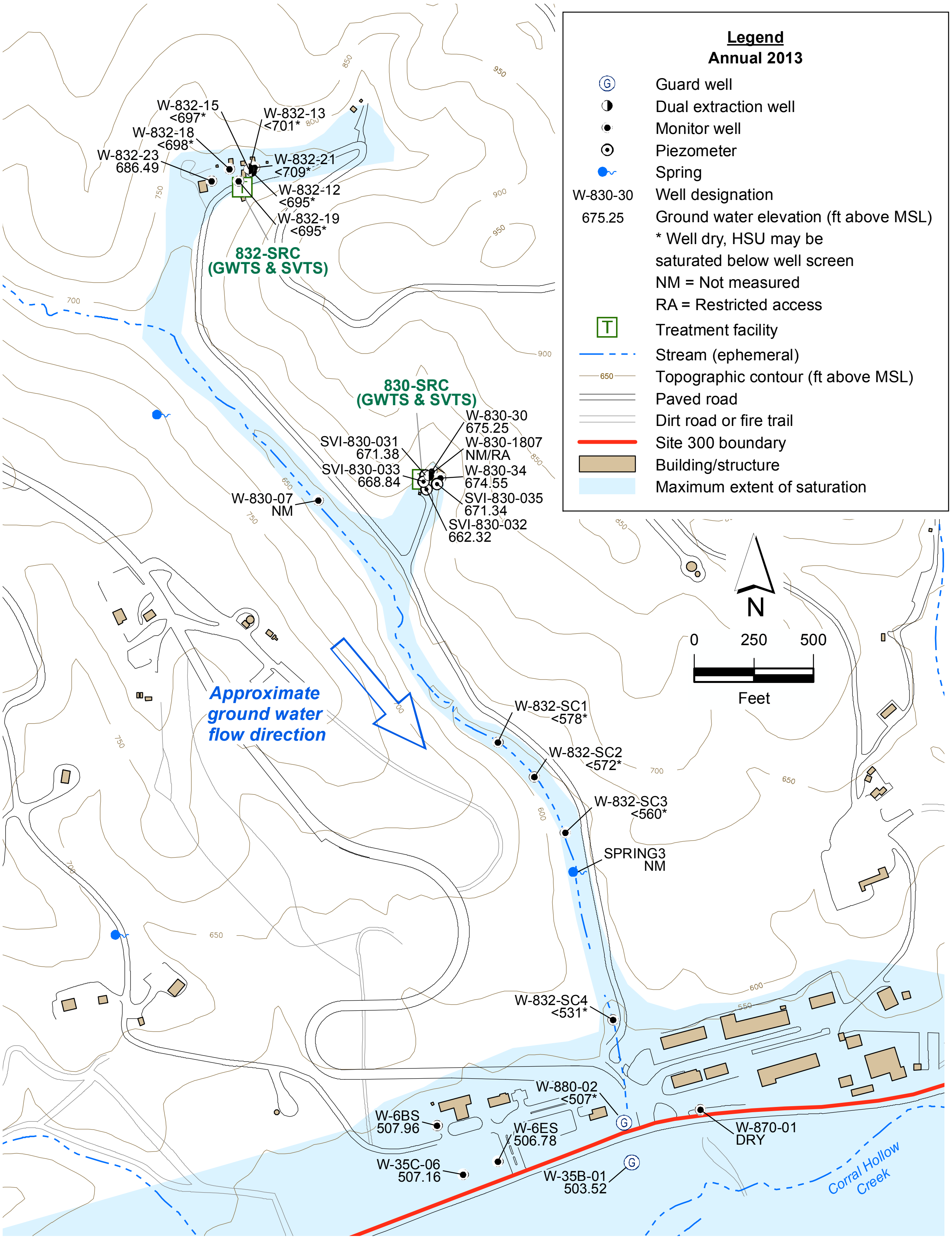


Figure 2.7-2. Building 832 Canyon Operable Unit map showing ground water elevations and ground water flow direction for the Qal/WBR hydrostratigraphic unit.

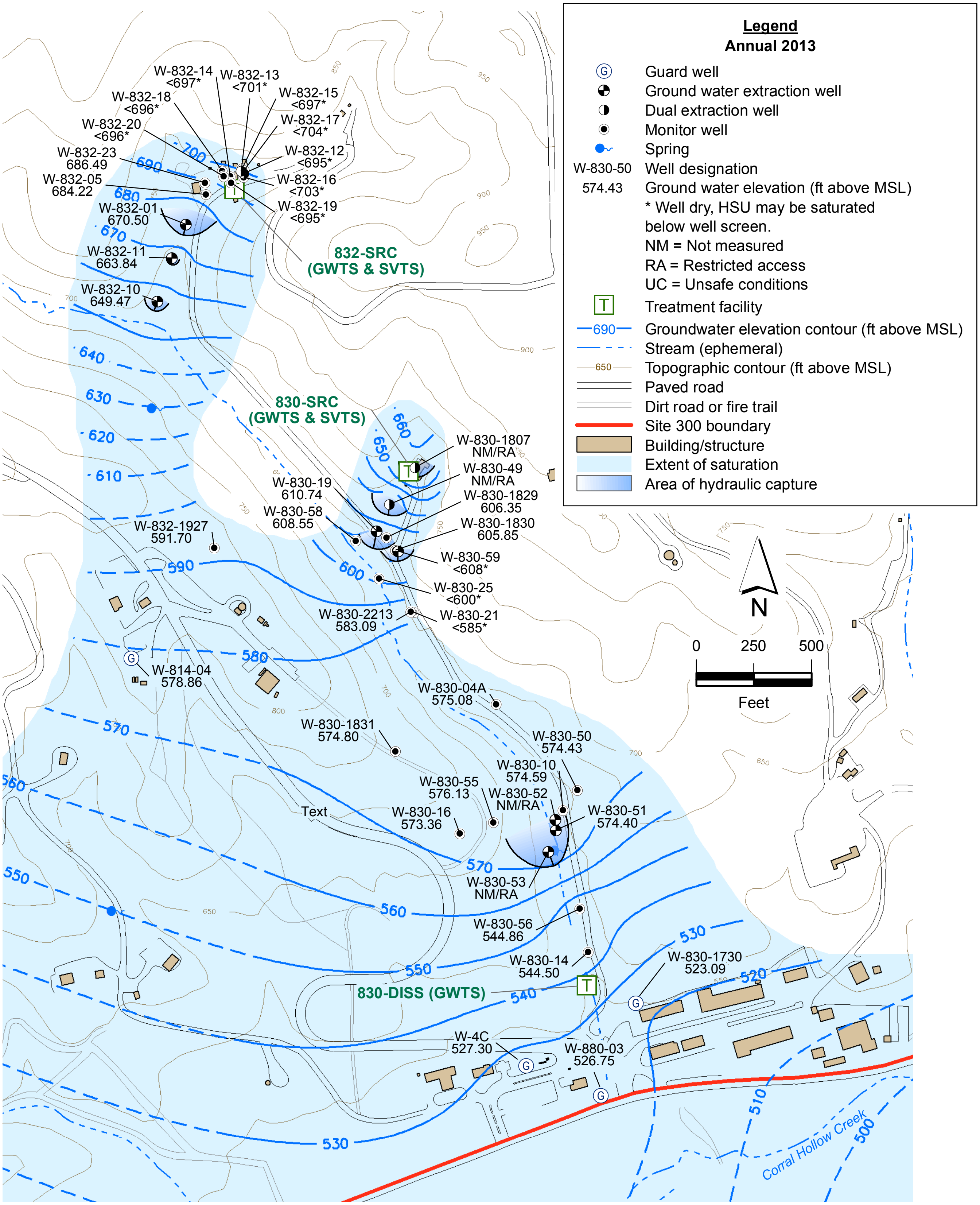


Figure 2.7-3. Building 832 Canyon Operable Unit ground water potentiometric surface map for the Tnsc$_{1b}$ hydrostratigraphic unit.

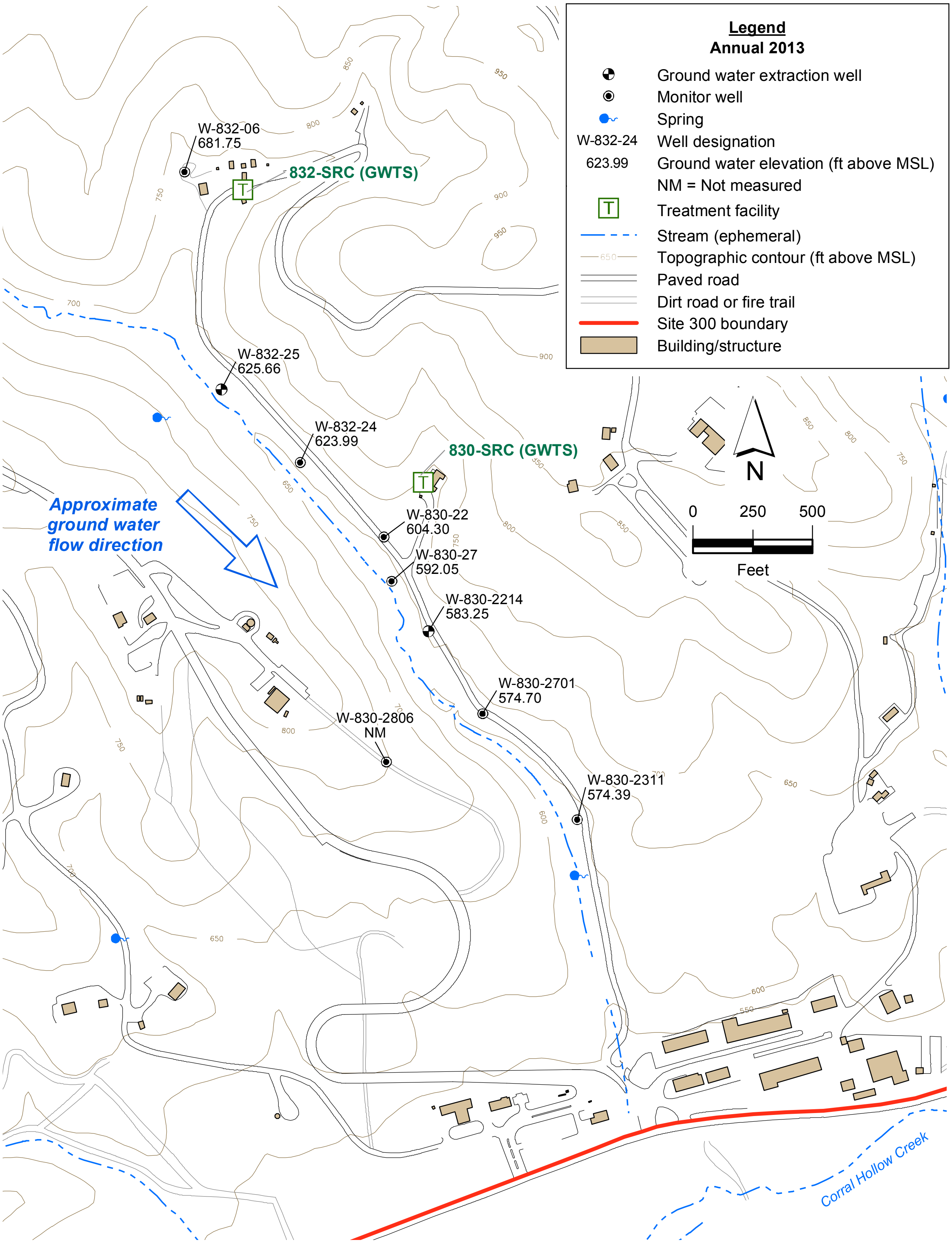


Figure 2.7-4. Building 832 Canyon Operable Unit map showing ground water elevations and ground water flow direction for the $Tnsc_{1a}$ hydrostratigraphic unit.

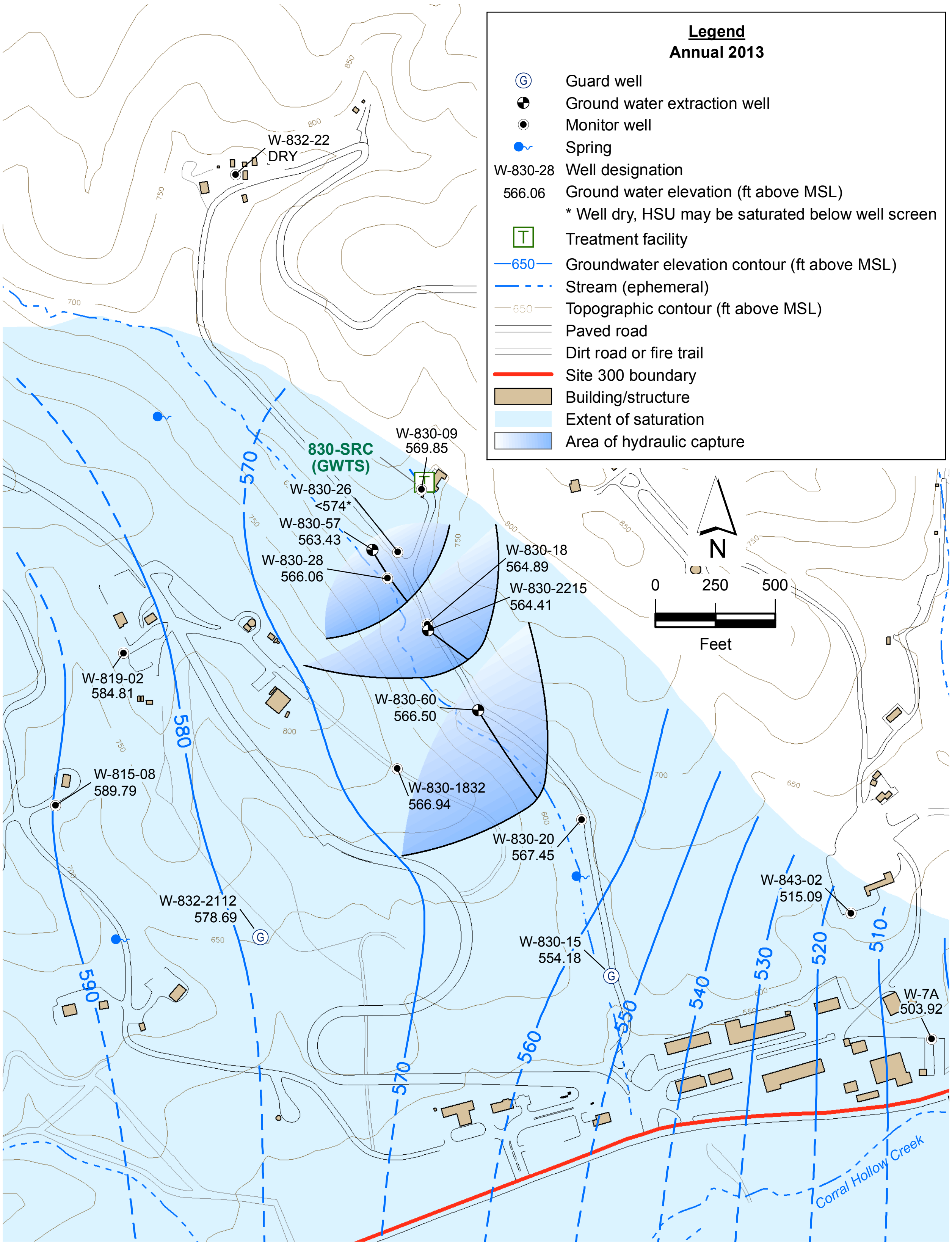


Figure 2.7-5. Building 832 Canyon Operable Unit ground water potentiometric surface map for the Upper Tnbs$_1$ hydrostratigraphic unit.

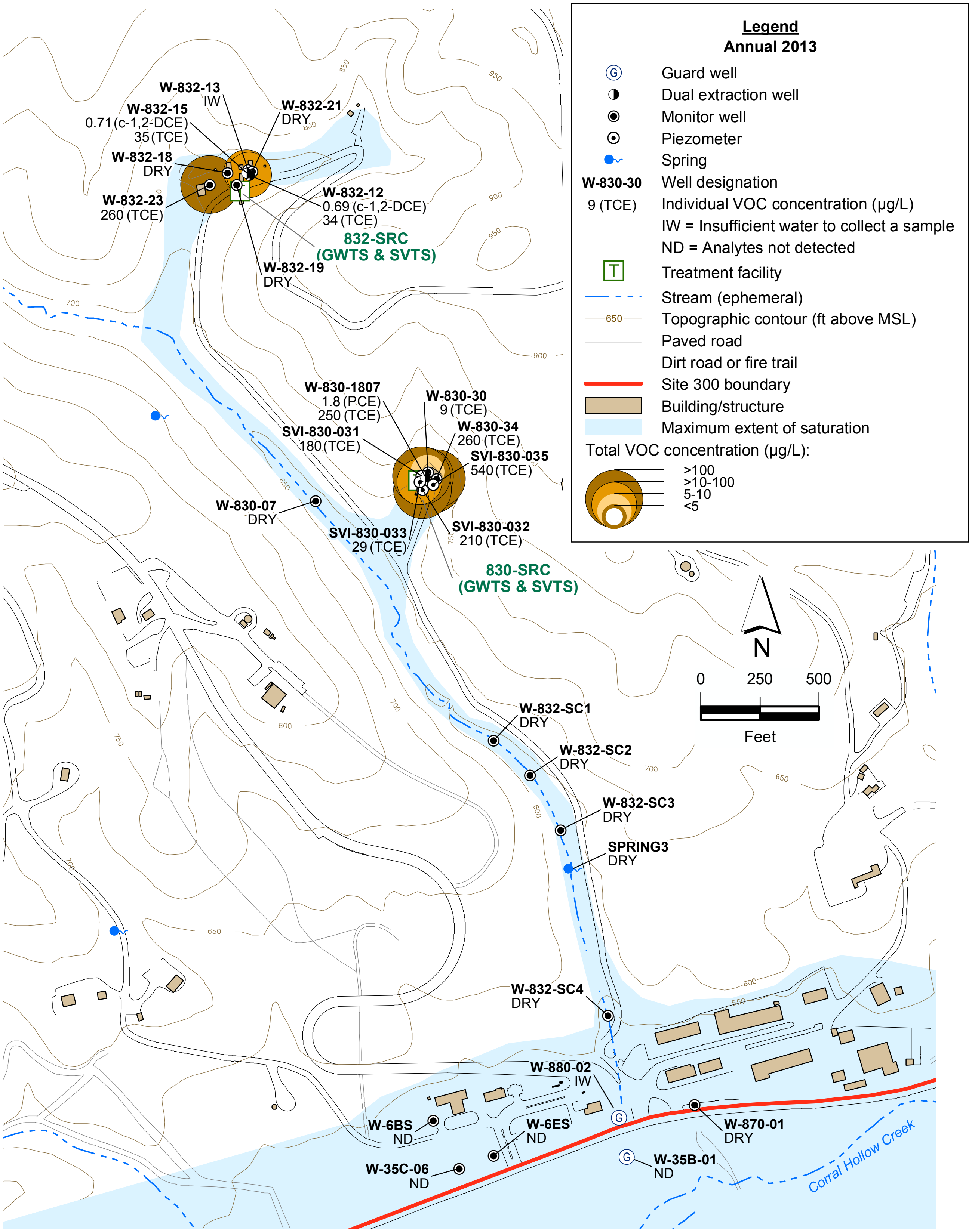


Figure 2.7-6. Building 832 Canyon Operable Unit map showing individual VOC concentrations for the Qal/WBR hydrostratigraphic unit.

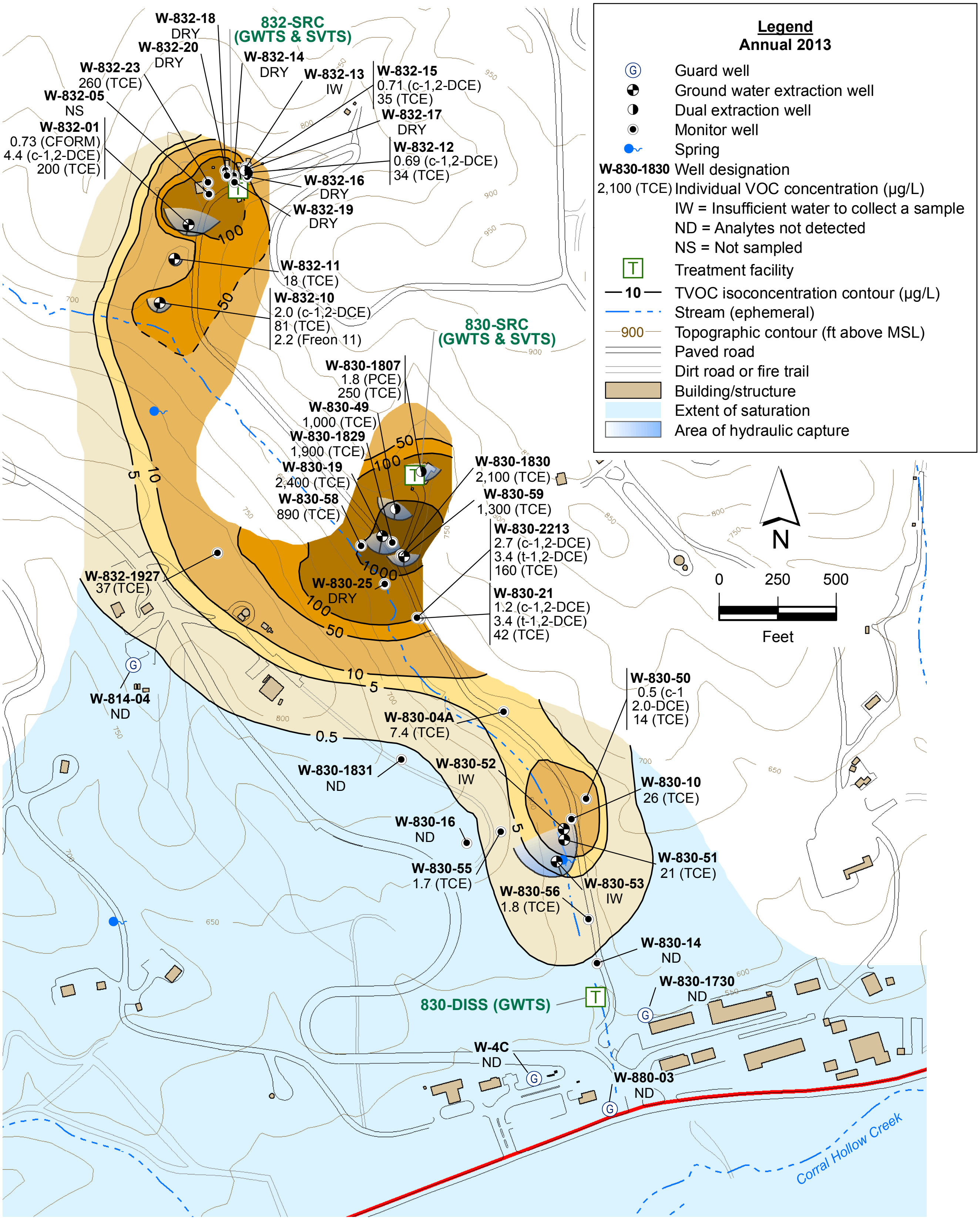


Figure 2.7-7. Building 832 Canyon Operable Unit total VOC isoconcentration contour map and individual VOC concentrations for the Tnsc$_{1b}$ hydrostratigraphic unit.

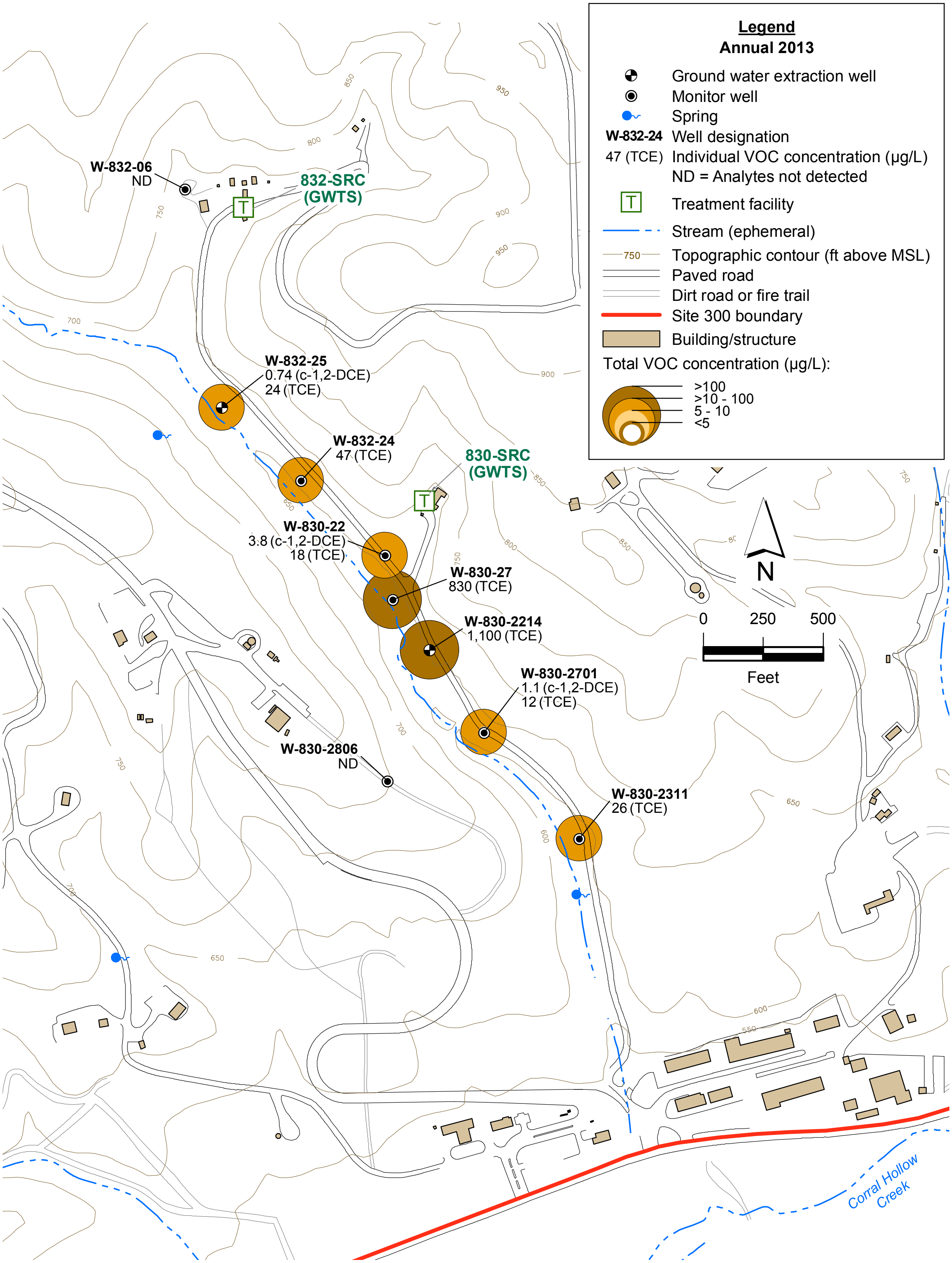


Figure 2.7-8. Building 832 Canyon Operable Unit map showing individual VOC concentrations for the $Tnsc_{1a}$ hydrostratigraphic unit.

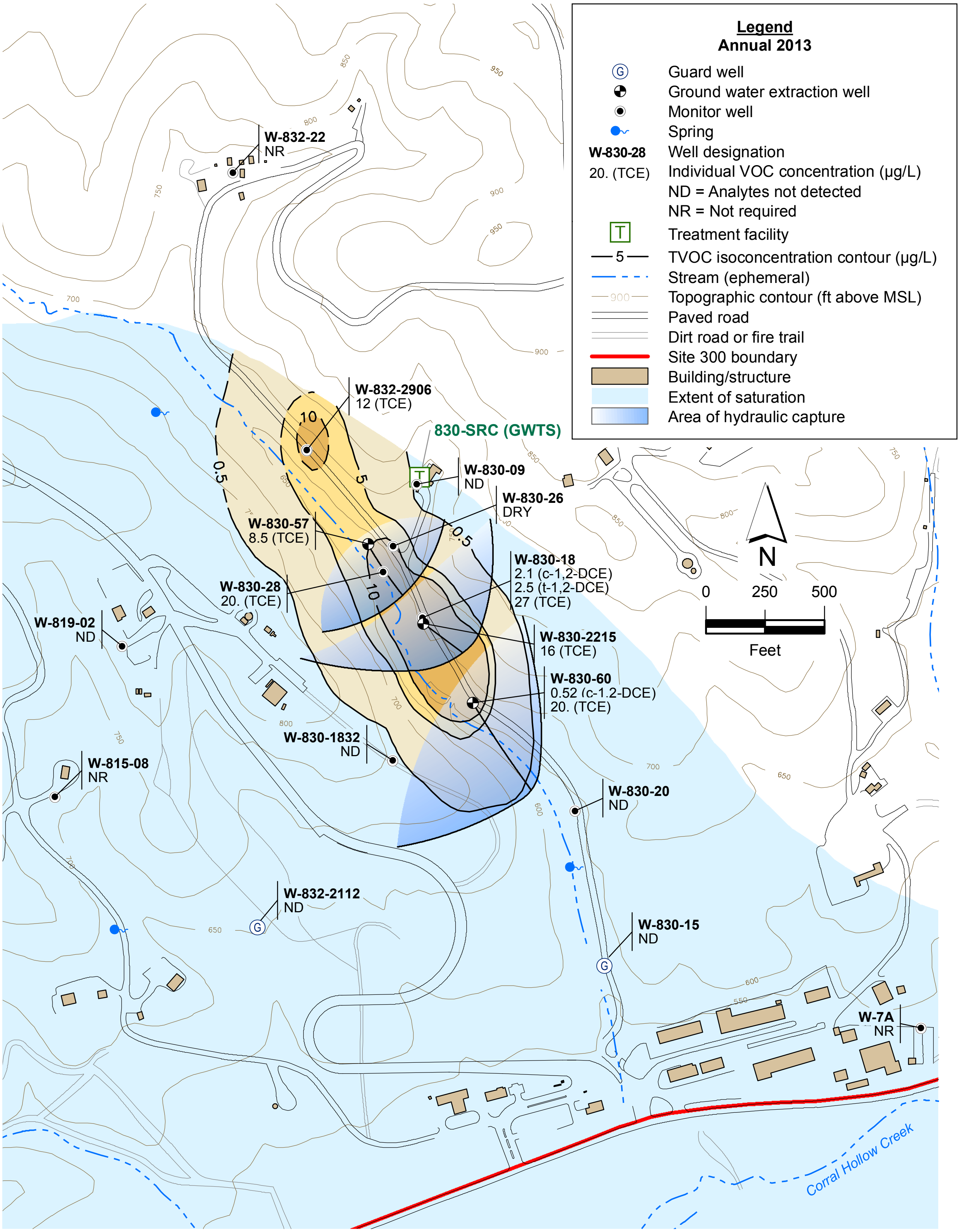


Figure 2.7-9. Building 832 Canyon Operable Unit total VOC isoconcentration contour map and individual VOC concentrations for the Upper Tnbs$_1$ hydrostratigraphic unit.

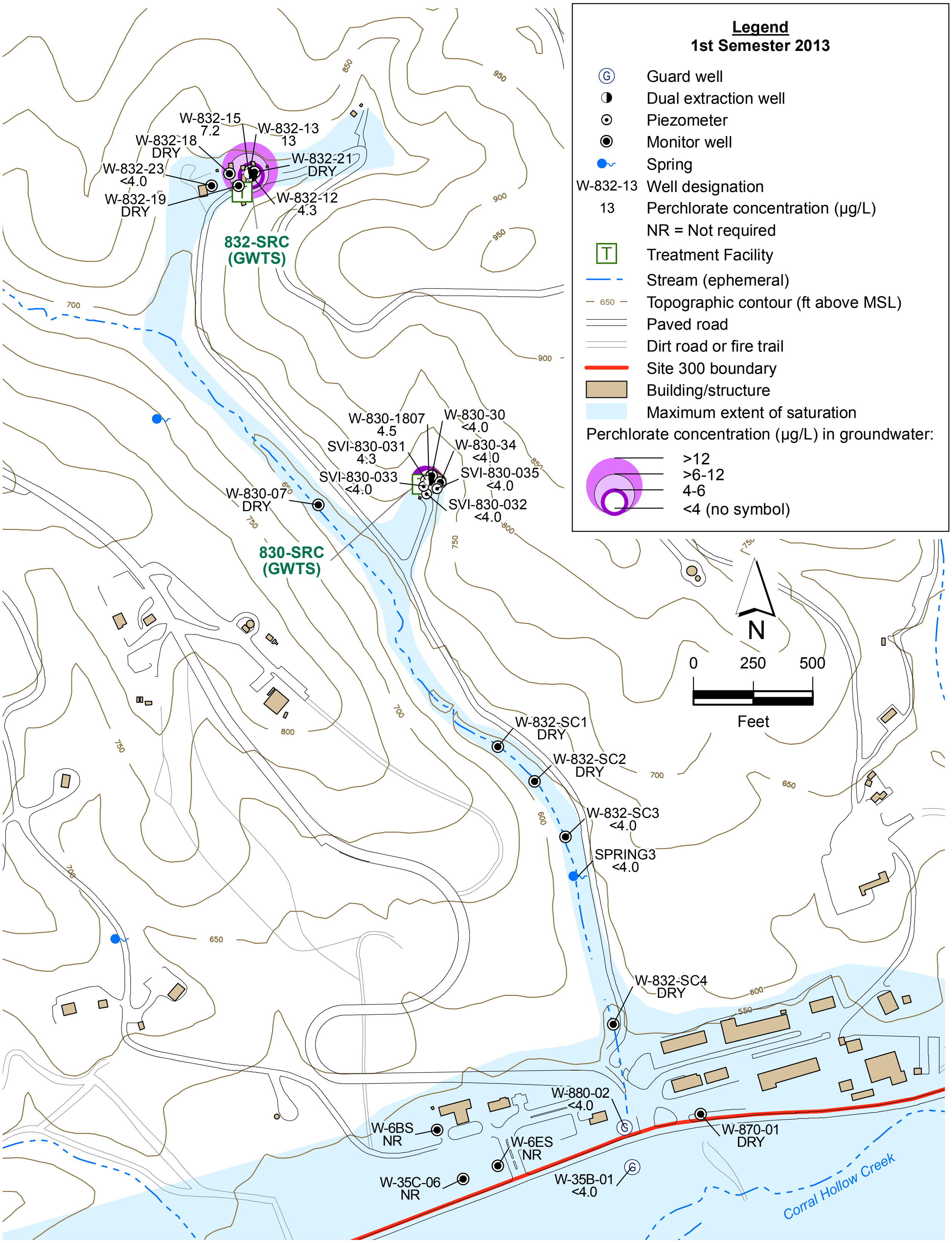


Figure 2.7-10. Building 832 Canyon Operable Unit map showing perchlorate concentrations for the Qal/WBR hydrostratigraphic unit.

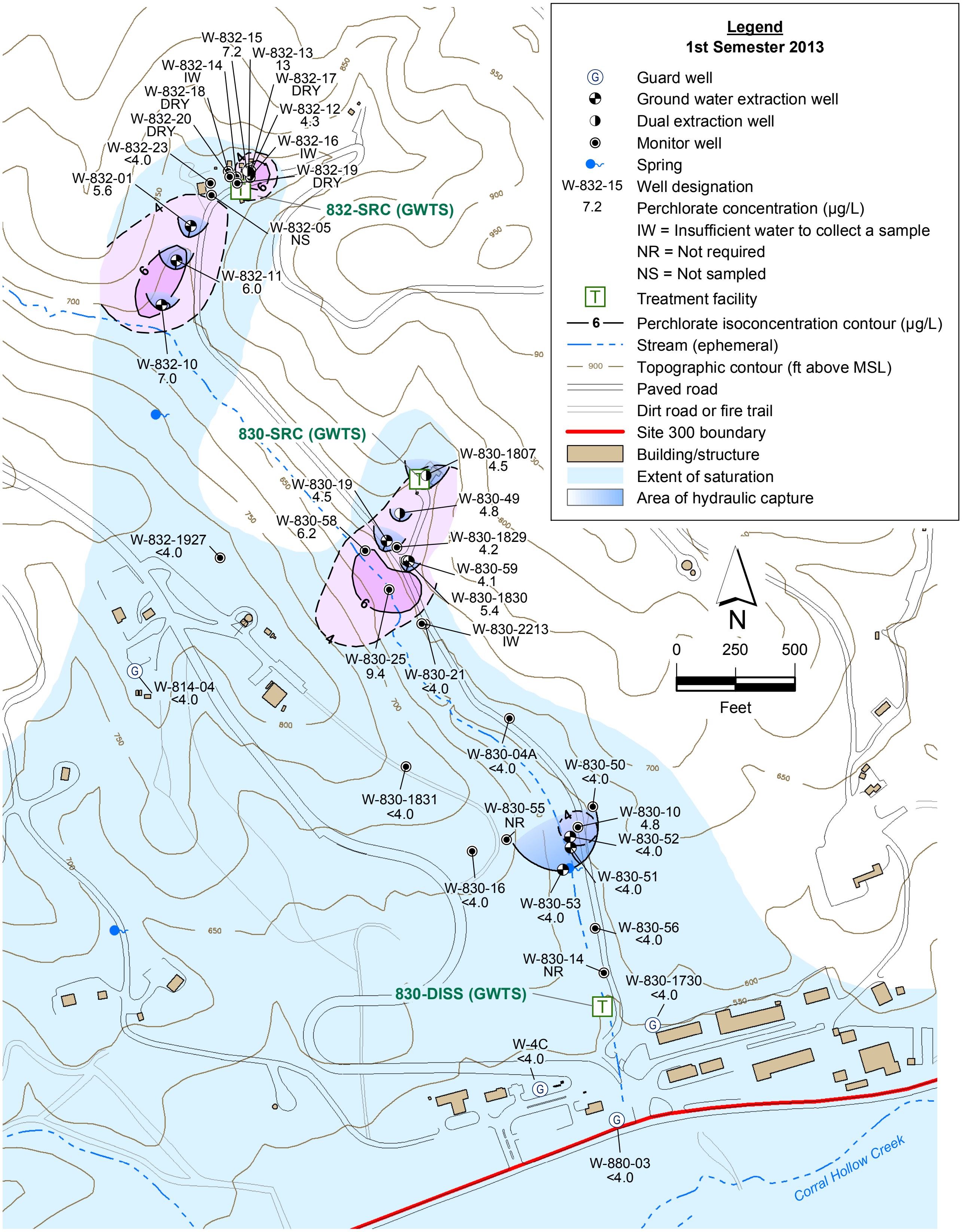


Figure 2.7-11. Building 832 Canyon Operable Unit perchlorate isoconcentration contour map for the Tnsc$_{1b}$ hydrostratigraphic unit.

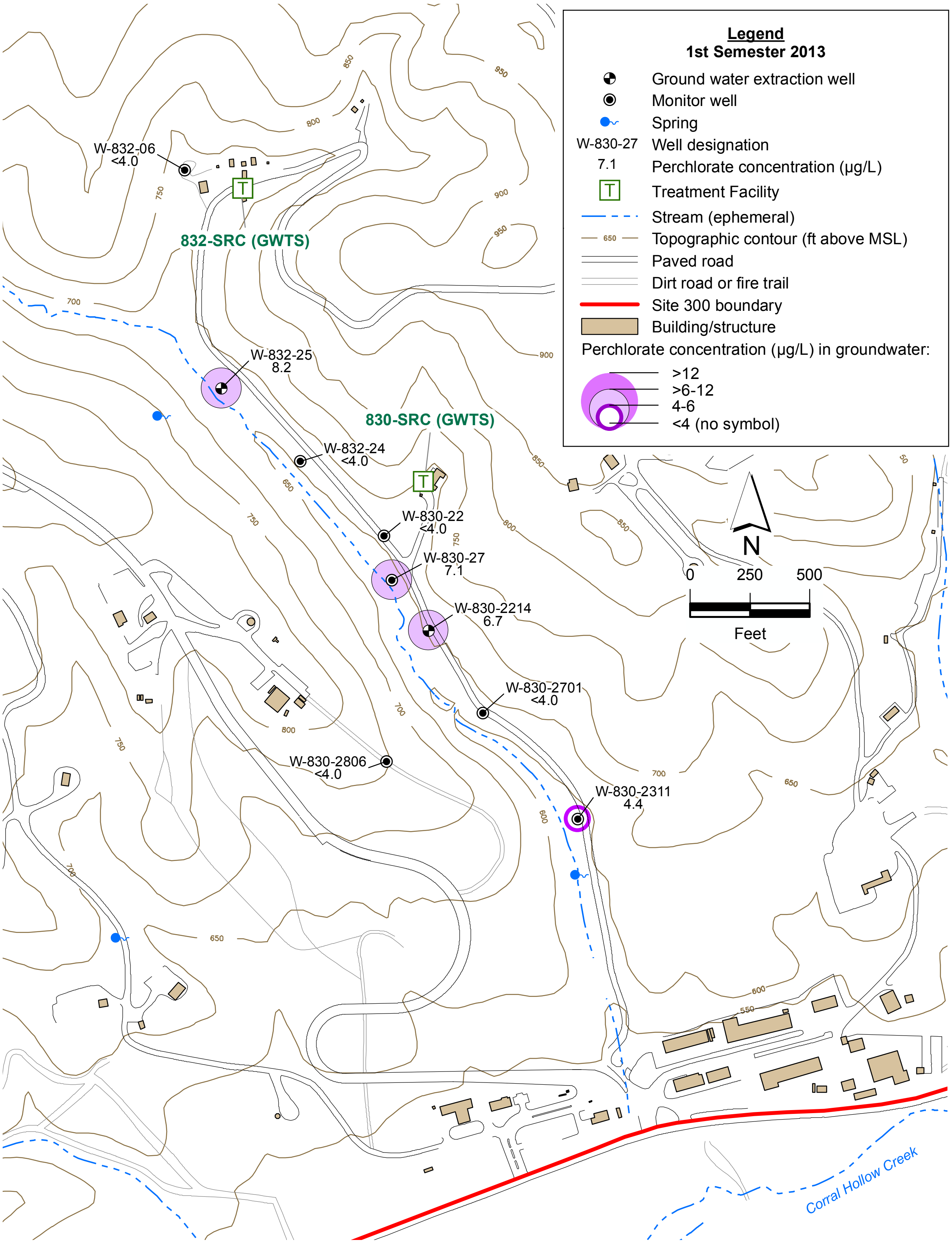


Figure 2.7-12. Building 832 Canyon Operable Unit map showing perchlorate concentrations for the $Tnsc_{1a}$ hydrostratigraphic unit.

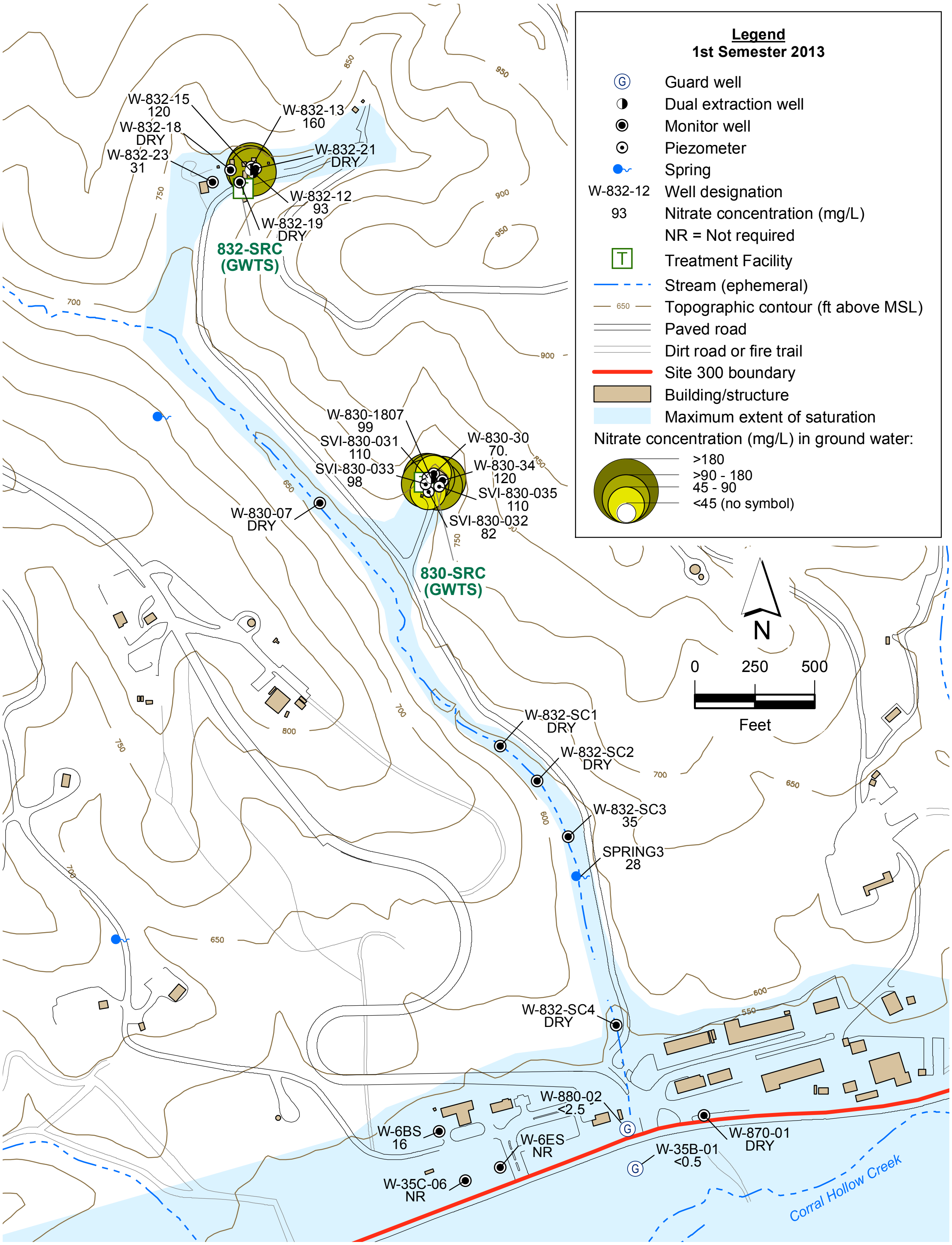


Figure 2.7-13. Building 832 Canyon Operable Unit map showing nitrate concentrations for the Qal/WBR hydrostratigraphic unit.

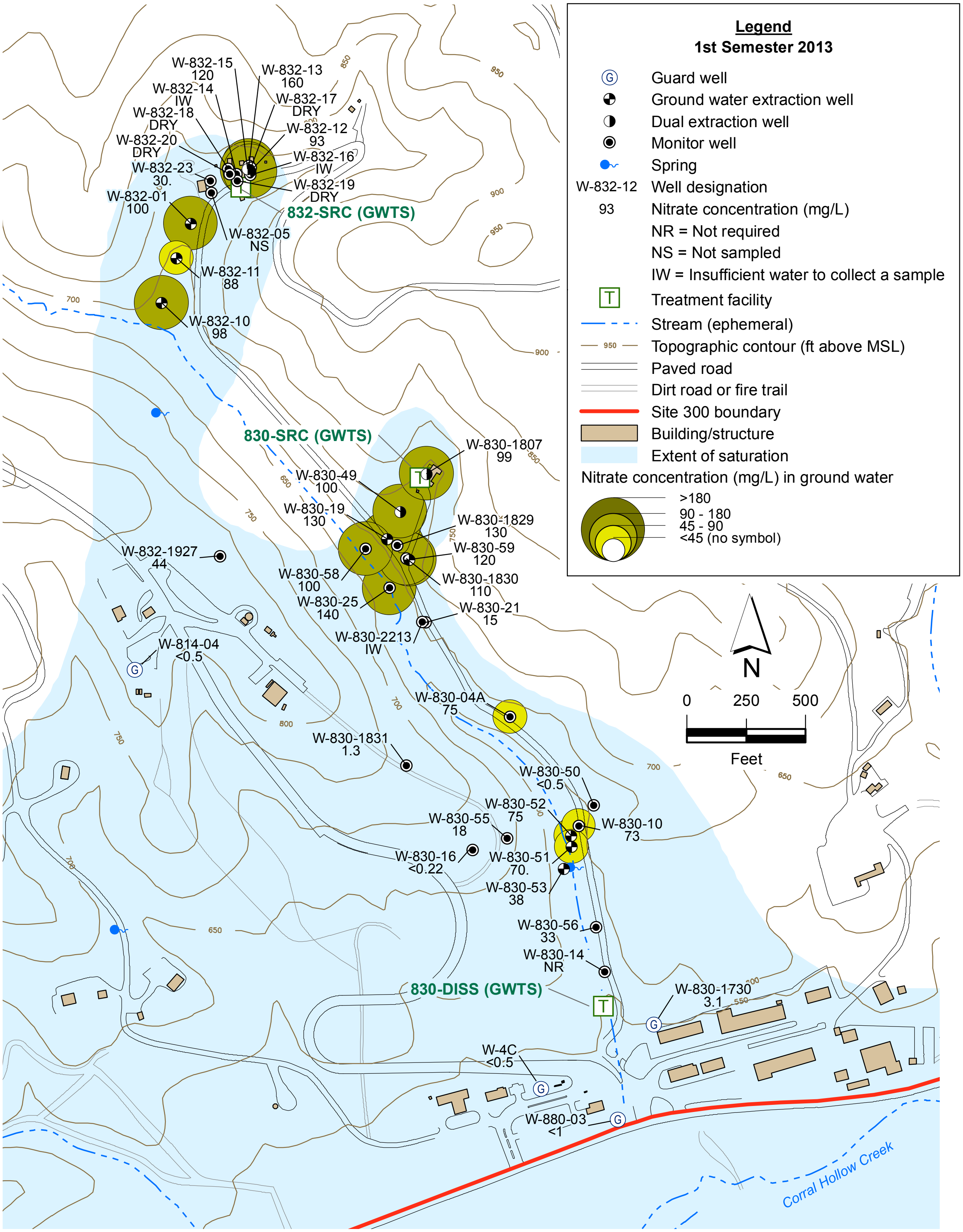


Figure 2.7-14. Building 832 Canyon Operable Unit map showing nitrate concentrations for the $Tnsc_{1b}$ hydrostratigraphic unit.

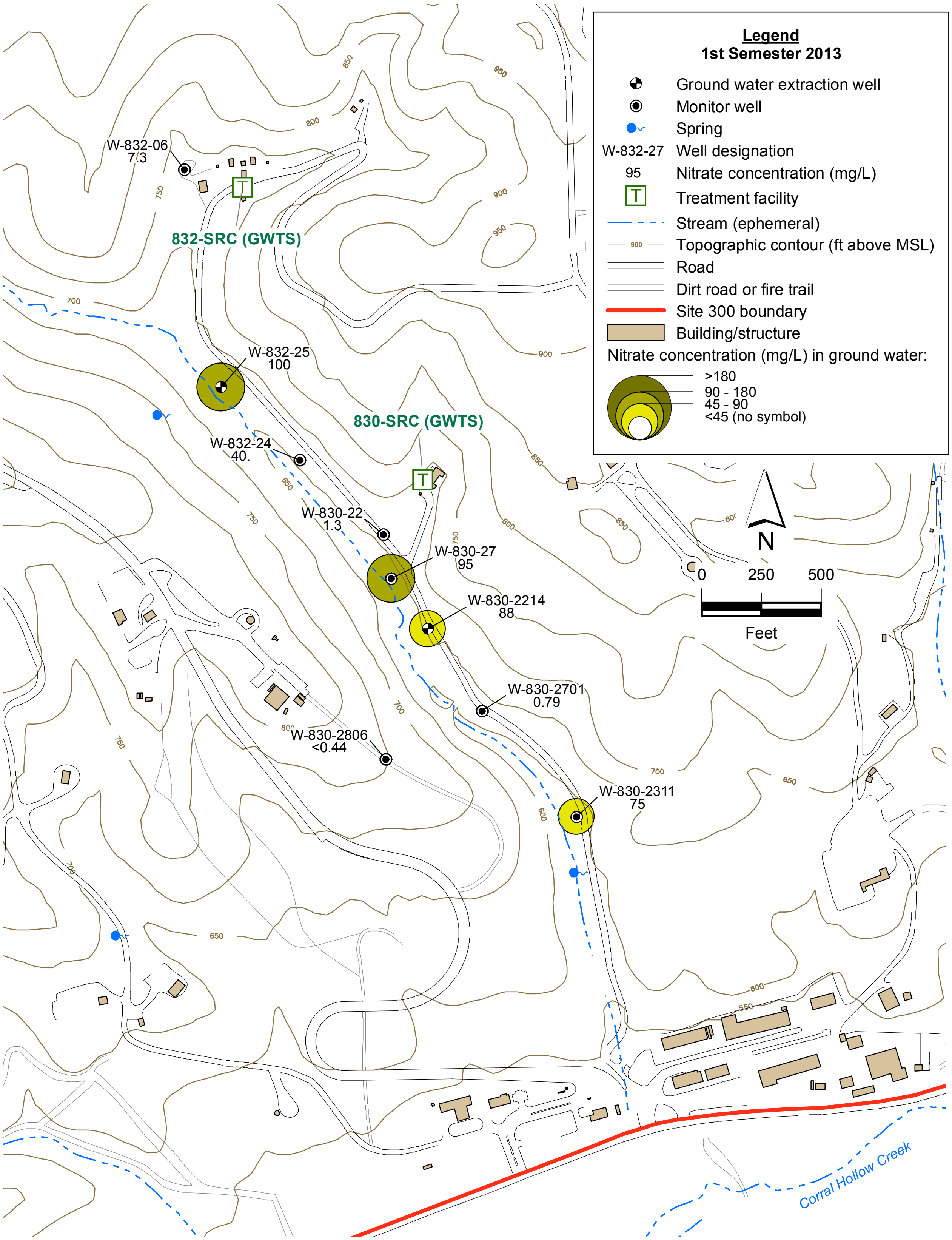
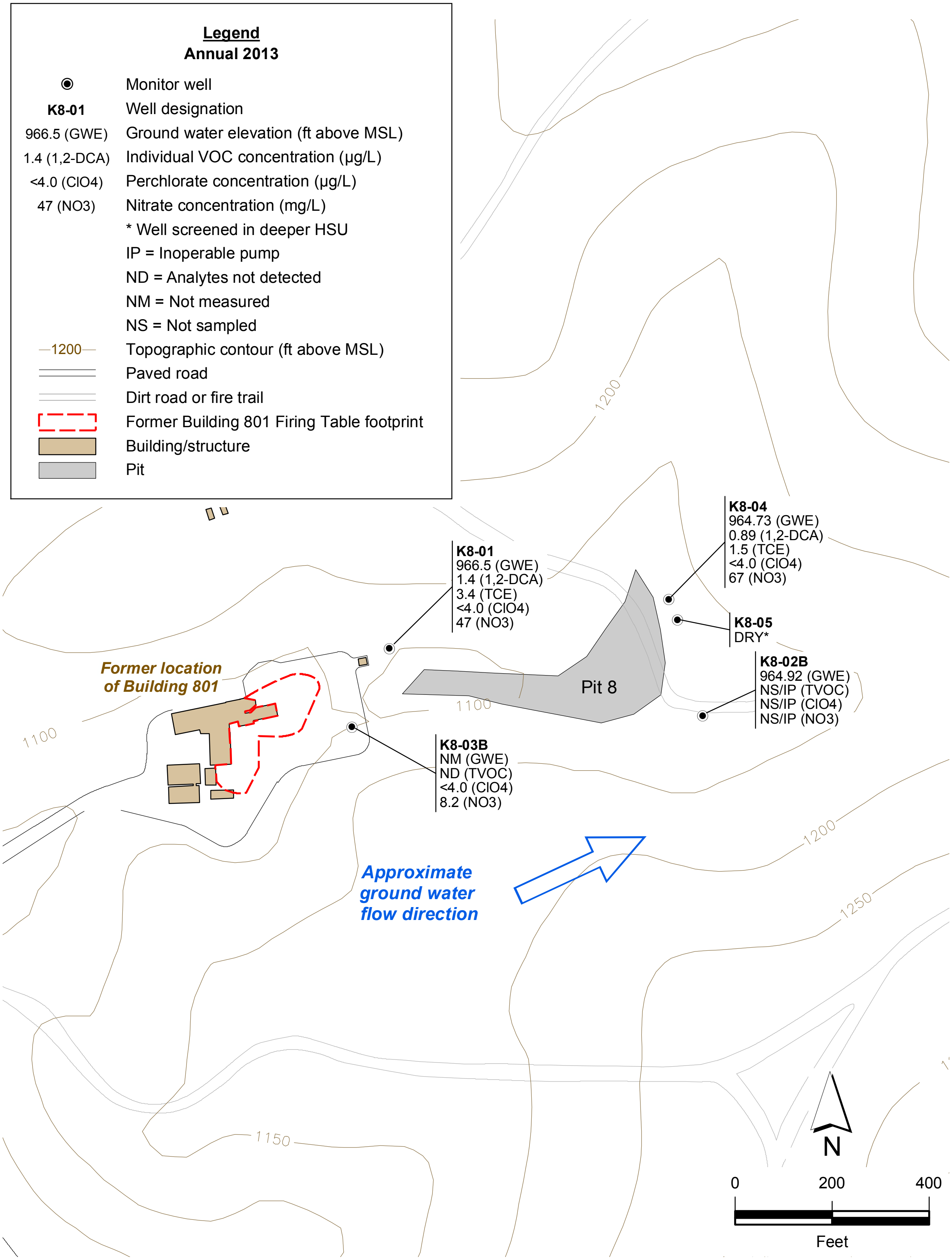


Figure 2.7-15. Building 832 Canyon Operable Unit map showing nitrate concentrations for the Tnsc$_{1a}$ hydrostratigraphic unit.



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

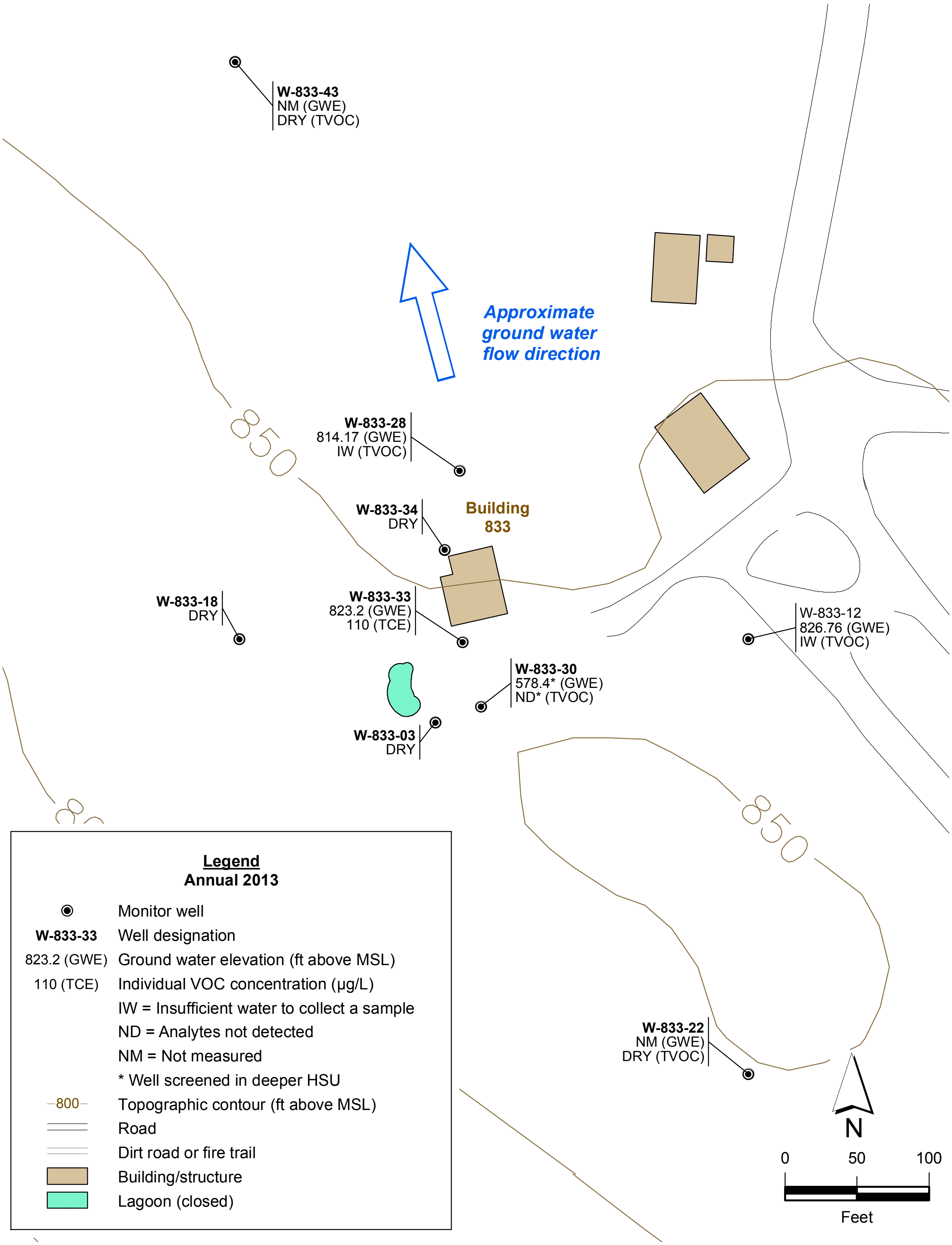


Figure 2.8-2. Building 833 site map showing monitor well locations, ground water elevations, approximate ground water flow direction, and individual VOC concentrations for the Tpsg hydrostratigraphic unit.

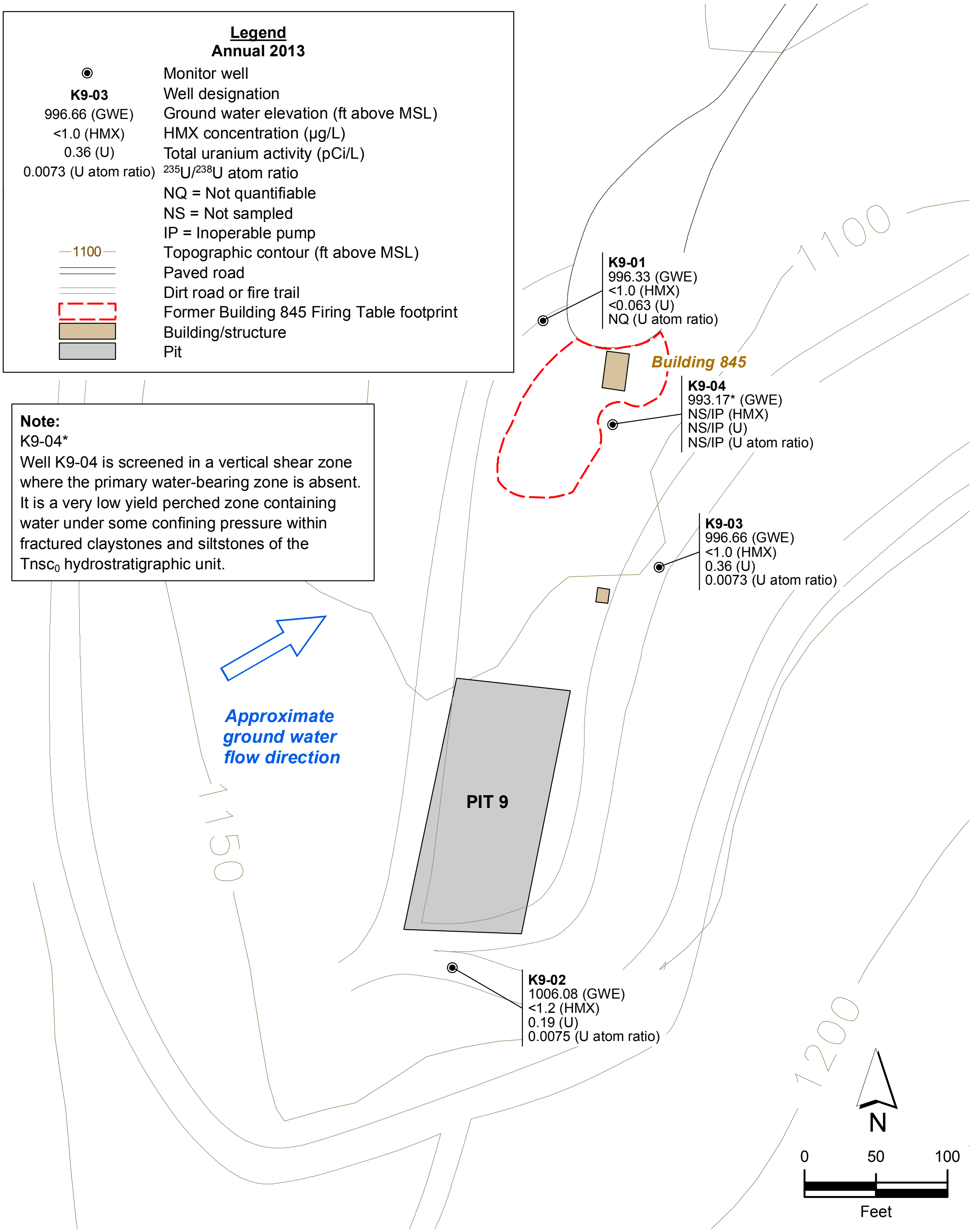


Figure 2.8-3. Building 845 Firing Table and Pit 9 Landfill site map showing monitor well locations, ground water elevations, approximate ground water flow direction, and High Melting Point Explosive concentrations, uranium activities and $^{235}U/^{238}U$ isotope atom ratios in the $Tnsc_0$ hydrostratigraphic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

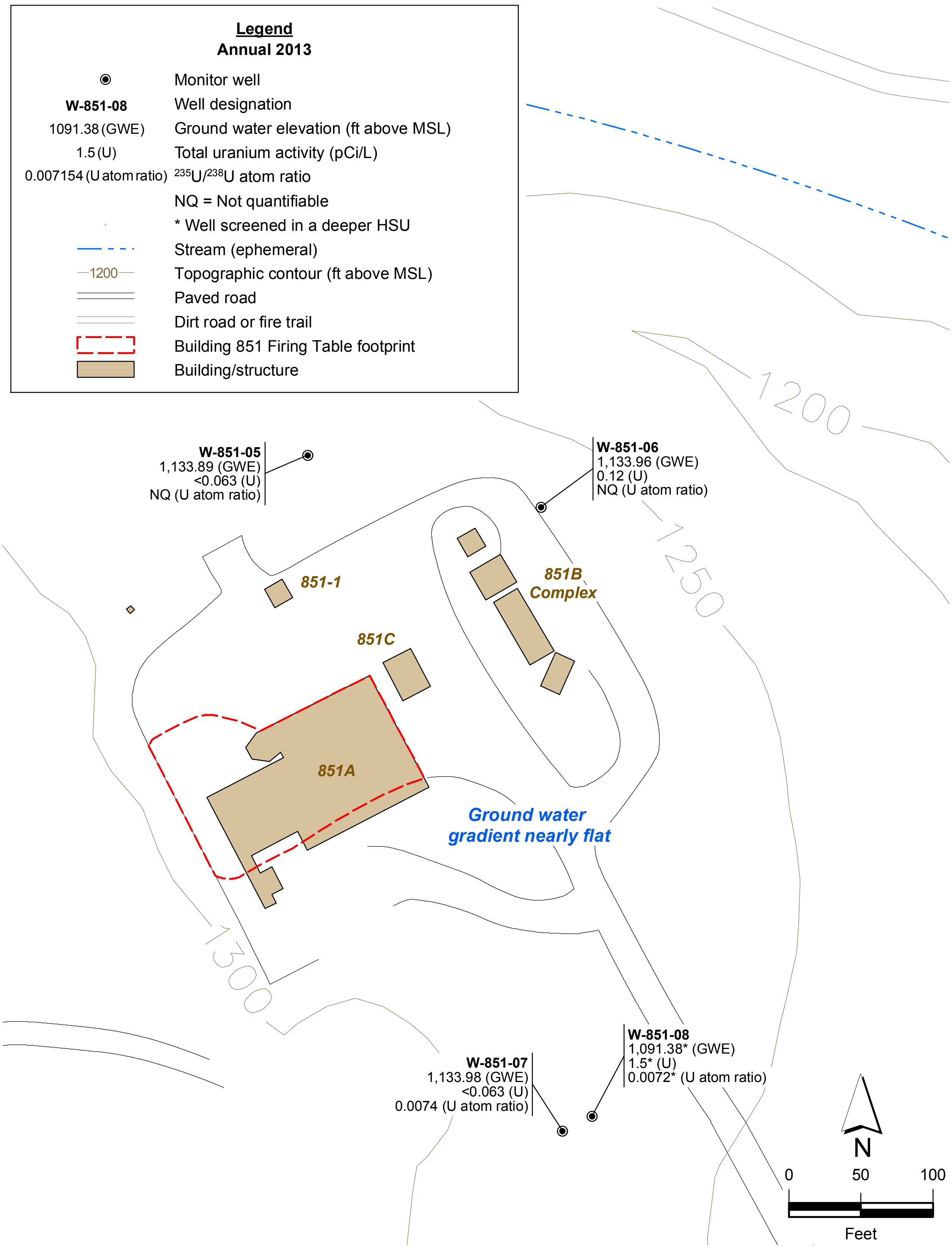


Figure 2.8-4. Building 851 Firing Table site map showing monitor well locations, ground water elevations, approximate ground water flow direction, uranium activities, and $^{235}U/^{238}U$ isotope atom ratios for the Tmss hydrostratigraphic unit.

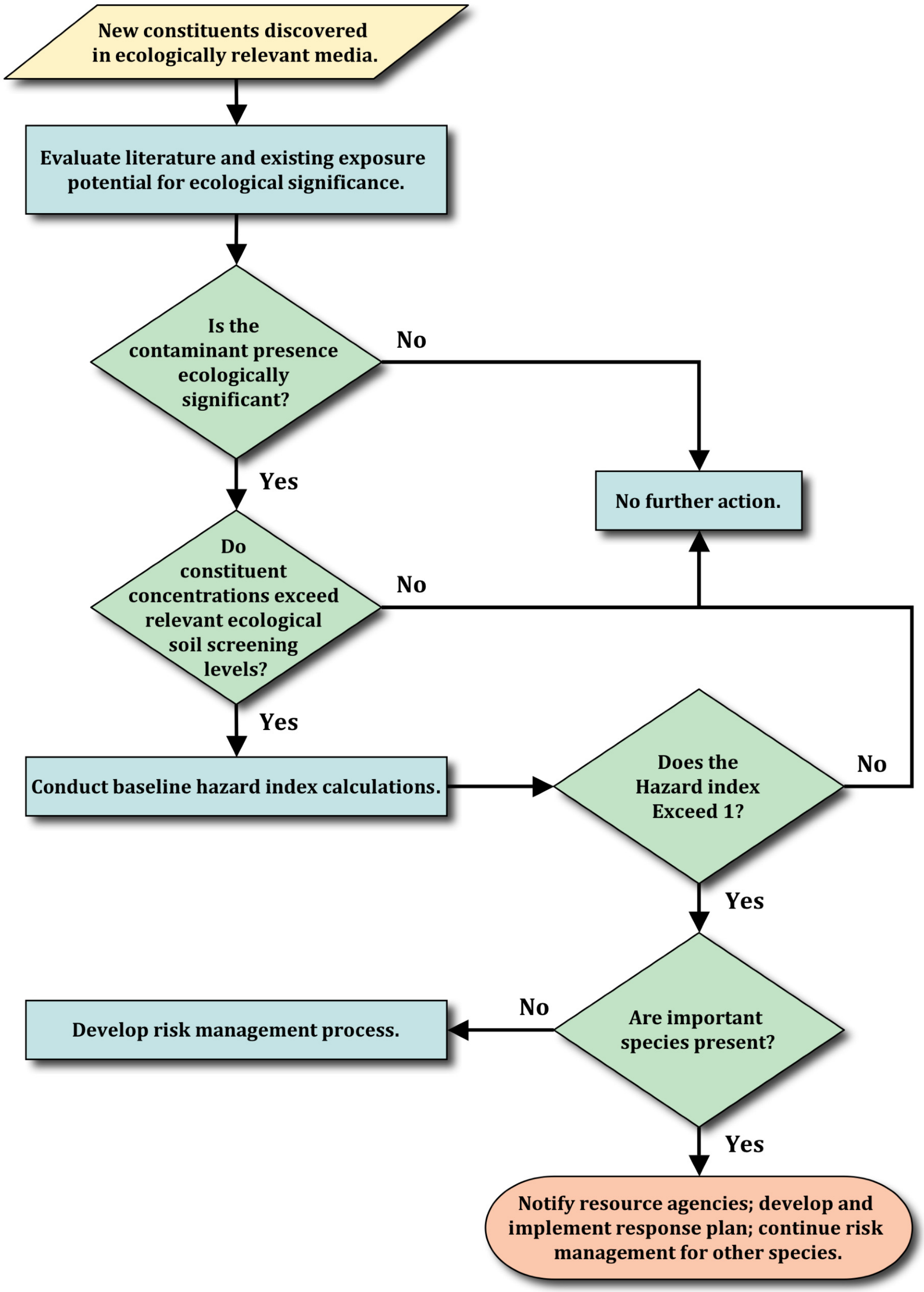


Figure 4.2-1. Process outlined in the 2009 CMP/CP (Dibley et al., 2009) to evaluate new contaminants in ecologically relevant media.

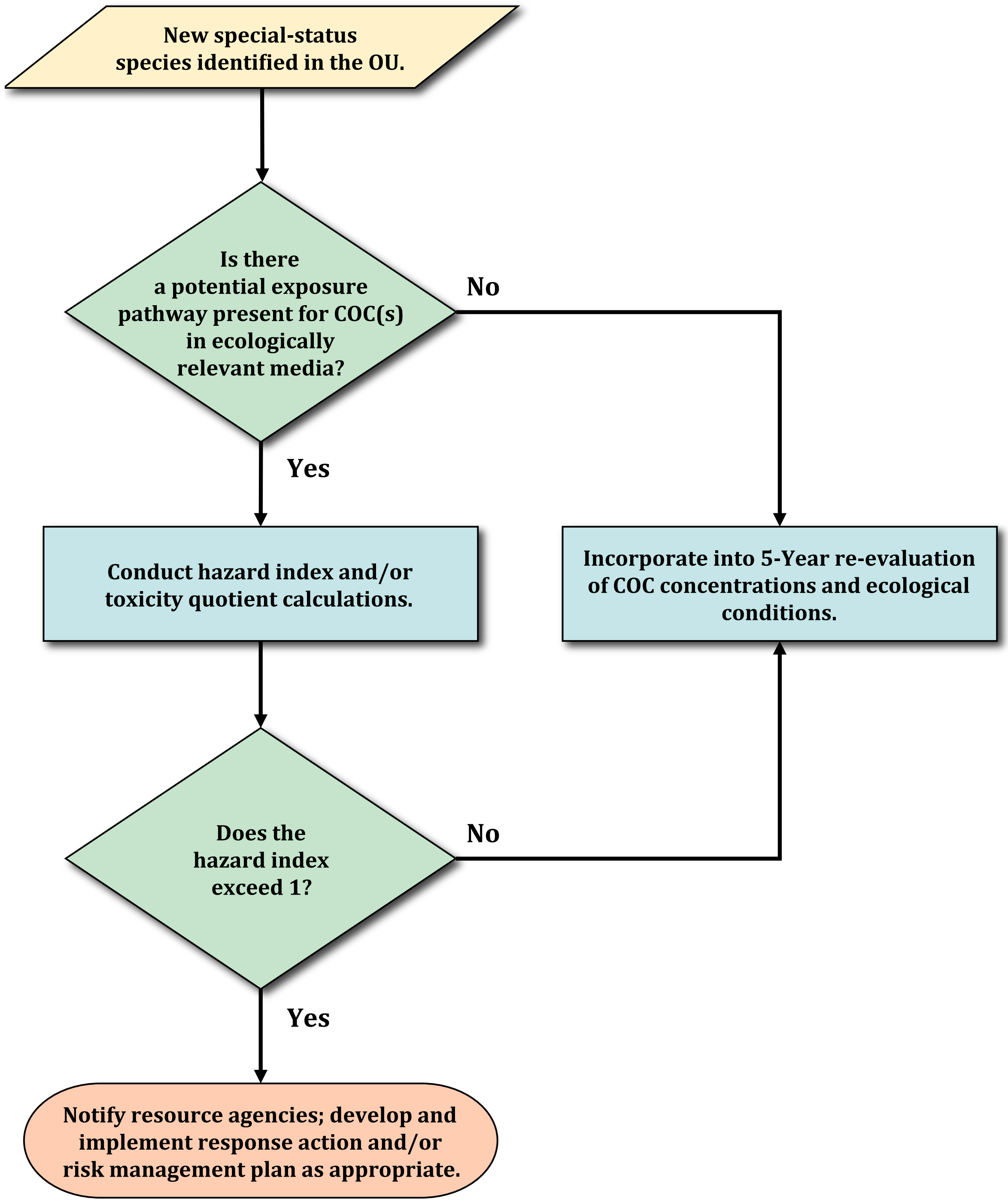


Figure 4.2-2. Process outlined in the 2009 CMP/CP (Dibley et al., 2009) to evaluate new special-status species.

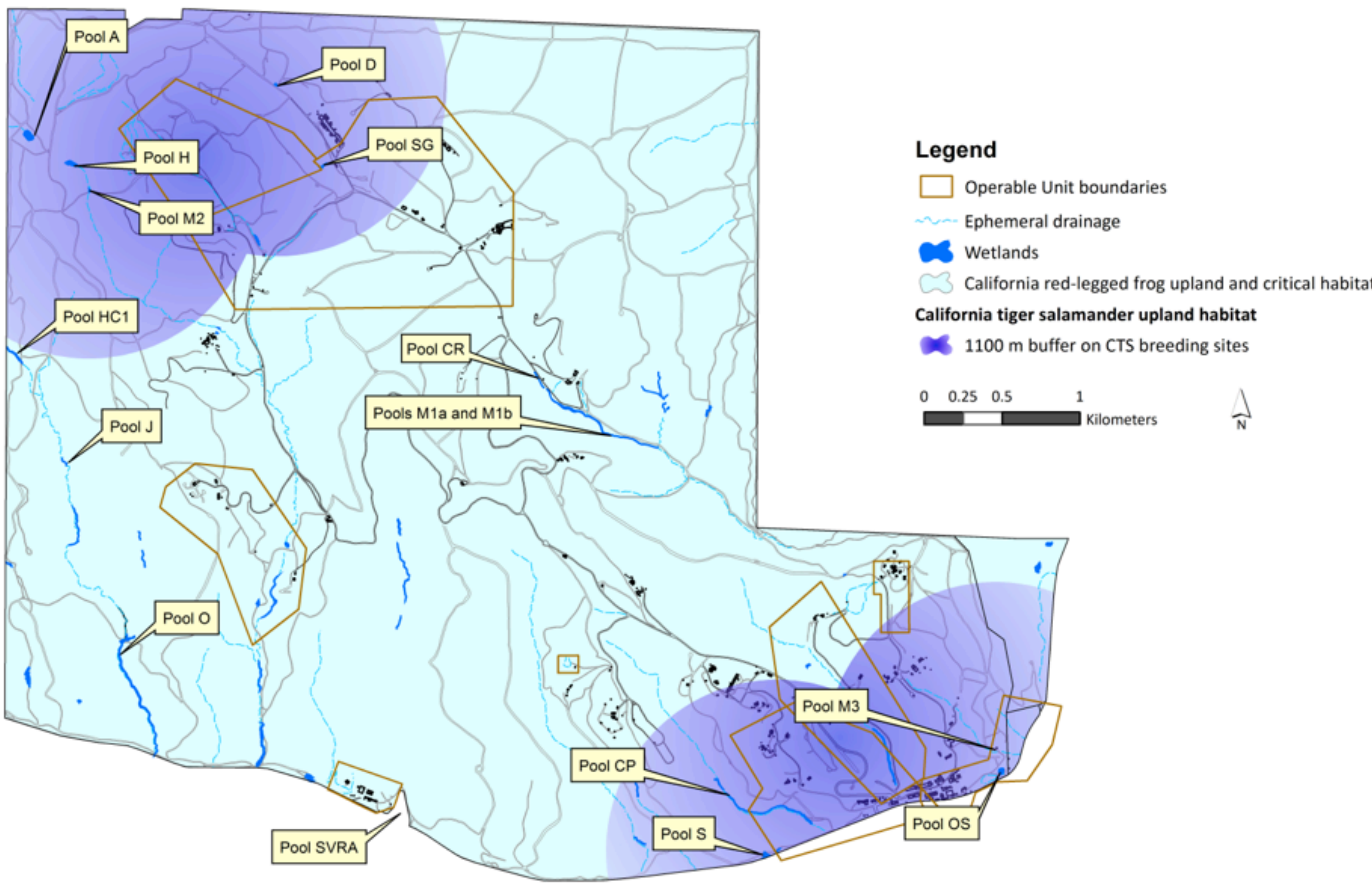


Figure 4.2-3. Distribution of wetlands, pools (potential California tiger salamander and California red-legged frog breeding sites), California red-legged frog critical habitat, and California tiger salamander upland habitat at Site 300 (Paterson and Woollett, 2014).

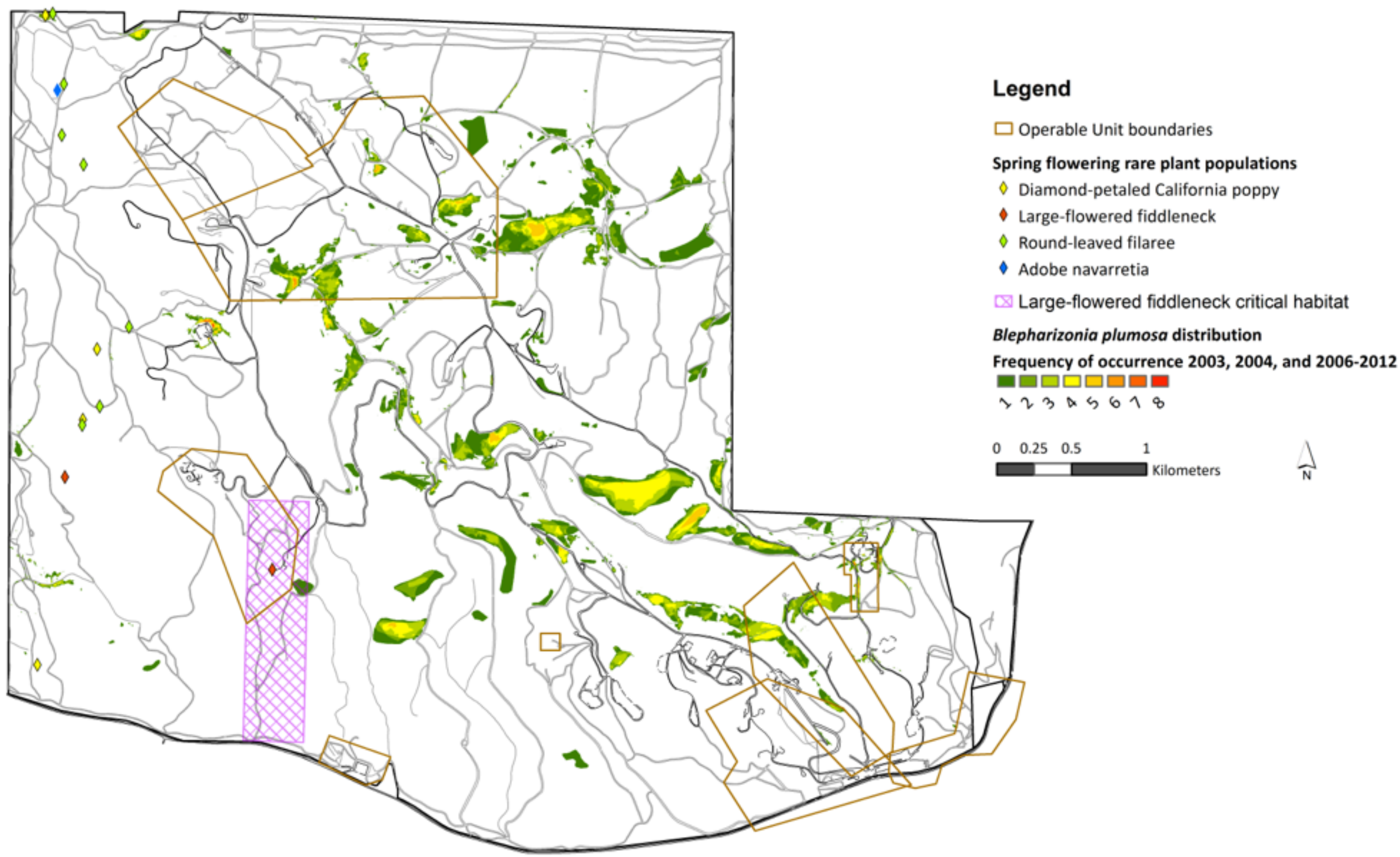


Figure 4.2-4. Distribution of special-status plant species at Site 300 (Paterson and Woollett, 2014).

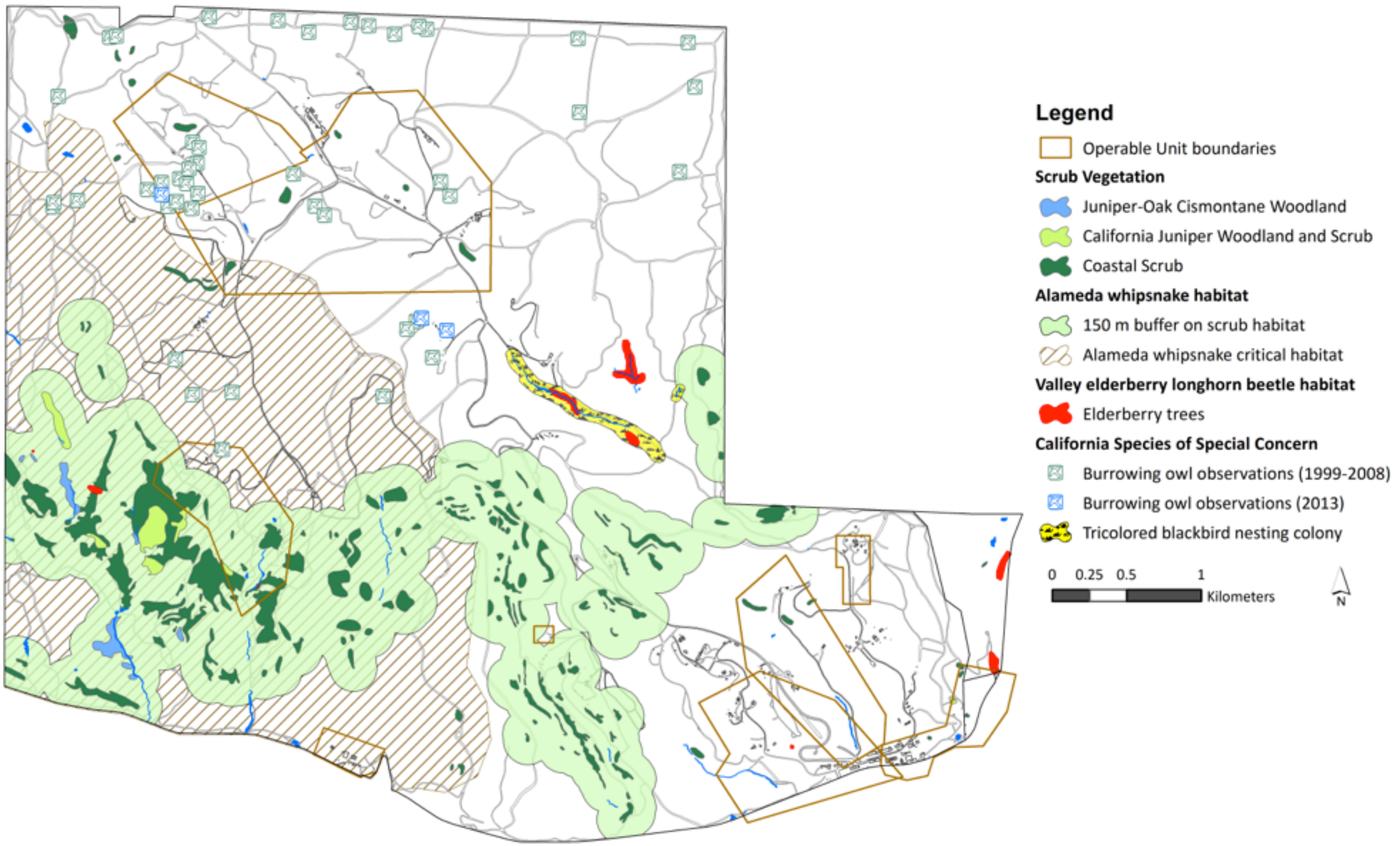


Figure 4.2-5. Distribution of selected special-status vertebrate and invertebrate species and habitat at Site 300 (Paterson and Woollett, 2014).

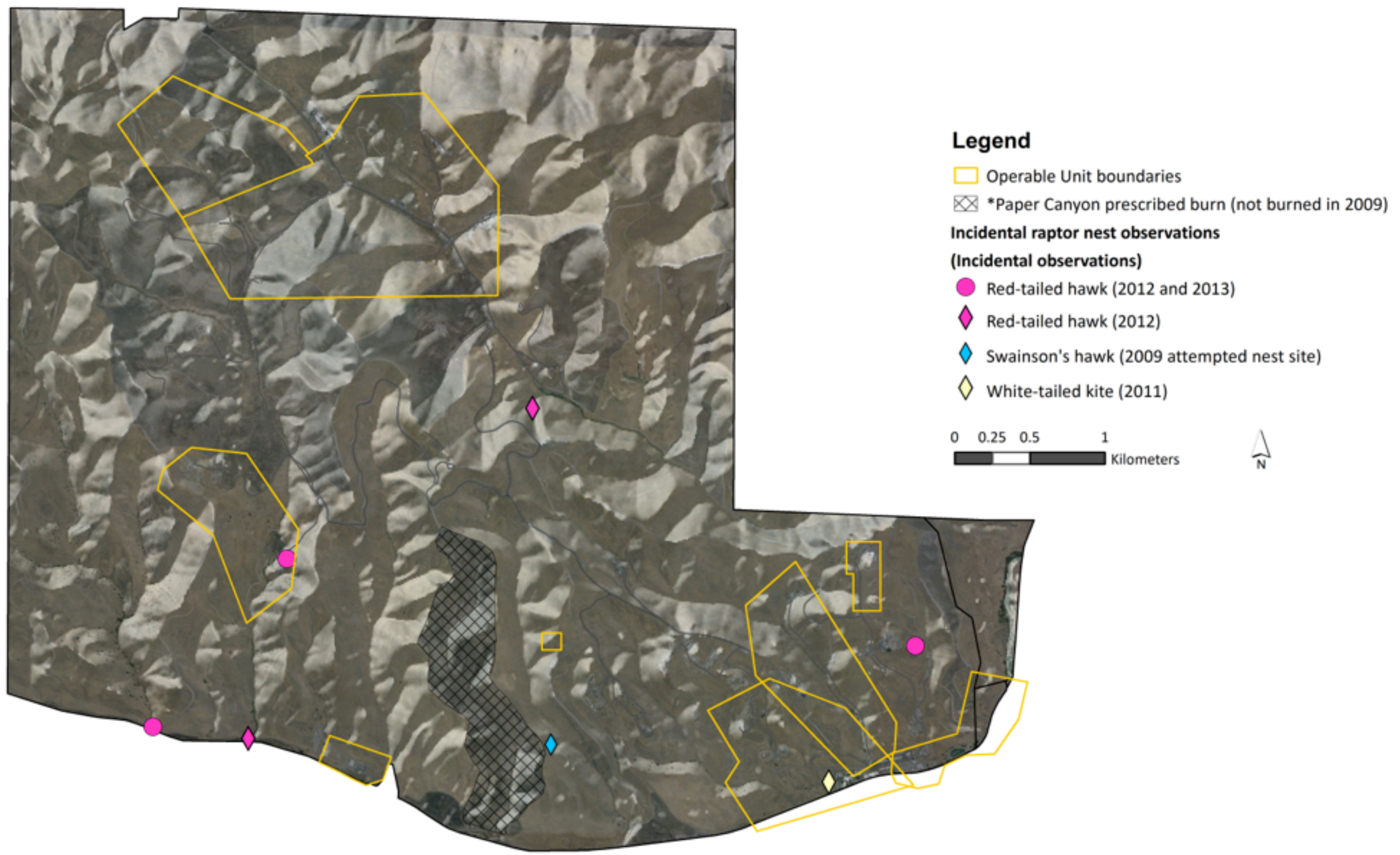


Figure 4.2-6. Distribution of incidental raptor observations at Site 300 (Paterson and Woollett, 2014). Burrowing owl observations are shown on Figure 4.2-5.

Tables

Acronyms and Abbreviations

1,1-DCA	1,1-Dichloroethane
1,2-DCA	1,2-Dichloroethane
1,1-DCE	1,1-Dichloroethene
1,2-DCE	1,2-Dichloroethene (total)
1,1,1-TCA	1,1,1-Trichloroethane
1,1,2-TCA	1,1,2-Trichloroethane
2-ADNT	4-Amino-2,6-dinitrotoluene
4-ADNT	4-Amino-2,6-dinitrotoluene
815	Building 815
817	Building 817
829	Building 829
832	Building 832
834	Building 834
845	Building 845
850	Building 850
851	Building 851
854	Building 854
A	Annual
As N	As nitrogen
As $CaCO_3$	As calcium carbonate
BTEX	Benzene, toluene, ethyl benzene, and xylene
°C	Degrees Celsius
C12-C24	Diesel range organic compounds in the carbon 12 to carbon 24 range
CAL	Contracted analytical laboratories
CAMU	Corrective Action Management Unit
CAP	Corrective and Preventative Action Program
CDFG	California Department of Fish and Game
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFE	Carbon filter effluent
CFI	Carbon filter influent
CF2I	Second aqueous phase granular carbon filter influent
CF3I	Third aqueous phase granular carbon filter influent
cfm	Cubic feet per minute
CFORM	Chloroform
CFV2	Second vapor phase granular activated carbon filter effluent
CGSA	Central General Services Area
CHC	Corral Hollow Creek
c-1,2-DCE	cis-1,2-Dichloroethene
cis-1,2-DCE	cis-1,2-Dichloroethene
CMP/CP	Compliance Monitoring Plan/Contingency Plan
CMR	Compliance Monitoring Report
CO_2	Carbon dioxide
COC	Contaminants of Concern
CTET	Carbon tetrachloride
DEET	n,n-diethyl-meta-toluamide
DIS	Discretionary sampling (not required by the CMP)

DISS	Distal south
DMW	Detection monitor well
DOE	Department of Energy
DSB	Distal Site Boundary
DTSC	Department of Toxic Substances Control
DUP	Duplicate or collocated QC sample
E	Effluent (acronym found in Treatment Facility Sampling Plan Tables)
E	Sample to be collected during even numbered years (i.e., 2012) (acronym found in Sampling Plan Tables)
EcoSSLs	Ecological Soil Screening Levels
EFA	Environmental Functional Area
EGSA	Eastern General Services Area
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
EMS	Environmental Management System
EPA	Environmental Protection Agency
ERD	Environmental Restoration Department
ES&H	Environmental Safety and Health
EV	Effluent vapor
EW	Extraction well
Freon 11	Trichlorofluoromethane
Freon 113	1,1,2-trichloro-1,2,2-trifluoroethane
ft	Feet
ft^3	Cubic feet
g	Gram(s)
GAC	Granular activated carbon
gal	Gallon(s)
GIS	Geographic Information Systems
gpd	Gallons per day
gpm	Gallons per minute
GSA	General Services Area
GTU	Ground Water Treatment Unit.
GW	Guard well
GWTS	Ground Water Treatment System
HE	High Explosives
HEPA	High Explosives Process Area
H-H	Hetch-Hetchy
HMX	High-Melting Explosive
HQ	Hazard quotient
HSU	Hydrostratigraphic unit
I	Influent
ICP-MS	Inductively Coupled Plasma - Mass Spectrometry
ISMA	*In Situ* Microcosm Array
ISMS	Integrated Safety Management System
ISO	International Organization for Standardization
ITS	Issues Tracking System
IV	Influent vapor
IW	Injection well
IWS	Integrated Work Sheet
K-40	Potassium-40
kft^3	Thousands of cubic feet

kg	Kilograms
kgal	Thousands of gallons
km	Kilometers
LCS	Laboratory Control Sample
LHC	Light hydrocarbon
LLNL	Lawrence Livermore National Laboratory
µg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per meters cubed
µmhos/cm	Micro ohms per centimeter
µS	Microsiemens
M	Monthly
MCL	Maximum Contaminant Level
MeCL	Methylene chloride
Mgal	Millions of gallons
Mg/kg/d	Milligram per kilogram per day
mg/L	Milligrams per liter
MNA	Monitored Natural Attenuation
MOVI	Management observations, verifications, and inspections
MSA	Management self-assessment
MSL	Mean Sea Level
MTU	Miniature Treatment Unit
mv	Millivolts
MWB	Monitor well used for background
N	No
NB	Nitrobenzene
N_2	Nitrogen
NO_3	Nitrate
NA	Not applicable
NT	Nitrotoluene
NTU	Nephelometric turbidity units
O	Sample to be collected during odd numbered years (i.e., 2013)
OR	Occurrence Report
ORP	Oxidation/reduction potential
OU	Operable unit
O&M	Operations and Maintenance
P/PO_4	Phosphorous
PCBs	Polychlorinated biphenyls
PCE	Tetrachloroethene
pCi/L	PicoCuries per liter
pH	A measure of the acidity or alkalinity of an aqueous solution
PHG	Public Health Goal
PLC	Programmatic logic control
ppb_v	Parts per billion by volume
ppm_v	Parts per million on a volume-to-volume basis
PBA	Programmatic Biological Assessment
PPCP	Pharmaceutical and Personal Care Product analytes
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
SLs	Statistical Limits
SOP	Standard Operating Procedure
SOW	Statement of work
SPACT	Sample Planning and Chain of Custody Tracking
SPR	Spring
SRC	Source
STU	Solar-powered Treatment Unit
SVE	Soil Vapor Extraction
SVTS	Soil Vapor Treatment System
SVI	Soil Vapor Influent
SWEIS	Site-Wide Environmental Impact Statement
SWFS	Site Wide Feasibility Study
SWRI	Site-Wide Remedial Investigation
TBOS	Tetrabutyl orthosilicate
TCEP	tris (2-chloroethyl) phosphate
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
Total-1,2-DCE	1,2-Dichloroethene (total)
TRV	Toxicity Reference Value
t-1,2-DCE	trans-1,2-Dichloroethene
$^{235}U/^{238}U$	Atom ratio of the isotopes uranium-235 and uranium-238
U.S.	United States
USFWS	U.S. Fish and Wildlife Service
VC	Vinyl chloride
VCF4I	Fourth vapor phase granular activated carbon filter influent
VE	Vapor effluent
VES	Vapor extraction system

VI	Vapor influent
VOC	Volatile organic compound
WAA	waste accumulation area
WGMG	Water Guidance and Monitoring Group
WS	Water supply well
Y	Yes

Hydrogeologic Units

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

Data Qualifier Flag Definitions

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

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

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

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

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

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

I = Surrogate recoveries were outside of QC limits.

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

L = Spike accuracy not within control limits.

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

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

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

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

Requested Analyses

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

Ground Water Elevation Table Notes

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

List of Tables

Table Summ-1. Mass removed, January 1, 2013 through December 31, 2013.

Treatment facility	Volume of ground water treated (thousands of gal)	Volume of soil vapor treated (thousands of cf)	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	1,751	NA	240	NA	NA	NA	NA	NA
CGSA SVTS	NA	19,814	470	NA	NA	NA	NA	NA
834 GWTS	111	NA	560	NA	34	NA	1.7	NA
834 SVTS	NA	50,534	6,900	NA	NA	NA	NA	NA
815-SRC GWTS	861	NA	24	8.2	280	150	NA	NA
815-PRX GWTS	556	NA	47	15	170	NA	NA	NA
815-DSB GWTS	2,326	NA	55	NA	NA	NA	NA	NA
817-SRC GWTS	12	NA	0	1.3	3.7	1.8	NA	NA
817-PRX GWTS	759	NA	25	67	270	21	NA	NA
829-SRC GWTS	1	NA	0.055	0.052	0.31	NA	NA	NA
PIT7-SRC GWTS	99	NA	0.0029	4.5	15	NA	NA	24
854-SRC GWTS	1,019	NA	120	5.6	170	NA	NA	NA
854-SRC SVTS	NA	19,400	820	NA	NA	NA	NA	NA
854-PRX GWTS	383	NA	24	9.8	54	NA	NA	NA
854-DIS GWTS	8	NA	0.92	0.13	0.62	NA	NA	NA
832-SRC GWTS	79	NA	14	1.8	33	NA	NA	NA
832-SRC SVTS	NA	1,651	47	NA	NA	NA	NA	NA
830-SRC GWTS	2,144	NA	1,100	4.3	110	NA	NA	NA
830-SRC SVTS	NA	8,132	560	NA	NA	NA	NA	NA
830-DISS GWTS	1,151	NA	57	5.6	270	NA	NA	NA
Total	11,260	99,531	11,000	120	1,400	170	1.7	24

Notes:

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

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

Table Summ-2. Summary of cumulative remediation.

Treatment facility	Volume of ground water treated (thousands of gallons)	Volume of soil vapor treated (thousands of cubic feet)	Estimated total VOC mass removed (kg)	Estimated total perchlorate mass removed (g)	Estimated total nitrate mass removed (kg)	Estimated total RDX mass removed (kg)	Estimated total TBOS/ TKEBS mass removed (kg)	Estimated total uranium mass removed (kg)
EGSA GWTS	309,379	NA	7.6	NA	NA	NA	NA	NA
CGSA GWTS	25,999	NA	26	NA	NA	NA	NA	NA
CGSA SVTS	NA	183,330	77	NA	NA	NA	NA	NA
834 GWTS	1,304	NA	46	NA	330	NA	9.5	NA
834 SVTS	NA	416,472	350	NA	NA	NA	NA	NA
815-SRC GWTS*	7,478	NA	0.18	270	2,600	1.8	NA	NA
815-PRX GWTS*	8,526	NA	0.91	200	2,600	NA	NA	NA
815-DSB GWTS	18,399	NA	0.64	NA	NA	NA	NA	NA
817-SRC GWTS*	59	NA	0	6.0	19	0.0099	NA	NA
817-PRX GWTS*	4,932	NA	0.20	430	1,800	0.13	NA	NA
829-SRC GWTS	7	NA	0.00045	0.25	2.0	NA	NA	NA
PIT7-SRC GWTS	275	NA	0.0027	13	40	NA	NA	0.041
854-SRC GWTS	11,851	NA	5.8	160	2,200	NA	NA	NA
854-SRC SVTS	NA	120,971	13	NA	NA	NA	NA	NA
854-PRX GWTS	4,102	NA	0.70	170	680	NA	NA	NA
854-DIS GWTS	70	NA	0.0087	1.2	5.5	NA	NA	NA
832-SRC GWTS	933	NA	0.28	24	370	NA	NA	NA
832-SRC SVTS	NA	25,272	2.1	NA	NA	NA	NA	NA
830-SRC GWTS	13,165	NA	8.1	25	950	NA	NA	NA
830-SRC SVTS	NA	73,869	53	NA	NA	NA	NA	NA
830-PRXN GWTS	1,949	NA	0.26	NA	22	NA	NA	NA
830-DISS GWTS	9,246	NA	1.6	71	2,300	NA	NA	NA
Total	417,676	819,914	590	1,400	14,000	1.9	9.5	0.041

Notes:

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

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

Table 2-1. Wells and boreholes installed during 2013.

Well name	Well type	OU	Well/Borehole installation date	HSU	Drill Depth (ft-bgs)	Casing depth (ft-bgs)	Screened interval (ft-bgs)	Primary COCs	Primary COC sampling frequency	Secondary COCs	Secondary COC sampling frequency
W-CGSA-2907	IW	OU1	9/18/13	Qt	25.5	25.5	10-25	VOCs	NA	None	NA
W-CGSA-2908	IW	OU1	9/18/13	Qt	25.5	25.5	10-25	VOCs	NA	None	NA
W-832-2906	MW	OU7	10/8/13	$UTnbs_1$	125	120.5	100-120	VOCs	Semi-annually	Perchlorate, Nitrate	Annually

Notes:

bgs = Below ground surface.
COC = Contaminant of concern.
ft = Feet.
HSU = Hydrostratigraphic unit.
OU = Operable Unit.
MW = Monitor Well.
IW = Injection Well.
NA = Not applicable.

Table 2.1-1. Central General Services Area (CGSA) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
CGSA	July	840	840	1,871	283,990
	August	696	696	1,518	235,837
	September	768	768	1,675	257,408
	October	720	720	1,598	219,142
	November	624	576	1,429	186,559
	December	840	192	1,965	62,410
Total		4,488	3,792	10,056	1,245,346

Table 2.1-2. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CGSA-I	7/9/13	16	0.79	<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-I	10/9/13	18	0.7	0.54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-E	7/9/13	<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	<0.5
CGSA-E	8/5/13	<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	<0.5
CGSA-E	9/4/13	<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	<0.5
CGSA-E	10/9/13	<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	<0.5
CGSA-E	11/4/13	<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	<0.5
CGSA-E	12/2/13	<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	<0.5

Notes:

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

Table 2.1-2 (Cont.). Analyte detected but not reported in main table.

Location	Date	Detection frequency
CGSA-I	7/9/13	0 of 18
CGSA-I	10/9/13	0 of 18
CGSA-E	7/9/13	0 of 18
CGSA-E	8/5/13	0 of 18
CGSA-E	9/4/13	0 of 18
CGSA-E	10/9/13	0 of 18
CGSA-E	11/4/13	0 of 18
CGSA-E	12/2/13	0 of 18

Notes:

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

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

Sample location	Sample identification	Parameter	Frequency
CGSA GWTS			
Influent Port	**CGSA-I**	**VOCs**	**Quarterly**
		pH	**Quarterly**
Effluent Port	**CGSA-E**	**VOCs**	**Monthly**
		pH	**Monthly**
834 SVTS			
Influent Port	**CGSA-VI**	**No Monitoring Requirements**	
Effluent Port	**CGSA-VE**	**VOCs**	**Weekly**[a]
Intermediate GAC	**CGSA-VCF4I**	**VOCs**	**Weekly**[a]

Notes:

[a] **Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.**

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

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

Table 2.1-4. General Services Area Operable Unit ground water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CDF1	WS	LTnbs1	A	WGMG	E502.2:ALL	1	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	1	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	1	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	1	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	2	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	2	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	2	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	3	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	3	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	3	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	4	Y	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	4	π	
CDF1	WS	LTnbs1	M	CMP	E601:ALL	4	Y	
CON1	WS	LTnbs1	A	WGMG	E502.2:ALL	1	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	1	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	1	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	1	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	2	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	2	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	2	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	3	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	3	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	3	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	4	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	4	Y	
CON1	WS	LTnbs1	M	CMP	E601:ALL	4	Y	
CON2	WS	LTnbs1	A	WGMG	E601:ALL	1	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	1	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	1	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	2	N	Inoperable pump.
CON2	WS	LTnbs1	M	CMP	E601:ALL	2	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	2	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	3	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	3	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	3	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	4	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	4	Y	
CON2	WS	LTnbs1	M	CMP	E601:ALL	4	Y	
W-26R-06	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	2	Y	
W-26R-06	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	4	Y	
W-26R-11	PTMW	Qal-Tnbs1	S	DIS	E601:ALL	2	Y	
W-26R-11	PTMW	Qal-Tnbs1	S	DIS	E601:ALL	4	Y	
W-35A-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-35A-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-35A-02	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-35A-02	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-35A-03	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-35A-03	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-35A-04	PTMW	Qt-Tnsc1	A	WGMG	E502.2:ALL	4	Y	
W-35A-04	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-35A-04	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-35A-05	PTMW	UTnbs1	S	CMP	E601:ALL	2	Y	
W-35A-05	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-35A-06	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-35A-06	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	N	Inoperable pump.
W-35A-07	PTMW	LTnbs1	S	CMP	E601:ALL	2	Y	
W-35A-07	PTMW	LTnbs1	S	CMP	E601:ALL	4	Y	
W-35A-08	GW	Qt-Tnsc1	Q	CMP	E601:ALL	1	Y	
W-35A-08	GW	Qt-Tnsc1	Q	CMP	E601:ALL	2	Y	
W-35A-08	GW	Qt-Tnsc1	Q	CMP	E601:ALL	3	Y	
W-35A-08	GW	Qt-Tnsc1	Q	CMP	E601:ALL	4	Y	
W-35A-09	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-35A-09	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-35A-10	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	

Table 2.1-4. General Services Area Operable Unit ground water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-35A-10	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-35A-11	PTMW	LTnbs1	S	CMP	E601:ALL	2	N	Inoperable pump.
W-35A-11	PTMW	LTnbs1	S	CMP	E601:ALL	4	Y	
W-35A-12	PTMW	UTnbs1	S	CMP	E601:ALL	2	Y	
W-35A-12	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-35A-13	PTMW	UTnbs1	S	CMP	E601:ALL	2	Y	
W-35A-13	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-35A-14	GW	Qt-Tnsc1	Q	CMP	E601:ALL	1	Y	
W-35A-14	GW	Qt-Tnsc1	Q	CMP	E601:ALL	2	Y	
W-35A-14	GW	Qt-Tnsc1	Q	CMP	E601:ALL	3	Y	
W-35A-14	GW	Qt-Tnsc1	Q	CMP	E601:ALL	4	Y	
W-7A	PTMW	UTnbs1	S	CMP	E601:ALL	2	N	Inoperable pump.
W-7A	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-7B	PTMW	UTnbs1	S	CMP	E601:ALL	2	Y	
W-7B	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-7C	PTMW	UTnbs1	S	CMP	E601:ALL	2	N	Inoperable pump.
W-7C	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-7DS	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	2	Y	
W-7DS	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	4	Y	
W-7E	PTMW	UTnbs1	S	CMP	E601:ALL	2	Y	
W-7E	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-7ES	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-7ES	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-7F	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-7F	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-7G	PTMW	LTnbs1	S	CMP	E601:ALL	2	Y	
W-7G	PTMW	LTnbs1	S	CMP	E601:ALL	4	Y	
W-7H	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-7H	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-7I	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	Y	
W-7I	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	Y	
W-7I	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	Y	
W-7I	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	Y	
W-7J	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-7J	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-7K	PTMW	LTnbs1	S	CMP	E601:ALL	2	Y	
W-7K	PTMW	LTnbs1	S	CMP	E601:ALL	4	Y	
W-7L	PTMW	UTnbs1	S	CMP	E601:ALL	2	Y	
W-7L	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-7M	PTMW	LTnbs1	S	CMP	E601:ALL	2	Y	
W-7M	PTMW	LTnbs1	S	CMP	E601:ALL	4	Y	
W-7N	PTMW	UTnbs1	S	CMP	E601:ALL	2	Y	
W-7N	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-7O	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	Y	
W-7O	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	Y	
W-7O	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	Y	
W-7O	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	Y	
W-7P	EW	Qal-Tnbs1	S	DIS-TF	E601:ALL	1	Y	
W-7P	EW	Qal-Tnbs1	S	CMP-TF	E601:ALL	2	N	Insufficient water.
W-7P	EW	Qal-Tnbs1	S	DIS-TF	E601:ALL	3	Y	
W-7P	EW	Qal-Tnbs1	S	CMP-TF	E601:ALL	4	N	Pump not running at time of measurement.
W-7PS	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	2	N	Dry.
W-7PS	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	4	N	Dry.
W-7Q	PTMW	Qt-Tnsc1	S	DIS	E601:ALL	2	Y	
W-7Q	PTMW	Qt-Tnsc1	S	DIS	E601:ALL	4	Y	
W-7R	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	Y	
W-7R	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	Y	
W-7R	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	Y	
W-7R	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	Y	
W-7S	PTMW	Qt-Tnsc1	S	DIS	E601:ALL	2	Y	
W-7S	PTMW	Qt-Tnsc1	S	DIS	E601:ALL	4	Y	
W-7T	PTMW	Qt-Tnsc1	S	DIS	E601:ALL	2	Y	
W-7T	PTMW	Qt-Tnsc1	S	DIS	E601:ALL	4	Y	

Table 2.1-4. General Services Area Operable Unit ground water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-843-01	PTMW	LTnbs1	S	CMP	E601:ALL	2	Y	
W-843-01	PTMW	LTnbs1	S	CMP	E601:ALL	4	Y	
W-843-02	PTMW	UTnbs1	S	CMP	E601:ALL	2	Y	
W-843-02	PTMW	UTnbs1	S	CMP	E601:ALL	4	Y	
W-872-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	N	Dry.
W-872-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	N	Dry.
W-872-02	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	Y	
W-872-02	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	Y	
W-872-02	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	Y	
W-872-02	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	Y	
W-873-01	PTMW	LTnbs1	S	CMP	E601:ALL	2	Y	
W-873-01	PTMW	LTnbs1	S	CMP	E601:ALL	4	Y	
W-873-02	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-873-02	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-873-03	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-873-03	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-873-04	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-873-04	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-873-06	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-873-06	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-873-07	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	Y	
W-873-07	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	Y	
W-873-07	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	Y	
W-873-07	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	Y	
W-875-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-875-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-875-02	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-875-02	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-875-03	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-875-03	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-875-04	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-875-04	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-875-05	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-875-05	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-875-06	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-875-06	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-875-07	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	N	Insufficient water.
W-875-07	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	N	Insufficient water.
W-875-07	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	N	Dry.
W-875-07	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	N	Insufficient water.
W-875-08	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	Y	
W-875-08	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	Y	
W-875-08	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	Y	
W-875-08	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	Y	
W-875-09	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	N	Insufficient water.
W-875-09	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	N	Dry.
W-875-09	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	N	Dry.
W-875-09	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	N	Dry.
W-875-10	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	N	Insufficient water.
W-875-10	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	N	Dry.
W-875-10	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	N	Dry.
W-875-10	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	N	Dry.
W-875-11	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	N	Insufficient water.
W-875-11	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	N	Dry.
W-875-11	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	N	Dry.
W-875-11	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	N	Dry.
W-875-15	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	1	N	Insufficient water.
W-875-15	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	2	N	Dry.
W-875-15	EW	Qt-Tnsc1	S	DIS-TF	E601:ALL	3	N	Dry.
W-875-15	EW	Qt-Tnsc1	S	CMP-TF	E601:ALL	4	N	Dry.
W-876-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-876-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-879-01	PTMW	Qt-Tnsc1	S	DIS	AS:UISO	4	Y	
W-879-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	

Table 2.1-4. General Services Area Operable Unit ground water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-879-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-879-01	PTMW	Qt-Tnsc1	S	DIS	GENMIN:ALL	4	Y	
W-889-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-889-01	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-CGSA-1732	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	N	Insufficient water.
W-CGSA-1732	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-CGSA-1733	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	N	Insufficient water.
W-CGSA-1733	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	N	Dry.
W-CGSA-1735	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	2	N	Dry.
W-CGSA-1735	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	4	N	Dry.
W-CGSA-1736	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	2	Y	
W-CGSA-1736	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	4	Y	
W-CGSA-1737	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	2	Y	
W-CGSA-1737	PTMW	Qal-Tnbs1	S	CMP	E601:ALL	4	Y	
W-CGSA-1739	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-CGSA-1739	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	
W-CGSA-2708	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	2	Y	
W-CGSA-2708	PTMW	Qt-Tnsc1	S	CMP	E601:ALL	4	Y	

Notes:

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

Table 2.1-5. Central General Services Area (CGSA) mass removed, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
CGSA	July	82	26	NA	NA	NA	NA
	August	67	22	NA	NA	NA	NA
	September	67	24	NA	NA	NA	NA
	October	64	21	NA	NA	NA	NA
	November	58	17	NA	NA	NA	NA
	December	50	5.5	NA	NA	NA	NA
Total		390	120	NA	NA	NA	NA

Table 2.2-1. Building 834 (834) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
834	July	887	887	6,635	13,499
	August	624	625	4,734	10,195
	September	840	840	6,430	13,382
	October	581	700	4,534	8,621
	November	624	624	4,914	9,286
	December	168	168	1,345	2,664
Total		3,724	3,844	28,592	57,647

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

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
834-I	7/1/13	1,700 D	11 D	210 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
834-I	10/15/13	2,500 D	20 D	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
834-E	7/1/13	<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	<0.5
834-E	8/5/13	<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	<0.5
834-E	9/3/13	<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	<0.5
834-E	10/15/13	<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	<0.5
834-E	11/4/13	<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	<0.5
834-E	12/2/13	<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	<0.5

Notes:

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

Table 2.2-2 (Cont.). Analyte detected but not reported in main table.

Location	Date	Detection frequency	1,2-DCE (total) (µg/L)
834-I	7/1/13	1 of 18	210 D
834-I	10/15/13	1 of 18	110 D
834-E	7/1/13	0 of 18	–
834-E	8/5/13	0 of 18	–
834-E	9/3/13	0 of 18	–
834-E	10/15/13	0 of 18	–
834-E	11/4/13	0 of 18	–
834-E	12/2/13	0 of 18	–

Notes:

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

Table 2.2-3. Building 834 Operable Unit diesel range organic compounds in ground water extraction and treatment system influent and effluent.

Location	Date	Diesel Range Organics (C12-C24) (µg/L)
834-I	7/1/13	<200
834-I	10/15/13	<200
834-E	7/1/13	<200
834-E	8/5/13	<200
834-E	9/3/13	<200
834-E	10/15/13	<200
834-E	11/4/13	<200
834-E	12/2/13	<200

Notes:

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

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

Location	Date	TBOS (µg/L)
834-I	7/1/13	<10
834-I	10/15/13	<10
834-E	7/1/13	<10
834-E	8/5/13	<10
834-E	9/3/13	<10
834-E	10/15/13	<10
834-E	11/4/13	<10
834-E	12/2/13	<10

Notes:

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

Table 2.2-5. Building 834 Operable Unit treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
834 GWTS			
Influent Port	**834-I**	**VOCs**	**Quarterly**
		TBOS/TKEBS	**Quarterly**
		Diesel	**Quarterly**
		pH	**Quarterly**
Effluent Port	**834-E**	**VOCs**	**Monthly**
		TBOS/TKEBS	**Monthly**
		Diesel	**Monthly**
		pH	**Monthly**
834 SVTS			
Influent Port	**834-VI**	**No Monitoring Requirements**	
Effluent Port	**834-VE**	**VOCs**	**Weekly**[a]
Intermediate GAC	**834-VCF4I**	**VOCs**	**Weekly**[a]

Notes:

[a] **Weekly monitoring for VOCs will consist of the use of a flame-ionization detector, photo-ionization detector, or other District-approved VOC detection device.**

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

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

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-1709	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1709	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-1709	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-1709	PTMW	Tpsg	A	CMP	TBOS:ALL	1	Y	
W-834-1711	PTMW	Tps-Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-1711	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	1	Y	
W-834-1711	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	3	Y	
W-834-1711	PTMW	Tps-Tnsc2	A	CMP	TBOS:ALL	1	N	Insufficient water. Only partial sample event collected.
W-834-1824	PTMW	Tpsg	A	DIS	E200.7:FE	1	Y	
W-834-1824	PTMW	Tpsg	A	DIS	E200.8:MN	1	Y	
W-834-1824	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1824	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-1824	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-1824	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-1825	PTMW	Tpsg	A	DIS	E200.7:FE	1	Y	
W-834-1825	PTMW	Tpsg	A	DIS	E200.8:MN	1	Y	
W-834-1825	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1825	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-1825	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-1825	PTMW	Tpsg	O	CMP	TBOS:ALL	1	Y	
W-834-1833	PTMW	Tpsg	A	DIS	E200.7:FE	1	Y	
W-834-1833	PTMW	Tpsg	A	DIS	E200.8:MN	1	Y	
W-834-1833	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1833	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-1833	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-1833	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-2001	EW	Tps-Tnsc2	A	CMP-TF	E300.0:NO3	1	Y	
W-834-2001	EW	Tps-Tnsc2	S	CMP-TF	E601:ALL	1	Y	
W-834-2001	EW	Tps-Tnsc2	S	CMP-TF	E601:ALL	3	Y	
W-834-2001	EW	Tps-Tnsc2	S	DIS-TF	E624:ALL	2	Y	
W-834-2001	EW	Tps-Tnsc2	S	DIS-TF	E624:ALL	4	Y	
W-834-2001	EW	Tps-Tnsc2	S	DIS-TF	EM8015:DIESEL	1	Y	
W-834-2001	EW	Tps-Tnsc2	S	DIS-TF	EM8015:DIESEL	3	Y	
W-834-2001	EW	Tps-Tnsc2	A	CMP-TF	TBOS:ALL	1	Y	
W-834-2001	EW	Tps-Tnsc2	A	DIS-TF	TBOS:ALL	3	Y	
W-834-2113	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2113	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-2113	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-2113	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-2117	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2117	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-2117	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-2117	PTMW	Tpsg	O	CMP	TBOS:ALL	1	Y	
W-834-2118	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2118	PTMW	Tpsg	S	DIS	E300.0:PERC	1	Y	
W-834-2118	PTMW	Tpsg	S	DIS	E300.0:PERC	3	Y	
W-834-2118	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-2118	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-2118	PTMW	Tpsg	O	CMP	TBOS:ALL	1	Y	
W-834-2119	PTMW	Tps-Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-2119	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	1	Y	
W-834-2119	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	3	Y	
W-834-2119	PTMW	Tps-Tnsc2	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-A1	PTMW	Tps-Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-A1	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	1	Y	
W-834-A1	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	3	Y	
W-834-A1	PTMW	Tps-Tnsc2	A	CMP	TBOS:ALL	1	Y	
W-834-A2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-A2	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Insufficient water.
W-834-A2	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-A2	PTMW	Tpsg	A	CMP	TBOS:ALL	1	N	Insufficient water.
W-834-B2	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-B2	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
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	Y	
W-834-B4	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-B4	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-B4	PTMW	Tpsg	A	CMP	TBOS:ALL	1	Y	
W-834-C2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-C2	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Insufficient water.
W-834-C2	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-C2	PTMW	Tpsg	A	CMP	TBOS:ALL	1	N	Insufficient water.
W-834-C4	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-C4	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-C4	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-C4	PTMW	Tpsg	A	CMP	TBOS:ALL	1	Y	
W-834-C5	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-C5	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-C5	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-C5	PTMW	Tpsg	A	CMP	TBOS:ALL	1	Y	
W-834-D2	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D2	PTMW	LTnbs1	A	CMP	E601:ALL	1	N	Dry.
W-834-D2	PTMW	LTnbs1	A	CMP	TBOS:ALL	1	N	Dry.
W-834-D3	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D3	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-D3	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-D3	PTMW	Tpsg	A	CMP	TBOS:ALL	1	Y	
W-834-D4	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-D4	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
W-834-D4	EW	Tpsg	S	DIS-TF	E601:ALL	2	Y	
W-834-D4	EW	Tpsg	S	CMP-TF	E601:ALL	3	Y	
W-834-D4	EW	Tpsg	S	DIS-TF	E601:ALL	4	Y	
W-834-D4	EW	Tpsg	A	CMP-TF	TBOS:ALL	1	Y	
W-834-D4	EW	Tpsg	A	DIS-TF	TBOS:ALL	3	Y	
W-834-D5	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-D5	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
W-834-D5	EW	Tpsg	S	CMP-TF	E601:ALL	3	Y	
W-834-D5	EW	Tpsg	A	CMP-TF	TBOS:ALL	1	Y	
W-834-D6	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-D6	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
W-834-D6	EW	Tpsg	S	DIS-TF	E601:ALL	2	Y	
W-834-D6	EW	Tpsg	S	CMP-TF	E601:ALL	3	Y	
W-834-D6	EW	Tpsg	S	DIS-TF	E601:ALL	4	Y	
W-834-D6	EW	Tpsg	A	CMP-TF	TBOS:ALL	1	Y	
W-834-D6	EW	Tpsg	A	DIS-TF	TBOS:ALL	3	Y	
W-834-D7	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-D7	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
W-834-D7	EW	Tpsg	S	DIS-TF	E601:ALL	2	Y	
W-834-D7	EW	Tpsg	S	CMP-TF	E601:ALL	3	Y	
W-834-D7	EW	Tpsg	S	DIS-TF	E601:ALL	4	Y	
W-834-D7	EW	Tpsg	A	CMP-TF	TBOS:ALL	1	Y	
W-834-D7	EW	Tpsg	A	DIS-TF	TBOS:ALL	3	Y	
W-834-D9A	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D9A	PTMW	Tnbs2	A	CMP	E601:ALL	1	N	Dry.
W-834-D9A	PTMW	Tnbs2	A	CMP	TBOS:ALL	1	N	Dry.
W-834-D10	PTMW	Tps-Tnsc2	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D10	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	1	N	Dry.

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-D10	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	3	N	Dry.
W-834-D10	PTMW	Tps-Tnsc2	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	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	Y	
W-834-D15	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-D15	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-D15	PTMW	Tpsg	A	CMP	TBOS:ALL	1	Y	
W-834-D16	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D16	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-D16	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-D16	PTMW	Tpsg	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	A	CMP	TBOS:ALL	1	N	Dry.
W-834-D18	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-D18	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Insufficient water.
W-834-D18	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-D18	PTMW	Tpsg	A	CMP	TBOS:ALL	1	N	Insufficient water.
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	N	Dry.
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-J1	EW	Tpsg	A	DIS-TF	TBOS:ALL	3	Y	
W-834-J2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-J2	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-J2	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-J2	PTMW	Tpsg	A	CMP	TBOS:ALL	1	Y	
W-834-J3	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-J3	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-J3	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-J3	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	Dry.
W-834-K1A	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-K1A	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-K1A	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-K1A	PTMW	Tpsg	A	CMP	TBOS:ALL	1	N	Dry.
W-834-M1	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-M1	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-M1	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-M1	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-M2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-M2	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-M2	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-M2	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-S1	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	
W-834-S1	EW	Tpsg	S	CMP-TF	E601:ALL	1	Y	
W-834-S1	EW	Tpsg	S	DIS-TF	E601:ALL	2	Y	
W-834-S1	EW	Tpsg	S	CMP-TF	E601:ALL	3	Y	
W-834-S1	EW	Tpsg	S	DIS-TF	E601:ALL	4	Y	
W-834-S1	EW	Tpsg	A	CMP-TF	TBOS:ALL	1	Y	
W-834-S1	EW	Tpsg	A	DIS-TF	TBOS:ALL	3	Y	
W-834-S10	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-S10	PTMW	Tpsg	S	CMP	E624:ALL	1	N	Dry.
W-834-S10	PTMW	Tpsg	S	CMP	E624:ALL	3	N	Dry.
W-834-S10	PTMW	Tpsg	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-S12A	EW	Tpsg	A	DIS-TF	TBOS:ALL	3	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-S13	EW	Tpsg	A	DIS-TF	TBOS:ALL	3	Y	
W-834-S4	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-S4	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-S4	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-S4	PTMW	Tpsg	O	CMP	TBOS:ALL	1	Y	
W-834-S5	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-S5	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-S5	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-S5	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	Dry.
W-834-S6	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-S6	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Insufficient water.
W-834-S6	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Insufficient water.
W-834-S6	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-S7	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-S7	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-S7	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-S7	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-S8	PTMW	Tps-Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-S8	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	1	Y	
W-834-S8	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	3	N	Insufficient water.
W-834-S8	PTMW	Tps-Tnsc2	O	DIS	EM8015:DRANGE	1	Y	
W-834-S8	PTMW	Tps-Tnsc2	O	CMP	TBOS:ALL	1	Y	
W-834-S9	PTMW	Tps-Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-S9	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	1	Y	
W-834-S9	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	3	Y	
W-834-S9	PTMW	Tps-Tnsc2	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-T1	GW	LTnbs1	S	CMP	E300.0:NO3	1	Y	
W-834-T1	GW	LTnbs1	S	CMP	E300.0:NO3	3	Y	
W-834-T1	GW	LTnbs1	Q	CMP	E601:ALL	1	Y	
W-834-T1	GW	LTnbs1	Q	CMP	E601:ALL	2	Y	
W-834-T1	GW	LTnbs1	Q	CMP	E601:ALL	3	Y	
W-834-T1	GW	LTnbs1	Q	CMP	E601:ALL	4	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-T1	GW	LTnbs1	S	CMP	TBOS:ALL	1	Y	
W-834-T1	GW	LTnbs1	S	CMP	TBOS:ALL	3	Y	
W-834-T11	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T11	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-T11	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-T11	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-T2	PTMW	Tpsg	A	DIS	E200.7:FE	1	Y	
W-834-T2	PTMW	Tpsg	A	DIS	E200.8:MN	1	Y	
W-834-T2	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T2	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-T2	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-T2	PTMW	Tpsg	O	CMP	TBOS:ALL	1	Y	
W-834-T2A	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T2A	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-T2A	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-T2A	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-T2B	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T2B	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-T2B	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-T2B	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	Dry.
W-834-T2C	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T2C	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-T2C	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-T2C	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-T2D	PTMW	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T2D	PTMW	Tpsg	S	CMP	E601:ALL	1	Y	
W-834-T2D	PTMW	Tpsg	S	CMP	E601:ALL	3	Y	
W-834-T2D	PTMW	Tpsg	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-T3	GW	LTnbs1	S	CMP	E300.0:NO3	1	Y	
W-834-T3	GW	LTnbs1	S	CMP	E300.0:NO3	3	Y	
W-834-T3	GW	LTnbs1	Q	CMP	E601:ALL	1	Y	
W-834-T3	GW	LTnbs1	Q	CMP	E601:ALL	2	Y	
W-834-T3	GW	LTnbs1	Q	CMP	E601:ALL	3	Y	
W-834-T3	GW	LTnbs1	Q	CMP	E601:ALL	4	Y	
W-834-T3	GW	LTnbs1	S	CMP	TBOS:ALL	1	Y	
W-834-T3	GW	LTnbs1	S	CMP	TBOS:ALL	3	Y	
W-834-T5	PTMW	Tps-Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-T5	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	1	Y	
W-834-T5	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	3	Y	
W-834-T5	PTMW	Tps-Tnsc2	E	CMP	TBOS:ALL	1	N	To be sampled in 2014.
W-834-T7A	PTMW	Tps-Tnsc2	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T7A	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	1	N	Dry.
W-834-T7A	PTMW	Tps-Tnsc2	S	CMP	E601:ALL	3	N	Dry.
W-834-T7A	PTMW	Tps-Tnsc2	O	CMP	TBOS:ALL	1	N	Dry.
W-834-T8A	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T8A	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-T8A	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-T8A	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	Dry.
W-834-T9	PTMW	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T9	PTMW	Tpsg	S	CMP	E601:ALL	1	N	Dry.
W-834-T9	PTMW	Tpsg	S	CMP	E601:ALL	3	N	Dry.
W-834-T9	PTMW	Tpsg	O	CMP	TBOS:ALL	1	N	Dry.
W-834-U1	PTMW	Tps-Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-U1	PTMW	Tps-Tnsc2	S	CMP	E624:ALL	1	Y	
W-834-U1	PTMW	Tps-Tnsc2	S	CMP	E624:ALL	3	Y	
W-834-U1	PTMW	Tps-Tnsc2	A	DIS	EM8015:DIESEL	1	Y	
W-834-U1	PTMW	Tps-Tnsc2	A	CMP	TBOS:ALL	1	Y	

Table 2.2-7. Building 834 (834) mass removed, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
834	July	910	63	NA	3.9	NA	0.33
	August	640	46	NA	2.9	NA	0.26
	September	880	58	NA	4.0	NA	0.39
	October	620	37	NA	2.7	NA	0.25
	November	920	38	NA	3.0	NA	0.26
	December	250	10	NA	0.92	NA	0.089
Total		4,200	250	NA	17	NA	1.6

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
BC6-10	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
BC6-10	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
BC6-10	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	
BC6-10	PTMW	LTnbs1	S	CMP	E601:ALL	3	Y	
BC6-10	PTMW	LTnbs1	S	CMP	E906:ALL	1	Y	
BC6-10	PTMW	LTnbs1	S	CMP	E906:ALL	3	Y	
BC6-13	PTMW	Qt-Tnbs1	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
BC6-13	PTMW	Qt-Tnbs1	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
BC6-13	PTMW	Qt-Tnbs1	E	CMP	E601:ALL	1	N	To be sampled in 2014.
BC6-13	PTMW	Qt-Tnbs1	E	CMP	E906:ALL	1	N	To be sampled in 2014.
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E624:ALL	1	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E624:ALL	2	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E624:ALL	3	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E624:ALL	4	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E8330:R+H	1	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E8330:R+H	2	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E8330:R+H	3	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E8330:R+H	4	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E900:ALL	1	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E900:ALL	2	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E900:ALL	3	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	E900:ALL	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW1	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	WGMGMET3:ALL	1	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	WGMGMET3:ALL	2	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	WGMGMET3:ALL	3	Y	
CARNRW1	WS	Qt-Tnbs1	Q	WGMG	WGMGMET3:ALL	4	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	AS:UISO	1	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	AS:UISO	2	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	AS:UISO	3	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	AS:UISO	4	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	N	Unit Off
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	N	Unit Off
CARNRW2	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E502.2:ALL	1	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E502.2:ALL	2	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E502.2:ALL	3	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E502.2:ALL	4	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	N	Unit Off
CARNRW2	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E8330:R+H	1	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E8330:R+H	2	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E8330:R+H	3	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E8330:R+H	4	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E900:ALL	1	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E900:ALL	2	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E900:ALL	3	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	E900:ALL	4	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	N	Unit Off
CARNRW2	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	WGMGMET3:ALL	1	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	WGMGMET3:ALL	2	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	WGMGMET3:ALL	3	Y	
CARNRW2	WS	Qt-Tnbs1	Q	WGMG	WGMGMET3:ALL	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW3	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:NO3	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E300.0:PERC	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E601:ALL	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	1	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	2	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	3	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
CARNRW4	WS	Qt-Tnbs1	M	CMP	E906:ALL	4	Y	
EP6-06	DMW	LTnbs1	A	WGMG	AS:UISO	1	Y	
EP6-06	DMW	LTnbs1	A	WGMG	E160.1:ALL	1	Y	
EP6-06	DMW	LTnbs1	A	WGMG	E300.0:NO3	1	Y	
EP6-06	DMW	LTnbs1	A	WGMG	E300.0:PERC	1	Y	
EP6-06	DMW	LTnbs1	S	WGMG	E8260:ALL	1	Y	
EP6-06	DMW	LTnbs1	S	WGMG	E8260:ALL	3	Y	
EP6-06	DMW	LTnbs1	A	WGMG	E900:ALL	1	Y	
EP6-06	DMW	LTnbs1	S	WGMG	E906:ALL	1	Y	
EP6-06	DMW	LTnbs1	S	WGMG	E906:ALL	3	Y	
EP6-06	DMW	LTnbs1	A	WGMG	METROSURV:ALL	1	Y	
EP6-07	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
EP6-07	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
EP6-07	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	
EP6-07	PTMW	LTnbs1	S	CMP	E601:ALL	3	Y	
EP6-07	PTMW	LTnbs1	S	CMP	E906:ALL	1	Y	
EP6-07	PTMW	LTnbs1	S	CMP	E906:ALL	3	Y	
EP6-08	DMW	Qt-Tnbs1	A	WGMG	AS:UISO	1	N	Dry.
EP6-08	DMW	Qt-Tnbs1	A	WGMG	E160.1:ALL	1	N	Dry.
EP6-08	DMW	Qt-Tnbs1	A	WGMG	E300.0:NO3	1	N	Dry.
EP6-08	DMW	Qt-Tnbs1	A	WGMG	E300.0:PERC	1	N	Dry.
EP6-08	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	1	N	Dry.
EP6-08	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	3	N	Dry.

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
EP6-08	DMW	Qt-Tnbs1	A	WGMG	E900:ALL	1	N	Dry.
EP6-08	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	1	N	Dry.
EP6-08	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	3	N	Dry.
EP6-08	DMW	Qt-Tnbs1	A	WGMG	METROSURV:ALL	1	N	Dry.
EP6-09	DMW	Qt-Tnbs1	A	WGMG	AS:UISO	1	Y	
EP6-09	DMW	Qt-Tnbs1	A	WGMG	E160.1:ALL	1	Y	
EP6-09	DMW	Qt-Tnbs1	A	WGMG	E300.0:NO3	1	Y	
EP6-09	DMW	Qt-Tnbs1	A	WGMG	E300.0:PERC	1	Y	
EP6-09	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	1	Y	
EP6-09	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	3	Y	
EP6-09	DMW	Qt-Tnbs1	A	WGMG	E900:ALL	1	Y	
EP6-09	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	1	Y	
EP6-09	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	3	Y	
EP6-09	DMW	Qt-Tnbs1	A	WGMG	METROSURV:ALL	1	Y	
K6-01	DMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-01	DMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-01	DMW	Qt-Tnbs1	S	CMP	E601:ALL	1	Y	
K6-01	DMW	Qt-Tnbs1	S	CMP	E601:ALL	3	Y	
K6-01	DMW	Qt-Tnbs1	S	CMP	E906:ALL	1	Y	
K6-01	DMW	Qt-Tnbs1	S	CMP	E906:ALL	3	Y	
K6-01S	DMW	Qt-Tnbs1	A	WGMG	AS:UISO	1	Y	
K6-01S	DMW	Qt-Tnbs1	A	WGMG	E160.1:ALL	1	Y	
K6-01S	DMW	Qt-Tnbs1	A	WGMG	E300.0:NO3	1	Y	
K6-01S	DMW	Qt-Tnbs1	A	WGMG	E300.0:PERC	1	Y	
K6-01S	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	1	Y	
K6-01S	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	3	Y	
K6-01S	DMW	Qt-Tnbs1	A	WGMG	E900:ALL	1	Y	
K6-01S	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	1	Y	
K6-01S	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	3	Y	
K6-01S	DMW	Qt-Tnbs1	A	WGMG	METROSURV:ALL	1	Y	
K6-03	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	N	Dry.
K6-03	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	N	Dry.
K6-03	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	N	Dry.
K6-03	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	N	Dry.
K6-03	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	N	Dry.
K6-03	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	N	Dry.
K6-04	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	N	Inoperable pump.
K6-04	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	N	Inoperable pump.
K6-04	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	N	Inoperable pump.
K6-04	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	N	Inoperable pump.
K6-04	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	N	Inoperable pump.
K6-04	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	N	Inoperable pump.
K6-14	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
K6-14	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
K6-14	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	
K6-14	PTMW	LTnbs1	S	CMP	E601:ALL	3	Y	
K6-14	PTMW	LTnbs1	S	CMP	E906:ALL	1	Y	
K6-14	PTMW	LTnbs1	S	CMP	E906:ALL	3	Y	
K6-15	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	N	Dry.
K6-15	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	N	Dry.
K6-15	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	N	Dry.
K6-15	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	N	Dry.
K6-15	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	N	Dry.
K6-15	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	N	Dry.
K6-16	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-16	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-16	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	Y	
K6-16	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	Y	
K6-16	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	Y	
K6-16	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	Y	
K6-17	GW	Qt-Tnbs1	S	CMP	E300.0:NO3	1	Y	
K6-17	GW	Qt-Tnbs1	S	CMP	E300.0:NO3	3	Y	
K6-17	GW	Qt-Tnbs1	S	CMP	E300.0:PERC	1	Y	
K6-17	GW	Qt-Tnbs1	S	CMP	E300.0:PERC	3	Y	
K6-17	GW	Qt-Tnbs1	Q	CMP	E601:ALL	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
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	
K6-17	GW	Qt-Tnbs1	S	WGMG	SM9221:ALL	1	Y	
K6-17	GW	Qt-Tnbs1	S	WGMG	SM9221:ALL	3	Y	
K6-18	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	Y	
K6-18	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-18	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	Y	
K6-18	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	Y	
K6-18	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	Y	
K6-18	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	Y	
K6-19	DMW	Qt-Tnbs1	A	WGMG	AS:UISO	1	Y	
K6-19	DMW	Qt-Tnbs1	A	WGMG	E160.1:ALL	1	Y	
K6-19	DMW	Qt-Tnbs1	A	WGMG	E300.0:NO3	1	Y	
K6-19	DMW	Qt-Tnbs1	A	WGMG	E300.0:PERC	1	Y	
K6-19	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	1	Y	
K6-19	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	3	Y	
K6-19	DMW	Qt-Tnbs1	A	WGMG	E900:ALL	1	Y	
K6-19	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	1	Y	
K6-19	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	3	Y	
K6-19	DMW	Qt-Tnbs1	A	WGMG	METROSURV:ALL	1	Y	
K6-21	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	N	Dry.
K6-21	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	N	Dry.
K6-21	PTMW	LTnbs1	A	CMP	E601:ALL	1	N	Dry.
K6-21	PTMW	LTnbs1	A	CMP	E906:ALL	1	N	Dry.
K6-22	GW	Qt-Tnbs1	S	CMP	E300.0:NO3	1	Y	
K6-22	GW	Qt-Tnbs1	S	CMP	E300.0:NO3	3	Y	
K6-22	GW	Qt-Tnbs1	S	CMP	E300.0:PERC	1	Y	
K6-22	GW	Qt-Tnbs1	S	CMP	E300.0:PERC	3	Y	
K6-22	GW	Qt-Tnbs1	Q	CMP	E601:ALL	1	Y	
K6-22	GW	Qt-Tnbs1	Q	CMP	E601:ALL	2	Y	
K6-22	GW	Qt-Tnbs1	Q	CMP	E601:ALL	3	Y	
K6-22	GW	Qt-Tnbs1	Q	CMP	E601:ALL	4	Y	
K6-22	GW	Qt-Tnbs1	Q	CMP	E906:ALL	1	Y	
K6-22	GW	Qt-Tnbs1	Q	CMP	E906:ALL	2	Y	
K6-22	GW	Qt-Tnbs1	Q	CMP	E906:ALL	3	Y	
K6-22	GW	Qt-Tnbs1	Q	CMP	E906:ALL	4	Y	
K6-23	PTMW	Qt-Tnbs1	S	CMP	E300.0:NO3	1	Y	
K6-23	PTMW	Qt-Tnbs1	S	CMP	E300.0:NO3	3	Y	
K6-23	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	Y	
K6-23	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	Y	
K6-23	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	Y	
K6-23	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	Y	
K6-23	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	Y	
K6-23	PTMW	Qt-Tnbs1	S	WGMG	SM9221:ALL	1	Y	
K6-23	PTMW	Qt-Tnbs1	S	WGMG	SM9221:ALL	3	Y	
K6-24	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	N	Dry.
K6-24	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	N	Dry.
K6-24	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	N	Dry.
K6-24	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	N	Dry.
K6-24	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	N	Dry.
K6-24	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	N	Dry.
K6-25	PTMW	Tmss	A	CMP	E300.0:NO3	1	N	Inoperable pump.
K6-25	PTMW	Tmss	A	CMP	E300.0:PERC	1	N	Inoperable pump.
K6-25	PTMW	Tmss	S	CMP	E601:ALL	1	N	Inoperable pump.
K6-25	PTMW	Tmss	S	CMP	E601:ALL	3	N	Inoperable pump.
K6-25	PTMW	Tmss	S	CMP	E906:ALL	1	N	Inoperable pump.
K6-25	PTMW	Tmss	S	CMP	E906:ALL	3	N	Inoperable pump.
K6-26	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
K6-26	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
K6-26	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K6-26	PTMW	LTnbs1	S	CMP	E601:ALL	3	Y	
K6-26	PTMW	LTnbs1	S	CMP	E906:ALL	1	Y	
K6-26	PTMW	LTnbs1	S	CMP	E906:ALL	3	Y	
K6-27	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
K6-27	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
K6-27	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	
K6-27	PTMW	LTnbs1	S	CMP	E601:ALL	3	Y	
K6-27	PTMW	LTnbs1	S	CMP	E906:ALL	1	Y	
K6-27	PTMW	LTnbs1	S	CMP	E906:ALL	3	Y	
K6-32	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	N	Dry.
K6-32	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	N	Dry.
K6-32	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	N	Dry.
K6-32	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	N	Dry.
K6-32	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	N	Dry.
K6-32	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	N	Dry.
K6-33	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	N	Dry.
K6-33	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	N	Dry.
K6-33	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	N	Dry.
K6-33	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	N	Insufficient water.
K6-33	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	N	Dry.
K6-33	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	N	Insufficient water.
K6-34	GW	LTnbs1	S	CMP	E300.0:NO3	1	Y	
K6-34	GW	LTnbs1	S	CMP	E300.0:NO3	3	Y	
K6-34	GW	LTnbs1	S	CMP	E300.0:PERC	1	Y	
K6-34	GW	LTnbs1	S	CMP	E300.0:PERC	3	Y	
K6-34	GW	LTnbs1	Q	CMP	E601:ALL	1	Y	
K6-34	GW	LTnbs1	Q	CMP	E601:ALL	2	Y	
K6-34	GW	LTnbs1	Q	CMP	E601:ALL	3	Y	
K6-34	GW	LTnbs1	Q	CMP	E601:ALL	4	Y	
K6-34	GW	LTnbs1	Q	CMP	E906:ALL	1	Y	
K6-34	GW	LTnbs1	Q	CMP	E906:ALL	2	Y	
K6-34	GW	LTnbs1	Q	CMP	E906:ALL	3	Y	
K6-34	GW	LTnbs1	Q	CMP	E906:ALL	4	Y	
K6-35	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
K6-35	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
K6-35	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	
K6-35	PTMW	LTnbs1	S	CMP	E601:ALL	3	Y	
K6-35	PTMW	LTnbs1	S	CMP	E906:ALL	1	Y	
K6-35	PTMW	LTnbs1	S	CMP	E906:ALL	3	Y	
K6-36	DMW	Qt-Tnbs1	A	WGMG	AS:UISO	1	N	Dry.
K6-36	DMW	Qt-Tnbs1	A	WGMG	E160.1:ALL	1	N	Dry.
K6-36	DMW	Qt-Tnbs1	A	WGMG	E300.0:NO3	1	N	Dry.
K6-36	DMW	Qt-Tnbs1	A	WGMG	E300.0:PERC	1	N	Dry.
K6-36	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	1	N	Dry.
K6-36	DMW	Qt-Tnbs1	S	WGMG	E8260:ALL	3	N	Dry.
K6-36	DMW	Qt-Tnbs1	A	WGMG	E900:ALL	1	N	Dry.
K6-36	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	1	N	Dry.
K6-36	DMW	Qt-Tnbs1	S	WGMG	E906:ALL	3	N	Dry.
K6-36	DMW	Qt-Tnbs1	A	WGMG	METROSURV:ALL	1	N	Dry.
W-33C-01	PTMW	Tts	A	CMP	E300.0:NO3	1	Y	
W-33C-01	PTMW	Tts	A	CMP	E300.0:PERC	1	Y	
W-33C-01	PTMW	Tts	S	CMP	E601:ALL	1	Y	
W-33C-01	PTMW	Tts	S	CMP	E601:ALL	3	Y	
W-33C-01	PTMW	Tts	S	CMP	E906:ALL	1	Y	
W-33C-01	PTMW	Tts	S	CMP	E906:ALL	3	Y	
SPRING15	SPR	Qt-Tnbs1	O	CMP	E300.0:NO3	1	N	Dry.
SPRING15	SPR	Qt-Tnbs1	O	CMP	E300.0:PERC	1	N	Dry.
SPRING15	SPR	Qt-Tnbs1	O	CMP	E601:ALL	1	N	Dry.
SPRING15	SPR	Qt-Tnbs1	O	CMP	E906:ALL	1	N	Dry.
SPRING15	SPR	Qt-Tnbs1	Q	WGMG	NUTRIENTS:ALL	1	N	Dry.
SPRING15	SPR	Qt-Tnbs1	Q	WGMG	NUTRIENTS:ALL	2	N	Dry.
SPRING15	SPR	Qt-Tnbs1	Q	WGMG	NUTRIENTS:ALL	3	N	Dry.
SPRING15	SPR	Qt-Tnbs1	Q	WGMG	NUTRIENTS:ALL	4	N	Dry.
W-PIT6-1819	GW	Qt-Tnbs1	S	CMP	E300.0:NO3	1	Y	
W-PIT6-1819	GW	Qt-Tnbs1	S	CMP	E300.0:NO3	3	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-PIT6-1819	GW	Qt-Tnbs1	S	CMP	E300.0:PERC	1	Y	
W-PIT6-1819	GW	Qt-Tnbs1	S	CMP	E300.0:PERC	3	Y	
W-PIT6-1819	GW	Qt-Tnbs1	Q	CMP	E601:ALL	1	Y	
W-PIT6-1819	GW	Qt-Tnbs1	Q	CMP	E601:ALL	2	Y	
W-PIT6-1819	GW	Qt-Tnbs1	Q	CMP	E601:ALL	3	Y	
W-PIT6-1819	GW	Qt-Tnbs1	Q	CMP	E601:ALL	4	Y	
W-PIT6-1819	GW	Qt-Tnbs1	Q	CMP	E906:ALL	1	Y	
W-PIT6-1819	GW	Qt-Tnbs1	Q	CMP	E906:ALL	2	Y	
W-PIT6-1819	GW	Qt-Tnbs1	Q	CMP	E906:ALL	3	Y	
W-PIT6-1819	GW	Qt-Tnbs1	Q	CMP	E906:ALL	4	Y	
W-PIT6-2816	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-PIT6-2816	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-PIT6-2816	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	Y	
W-PIT6-2816	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	Y	
W-PIT6-2816	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	Y	
W-PIT6-2816	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	Y	
W-PIT6-2817	PTMW	Qt-Tnbs1	A	CMP	E300.0:NO3	1	Y	
W-PIT6-2817	PTMW	Qt-Tnbs1	A	CMP	E300.0:PERC	1	Y	
W-PIT6-2817	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	1	Y	
W-PIT6-2817	PTMW	Qt-Tnbs1	S	CMP	E601:ALL	3	Y	
W-PIT6-2817	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	1	Y	
W-PIT6-2817	PTMW	Qt-Tnbs1	S	CMP	E906:ALL	3	Y	

Table 2.4-1. Building 815-Source (815-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
815-SRC	July	NA	837	NA	67,056
	August	NA	671	NA	75,900
	September	NA	831	NA	93,733
	October	NA	514	NA	58,915
	November	NA	618	NA	70,694
	December	NA	668	NA	74,146
Total		NA	4,139	NA	440,444

Table 2.4-2. Building 815-Proximal (815-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
815-PRX	July	NA	853	NA	74,891
	August	NA	669	NA	46,350
	September	NA	842	NA	42,442
	October	NA	600	NA	35,619
	November	NA	658	NA	45,269
	December	NA	0	NA	0
Total		NA	3,622	NA	244,571

Table 2.4-3. Building 815-Distal Site Boundary (815-DSB) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
815-DSB	July	NA	838	NA	226,907
	August	NA	695	NA	181,505
	September	NA	768	NA	198,705
	October	NA	706	NA	177,899
	November	NA	625	NA	162,460
	December	NA	839	NA	210,807
Total		NA	4,471	NA	1,158,283

Table 2.4-4. Building 817-Source (817-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
817-SRC	July	NA	26	NA	1,212
	August	NA	24	NA	938
	September	NA	32	NA	1,358
	October	NA	23	NA	1,049
	November	NA	32	NA	1,367
	December	NA	0	NA	0
Total		NA	137	NA	5,924

Table 2.4-5. Building 817-Proximal (817-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
817-PRX	July	NA	296	NA	44,061
	August	NA	674	NA	80,592
	September	NA	843	NA	102,014
	October	NA	521	NA	66,101
	November	NA	827	NA	112,059
	December	NA	678	NA	93,662
Total		NA	3,839	NA	498,489

Table 2.4-6. Building 829-Source (829-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
829-SRC	July	NA	539	NA	233
	August	NA	701	NA	196
	September	NA	505	NA	184
	October	NA	534	NA	187
	November	NA	481	NA	131
	December	NA	168	NA	39
Total		NA	2,928	NA	970

Table 2.4-7. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 815-Distal Site Boundry															
815-DSB-I	**7/8/13**	**5.1**	**<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**
815-DSB-I	**10/9/13**	**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**
815-DSB-E	**7/8/13**	**<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**	**<0.5**
815-DSB-E	**8/5/13**	**<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**	**<0.5**
815-DSB-E	**9/4/13**	**<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**	**<0.5**
815-DSB-E	**10/9/13**	**<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**	**<0.5**
815-DSB-E	**11/4/13**	**<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**	**<0.5**
815-DSB-E	**12/2/13**	**<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**	**<0.5**
Building 815-Proximal															
815-PRX-I	**7/1/13**	**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**
815-PRX-I	**10/9/13**	**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**
815-PRX-E	**7/1/13**	**<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**	**<0.5**
815-PRX-E	**8/12/13**	**<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**	**<0.5**
815-PRX-E	**9/4/13**	**<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**	**<0.5**
815-PRX-E	**10/9/13**	**<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**	**<0.5**
815-PRX-E	**11/4/13**	**<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**	**<0.5**
815-PRX-E	**12/2/13**	**<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**	**<0.5**
Building 815-Source															
815-SRC-I	**7/1/13**	**10**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**0.82**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-SRC-I	**10/15/13**	**11**	**<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**
815-SRC-E	**7/1/13**	**<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**	**<0.5**
815-SRC-E	**8/12/13**	**<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**	**<0.5**
815-SRC-E	**9/4/13**	**<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**	**<0.5**
815-SRC-E	**10/15/13**	**<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**	**<0.5**
815-SRC-E	**11/4/13**	**<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**	**<0.5**
815-SRC-E	**12/2/13**	**<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**	**<0.5**

Table 2.4-7 (Cont.). High Explosives Process Area Operable Unit Volatile Organic Compounds (VOCs) in ground water extraction and treatment system influent and effluent.

Location	Date	TCE (μg/L)	PCE (μg/L)	cis-1,2-DCE (μg/L)	trans-1,2-DCE (μg/L)	Carbon tetra-chloride (μg/L)	Chloro-form (μg/L)	1,1-DCA (μg/L)	1,2-DCA (μg/L)	1,1-DCE (μg/L)	1,1,1-TCA (μg/L)	1,1,2-TCA (μg/L)	Freon 11 (μg/L)	Freon 113 (μg/L)	Vinyl chloride (μg/L)
Building 817-Proximal[a]															
817-PRX-I	7/10/13	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-I	7/22/13	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-I	10/15/13	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
817-PRX-E	7/9/13	<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	<0.5
817-PRX-E	7/10/13	<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	<0.5
817-PRX-E	7/22/13	<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	<0.5
817-PRX-E	8/12/13	<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	<0.5
817-PRX-E	9/4/13	<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	<0.5
817-PRX-E	10/15/13	<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	<0.5
817-PRX-E	11/4/13	<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	<0.5
817-PRX-E	12/2/13	<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	<0.5
Building 817-Source															
817-SRC-I	7/1/13	<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	<0.5
817-SRC-I	10/15/13	<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	<0.5
817-SRC-E	7/1/13	<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	<0.5
817-SRC-E	8/19/13	<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	<0.5
817-SRC-E	9/4/13	<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	<0.5
817-SRC-E	10/15/13	<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	<0.5
817-SRC-E	11/4/13	<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	<0.5
817-SRC-E	12/2/13	<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	<0.5
Building 829-Source[b]															
829-SRC-I	7/8/13	11	<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
829-SRC-I	11/5/13	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
829-SRC-E	7/8/13	<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	<0.5

Notes appear on the following page.

Table 2.4-7 (Cont.). High Explosives Process Area Operable Unit Volatile Organic Compounds (VOCs) in ground water extraction and treatment system influent and effluent.

Notes:

[a] **Extra monitoring conducted due to restart sampling related to effluent perchlorate hit during 1st Semester 2013.**

[b] **Limited monitoring conducted due to removal of GWTS in August 2013.**

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

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

Location	Date	Detection frequency	Chloromethane (µg/L)
Building 815-Distal Site Boundry			
815-DSB-I	7/8/13	0 of 18	–
815-DSB-I	10/9/13	0 of 18	–
815-DSB-E	7/8/13	0 of 18	–
815-DSB-E	8/5/13	0 of 18	–
815-DSB-E	9/4/13	0 of 18	–
815-DSB-E	10/9/13	0 of 18	–
815-DSB-E	11/4/13	0 of 18	–
815-DSB-E	12/2/13	0 of 18	–
Building 815-Proximal			
815-PRX-I	7/1/13	0 of 18	–
815-PRX-I	10/9/13	0 of 18	–
815-PRX-E	7/1/13	0 of 18	–
815-PRX-E	8/12/13	0 of 18	–
815-PRX-E	9/4/13	0 of 18	–
815-PRX-E	10/9/13	0 of 18	–
815-PRX-E	11/4/13	0 of 18	–
815-PRX-E	12/2/13	0 of 18	–
Building 815-Source			
815-SRC-I	7/1/13	0 of 18	–
815-SRC-I	10/15/13	0 of 18	–
815-SRC-E	7/1/13	0 of 18	–
815-SRC-E	8/12/13	0 of 18	–
815-SRC-E	9/4/13	0 of 18	–
815-SRC-E	10/15/13	0 of 18	–
815-SRC-E	11/4/13	0 of 18	–
815-SRC-E	12/2/13	0 of 18	–
Building 817-Proximal[a]			
817-PRX-I	7/10/13	0 of 18	–
817-PRX-I	7/22/13	0 of 18	–
817-PRX-I	10/15/13	0 of 18	–
817-PRX-E	7/9/13	0 of 18	–
817-PRX-E	7/10/13	0 of 18	–
817-PRX-E	7/22/13	0 of 18	–
817-PRX-E	8/12/13	0 of 18	–
817-PRX-E	9/4/13	0 of 18	–
817-PRX-E	10/15/13	0 of 18	–
817-PRX-E	11/4/13	0 of 18	–
817-PRX-E	12/2/13	0 of 18	–

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

Location	Date	Detection frequency	Chloromethane (µg/L)
Building 817-Source			
817-SRC-I	7/1/13	0 of 18	
817-SRC-I	10/15/13	0 of 18	–
817-SRC-E	7/1/13	0 of 18	–
817-SRC-E	8/19/13	0 of 18	–
817-SRC-E	9/4/13	0 of 18	–
817-SRC-E	10/15/13	0 of 18	–
817-SRC-E	11/4/13	0 of 18	–
817-SRC-E	12/2/13	0 of 18	–
Building 829-Source[b]			
829-SRC-I	7/8/13	1 of 18	0.83
829-SRC-I	11/5/13	0 of 18	–
829-SRC-E	7/8/13	0 of 18	–

Notes:

[a] Extra monitoring conducted due to restart sampling related to effluent perchlorate hit during 1st Semester 2013.

[b] Limited monitoring conducted due to removal of GWTS in August 2013.

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

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

Location	Date	Nitrate as NO3 (mg/L)	Perchlorate (mg/L)
Building 815-Distal Site Boundary[a]			
815-DSB-I	7/8/13	<1 D	-
815-DSB-I	10/9/13	<0.5	-
Building 815-Proximal			
815-PRX-I	7/1/13	-	6.8
815-PRX-I	10/9/13	-	5.1
815-PRX-E	7/1/13	-	<4
815-PRX-E	8/12/13	-	<4
815-PRX-E	9/4/13	-	<4
815-PRX-E	10/9/13	-	<4
815-PRX-E	11/4/13	-	<4
815-PRX-E	12/2/13	-	<4
Building 815-Source			
815-SRC-I	7/1/13	-	<4
815-SRC-I	10/15/13	-	<4
815-SRC-E	7/1/13	-	<4
815-SRC-E	8/12/13	-	<4
815-SRC-E	9/4/13	-	<4
815-SRC-E	10/15/13	-	<4
815-SRC-E	11/4/13	-	<4
815-SRC-E	12/2/13	-	<4
Building 817-Proximal[b]			
817-PRX-I	7/10/13	-	22 D
817-PRX-I	7/22/13	-	20
817-PRX-I	10/15/13	-	17
817-PRX-E	7/9/13	-	<4
817-PRX-E	7/10/13	-	<4
817-PRX-E	7/22/13	-	<4
817-PRX-E	8/12/13	-	<4
817-PRX-E	9/4/13	-	<4
817-PRX-E	10/15/13	-	<4
817-PRX-E	11/4/13	-	<4
817-PRX-E	12/2/13	-	<4
Building 817-Source			
817-SRC-I	7/1/13	-	29 D
817-SRC-I	10/15/13	-	29 D
817-SRC-E	7/1/13	-	<4
817-SRC-E	8/19/13	-	<4
817-SRC-E	9/4/13	-	<4
817-SRC-E	10/15/13	-	<4
817-SRC-E	11/4/13	-	<4
817-SRC-E	12/2/13	-	<4
Building 829-Source[c]			
829-SRC-I	7/8/13	63 D	11
829-SRC-I	11/5/13	72 D	12
829-SRC-E	7/8/13	<2.5 D	<4

Notes appear on the following page.

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

Notes:

[a] **No nitrate or perchlorate monitoring required.**

[b] **Extra monitoring conducted due to effluent perchlorate hit during 1st semester.**

[c] **Limited monitoring due to removal of GWTS in August 2013.**

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

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

Location	Date	1,3,5-TNB (µg/L)	1,3-DNB (µg/L)	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)	TNT (µg/L)
Building 815-Distal Site Boundry[a]														
Building 815-Source														
815-SRC-I	7/1/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	7.8	<2	51	<2
815-SRC-I	10/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	5.2	<2	41	<2
815-SRC-E	7/1/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
815-SRC-E	8/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
815-SRC-E	9/4/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	<1	<2
815-SRC-E	10/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
815-SRC-E	11/4/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
815-SRC-E	12/2/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
Building 817-Proximal														
817-PRX-I	7/10/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	6.1	<2
817-PRX-I	7/22/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	7.3	<2
817-PRX-I	10/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	6	<2
817-PRX-E	7/9/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
817-PRX-E	7/10/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
817-PRX-E	7/22/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
817-PRX-E	8/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
817-PRX-E	9/4/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	<1	<2
817-PRX-E	10/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
817-PRX-E	11/4/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
817-PRX-E	12/2/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

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

Location	Date	1,3,5-TNB (µg/L)	1,3-DNB (µg/L)	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)	TNT (µg/L)
Building 817-Source														
817-SRC-I	7/1/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	18	<2	41	<2
817-SRC-I	10/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	10	<2	38	<2
817-SRC-E	7/1/13	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<1 O	<2 O	<1 O	<2 O
817-SRC-E	8/19/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
817-SRC-E	9/4/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	<1	<2
817-SRC-E	10/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
817-SRC-E	11/4/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
817-SRC-E	12/2/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Notes:

[a] **No high explosive compound monitoring required.**

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

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

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

Table 2.4-10 (Con't.). High Explosives Process Area Operable Unit treatment facility sampling and analysis plans.

Sample location	Sample identification	Parameter	Frequency
817-PRX GWTS			
Influent Port	**817-PRX-I**	**VOCs**	**Quarterly**
		HE Compounds	**Quarterly**
		Perchlorate	**Quarterly**
Effluent Port	**817-PRX-E**	**VOCs**	**Monthly**
		HE Compounds	**Monthly**
		Perchlorate	**Monthly**
		pH	**Monthly**
829-SRC GWTS			
Influent Port	**W-829-06-829-SRC-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
Effluent Port[a]	**829-SRC-E**	**NA**	**NA**

Notes:
[a] Effluent monitoring no longer required due to extracted water being treated at 815-SRC GWTS.
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	Hydro unit	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	
GALLO1	WS	Tnbs2	M	CMP	E8330LOW:ALL	4	Y	
GALLO1	WS	Tnbs2	M	CMP	E8330LOW:ALL	4	Y	
GALLO1	WS	Tnbs2	M	CMP	E8330LOW:ALL	4	Y	
SPRING14	SPR	Tpsg-Tps	O	CMP	ANIONS:CL	1	Y	
SPRING14	SPR	Tpsg-Tps	O	CMP	E300.0:NO3	1	Y	
SPRING14	SPR	Tpsg-Tps	O	CMP	E300.0:PERC	1	Y	
SPRING14	SPR	Tpsg-Tps	O	CMP	E601:ALL	1	Y	
SPRING14	SPR	Tpsg-Tps	O	CMP	E8330LOW:ALL	1	Y	
SPRING5	SPR	Tpsg-Tps	A	CMP	E300.0:NO3	1	N	Dry.
SPRING5	SPR	Tpsg-Tps	A	CMP	E300.0:PERC	1	N	Dry.
SPRING5	SPR	Tpsg-Tps	S	CMP	E601:ALL	1	N	Dry.
SPRING5	SPR	Tpsg-Tps	S	CMP	E601:ALL	3	N	Dry.
SPRING5	SPR	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	N	Dry.
W-35B-01	GW	Qal/WBR	S	CMP	E300.0:NO3	1	Y	
W-35B-01	GW	Qal/WBR	S	CMP	E300.0:NO3	3	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-35B-01	GW	Qal/WBR	S	CMP	E300.0:PERC	1	Y	
W-35B-01	GW	Qal/WBR	S	CMP	E300.0:PERC	3	Y	
W-35B-01	GW	Qal/WBR	Q	CMP	E601:ALL	1	Y	
W-35B-01	GW	Qal/WBR	Q	CMP	E601:ALL	2	Y	
W-35B-01	GW	Qal/WBR	Q	CMP	E601:ALL	3	Y	
W-35B-01	GW	Qal/WBR	Q	CMP	E601:ALL	4	Y	
W-35B-01	GW	Qal/WBR	S	CMP	E8330LOW:ALL	1	Y	
W-35B-01	GW	Qal/WBR	S	CMP	E8330LOW:ALL	3	Y	
W-35B-02	GW	Tnbs2	S	CMP	E300.0:NO3	1	Y	
W-35B-02	GW	Tnbs2	S	CMP	E300.0:NO3	3	Y	
W-35B-02	GW	Tnbs2	S	CMP	E300.0:PERC	1	Y	
W-35B-02	GW	Tnbs2	S	CMP	E300.0:PERC	3	Y	
W-35B-02	GW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-35B-02	GW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-35B-02	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
W-35B-02	GW	Tnbs2	Q	CMP	E601:ALL	4	Y	
W-35B-02	GW	Tnbs2	S	CMP	E8330LOW:ALL	1	Y	
W-35B-02	GW	Tnbs2	S	CMP	E8330LOW:ALL	3	Y	
W-35B-03	GW	Tnbs2	S	CMP	E300.0:NO3	1	Y	
W-35B-03	GW	Tnbs2	S	CMP	E300.0:NO3	3	Y	
W-35B-03	GW	Tnbs2	S	CMP	E300.0:PERC	1	Y	
W-35B-03	GW	Tnbs2	S	CMP	E300.0:PERC	3	Y	
W-35B-03	GW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-35B-03	GW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-35B-03	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
W-35B-03	GW	Tnbs2	Q	CMP	E601:ALL	4	Y	
W-35B-03	GW	Tnbs2	S	CMP	E8330LOW:ALL	1	Y	
W-35B-03	GW	Tnbs2	S	CMP	E8330LOW:ALL	3	Y	
W-35B-04	GW	Tnbs2	S	CMP	E300.0:NO3	1	Y	
W-35B-04	GW	Tnbs2	S	CMP	E300.0:NO3	3	Y	
W-35B-04	GW	Tnbs2	S	CMP	E300.0:PERC	1	Y	
W-35B-04	GW	Tnbs2	S	CMP	E300.0:PERC	3	Y	
W-35B-04	GW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-35B-04	GW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-35B-04	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
W-35B-04	GW	Tnbs2	Q	CMP	E601:ALL	4	Y	
W-35B-04	GW	Tnbs2	S	CMP	E8330LOW:ALL	1	Y	
W-35B-04	GW	Tnbs2	S	CMP	E8330LOW:ALL	3	Y	
W-35B-05	GW	Tnbs2	S	CMP	E300.0:NO3	1	Y	
W-35B-05	GW	Tnbs2	S	CMP	E300.0:NO3	3	Y	
W-35B-05	GW	Tnbs2	S	CMP	E300.0:PERC	1	Y	
W-35B-05	GW	Tnbs2	S	CMP	E300.0:PERC	3	Y	
W-35B-05	GW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-35B-05	GW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-35B-05	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
W-35B-05	GW	Tnbs2	Q	CMP	E601:ALL	4	Y	
W-35B-05	GW	Tnbs2	S	CMP	E8330LOW:ALL	1	Y	
W-35B-05	GW	Tnbs2	S	CMP	E8330LOW:ALL	3	Y	
W-35C-01	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-35C-01	PTMW	Tpsg-Tps	O	CMP	E300.0:PERC	1	Y	
W-35C-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-35C-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-35C-01	PTMW	Tpsg-Tps	O	CMP	E8330LOW:ALL	1	Y	
W-35C-02	PTMW	Tnbs1	O	CMP	E300.0:NO3	1	Y	
W-35C-02	PTMW	Tnbs1	O	CMP	E300.0:PERC	1	Y	
W-35C-02	PTMW	Tnbs1	S	CMP	E601:ALL	1	Y	
W-35C-02	PTMW	Tnbs1	S	CMP	E601:ALL	3	Y	
W-35C-02	PTMW	Tnbs1	A	CMP	E8330LOW:ALL	1	Y	
W-35C-04	EW	Tnbs2	O	CMP-TF	E300.0:NO3	1	Y	
W-35C-04	EW	Tnbs2	O	CMP-TF	E300.0:PERC	1	Y	
W-35C-04	EW	Tnbs2	S	CMP-TF	E601:ALL	1	Y	
W-35C-04	EW	Tnbs2	S	DIS-TF	E601:ALL	2	Y	
W-35C-04	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	
W-35C-04	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-35C-04	EW	Tnbs2	O	CMP-TF	E8330LOW:ALL	1	Y	
W-35C-05	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-35C-05	PTMW	Tpsg-Tps	O	CMP	E300.0:PERC	1	Y	
W-35C-05	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-35C-05	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-35C-05	PTMW	Tpsg-Tps	O	CMP	E8330LOW:ALL	1	Y	
W-35C-06	PTMW	Qal/WBR	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-35C-06	PTMW	Qal/WBR	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-35C-06	PTMW	Qal/WBR	S	CMP	E601:ALL	1	N	Inoperable pump.
W-35C-06	PTMW	Qal/WBR	S	CMP	E601:ALL	3	Y	
W-35C-06	PTMW	Qal/WBR	A	CMP	E8330LOW:ALL	1	N	Inoperable pump.
W-35C-06	PTMW	Qal/WBR	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-35C-07	PTMW	Tnsc2	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-35C-07	PTMW	Tnsc2	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-35C-07	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-35C-07	PTMW	Tnsc2	S	CMP	E601:ALL	3	Y	
W-35C-07	PTMW	Tnsc2	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-35C-08	PTMW	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-35C-08	PTMW	Tnsc2	A	CMP	E300.0:PERC	1	Y	
W-35C-08	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-35C-08	PTMW	Tnsc2	S	CMP	E601:ALL	3	Y	
W-35C-08	PTMW	Tnsc2	O	CMP	E8330LOW:ALL	1	Y	
W-4A	PTMW	Tnbs2	Q	DIS	AS:UISO	3	Y	
W-4A	PTMW	Tnbs2	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-4A	PTMW	Tnbs2	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-4A	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-4A	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-4A	PTMW	Tnbs2	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-4A	PTMW	Tnbs2	Q	DIS	E9060:ALL	3	Y	
W-4A	PTMW	Tnbs2	Q	DIS	GENMIN:ALL	3	Y	
W-4AS	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-4AS	PTMW	Tpsg-Tps	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-4AS	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-4AS	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-4AS	PTMW	Tpsg-Tps	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-4B	PTMW	Tnbs2	O	CMP	E300.0:NO3	1	Y	
W-4B	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	Y	
W-4B	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-4B	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-4B	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	Y	
W-4C	GW	Tnsc1b	S	CMP	E300.0:NO3	1	Y	
W-4C	GW	Tnsc1b	S	CMP	E300.0:NO3	3	Y	
W-4C	GW	Tnsc1b	S	CMP	E300.0:PERC	1	Y	
W-4C	GW	Tnsc1b	S	CMP	E300.0:PERC	3	Y	
W-4C	GW	Tnsc1b	Q	CMP	E601:ALL	1	Y	
W-4C	GW	Tnsc1b	Q	CMP	E601:ALL	2	Y	
W-4C	GW	Tnsc1b	Q	CMP	E601:ALL	3	Y	
W-4C	GW	Tnsc1b	Q	CMP	E601:ALL	4	Y	
W-6BD	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-6BD	PTMW	Tpsg-Tps	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-6BD	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-6BD	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-6BD	PTMW	Tpsg-Tps	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-6BS	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	Y	
W-6BS	PTMW	Qal/WBR	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-6BS	PTMW	Qal/WBR	S	CMP	E601:ALL	1	Y	
W-6BS	PTMW	Qal/WBR	S	CMP	E601:ALL	3	Y	
W-6BS	PTMW	Qal/WBR	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-6CD	PTMW	Tnbs2	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-6CD	PTMW	Tnbs2	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-6CD	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-6CD	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-6CD	PTMW	Tnbs2	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-6CI	PTMW	Tnsc2	A	CMP	E300.0:NO3	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-6CI	PTMW	Tnsc2	A	CMP	E300.0:PERC	1	Y	
W-6CI	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-6CI	PTMW	Tnsc2	S	CMP	E601:ALL	3	Y	
W-6CI	PTMW	Tnsc2	A	CMP	E8330LOW:ALL	1	Y	
W-6CS	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-6CS	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	Y	
W-6CS	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-6CS	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-6CS	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	Y	
W-6EI	PTMW	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-6EI	PTMW	Tnsc2	A	CMP	E300.0:PERC	1	Y	
W-6EI	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-6EI	PTMW	Tnsc2	S	CMP	E601:ALL	3	Y	
W-6EI	PTMW	Tnsc2	A	CMP	E8330LOW:ALL	1	Y	
W-6ER	EW	Tnbs2	O	CMP-TF	E300.0:NO3	1	Y	
W-6ER	EW	Tnbs2	O	CMP-TF	E300.0:PERC	1	Y	
W-6ER	EW	Tnbs2	S	CMP-TF	E601:ALL	1	Y	
W-6ER	EW	Tnbs2	S	DIS-TF	E601:ALL	2	Y	
W-6ER	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	
W-6ER	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	
W-6ER	EW	Tnbs2	O	CMP-TF	E8330LOW:ALL	1	Y	
W-6ES	PTMW	Qal/WBR	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-6ES	PTMW	Qal/WBR	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-6ES	PTMW	Qal/WBR	S	CMP	E601:ALL	1	N	Inoperable pump.
W-6ES	PTMW	Qal/WBR	S	CMP	E601:ALL	3	Y	
W-6ES	PTMW	Qal/WBR	A	CMP	E8330LOW:ALL	1	N	Inoperable pump.
W-6ES	PTMW	Qal/WBR	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-6F	PTMW	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-6F	PTMW	Tnsc2	A	CMP	E300.0:PERC	1	Y	
W-6F	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-6F	PTMW	Tnsc2	S	CMP	E601:ALL	3	Y	
W-6F	PTMW	Tnsc2	A	CMP	E8330LOW:ALL	1	Y	
W-6G	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-6G	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-6G	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-6G	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-6G	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-6H	GW	Tnbs2	S	CMP	E300.0:NO3	1	Y	
W-6H	GW	Tnbs2	S	CMP	E300.0:NO3	3	Y	
W-6H	GW	Tnbs2	S	CMP	E300.0:PERC	1	Y	
W-6H	GW	Tnbs2	S	CMP	E300.0:PERC	3	Y	
W-6H	GW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-6H	GW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-6H	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
W-6H	GW	Tnbs2	Q	CMP	E601:ALL	4	Y	
W-6H	GW	Tnbs2	S	CMP	E8330LOW:ALL	1	Y	
W-6H	GW	Tnbs2	S	CMP	E8330LOW:ALL	3	Y	
W-6I	PTMW	Tpsg-Tps	O	CMP	E300.0:NO3	1	Y	
W-6I	PTMW	Tpsg-Tps	O	CMP	E300.0:PERC	1	Y	
W-6I	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-6I	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-6I	PTMW	Tpsg-Tps	O	CMP	E8330LOW:ALL	1	Y	
W-6J	GW	Tnbs2	S	CMP	E300.0:NO3	1	Y	
W-6J	GW	Tnbs2	S	CMP	E300.0:NO3	3	Y	
W-6J	GW	Tnbs2	S	CMP	E300.0:PERC	1	Y	
W-6J	GW	Tnbs2	S	CMP	E300.0:PERC	3	Y	
W-6J	GW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-6J	GW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-6J	GW	Tnbs2	Q	CMP	E601:ALL	3	Y	
W-6J	GW	Tnbs2	Q	CMP	E601:ALL	4	Y	
W-6J	GW	Tnbs2	S	CMP	E8330LOW:ALL	1	Y	
W-6J	GW	Tnbs2	S	CMP	E8330LOW:ALL	3	Y	
W-6K	PTMW	Tnbs2	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-6K	PTMW	Tnbs2	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-6K	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-6K	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-6K	PTMW	Tnbs2	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-6L	PTMW	Tnbs2	O	CMP	E300.0:NO3	1	Y	
W-6L	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	Y	
W-6L	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-6L	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-6L	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	Y	
W-806-06A	PTMW	Tnsc1b	O	CMP	E300.0:NO3	1	N	Inoperable pump.
W-806-06A	PTMW	Tnsc1b	O	CMP	E300.0:PERC	1	N	Inoperable pump.
W-806-06A	PTMW	Tnsc1b	O	CMP	E601:ALL	1	N	Inoperable pump.
W-806-06A	PTMW	Tnsc1b	O	CMP	E8330LOW:ALL	1	N	Inoperable pump.
W-806-07	PTMW	Tnbs2	O	CMP	E300.0:NO3	1	N	Dry.
W-806-07	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	N	Dry.
W-806-07	PTMW	Tnbs2	O	CMP	E601:ALL	1	N	Dry.
W-806-07	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	N	Dry.
W-808-01	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-808-01	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	Y	
W-808-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-808-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-808-01	PTMW	Tpsg-Tps	O	CMP	E8330LOW:ALL	1	Y	
W-808-02	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-808-02	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-808-02	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	N	Dry.
W-808-02	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	N	Dry.
W-808-02	PTMW	Tpsg-Tps	O	CMP	E8330LOW:ALL	1	N	Dry.
W-808-03	PTMW	UTnbs1	A	CMP	E300.0:NO3	1	Y	
W-808-03	PTMW	UTnbs1	A	CMP	E300.0:PERC	1	Y	
W-808-03	PTMW	UTnbs1	S	CMP	E601:ALL	1	Y	
W-808-03	PTMW	UTnbs1	S	CMP	E601:ALL	3	Y	
W-808-03	PTMW	UTnbs1	O	CMP	E8330LOW:ALL	1	Y	
W-809-01	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-809-01	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	Y	
W-809-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-809-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-809-01	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	Y	
W-809-02	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-809-02	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-809-02	PTMW	Tnbs2	A	DIS	E300.0:PERC	3	Y	
W-809-02	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-809-02	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-809-02	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-809-03	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-809-03	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-809-03	PTMW	Tnbs2	A	DIS	E300.0:PERC	3	Y	
W-809-03	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-809-03	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-809-03	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-809-03	PTMW	Tnbs2	A	DIS	E8330LOW:ALL	3	Y	
W-809-04	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-809-04	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	Y	
W-809-04	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-809-04	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-809-04	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	Y	
W-810-01	PTMW	UTnbs1	A	CMP	E300.0:NO3	1	Y	
W-810-01	PTMW	UTnbs1	A	CMP	E300.0:PERC	1	Y	
W-810-01	PTMW	UTnbs1	S	CMP	E601:ALL	1	Y	
W-810-01	PTMW	UTnbs1	S	CMP	E601:ALL	3	Y	
W-810-01	PTMW	UTnbs1	A	CMP	E8330LOW:ALL	1	Y	
W-814-01	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-814-01	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	Y	
W-814-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-814-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-814-01	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-814-02	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-814-02	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-814-02	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-814-02	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-814-02	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-814-03	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-814-03	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-814-03	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	N	Dry.
W-814-03	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	N	Dry.
W-814-03	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	N	Dry.
W-814-04	GW	Tnsc1b	S	CMP	E300.0:NO3	1	Y	
W-814-04	GW	Tnsc1b	S	CMP	E300.0:NO3	3	Y	
W-814-04	GW	Tnsc1b	S	CMP	E300.0:PERC	1	Y	
W-814-04	GW	Tnsc1b	S	CMP	E300.0:PERC	3	Y	
W-814-04	GW	Tnsc1b	Q	CMP	E601:ALL	1	Y	
W-814-04	GW	Tnsc1b	Q	CMP	E601:ALL	2	Y	
W-814-04	GW	Tnsc1b	Q	CMP	E601:ALL	3	Y	
W-814-04	GW	Tnsc1b	Q	CMP	E601:ALL	4	N	Insufficient water.
W-814-2138	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-814-2138	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	Y	
W-814-2138	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-814-2138	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-814-2138	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	Y	
W-815-01	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-01	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	N	Dry.
W-815-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	N	Dry.
W-815-01	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	N	Dry.
W-815-02	EW	Tnbs2	A	CMP-TF	E300.0:NO3	1	Y	
W-815-02	EW	Tnbs2	A	CMP-TF	E300.0:PERC	1	Y	
W-815-02	EW	Tnbs2	A	DIS-TF	E300.0:PERC	3	Y	
W-815-02	EW	Tnbs2	S	CMP-TF	E601:ALL	1	Y	
W-815-02	EW	Tnbs2	S	DIS-TF	E601:ALL	2	Y	
W-815-02	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	
W-815-02	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	
W-815-02	EW	Tnbs2	A	CMP-TF	E8330LOW:ALL	1	Y	
W-815-02	EW	Tnbs2	A	DIS-TF	E8330LOW:ALL	3	Y	
W-815-03	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-03	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-03	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	N	Dry.
W-815-03	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	N	Dry.
W-815-03	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	N	Dry.
W-815-04	EW	Tnbs2	A	CMP-TF	E300.0:NO3	1	Y	
W-815-04	EW	Tnbs2	A	CMP-TF	E300.0:PERC	1	Y	
W-815-04	EW	Tnbs2	A	DIS-TF	E300.0:PERC	3	Y	
W-815-04	EW	Tnbs2	S	CMP-TF	E601:ALL	1	Y	
W-815-04	EW	Tnbs2	S	DIS-TF	E601:ALL	2	Y	
W-815-04	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	
W-815-04	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	
W-815-04	EW	Tnbs2	A	CMP-TF	E8330LOW:ALL	1	Y	
W-815-04	EW	Tnbs2	A	DIS-TF	E8330LOW:ALL	3	Y	
W-815-05	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	N	Unsafe conditions/erosion near well.
W-815-05	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	N	Unsafe conditions. Erosion near well.
W-815-05	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	N	Unsafe conditions. Erosion near well.
W-815-05	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	N	Unsafe conditions. Erosion near well.
W-815-05	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	N	Unsafe conditions. Erosion near well.
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	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-815-06	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-815-06	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-815-07	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-815-07	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-815-07	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-815-07	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-815-07	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-815-08	PTMW	UTnbs1	A	CMP	E300.0:NO3	1	Y	
W-815-08	PTMW	UTnbs1	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-815-08	PTMW	UTnbs1	A	CMP	E300.0:PERC	1	Y	
W-815-08	PTMW	UTnbs1	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-815-08	PTMW	UTnbs1	S	CMP	E601:ALL	1	Y	
W-815-08	PTMW	UTnbs1	A	CMP	E8330LOW:ALL	1	Y	
W-815-08	PTMW	UTnbs1	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-815-1928	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-815-1928	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	Y	
W-815-1928	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-815-1928	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-815-1928	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	Y	
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	Y	
W-815-2217	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	Y	
W-815-2217	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-815-2217	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-815-2217	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	Y	
W-815-2608	EW	Tnbs2	A	CMP-TF	E300.0:NO3	1	Y	
W-815-2608	EW	Tnbs2	A	CMP-TF	E300.0:PERC	1	Y	
W-815-2608	EW	Tnbs2	Q	CMP-TF	E601:ALL	1	Y	
W-815-2608	EW	Tnbs2	Q	CMP-TF	E601:ALL	2	Y	
W-815-2608	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	
W-815-2608	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	
W-815-2608	EW	Tnbs2	A	CMP-TF	E8330LOW:ALL	1	Y	
W-815-2621	PTMW	Tnbs2	S	CMP	E300.0:NO3	1	Y	
W-815-2621	PTMW	Tnbs2	S	CMP	E300.0:PERC	1	Y	
W-815-2621	PTMW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-815-2621	PTMW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-815-2621	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-815-2621	PTMW	Tnbs2	S	CMP	E8330LOW:ALL	1	Y	
W-815-2803	EW	Tnbs2	S	CMP-TF	E300.0:NO3	1	Y	
W-815-2803	EW	Tnbs2	A	CMP-TF	E300.0:NO3	3	Y	
W-815-2803	EW	Tnbs2	S	CMP-TF	E300.0:PERC	1	Y	
W-815-2803	EW	Tnbs2	A	CMP-TF	E300.0:PERC	3	Y	
W-815-2803	EW	Tnbs2	Q	CMP-TF	E601:ALL	1	Y	
W-815-2803	EW	Tnbs2	Q	CMP-TF	E601:ALL	2	Y	
W-815-2803	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-815-2803	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	
W-815-2803	EW	Tnbs2	S	CMP-TF	E8330LOW:ALL	1	Y	
W-815-2803	EW	Tnbs2	A	CMP-TF	E8330LOW:ALL	3	Y	
W-817-01	EW	Tnbs2	A	DIS-TF	E300.0:NO3	1	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E300.0:PERC	1	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E300.0:PERC	2	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E300.0:PERC	3	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E300.0:PERC	4	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E601:ALL	1	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E601:ALL	2	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E601:ALL	3	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E601:ALL	4	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E8330LOW:ALL	1	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E8330LOW:ALL	2	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E8330LOW:ALL	3	Y	
W-817-01	EW	Tnbs2	Q	DIS-TF	E8330LOW:ALL	4	Y	
W-817-03	EW	Tnbs2	A	CMP-TF	E300.0:NO3	1	Y	
W-817-03	EW	Tnbs2	A	CMP-TF	E300.0:PERC	1	Y	
W-817-03	EW	Tnbs2	A	DIS-TF	E300.0:PERC	3	Y	
W-817-03	EW	Tnbs2	S	CMP-TF	E601:ALL	1	Y	
W-817-03	EW	Tnbs2	S	DIS-TF	E601:ALL	2	Y	
W-817-03	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	
W-817-03	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	
W-817-03	EW	Tnbs2	A	CMP-TF	E8330LOW:ALL	1	Y	
W-817-03	EW	Tnbs2	A	DIS-TF	E8330LOW:ALL	3	Y	
W-817-03A	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-817-03A	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	Y	
W-817-03A	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-817-03A	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	N	Dry.
W-817-03A	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	Y	
W-817-04	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-817-04	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-817-04	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-817-04	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-817-04	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-817-05	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	Y	
W-817-05	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	Y	
W-817-05	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-817-05	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-817-05	PTMW	Tnsc1b	A	CMP	E8330LOW:ALL	1	Y	
W-817-07	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-817-07	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-817-07	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-817-07	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-817-07	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-817-2318	EW	Tpsg-Tps	A	CMP-TF	E300.0:NO3	1	Y	
W-817-2318	EW	Tpsg-Tps	A	CMP-TF	E300.0:PERC	1	Y	
W-817-2318	EW	Tpsg-Tps	A	DIS-TF	E300.0:PERC	3	Y	
W-817-2318	EW	Tpsg-Tps	S	CMP-TF	E601:ALL	1	Y	
W-817-2318	EW	Tpsg-Tps	S	DIS-TF	E601:ALL	2	Y	
W-817-2318	EW	Tpsg-Tps	S	CMP-TF	E601:ALL	3	Y	
W-817-2318	EW	Tpsg-Tps	S	DIS-TF	E601:ALL	4	Y	
W-817-2318	EW	Tpsg-Tps	A	CMP-TF	E8330LOW:ALL	1	Y	
W-817-2318	EW	Tpsg-Tps	A	DIS-TF	E8330LOW:ALL	3	Y	
W-817-2609	PTMW	Tnbs2	S	CMP	E300.0:NO3	1	Y	
W-817-2609	PTMW	Tnbs2	S	CMP	E300.0:PERC	1	Y	
W-817-2609	PTMW	Tnbs2	Q	CMP	E601:ALL	1	Y	
W-817-2609	PTMW	Tnbs2	Q	CMP	E601:ALL	2	Y	
W-817-2609	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-817-2609	PTMW	Tnbs2	S	CMP	E8330LOW:ALL	1	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	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-818-01	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-818-03	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-818-03	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-818-03	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-818-03	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-818-03	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	Y	
W-818-04	PTMW	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-818-04	PTMW	Tnsc2	A	CMP	E300.0:PERC	1	Y	
W-818-04	PTMW	Tnsc2	S	CMP	E601:ALL	1	Y	
W-818-04	PTMW	Tnsc2	S	CMP	E601:ALL	3	Y	
W-818-04	PTMW	Tnsc2	A	CMP	E8330LOW:ALL	1	Y	
W-818-06	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-818-06	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-818-06	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-818-06	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-818-06	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	Y	
W-818-07	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-818-07	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-818-07	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-818-07	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-818-07	PTMW	Tnbs2	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
W-818-08	EW	Tnbs2	A	CMP-TF	E300.0:NO3	1	Y	
W-818-08	EW	Tnbs2	A	CMP-TF	E300.0:PERC	1	Y	
W-818-08	EW	Tnbs2	A	DIS-TF	E300.0:PERC	3	Y	
W-818-08	EW	Tnbs2	S	CMP-TF	E601:ALL	1	Y	
W-818-08	EW	Tnbs2	S	DIS-TF	E601:ALL	2	Y	
W-818-08	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	
W-818-08	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	
W-818-08	EW	Tnbs2	A	CMP-TF	E8330LOW:ALL	1	Y	
W-818-09	EW	Tnbs2	A	CMP-TF	E300.0:NO3	1	Y	
W-818-09	EW	Tnbs2	A	CMP-TF	E300.0:PERC	1	Y	
W-818-09	EW	Tnbs2	A	DIS-TF	E300.0:PERC	3	Y	
W-818-09	EW	Tnbs2	S	CMP-TF	E601:ALL	1	Y	
W-818-09	EW	Tnbs2	S	DIS-TF	E601:ALL	2	Y	
W-818-09	EW	Tnbs2	S	CMP-TF	E601:ALL	3	Y	
W-818-09	EW	Tnbs2	S	DIS-TF	E601:ALL	4	Y	
W-818-09	EW	Tnbs2	A	CMP-TF	E8330LOW:ALL	1	Y	
W-818-11	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	UTnbs1	A	CMP	E300.0:NO3	1	Y	
W-819-02	PTMW	UTnbs1	A	CMP	E300.0:PERC	1	Y	
W-819-02	PTMW	UTnbs1	S	CMP	E601:ALL	1	Y	
W-819-02	PTMW	UTnbs1	S	CMP	E601:ALL	3	Y	
W-819-02	PTMW	UTnbs1	A	CMP	E8330LOW:ALL	1	Y	
W-823-01	PTMW	Tpsg-Tps	A	CMP	E300.0:NO3	1	Y	
W-823-01	PTMW	Tpsg-Tps	A	CMP	E300.0:PERC	1	Y	
W-823-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	1	Y	
W-823-01	PTMW	Tpsg-Tps	S	CMP	E601:ALL	3	Y	
W-823-01	PTMW	Tpsg-Tps	A	CMP	E8330LOW:ALL	1	Y	
W-823-01	PTMW	Tpsg-Tps	O	DIS	EM8015:DIESEL	1	Y	
W-823-02	PTMW	Tnbs2	O	CMP	E300.0:NO3	1	Y	
W-823-02	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	Y	
W-823-02	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-823-02	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-823-02	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	Y	
W-823-02	PTMW	Tnbs2	O	DIS	EM8015:DIESEL	1	Y	
W-823-03	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-823-03	PTMW	Tnbs2	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-823-03	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-823-03	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-823-03	PTMW	Tnbs2	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-823-03	PTMW	Tnbs2	O	DIS	EM8015:DIESEL	1	Y	
W-823-13	PTMW	Tnbs2	A	CMP	E300.0:NO3	1	Y	
W-823-13	PTMW	Tnbs2	A	CMP	E300.0:PERC	1	Y	
W-823-13	PTMW	Tnbs2	S	CMP	E601:ALL	1	Y	
W-823-13	PTMW	Tnbs2	S	CMP	E601:ALL	3	Y	
W-823-13	PTMW	Tnbs2	A	CMP	E8330LOW:ALL	1	Y	
W-827-01	PTMW	Tnbs2	O	CMP	E300.0:NO3	1	N	Dry.
W-827-01	PTMW	Tnbs2	O	CMP	E300.0:PERC	1	N	Dry.
W-827-01	PTMW	Tnbs2	O	CMP	E601:ALL	1	N	Dry.
W-827-01	PTMW	Tnbs2	O	CMP	E8330LOW:ALL	1	N	Dry.
W-827-02	PTMW	Tnsc1	O	CMP	E300.0:NO3	1	Y	
W-827-02	PTMW	Tnsc1	O	CMP	E300.0:PERC	1	Y	
W-827-02	PTMW	Tnsc1	O	CMP	E601:ALL	1	Y	
W-827-02	PTMW	Tnsc1	O	CMP	E8330LOW:ALL	1	Y	
W-827-03	PTMW	UTnbs1	O	CMP	E300.0:NO3	1	N	Inoperable pump.
W-827-03	PTMW	UTnbs1	O	CMP	E300.0:PERC	1	N	Inoperable pump.
W-827-03	PTMW	UTnbs1	O	CMP	E601:ALL	1	N	Inoperable pump.
W-827-03	PTMW	UTnbs1	O	CMP	E8330LOW:ALL	1	N	Inoperable pump.
W-827-04	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	N	Dry.
W-827-04	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	N	Dry.
W-827-04	PTMW	LTnbs1	S	CMP	E601:ALL	1	N	Dry.
W-827-04	PTMW	LTnbs1	S	CMP	E601:ALL	3	N	Insufficient water.
W-827-04	PTMW	LTnbs1	A	CMP	E8330LOW:ALL	1	N	Dry.
W-827-05	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
W-827-05	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
W-827-05	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	
W-827-05	PTMW	LTnbs1	S	CMP	E601:ALL	3	Y	
W-827-05	PTMW	LTnbs1	A	CMP	E8330LOW:ALL	1	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E300.0:NO3	1	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E300.0:NO3	2	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E300.0:NO3	3	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E300.0:NO3	4	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E300.0:PERC	1	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E300.0:PERC	2	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E300.0:PERC	3	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E300.0:PERC	4	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E601:ALL	1	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E601:ALL	2	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E601:ALL	3	Y	
W-829-06	EW	Tnsc1b	Q	DIS-TF	E601:ALL	4	Y	
W-829-06	EW	Tnsc1b	A	DIS-TF	E8330LOW:ALL	1	Y	
W-829-15	DMW	LTnbs1	A	WGMG	E300.0:PERC	2	Y	
W-829-15	DMW	LTnbs1	A	WGMG	E624:ALL	2	Y	
W-829-15	DMW	LTnbs1	A	WGMG	E8330:R+H	2	Y	
W-829-15	DMW	LTnbs1	A	WGMG	E8330:TNT	2	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E300.0:PERC	1	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E300.0:PERC	2	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E300.0:PERC	3	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E300.0:PERC	4	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E624:ALL	1	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E624:ALL	2	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E624:ALL	3	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E624:ALL	4	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E8330:R+H	1	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E8330:R+H	2	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E8330:R+H	3	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E8330:R+H	4	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E8330:TNT	1	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E8330:TNT	2	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E8330:TNT	3	Y	
W-829-1938	DMW	LTnbs1	Q	WGMG	E8330:TNT	4	Y	
W-829-1940	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	Y	
W-829-1940	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	Y	
W-829-1940	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-829-1940	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-829-1940	PTMW	Tnsc1b	A	CMP	E8330LOW:ALL	1	Y	
W-829-22	DMW	LTnbs1	A	WGMG	E300.0:PERC	2	Y	
W-829-22	DMW	LTnbs1	A	WGMG	E624:ALL	2	Y	
W-829-22	DMW	LTnbs1	A	WGMG	E8330:R+H	2	Y	
W-829-22	DMW	LTnbs1	A	WGMG	E8330:TNT	2	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	1	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	1	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	1	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	2	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	2	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	2	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	3	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:NO3	3	Y	
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	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	1	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	1	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	1	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	2	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	2	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	2	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	3	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	3	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	3	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	4	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	4	Y	
WELL18	WS	Tnbs1	M	CMP	E300.0:PERC	4	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E601:ALL	1	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	1	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	1	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	2	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	2	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	2	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	3	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	3	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	3	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	4	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	4	Y	
WELL18	WS	Tnbs1	M	CMP	E601:ALL	4	N	Inoperable pump.
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	1	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	1	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	1	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	2	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	2	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	2	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	3	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	3	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	3	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	4	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	4	Y	
WELL18	WS	Tnbs1	M	CMP	E8330LOW:ALL	4	N	Inoperable pump.
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	1	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	1	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	1	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	2	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	2	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	2	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	3	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	3	N	Inoperable pump.
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	3	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	4	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	4	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:NO3	4	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	1	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	1	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	1	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	2	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	2	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	2	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	3	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	3	N	Inoperable pump.
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	3	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	4	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	4	Y	
WELL20	WS	Tnbs1	M	CMP	E300.0:PERC	4	Y	
WELL20	WS	Tnbs1	M	WGMG	E502.2:ALL	1	Y	
WELL20	WS	Tnbs1	M	WGMG	E502.2:ALL	1	Y	
WELL20	WS	Tnbs1	M	WGMG	E502.2:ALL	1	Y	
WELL20	WS	Tnbs1	M	WGMG	E502.2:ALL	2	Y	
WELL20	WS	Tnbs1	M	WGMG	E502.2:ALL	2	Y	
WELL20	WS	Tnbs1	M	WGMG	E502.2:ALL	2	Y	
WELL20	WS	Tnbs1	M	WGMG	E502.2:ALL	3	Y	
WELL20	WS	Tnbs1	M	WGMG	E502.2:ALL	3	N	Inoperable pump.
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	N	Inoperable pump.
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:

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, 2013 through December 31, 2013.

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	2.5	0.45	21	12	NA
	August	NA	2.2	0.34	25	12	NA
	September	NA	2.7	0.41	31	15	NA
	October	NA	1.7	0.26	20	9.6	NA
	November	NA	2.0	0.32	24	12	NA
	December	NA	2.2	0.31	25	12	NA
Total		NA	13	2.1	150	73	NA

Notes:
*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.

Table 2.4-13. Building 815-Proximal (815-PRX) mass removed, July 1, 2013 through December 31, 2013.

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	6.2	1.8	23	NA	NA
	August	NA	3.3	1.1	14	NA	NA
	September	NA	2.8	0.97	13	NA	NA
	October	NA	2.6	0.82	11	NA	NA
	November	NA	3.5	1.1	14	NA	NA
	December	NA	0	0	0	NA	NA
Total		NA	18	5.7	76	NA	NA

Notes:
*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.

Table 2.4-14. Building 815-Distal Site Boundary (815-DSB) mass removed, July 1, 2013 through December 31, 2013.

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	4.7	NA	NA	NA	NA
	August	NA	3.8	NA	NA	NA	NA
	September	NA	4.1	NA	NA	NA	NA
	October	NA	4.1	NA	NA	NA	NA
	November	NA	3.7	NA	NA	NA	NA
	December	NA	4.8	NA	NA	NA	NA
Total		NA	25	NA	NA	NA	NA

Table 2.4-15. Building 817-Source (817-SRC) mass removed, July 1, 2013 through December 31, 2013.

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	0.13	0.39	0.19	NA
	August	NA	0	0.10	0.30	0.15	NA
	September	NA	0	0.15	0.44	0.21	NA
	October	NA	0	0.12	0.34	0.15	NA
	November	NA	0	0.15	0.44	0.20	NA
	December	NA	0	0	0	0	NA
Total		NA	0	0.65	1.9	0.89	NA

Notes:

***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.**

Table 2.4-16. Building 817-Proximal (817-PRX) mass removed, July 1, 2013 through December 31, 2013.

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	1.9	3.9	16	1.1	NA
	August	NA	3.2	7.2	28	2.0	NA
	September	NA	4.0	9.2	36	2.6	NA
	October	NA	1.7	6.0	23	1.7	NA
	November	NA	2.9	10	39	2.9	NA
	December	NA	2.4	8.5	33	2.4	NA
Total		NA	16	45	170	13	NA

Notes:

***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.**

Table 2.4-17. Building 829-Source (829-SRC) mass removed, July 1, 2013 through December 31, 2013.

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	0.011	0.0097	0.056	NA	NA
	August	NA	0.0090	0.0082	0.047	NA	NA
	September	NA	0.0085	0.0077	0.044	NA	NA
	October	NA	0.0086	0.0078	0.045	NA	NA
	November	NA	0.0065	0.0060	0.036	NA	NA
	December	NA	0.0019	0.0018	0.011	NA	NA
Total		NA	0.045	0.041	0.24	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	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	1	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	2	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	3	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	4	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	1	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	2	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	3	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	4	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	1	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	2	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	3	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	4	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	1	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	2	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	3	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	4	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	N	Inoperable pump.
K1-01C	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	N	Inoperable pump.
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	1	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	2	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	3	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	4	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	1	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	2	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	3	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	4	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	1	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	2	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	3	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	4	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	1	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	2	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	3	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	4	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	Y	
K1-02B	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	1	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	2	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	3	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	4	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	1	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	2	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	3	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	4	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	1	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	2	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	3	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	4	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	1	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	2	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	3	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	4	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	Y	
K1-04	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	1	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	2	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	3	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	4	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	1	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	2	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	3	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	4	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	1	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	2	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	3	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	4	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	1	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	2	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	3	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	4	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	Y	
K1-05	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
K1-06	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	N	Dry.
K1-06	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	N	Dry.
K1-06	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	N	Dry.
K1-06	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	N	Dry.
K1-06	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	N	Dry.
K1-06	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	N	Dry.
K1-06	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	N	Dry.
K1-06	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	N	Dry.
K1-06	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	N	Dry.
K1-06	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	N	Dry.
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	1	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	2	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	3	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	4	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	1	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	2	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	3	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	4	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	1	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	2	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	3	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	4	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	1	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	2	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	3	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	4	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	Y	
K1-07	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
K1-07	DMW	Tnbs1-Tnbs0	A	DIS	MS:UISO	2	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	1	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	2	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	3	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	4	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	1	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	2	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	3	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	4	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	1	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	2	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	3	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	4	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	1	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	2	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	3	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	4	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	Y	
K1-08	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	1	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	2	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	3	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	4	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	1	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	2	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	3	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	4	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	1	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	2	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	3	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	4	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	1	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	2	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	3	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	4	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	N	Insufficient water. Only partial sample event collected.
K1-09	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
K2-03	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
K2-03	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
K2-03	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
K2-03	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
K2-03	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
K2-03	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
K2-04D	PTMW	Tnbs1-Tnbs0	O	CMP	AS:UISO	2	Y	
K2-04D	PTMW	Tnbs1-Tnbs0	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
K2-04D	PTMW	Tnbs1-Tnbs0	A	WGMG	E300.0:PERC	2	Y	
K2-04D	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
K2-04D	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
K2-04D	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
K2-04S	PTMW	Qal/WBR	E	CMP	AS:UISO	2	N	To be sampled in 2014.
K2-04S	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
K2-04S	PTMW	Qal/WBR	A	WGMG	E300.0:PERC	2	Y	
K2-04S	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
K2-04S	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
K2-04S	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC2-05	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	N	Insufficient water.
NC2-05	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	N	Insufficient water.

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC2-05	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	N	Insufficient water.
NC2-05	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	N	Dry.
NC2-05	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	N	Insufficient water.
NC2-05	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	N	Dry.
NC2-05A	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-05A	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-05A	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-05A	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-05A	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-05A	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-06	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-06	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-06	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-06	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-06	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-06	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-06A	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-06A	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-06A	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-06A	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-06A	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-06A	PTMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	Y	
NC2-09	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-09	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-09	PTMW	Tnbs1-Tnbs0	A	DIS	E300.0:PERC	2	Y	
NC2-09	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-09	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-10	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-10	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-10	PTMW	Tnbs1-Tnbs0	A	DIS	E300.0:PERC	2	Y	
NC2-10	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-10	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-11D	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-11D	PTMW	Tnbs1-Tnbs0	S	WGMG	E300.0:PERC	2	Y	
NC2-11D	PTMW	Tnbs1-Tnbs0	S	WGMG	E300.0:PERC	4	Y	
NC2-11D	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-11D	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-11D	PTMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	Y	
NC2-11I	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-11I	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-11I	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-11I	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-11I	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-11I	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-11S	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-11S	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-11S	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-11S	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-11S	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-11S	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-12D	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-12D	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-12D	PTMW	Tnbs1-Tnbs0	A	WGMG	E300.0:PERC	2	Y	
NC2-12D	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-12D	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-12D	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-12I	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-12I	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-12I	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-12I	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-12I	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-12I	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-12S	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-12S	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-12S	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-12S	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-12S	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC2-12S	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-13	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-13	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-13	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-13	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-13	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-13	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-14S	PTMW	Qal/WBR	O	CMP	AS:UISO	2	Y	
NC2-14S	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
NC2-14S	PTMW	Qal/WBR	S	CMP	E300.0:PERC	1	Y	
NC2-14S	PTMW	Qal/WBR	S	CMP	E300.0:PERC	3	Y	
NC2-14S	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC2-14S	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC2-15	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-15	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-15	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-15	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-15	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-15	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-16	PTMW	Tnbs1-Tnbs0	E	CMP	AS:UISO	2	N	To be sampled in 2014.
NC2-16	PTMW	Tnbs1-Tnbs0	O	CMP	E300.0:NO3	2	Y	
NC2-16	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	1	Y	
NC2-16	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	3	Y	
NC2-16	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-16	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-17	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	N	Inoperable pump.
NC2-17	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	N	Inoperable pump.
NC2-17	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	N	Inoperable pump.
NC2-17	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-17	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	N	Inoperable pump.
NC2-17	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-18	PTMW	Tnbs1-Tnbs0	S	CMP	AS:UISO	2	Y	
NC2-18	PTMW	Tnbs1-Tnbs0	S	CMP	AS:UISO	4	Y	
NC2-18	PTMW	Tnbs1-Tnbs0	O	CMP	E300.0:NO3	2	Y	
NC2-18	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-18	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-18	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-18	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-19	PTMW	Tnbs1-Tnbs0	E	CMP	AS:UISO	2	N	To be sampled in 2014.
NC2-19	PTMW	Tnbs1-Tnbs0	O	CMP	E300.0:NO3	2	Y	
NC2-19	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-19	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-19	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-19	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-20	PTMW	Tnbs1-Tnbs0	O	CMP	AS:UISO	2	Y	
NC2-20	PTMW	Tnbs1-Tnbs0	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
NC2-20	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
NC2-20	PTMW	Tnbs1-Tnbs0	A	CMP	E906:ALL	2	Y	
NC2-21	PTMW	Tnbs1-Tnbs0	E	CMP	AS:UISO	2	N	To be sampled in 2014.
NC2-21	PTMW	Tnbs1-Tnbs0	O	CMP	E300.0:NO3	2	Y	
NC2-21	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
NC2-21	PTMW	Tnbs1-Tnbs0	A	CMP	E906:ALL	2	Y	
NC7-10	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-10	PTMW	Qal/WBR	S	DIS	E300.0:PERC	1	Y	
NC7-10	PTMW	Qal/WBR	S	DIS	E300.0:PERC	3	Y	
NC7-10	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	2	Y	
NC7-10	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	4	Y	
NC7-10	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-10	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-10	PTMW	Qal/WBR	A	CMP	MS:UISO	2	Y	
NC7-11	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
NC7-11	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-11	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
NC7-11	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
NC7-11	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	4	Y	
NC7-11	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-11	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-14	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Dry.
NC7-14	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
NC7-14	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	N	Dry.
NC7-14	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	N	Dry.
NC7-14	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
NC7-14	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
NC7-15	PTMW	Qal/WBR	O	CMP	AS:UISO	2	Y	
NC7-15	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
NC7-15	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-15	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	2	Y	
NC7-15	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	4	Y	
NC7-15	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-15	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-19	PTMW	Qal/WBR	E	CMP	AS:UISO	2	N	To be sampled in 2014.
NC7-19	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-19	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
NC7-19	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
NC7-19	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	2	Y	
NC7-19	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	4	Y	
NC7-19	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-19	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-27	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC7-27	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-27	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC7-27	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC7-27	PTMW	Tnbs1-Tnbs0	S	DIS	E8330LOW:ALL	2	Y	
NC7-27	PTMW	Tnbs1-Tnbs0	S	DIS	E8330LOW:ALL	4	Y	
NC7-27	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC7-27	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	E300.0:NO3	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	E300.0:NO3	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	3	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	3	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	LITEHCS:ALL	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	LITEHCS:ALL	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	LITEHCS:ALL	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	LOWVFAS:ALL	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	LOWVFAS:ALL	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	LOWVFAS:ALL	4	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	MS:UISO	1	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	Y	
NC7-28	PTMW	Tnbs1-Tnbs0	Q	DIS	MS:UISO	4	Y	
NC7-29	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC7-29	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-29	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC7-29	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-29	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC7-29	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC7-43	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC7-43	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-43	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC7-43	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC7-43	PTMW	Tnbs1-Tnbs0	S	DIS	E8330LOW:ALL	2	Y	
NC7-43	PTMW	Tnbs1-Tnbs0	S	DIS	E8330LOW:ALL	4	Y	
NC7-43	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC7-43	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC7-44	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC7-44	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-44	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC7-44	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC7-44	PTMW	Tnbs1-Tnbs0	S	DIS	E8330LOW:ALL	2	Y	
NC7-44	PTMW	Tnbs1-Tnbs0	S	DIS	E8330LOW:ALL	4	Y	
NC7-44	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC7-44	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC7-46	PTMW	Qal/WBR	O	CMP	AS:UISO	2	Y	
NC7-46	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
NC7-46	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-46	PTMW	Qal/WBR	A	CMP	E906:ALL	2	Y	
NC7-54	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
NC7-54	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	N	Dry.
NC7-54	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	N	Dry.
NC7-54	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
NC7-54	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
NC7-55	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Dry.
NC7-55	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	N	Dry.
NC7-55	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	N	Dry.
NC7-55	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	N	Dry.
NC7-55	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
NC7-55	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
NC7-56	PTMW	Qal/WBR	O	CMP	AS:UISO	2	Y	
NC7-56	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
NC7-56	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
NC7-56	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	N	Dry.
NC7-56	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	2	Y	
NC7-56	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-56	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
NC7-57	PTMW	Qal/WBR	O	CMP	AS:UISO	2	N	Dry.
NC7-57	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
NC7-57	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	N	Dry.
NC7-57	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	N	Dry.
NC7-57	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
NC7-57	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
NC7-58	PTMW	Qal/WBR	E	CMP	AS:UISO	2	N	To be sampled in 2014.
NC7-58	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
NC7-58	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
NC7-58	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
NC7-58	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-58	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-59	PTMW	Qal/WBR	O	CMP	AS:UISO	2	Y	
NC7-59	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
NC7-59	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
NC7-59	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
NC7-59	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-59	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-60	PTMW	Tnsc0	E	CMP	AS:UISO	2	N	To be sampled in 2014.
NC7-60	PTMW	Tnsc0	A	CMP	E300.0:NO3	2	Y	
NC7-60	PTMW	Tnsc0	S	CMP	E300.0:PERC	1	Y	
NC7-60	PTMW	Tnsc0	S	CMP	E300.0:PERC	3	Y	
NC7-60	PTMW	Tnsc0	S	DIS	E8330LOW:ALL	2	Y	
NC7-60	PTMW	Tnsc0	S	DIS	E8330LOW:ALL	4	Y	
NC7-60	PTMW	Tnsc0	S	CMP	E906:ALL	2	Y	
NC7-60	PTMW	Tnsc0	S	CMP	E906:ALL	4	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	3	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	4	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	3	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	O	DIS	E8082A:ALL	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	1	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	3	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	4	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	1	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	3	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	4	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	S	WGMG	E906:ALL	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	S	WGMG	E906:ALL	4	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	1	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	3	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	4	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	1	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	2	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	3	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	3	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	4	Y	
NC7-61	PTMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	Y	
NC7-62	PTMW	Qal/WBR	E	CMP	AS:UISO	2	N	To be sampled in 2014.
NC7-62	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
NC7-62	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
NC7-62	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
NC7-62	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-62	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-69	PTMW	Tmss	A	CMP	AS:UISO	2	Y	
NC7-69	PTMW	Tmss	A	CMP	E300.0:NO3	2	Y	
NC7-69	PTMW	Tmss	S	CMP	E300.0:PERC	2	Y	
NC7-69	PTMW	Tmss	S	CMP	E300.0:PERC	4	Y	
NC7-69	PTMW	Tmss	S	DIS	E8330LOW:ALL	2	Y	
NC7-69	PTMW	Tmss	S	DIS	E8330LOW:ALL	4	Y	
NC7-69	PTMW	Tmss	S	CMP	E906:ALL	2	Y	
NC7-69	PTMW	Tmss	S	CMP	E906:ALL	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	E300.0:NO3	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	N	Experiment in progress
NC7-70	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	3	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	3	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	N	Experiment in progress
NC7-70	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	3	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	LITEHCS:ALL	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	LITEHCS:ALL	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	LOWVFAS:ALL	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	LOWVFAS:ALL	4	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	1	Y	
NC7-70	PTMW	Tnbs1-Tnbs0	Q	DIS	MS:UISO	4	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	DWMETALS:ALL	1	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	DWMETALS:ALL	2	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	DWMETALS:ALL	4	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	E300.0:NO3	1	Y	
NC7-71	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	E300.0:NO3	4	Y	
NC7-71	PTMW	Qal/WBR	M	DIS	E300.0:PERC	1	Y	
NC7-71	PTMW	Qal/WBR	M	DIS	E300.0:PERC	1	Y	
NC7-71	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
NC7-71	PTMW	Qal/WBR	M	DIS	E300.0:PERC	3	Y	
NC7-71	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	E8330LOW:ALL	1	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	E8330LOW:ALL	2	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	E8330LOW:ALL	4	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	E9060:ALL	1	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	E9060:ALL	2	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	E9060:ALL	4	Y	
NC7-71	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-71	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	GENMIN:ALL	1	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	GENMIN:ALL	2	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	GENMIN:ALL	4	Y	
NC7-71	PTMW	Qal/WBR	M	DIS	KPA:UTOT	1	Y	
NC7-71	PTMW	Qal/WBR	M	DIS	KPA:UTOT	2	Y	
NC7-71	PTMW	Qal/WBR	M	DIS	KPA:UTOT	3	Y	
NC7-71	PTMW	Qal/WBR	M	DIS	KPA:UTOT	4	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	MS:UISO	1	Y	
NC7-71	PTMW	Qal/WBR	A	CMP	MS:UISO	2	Y	
NC7-71	PTMW	Qal/WBR	Q	DIS	MS:UISO	4	Y	
NC7-72	PTMW	Qal/WBR	E	CMP	AS:UISO	2	N	To be sampled in 2014.
NC7-72	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
NC7-72	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
NC7-72	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
NC7-72	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	2	Y	
NC7-72	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	4	Y	
NC7-72	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-72	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-73	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
NC7-73	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
NC7-73	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
NC7-73	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
NC7-73	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	2	Y	
NC7-73	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	4	Y	
NC7-73	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-73	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
SPRING24	SPR	Tnbs1-Tnbs0	E	CMP	AS:UISO	2	N	To be sampled in 2014.
SPRING24	SPR	Tnbs1-Tnbs0	O	CMP	E300.0:NO3	2	N	Dry.
SPRING24	SPR	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	N	Dry.
SPRING24	SPR	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	N	Dry.
SPRING24	SPR	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	N	Dry.
SPRING24	SPR	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	N	Dry.
W-850-05	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
W-850-05	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
W-850-05	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
W-850-05	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
W-850-05	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	2	Y	
W-850-05	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	4	Y	
W-850-05	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
W-850-05	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
W-850-05	PTMW	Qal/WBR	A	DIS	MS:UISO	4	Y	
W-850-2145	PTMW	Tnbs1-Tnbs0	E	CMP	AS:UISO	2	N	To be sampled in 2014.
W-850-2145	PTMW	Tnbs1-Tnbs0	O	CMP	E300.0:NO3	2	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-850-2145	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-850-2145	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2145	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2145	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2312	PTMW	Tnbs1-Tnbs0	E	CMP	AS:UISO	2	N	To be sampled in 2014.
W-850-2312	PTMW	Tnbs1-Tnbs0	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
W-850-2312	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-850-2312	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2312	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2312	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2313	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
W-850-2313	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
W-850-2313	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	Y	
W-850-2313	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	Y	
W-850-2313	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	2	Y	
W-850-2313	PTMW	Qal/WBR	S	DIS	E8330LOW:ALL	4	Y	
W-850-2313	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
W-850-2313	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
W-850-2313	PTMW	Qal/WBR	A	DIS	MS:UISO	2	Y	
W-850-2314	PTMW	Tnbs1-Tnbs0	O	CMP	AS:UISO	2	Y	
W-850-2314	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
W-850-2314	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-850-2314	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2314	PTMW	Tnbs1-Tnbs0	S	DIS	E8330LOW:ALL	2	Y	
W-850-2314	PTMW	Tnbs1-Tnbs0	S	DIS	E8330LOW:ALL	4	Y	
W-850-2314	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2314	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2315	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
W-850-2315	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
W-850-2315	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-850-2315	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2315	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2315	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2316	PTMW	Tnbs1-Tnbs0	O	CMP	AS:UISO	2	Y	
W-850-2316	PTMW	Tnbs1-Tnbs0	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
W-850-2316	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-850-2316	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2316	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2316	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	DWMETALS:ALL	1	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	DWMETALS:ALL	2	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	DWMETALS:ALL	4	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	E300.0:NO3	1	Y	
W-850-2416	PTMW	Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	E300.0:NO3	4	Y	
W-850-2416	PTMW	Tnsc0	M	DIS	E300.0:PERC	1	Y	
W-850-2416	PTMW	Tnsc0	M	DIS	E300.0:PERC	1	Y	
W-850-2416	PTMW	Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-850-2416	PTMW	Tnsc0	M	DIS	E300.0:PERC	3	Y	
W-850-2416	PTMW	Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	E8330LOW:ALL	1	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	E8330LOW:ALL	2	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	E8330LOW:ALL	4	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	E9060:ALL	1	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	E9060:ALL	2	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	E9060:ALL	4	Y	
W-850-2416	PTMW	Tnsc0	S	CMP	E906:ALL	2	Y	
W-850-2416	PTMW	Tnsc0	S	CMP	E906:ALL	4	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	GENMIN:ALL	1	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	GENMIN:ALL	2	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	GENMIN:ALL	4	Y	
W-850-2416	PTMW	Tnsc0	M	DIS	KPA:UTOT	1	Y	
W-850-2416	PTMW	Tnsc0	M	DIS	KPA:UTOT	1	Y	
W-850-2416	PTMW	Tnsc0	M	DIS	KPA:UTOT	2	Y	
W-850-2416	PTMW	Tnsc0	M	DIS	KPA:UTOT	3	Y	
W-850-2416	PTMW	Tnsc0	M	DIS	KPA:UTOT	4	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	MS:UISO	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-850-2416	PTMW	Tnsc0	A	CMP	MS:UISO	2	Y	
W-850-2416	PTMW	Tnsc0	Q	DIS	MS:UISO	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	DWMETALS:ALL	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	E300.0:NO3	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	E300.0:NO3	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	M	DIS	E300.0:PERC	3	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	E8330LOW:ALL	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	E9060:ALL	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	GENMIN:ALL	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	3	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	M	DIS	KPA:UTOT	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	LITEHCS:ALL	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	LITEHCS:ALL	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	LITEHCS:ALL	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	LOWVFAS:ALL	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	LOWVFAS:ALL	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	LOWVFAS:ALL	4	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	MS:UISO	1	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	MS:UISO	2	Y	
W-850-2417	PTMW	Tnbs1-Tnbs0	Q	DIS	MS:UISO	4	Y	
W-850-2805	PTMW	Tnbs1/Tnbs0	A	CMP	AS:UISO	2	Y	
W-850-2805	PTMW	Tnbs1/Tnbs0	S	CMP	E300.0:NO3	2	Y	
W-850-2805	PTMW	Tnbs1/Tnbs0	A	CMP	E300.0:PERC	2	Y	
W-850-2805	PTMW	Tnbs1/Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-850-2805	PTMW	Tnbs1/Tnbs0	S	CMP	E906:ALL	2	Y	
W-850-2805	PTMW	Tnbs1/Tnbs0	S	CMP	E906:ALL	4	Y	
W-865-02	PTMW	Tnbs1-Tnbs0	A	DIS	DWMETALS:ALL	1	Y	
W-865-02	PTMW	Tnbs1-Tnbs0	S	DIS	E300.0:NO3	1	Y	
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	A	CMP	E300.0:PERC	1	N	Dry.
W-865-05	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	1	N	Dry.
W-865-05	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	3	N	Dry.
W-865-1802	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
W-865-1802	PTMW	Tnbs1-Tnbs0	A	DIS	E300.0:NO3	2	Y	
W-865-1802	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
W-865-1802	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	1	Y	
W-865-1802	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	3	Y	
W-865-1802	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-865-1802	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-865-1803	PTMW	Tnbs1-Tnbs0	E	CMP	AS:UISO	2	N	To be sampled in 2014.
W-865-1803	PTMW	Tnbs1-Tnbs0	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
W-865-1803	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
W-865-1803	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
W-865-1803	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-865-1803	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	A	DIS	DWMETALS:ALL	1	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	S	DIS	E300.0:NO3	1	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	S	DIS	E300.0:NO3	3	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	1	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	3	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	Y	
W-865-2005	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
W-865-2121	PTMW	Tnbs1-Tnbs0	A	DIS	DWMETALS:ALL	1	Y	
W-865-2121	PTMW	Tnbs1-Tnbs0	S	DIS	E300.0:NO3	1	Y	
W-865-2121	PTMW	Tnbs1-Tnbs0	S	DIS	E300.0:NO3	3	Y	
W-865-2121	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	1	Y	
W-865-2121	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	1	Y	
W-865-2121	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	3	Y	
W-865-2121	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-865-2121	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-865-2133	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	1	Y	
W-865-2133	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	3	Y	
W-865-2133	GW	Tnbs1-Tnbs0	A	DIS	DWMETALS:ALL	1	Y	
W-865-2133	GW	Tnbs1-Tnbs0	S	DIS	E300.0:NO3	1	Y	
W-865-2133	GW	Tnbs1-Tnbs0	S	DIS	E300.0:NO3	3	Y	
W-865-2133	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	1	Y	
W-865-2133	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	2	Y	
W-865-2133	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	3	Y	
W-865-2133	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	4	Y	
W-865-2133	GW	Tnbs1-Tnbs0	S	DIS	E601:ALL	1	Y	
W-865-2133	GW	Tnbs1-Tnbs0	S	DIS	E601:ALL	3	Y	
W-865-2133	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	1	Y	
W-865-2133	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	2	Y	
W-865-2133	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	3	Y	
W-865-2133	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	4	Y	
W-865-2224	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	2	Y	
W-865-2224	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	4	Y	
W-865-2224	GW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	2	Y	
W-865-2224	GW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	4	Y	
W-865-2224	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	1	Y	
W-865-2224	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	2	Y	
W-865-2224	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	3	Y	
W-865-2224	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	4	Y	
W-865-2224	GW	Tnbs1-Tnbs0	S	DIS	E601:ALL	2	Y	
W-865-2224	GW	Tnbs1-Tnbs0	S	DIS	E601:ALL	4	Y	
W-865-2224	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	1	Y	
W-865-2224	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	2	Y	
W-865-2224	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	3	Y	
W-865-2224	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	4	Y	
W-PIT1-01	PTMW	Tnbs1-Tnbs0	O	CMP	AS:UISO	1	N	Dry.
W-PIT1-01	PTMW	Tnbs1-Tnbs0	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	CMP	E906:ALL	1	N	Dry.
W-PIT1-01	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	3	N	Dry.
W-PIT1-2204	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Insufficient water.
W-PIT1-2204	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-PIT1-2204	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	N	Insufficient water.
W-PIT1-2204	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	N	Insufficient water.
W-PIT1-2204	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Insufficient water.
W-PIT1-2204	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Insufficient water.
W-PIT1-2209	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	2	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	4	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	2	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	4	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-PIT1-2209	GW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	S	DIS	E601:ALL	2	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	S	DIS	E601:ALL	4	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	Y	
W-PIT1-2209	GW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	2	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	4	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	2	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	4	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	1	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	2	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	3	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	4	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	1	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	2	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	3	Y	
W-PIT1-2225	GW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	4	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	1	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	2	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	3	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	AS:UISO	4	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	1	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	2	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	3	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:NO3	4	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	1	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	2	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	3	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E8260:ALL	4	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	1	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	2	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	3	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E8330:R+H	4	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	Y	
W-PIT1-2326	DMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	E	CMP	AS:UISO	2	N	To be sampled in 2014.
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	A	DIS	DWMETALS:ALL	2	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	A	DIS	E300.0:NO3	2	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	1	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	2	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	3	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	Q	WGMG	E300.0:PERC	4	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	2	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	4	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	1	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	2	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	3	Y	
W-PIT1-2620	PTMW	Tnbs1-Tnbs0	Q	WGMG	E906:ALL	4	Y	
W-PIT7-16	PTMW	Tnsc0	A	CMP	AS:UISO	2	Y	
W-PIT7-16	PTMW	Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-PIT7-16	PTMW	Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-PIT7-16	PTMW	Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-PIT7-16	PTMW	Tnsc0	S	DIS	E8330LOW:ALL	2	Y	
W-PIT7-16	PTMW	Tnsc0	S	DIS	E8330LOW:ALL	4	Y	
W-PIT7-16	PTMW	Tnsc0	S	CMP	E906:ALL	2	Y	
W-PIT7-16	PTMW	Tnsc0	S	CMP	E906:ALL	4	Y	
W8SPRNG	SPR	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	N	Dry.

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W8SPRNG	SPR	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	N	Dry.
W8SPRNG	SPR	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	N	Dry.
W8SPRNG	SPR	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	N	Dry.
W8SPRNG	SPR	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	N	Dry.
W8SPRNG	SPR	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	N	Dry.

Table 2.5-2. Pit 7-Source (PIT7-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
PIT7-SRC	July	NA	767	NA	9,688
	August	NA	689	NA	7,988
	September	NA	766	NA	9,504
	October	NA	559	NA	6,979
	November	NA	620	NA	7,864
	December	NA	839	NA	9,632
Total		NA	4,240	NA	51,655

Table 2.5-3. Pit 7-Source (PIT7-SRC) volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
PIT7-SRC-I	7/2/13	<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	<0.5
PIT7-SRC-I	10/15/13	<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	<0.5
PIT7-SRC-E	7/2/13	<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	<0.5
PIT7-SRC-E	8/5/13	<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	<0.5
PIT7-SRC-E	9/4/13	<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	<0.5
PIT7-SRC-E	10/15/13	<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	<0.5
PIT7-SRC-E	11/4/13	<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	<0.5
PIT7-SRC-E	12/3/13	<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	<0.5

Notes:

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

Table 2.5-3 (Con't). Analyte detected but not reported in main table.

Location	Date	Detection frequency
PIT7-SRC-I	7/2/13	0 of 18
PIT7-SRC-I	10/15/13	0 of 18
PIT7-SRC-E	7/2/13	0 of 18
PIT7-SRC-E	8/5/13	0 of 18
PIT7-SRC-E	9/4/13	0 of 18
PIT7-SRC-E	10/15/13	0 of 18
PIT7-SRC-E	11/4/13	0 of 18
PIT7-SRC-E	12/3/13	0 of 18

Notes:

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

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

Location	Date	Nitrate as NO3 (mg/L)	Perchlorate (mg/L)
PIT7-SRC-I	7/2/13	34	11
PIT7-SRC-I	10/15/13	33	9.3
PIT7-SRC-E	7/2/13	20	<4
PIT7-SRC-E	8/5/13	22	<4
PIT7-SRC-E	9/4/13	22	<4
PIT7-SRC-E	10/15/13	22	<4
PIT7-SRC-E	11/4/13	24	<4
PIT7-SRC-E	12/3/13	22	<4

Notes:

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

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

Location	Date	Total Uranium (pCi/L)
PIT7-SRC-I	7/2/13	31.9 ± 3.28
PIT7-SRC-I	10/15/13	26.9 ± 2.79
PIT7-SRC-E	7/2/13	<0.3
PIT7-SRC-E	8/5/13	<0.3
PIT7-SRC-E	9/4/13	<0.3
PIT7-SRC-E	10/15/13	<0.3
PIT7-SRC-E	11/4/13	<0.3
PIT7-SRC-E	12/3/13	<0.3

Notes:

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

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

Location	Date	Tritium (pCi/L)
PIT7-SRC-I	7/2/13	46700 ± 9080
PIT7-SRC-I	10/15/13	48600 ± 9440
PIT7-SRC-E	7/2/13	46900 ± 9120
PIT7-SRC-E	8/5/13	47700 ± 9260
PIT7-SRC-E	9/4/13	48100 ± 9350
PIT7-SRC-E	10/15/13	42200 ± 8210
PIT7-SRC-E	11/4/13	49400 ± 9600
PIT7-SRC-E	12/3/13	42300 ± 8210

Notes:

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

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

Sample location	Sample identification	Parameter	Frequency
PIT7-SRC GWTS			
Influent Port	**PIT7-SRC-I**	**VOCs**	**Quarterly**
		Uranium	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		Tritium[a]	**Quarterly**
		pH	**Quarterly**
Effluent Port	**PIT7-SRC-E**	**VOCs**	**Monthly**
		Uranium	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		Tritium[a]	**Monthly**
		pH	**Monthly**

Notes:

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

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

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

Table 2.5-8. Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K7-01	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	Y	
K7-01	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
K7-01	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
K7-01	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	Y	
K7-01	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
K7-01	DMW	Tnbs1-Tnbs0	A	CMP	E8082A:ALL	2	Y	
K7-01	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K7-01	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
K7-01	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
K7-01	DMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	Y	
K7-01	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	A	CMP	E8082A:ALL	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
K7-03	DMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	Y	
K7-03	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
K7-06	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	A	CMP	E8082A:ALL	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
K7-06	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
K7-06	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K7-07	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Dry.
K7-07	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
K7-07	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
K7-07	PTMW	Qal/WBR	A	CMP	E601:ALL	2	N	Dry.
K7-07	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
K7-07	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
K7-09	DMW	Tnsc0	A	CMP	AS:UISO	2	Y	
K7-09	DMW	Tnsc0	A	CMP	E200.7:LI	2	Y	
K7-09	DMW	Tnsc0	A	CMP	E300.0:NO3	2	Y	
K7-09	DMW	Tnsc0	S	CMP	E300.0:PERC	2	Y	
K7-09	DMW	Tnsc0	S	CMP	E300.0:PERC	4	Y	
K7-09	DMW	Tnsc0	A	CMP	E340.2:ALL	2	Y	
K7-09	DMW	Tnsc0	A	CMP	E601:ALL	2	Y	
K7-09	DMW	Tnsc0	A	CMP	E8082A:ALL	2	Y	
K7-09	DMW	Tnsc0	A	CMP	E8330LOW:ALL	2	Y	
K7-09	DMW	Tnsc0	S	CMP	E906:ALL	2	Y	
K7-09	DMW	Tnsc0	S	CMP	E906:ALL	4	Y	
K7-09	DMW	Tnsc0	A	CMP	T26METALS:ALL	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	A	CMP	E8082A:ALL	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
K7-10	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
K7-10	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	Y	
NC7-12	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
NC7-12	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
NC7-12	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-12	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	

Table 2.5-8. Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-12	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-12	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-12	PTMW	Qal/WBR	A	DIS	MS:UISO	2	Y	
NC7-16	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-16	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-16	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-16	PTMW	Qal/WBR	S	DIS	E906:ALL	1	Y	
NC7-16	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-16	PTMW	Qal/WBR	S	CMP	E906:ALL	3	Y	
NC7-16	PTMW	Qal/WBR	Q	DIS	MS:UISO	1	Y	
NC7-16	PTMW	Qal/WBR	Q	DIS	MS:UISO	2	Y	
NC7-16	PTMW	Qal/WBR	Q	DIS	MS:UISO	3	Y	
NC7-17	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
NC7-17	PTMW	Qal/WBR	A	DIS	E200.7:SI	2	Y	
NC7-17	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-17	PTMW	Qal/WBR	E	CMP	E300.0:PERC	2	N	To be sampled in 2014.
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	
NC7-18	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
NC7-18	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-18	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-18	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-18	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-18	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-20	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Insufficient water. Only partial sample event collected.
NC7-20	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
NC7-20	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-20	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-20	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-20	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-21	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
NC7-21	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-21	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-21	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-21	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-21	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-22	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Dry.
NC7-22	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
NC7-22	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
NC7-22	PTMW	Qal/WBR	A	CMP	E601:ALL	2	N	Dry.
NC7-22	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
NC7-22	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
NC7-24	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Dry.
NC7-24	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
NC7-24	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
NC7-24	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
NC7-24	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
NC7-25	EW	Tnbs1-Tnbs0	A	CMP-TF	AS:UISO	2	Y	
NC7-25	EW	Tnbs1-Tnbs0	A	CMP-TF	E300.0:NO3	2	Y	
NC7-25	EW	Tnbs1-Tnbs0	A	CMP-TF	E300.0:PERC	2	Y	
NC7-25	EW	Tnbs1-Tnbs0	A	DIS-TF	E300.0:PERC	4	Y	
NC7-25	EW	Tnbs1-Tnbs0	A	CMP-TF	E601:ALL	2	Y	
NC7-25	EW	Tnbs1-Tnbs0	A	DIS-TF	E601:ALL	4	Y	
NC7-25	EW	Tnbs1-Tnbs0	S	CMP-TF	E906:ALL	2	Y	
NC7-25	EW	Tnbs1-Tnbs0	S	CMP-TF	E906:ALL	4	Y	
NC7-25	EW	Tnbs1-Tnbs0	A	DIS-TF	KPA:UTOT	2	Y	
NC7-25	EW	Tnbs1-Tnbs0	A	DIS-TF	MS:UISO	4	Y	
NC7-26	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	Y	
NC7-26	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-26	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
NC7-26	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	Y	
NC7-26	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
NC7-26	DMW	Tnbs1-Tnbs0	A	CMP	E8082A:ALL	2	Y	
NC7-26	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	Y	

Table 2.5-8. Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-26	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC7-26	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	N	Insufficient water.
NC7-26	DMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	Y	
NC7-26	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	Y	
NC7-34	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
NC7-34	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-34	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-34	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-34	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-34	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-36	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC7-36	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-36	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
NC7-36	PTMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
NC7-36	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC7-36	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC7-37	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Dry.
NC7-37	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
NC7-37	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
NC7-37	PTMW	Qal/WBR	A	CMP	E601:ALL	2	N	Dry.
NC7-37	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
NC7-37	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
NC7-40	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-40	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-40	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-40	PTMW	Qal/WBR	S	DIS	E906:ALL	1	Y	
NC7-40	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-40	PTMW	Qal/WBR	S	DIS	E906:ALL	3	Y	
NC7-40	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-40	PTMW	Qal/WBR	Q	DIS	MS:UISO	1	Y	
NC7-40	PTMW	Qal/WBR	Q	DIS	MS:UISO	2	Y	
NC7-40	PTMW	Qal/WBR	Q	DIS	MS:UISO	3	Y	
NC7-40	PTMW	Qal/WBR	Q	DIS	MS:UISO	4	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	E8082A:ALL	2	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	E906:ALL	2	Y	
NC7-47	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	Y	
NC7-48	DMW	Qal/WBR	A	CMP	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	CMP	MS:UISO	2	Y	
NC7-48	DMW	Qal/WBR	A	CMP	T26METALS:ALL	2	Y	
NC7-49A	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
NC7-49A	PTMW	Qal/WBR	E	CMP	E300.0:NO3	2	N	To be sampled in 2014.
NC7-49A	PTMW	Qal/WBR	E	CMP	E300.0:PERC	2	N	To be sampled in 2014.
NC7-49A	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-49A	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-51	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
NC7-51	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-51	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
NC7-51	PTMW	Qal/WBR	S	DIS	E906:ALL	1	Y	
NC7-51	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-51	PTMW	Qal/WBR	S	DIS	E906:ALL	3	Y	
NC7-51	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
NC7-51	PTMW	Qal/WBR	Q	DIS	MS:UISO	1	Y	

Table 2.5-8. Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-51	PTMW	Qal/WBR	A	CMP	MS:UISO	2	Y	
NC7-51	PTMW	Qal/WBR	Q	DIS	MS:UISO	3	Y	
NC7-51	PTMW	Qal/WBR	Q	DIS	MS:UISO	4	Y	
NC7-52	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC7-52	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-52	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
NC7-52	PTMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
NC7-52	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	1	Y	
NC7-52	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	3	Y	
NC7-53	PTMW	Qal/WBR	A	DIS	AS:UISO	2	Y	
NC7-53	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
NC7-53	PTMW	Qal/WBR	O	CMP	E300.0:PERC	2	Y	
NC7-53	PTMW	Qal/WBR	O	DIS	E906:ALL	2	Y	
NC7-63	EW	Qal/WBR	A	CMP-TF	AS:UISO	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	N	Insufficient water.
NC7-63	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	N	Insufficient water.
NC7-64	EW	Qal/WBR	A	CMP-TF	AS:UISO	2	Y	
NC7-64	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	Y	
NC7-64	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	Y	
NC7-64	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	4	Y	
NC7-64	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	Y	
NC7-64	EW	Qal/WBR	A	DIS-TF	E601:ALL	4	Y	
NC7-64	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	Y	
NC7-64	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	Y	
NC7-64	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	1	Y	
NC7-64	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	2	Y	
NC7-64	EW	Qal/WBR	S	DIS-TF	KPA:UTOT	4	Y	
NC7-64	EW	Qal/WBR	A	DIS-TF	MS:UISO	4	Y	
NC7-65	PTMW	Tnsc0	A	CMP	AS:UISO	2	Y	
NC7-65	PTMW	Tnsc0	A	CMP	E300.0:NO3	2	Y	
NC7-65	PTMW	Tnsc0	A	CMP	E300.0:PERC	2	Y	
NC7-65	PTMW	Tnsc0	A	CMP	E601:ALL	2	Y	
NC7-65	PTMW	Tnsc0	S	CMP	E906:ALL	2	Y	
NC7-65	PTMW	Tnsc0	S	CMP	E906:ALL	4	Y	
NC7-65	PTMW	Tnsc0	A	DIS	MS:UISO	2	Y	
NC7-67	PTMW	Tnsc0	A	CMP	AS:UISO	2	Y	
NC7-67	PTMW	Tnsc0	A	CMP	E300.0:NO3	2	Y	
NC7-67	PTMW	Tnsc0	A	CMP	E300.0:PERC	2	Y	
NC7-67	PTMW	Tnsc0	A	CMP	E601:ALL	2	Y	
NC7-67	PTMW	Tnsc0	S	CMP	E906:ALL	2	Y	
NC7-67	PTMW	Tnsc0	S	CMP	E906:ALL	4	Y	
NC7-68	PTMW	Tnbs1-Tnbs0	A	DIS	AS:UISO	2	Y	
NC7-68	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC7-68	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
NC7-68	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC7-68	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC7-75	PTMW	Tnsc0	A	CMP	AS:UISO	2	Y	
NC7-75	PTMW	Tnsc0	A	CMP	E300.0:NO3	2	Y	
NC7-75	PTMW	Tnsc0	S	CMP	E300.0:PERC	2	Y	
NC7-75	PTMW	Tnsc0	S	CMP	E300.0:PERC	4	Y	
NC7-75	PTMW	Tnsc0	A	CMP	E601:ALL	2	Y	
NC7-75	PTMW	Tnsc0	S	CMP	E906:ALL	2	Y	
NC7-75	PTMW	Tnsc0	S	CMP	E906:ALL	4	Y	
NC7-76	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
NC7-76	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
NC7-76	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
NC7-76	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
NC7-76	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
W-865-01	PTMW	Tnbs1-Tnbs0	A	DIS	DWMETALS:ALL	1	Y	
W-865-01	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	1	Y	
W-865-01	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	1	Y	
W-865-01	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	1	Y	
W-865-01	PTMW	Tnbs1-Tnbs0	S	DIS	E601:ALL	3	Y	
W-865-01	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	1	Y	

Table 2.5-8. Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-865-01	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	3	Y	
W-865-03	PTMW	Tnbs1-Tnbs0	A	DIS	E300.0:NO3	1	Y	
W-865-03	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	1	Y	
W-865-03	PTMW	Tnbs1-Tnbs0	A	DIS	E906:ALL	1	Y	
W-865-1804	PTMW	Tnbs1-Tnbs0	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
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	E300.0:NO3	2	N	Dry.
W-PIT3-01	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT3-01	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
W-PIT3-01	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
W-PIT3-01	PTMW	Qal/WBR	A	CMP	MS:UISO	2	N	Dry.
W-PIT3-02	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Dry.
W-PIT3-02	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT3-02	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT3-02	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
W-PIT3-02	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
W-PIT5-01	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Dry.
W-PIT5-01	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT5-01	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT5-01	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
W-PIT5-01	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
W-PIT5-02	PTMW	Qal/WBR	A	CMP	AS:UISO	2	N	Dry.
W-PIT5-02	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT5-02	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT5-02	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Dry.
W-PIT5-02	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Dry.
W-PIT7-02	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
W-PIT7-02	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
W-PIT7-02	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
W-PIT7-02	PTMW	Qal/WBR	S	CMP	E906:ALL	1	Y	
W-PIT7-02	PTMW	Qal/WBR	S	CMP	E906:ALL	3	Y	
W-PIT7-03	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
W-PIT7-03	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
W-PIT7-03	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
W-PIT7-03	PTMW	Qal/WBR	S	CMP	E601:ALL	2	Y	
W-PIT7-03	PTMW	Qal/WBR	S	CMP	E601:ALL	4	Y	
W-PIT7-03	PTMW	Qal/WBR	A	CMP	E906:ALL	1	Y	
W-PIT7-10	PTMW	Qal/WBR	A	CMP	AS:UISO	2	Y	
W-PIT7-10	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
W-PIT7-10	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
W-PIT7-10	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
W-PIT7-10	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
W-PIT7-10	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
W-PIT7-11	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	N	Dry.
W-PIT7-11	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT7-11	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT7-11	PTMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	N	Dry.
W-PIT7-11	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	N	Dry.
W-PIT7-11	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	N	Dry.
W-PIT7-12	PTMW	Tnbs1-Tnbs0	O	CMP	AS:UISO	2	Y	
W-PIT7-12	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
W-PIT7-12	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
W-PIT7-12	PTMW	Tnbs1-Tnbs0	A	DIS	E300.0:PERC	4	Y	
W-PIT7-12	PTMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
W-PIT7-12	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-PIT7-12	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
W-PIT7-13	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
W-PIT7-13	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
W-PIT7-13	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:PERC	2	Y	
W-PIT7-13	PTMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
W-PIT7-13	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
W-PIT7-13	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	

Table 2.5-8. Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-PIT7-14	PTMW	Tnsc0	O	DIS	AS:UISO	2	Y	
W-PIT7-14	PTMW	Tnsc0	A	CMP	E300.0:PERC	2	Y	
W-PIT7-14	PTMW	Tnsc0	A	CMP	E906:ALL	2	Y	
W-PIT7-14	PTMW	Tnsc0	A	DIS	MS:UISO	2	Y	
W-PIT7-15	PTMW	Tnbs1-Tnbs0	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	CMP	MS:UISO	2	Y	
W-PIT7-1860	PTMW	Tnbs1-Tnbs0	E	CMP	E300.0:PERC	2	N	To be sampled in 2014.
W-PIT7-1860	PTMW	Tnbs1-Tnbs0	E	CMP	E906:ALL	2	N	To be sampled in 2014.
W-PIT7-1861	PTMW	Qal/WBR	O	CMP	AS:UISO	2	Y	
W-PIT7-1861	PTMW	Qal/WBR	O	CMP	E300.0:NO3	2	Y	
W-PIT7-1861	PTMW	Qal/WBR	O	CMP	E300.0:PERC	2	Y	
W-PIT7-1861	PTMW	Qal/WBR	O	CMP	E906:ALL	2	Y	
W-PIT7-1904	PTMW	Qal/WBR	A	DIS	AS:UISO	2	Y	
W-PIT7-1904	PTMW	Qal/WBR	A	DIS	E300.0:O-PO2	2	Y	
W-PIT7-1905	PTMW	Qal/WBR	A	DIS	AS:UISO	2	Y	
W-PIT7-1905	PTMW	Qal/WBR	A	DIS	E300.0:O-PO2	2	Y	
W-PIT7-1907	PTMW	Qal/WBR	A	DIS	AS:UISO	2	Y	
W-PIT7-1907	PTMW	Qal/WBR	A	DIS	E300.0:O-PO2	2	Y	
W-PIT7-1915	PTMW	Qal/WBR	A	DIS	AS:UISO	2	Y	
W-PIT7-1915	PTMW	Qal/WBR	A	DIS	E300.0:O-PO2	2	Y	
W-PIT7-1916	PTMW	Qal/WBR	A	DIS	AS:UISO	2	Y	
W-PIT7-1916	PTMW	Qal/WBR	A	DIS	E300.0:O-PO2	2	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	DIS	E300.0:O-PO2	2	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	DIS	E300.0:PERC	4	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	DIS	E601:ALL	4	Y	
W-PIT7-1918	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
W-PIT7-1918	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
W-PIT7-1918	PTMW	Qal/WBR	A	CMP	MS:UISO	2	Y	
W-PIT7-1919	PTMW	Qal/WBR	A	DIS	E300.0:O-PO2	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	CMP	MS:UISO	2	Y	
W-PIT7-2305	EW	Qal/WBR	A	CMP-TF	AS:UISO	2	Y	
W-PIT7-2305	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	Y	
W-PIT7-2305	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	Y	
W-PIT7-2305	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	4	Y	
W-PIT7-2305	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	Y	
W-PIT7-2305	EW	Qal/WBR	A	DIS-TF	E601:ALL	4	Y	
W-PIT7-2305	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	Y	
W-PIT7-2305	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	Y	
W-PIT7-2305	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	1	Y	
W-PIT7-2305	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	2	Y	
W-PIT7-2305	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	3	Y	
W-PIT7-2305	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	4	Y	
W-PIT7-2305	EW	Qal/WBR	A	DIS-TF	MS:UISO	4	Y	
W-PIT7-2306	EW	Qal/WBR	A	CMP-TF	AS:UISO	2	N	Insufficient water.
W-PIT7-2306	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	N	Insufficient water.
W-PIT7-2306	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	N	Insufficient water.
W-PIT7-2306	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	N	Insufficient water.
W-PIT7-2306	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	N	Insufficient water.
W-PIT7-2306	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	N	Insufficient water.
W-PIT7-2307	EW	Qal/WBR	A	CMP-TF	AS:UISO	2	Y	
W-PIT7-2307	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	Y	
W-PIT7-2307	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	Y	
W-PIT7-2307	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	4	Y	
W-PIT7-2307	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	Y	
W-PIT7-2307	EW	Qal/WBR	A	DIS-TF	E601:ALL	4	Y	
W-PIT7-2307	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	Y	

Table 2.5-8. Pit 7 Complex Area of Operable Unit 5 ground and surface water sampling and analysis plan.

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-PIT7-2307	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	Y	
W-PIT7-2307	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	1	Y	
W-PIT7-2307	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	2	Y	
W-PIT7-2307	EW	Qal/WBR	S	DIS-TF	KPA:UTOT	4	Y	
W-PIT7-2307	EW	Qal/WBR	A	DIS-TF	MS:UISO	4	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	CMP	E300.0:PERC	2	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	CMP	E601:ALL	2	Y	
W-PIT7-2309	PTMW	Qal/WBR	S	CMP	E906:ALL	2	Y	
W-PIT7-2309	PTMW	Qal/WBR	S	CMP	E906:ALL	4	Y	
W-PIT7-2309	PTMW	Qal/WBR	A	CMP	MS:UISO	2	Y	
W-PIT7-2703	EW	Qal/WBR	A	CMP-TF	AS:UISO	2	Y	
W-PIT7-2703	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	Y	
W-PIT7-2703	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	Y	
W-PIT7-2703	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	4	Y	
W-PIT7-2703	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	Y	
W-PIT7-2703	EW	Qal/WBR	A	DIS-TF	E601:ALL	4	Y	
W-PIT7-2703	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	Y	
W-PIT7-2703	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	Y	
W-PIT7-2703	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	1	Y	
W-PIT7-2703	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	2	Y	
W-PIT7-2703	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	3	Y	
W-PIT7-2703	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	4	Y	
W-PIT7-2703	EW	Qal/WBR	A	DIS-TF	MS:UISO	4	Y	
W-PIT7-2704	EW	Qal/WBR	A	CMP-TF	AS:UISO	2	N	Insufficient water.
W-PIT7-2704	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	N	Insufficient water.
W-PIT7-2704	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	N	Insufficient water.
W-PIT7-2704	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	N	Insufficient water.
W-PIT7-2704	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	N	Insufficient water.
W-PIT7-2704	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	N	Insufficient water.
W-PIT7-2704	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	3	Y	
W-PIT7-2705	EW	Qal/WBR	A	CMP-TF	AS:UISO	2	Y	
W-PIT7-2705	EW	Qal/WBR	A	CMP-TF	E300.0:NO3	2	Y	
W-PIT7-2705	EW	Qal/WBR	A	CMP-TF	E300.0:PERC	2	Y	
W-PIT7-2705	EW	Qal/WBR	A	DIS-TF	E300.0:PERC	4	Y	
W-PIT7-2705	EW	Qal/WBR	A	CMP-TF	E601:ALL	2	Y	
W-PIT7-2705	EW	Qal/WBR	A	DIS-TF	E601:ALL	4	Y	
W-PIT7-2705	EW	Qal/WBR	S	CMP-TF	E906:ALL	2	Y	
W-PIT7-2705	EW	Qal/WBR	S	CMP-TF	E906:ALL	4	Y	
W-PIT7-2705	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	1	Y	
W-PIT7-2705	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	2	Y	
W-PIT7-2705	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	3	Y	
W-PIT7-2705	EW	Qal/WBR	Q	DIS-TF	KPA:UTOT	4	Y	
W-PIT7-2705	EW	Qal/WBR	A	DIS-TF	MS:UISO	4	Y	

Table 2.5-9. Pit 7-Source (PIT7-SRC) mass removed, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	Total Uranium mass removed (g)
PIT7-SRC	July	NA	0	0.44	1.5	1.4
	August	NA	0	0.36	1.2	1.1
	September	NA	0	0.43	1.5	1.3
	October	NA	0	0.35	1.1	0.93
	November	NA	0	0.40	1.2	1.0
	December	NA	0	0.49	1.5	1.2
Total		NA	0	2.5	7.9	7.0

Table 2.6-1. Building 854-Source (854-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
854-SRC	July	841	710	2,290	125,093
	August	696	696	1,923	91,454
	September	765	764	2,122	100,945
	October	558	556	1,561	65,992
	November	619	586	1,745	62,638
	December	146	146	412	10,698
Total		3,625	3,458	10,053	456,820

Table 2.6-2. Building 854-Proximal (854-PRX) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
854-PRX	July	NA	790	NA	60,889
	August	NA	556	NA	43,640
	September	NA	587	NA	43,833
	October	NA	150	NA	35,563
	November	NA	648	NA	36,833
	December	NA	168	NA	8,902
Total		NA	2,899	NA	229,660

Table 2.6-3. Building 854-Distal (854-DIS) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
854-DIS	July	NA	12	NA	607
	August	NA	11	NA	626
	September	NA	16	NA	756
	October	NA	12	NA	530
	November	NA	8	NA	438
	December	NA	2	NA	90
Total		NA	61	NA	3,047

Table 2.6-4. Building 854 Operable Unit volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 854-Distal															
854-DIS-I	7/1/13	30	<0.5	0.64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-I	10/15/13	27	<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
854-DIS-E	7/1/13	<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	<0.5
854-DIS-E	8/5/13	<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	<0.5
854-DIS-E	9/3/13	<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	<0.5
854-DIS-E	10/15/13	<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	<0.5
854-DIS-E	11/4/13	<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	<0.5
854-DIS-E	12/2/13	<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	<0.5
Building 854-Proximal															
854-PRX-I	7/1/13	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
854-PRX-I	10/15/13	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
854-PRX-E	7/1/13	<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	<0.5
854-PRX-E	8/5/13	<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	<0.5
854-PRX-E	9/3/13	<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	<0.5
854-PRX-E	10/15/13	<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	<0.5
854-PRX-E	11/4/13	<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	<0.5
854-PRX-E	12/2/13	<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	<0.5
Building 854-Source															
854-SRC-I	7/1/13	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-I	10/15/13	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
854-SRC-E	7/1/13	<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	<0.5
854-SRC-E	8/5/13	<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	<0.5
854-SRC-E	9/3/13	<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	<0.5
854-SRC-E	10/15/13	<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	<0.5

Table 2.6-4. Building 854 Operable Unit volatile organic compounds (VOCs) in ground water extraction and treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
854-SRC-E	11/4/13	<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	<0.5
854-SRC-E	12/2/13	<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	<0.5

Notes:

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

Table 2.6-5. Building 854 Operable Unit nitrate and perchlorate in ground water extraction and treatment system influent and effluent.

Location	Date	Nitrate as NO3 (mg/L)	Perchlorate (mg/L)
Building 854-Distal			
854-DIS-I	7/1/13	21	5.7
854-DIS-I	10/15/13	20	4.5
854-DIS-E	7/1/13	12	<4
854-DIS-E	8/5/13	2.2	<4
854-DIS-E	9/3/13	4.5 L	<4
854-DIS-E	10/15/13	4.0	<4
854-DIS-E	11/4/13	4.2	<4
854-DIS-E	12/2/13	4.4	<4
Building 854-Proximal[a]			
854-PRX-I	7/1/13	37	6.8
854-PRX-I	8/5/13	35	-
854-PRX-I	9/3/13	36 D	-
854-PRX-I	10/15/13	37 D	5.8
854-PRX-I	12/2/13	38 D	-
854-PRX-E	7/1/13	30 D	<4
854-PRX-E	8/5/13	26	<4
854-PRX-E	9/3/13	22 L	<4
854-PRX-E	10/15/13	34	<4
854-PRX-E	11/4/13	33	<4
854-PRX-E	12/2/13	32 D	<4
Building 854-Source			
854-SRC-I	7/1/13	-	4.8
854-SRC-I	10/15/13	-	<4
854-SRC-E	7/1/13	-	<4
854-SRC-E	8/5/13	-	<4
854-SRC-E	9/3/13	-	<4
854-SRC-E	10/15/13	-	<4
854-SRC-E	11/4/13	-	<4
854-SRC-E	12/2/13	-	<4

Notes:

[a] **Monthly influent nitrate samples collected for internal purposes.**

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

Table 2.6-6. Building 854 Operable Unit treatment facility sampling and analysis plan.

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

Notes:

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

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

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

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-854-01	PTWM	Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-01	PTWM	Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-01	PTWM	Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-01	PTWM	Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-01	PTWM	Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-02	EW	Tnbs1-Tnsc0	A	CMP-TF	E300.0:NO3	2	Y	
W-854-02	EW	Tnbs1-Tnsc0	S	DIS-TF	E300.0:PERC	1	Y	
W-854-02	EW	Tnbs1-Tnsc0	S	CMP-TF	E300.0:PERC	2	Y	
W-854-02	EW	Tnbs1-Tnsc0	S	DIS-TF	E300.0:PERC	3	Y	
W-854-02	EW	Tnbs1-Tnsc0	S	CMP-TF	E300.0:PERC	4	Y	
W-854-02	EW	Tnbs1-Tnsc0	S	DIS-TF	E601:ALL	1	Y	
W-854-02	EW	Tnbs1-Tnsc0	S	CMP-TF	E601:ALL	2	Y	
W-854-02	EW	Tnbs1-Tnsc0	S	DIS-TF	E601:ALL	3	Y	
W-854-02	EW	Tnbs1-Tnsc0	S	CMP-TF	E601:ALL	4	Y	
W-854-03	EW	Tnbs1-Tnsc0	M	DIS-TF	E300.0:NO3	1	Y	
W-854-03	EW	Tnbs1-Tnsc0	M	DIS-TF	E300.0:NO3	2	Y	
W-854-03	EW	Tnbs1-Tnsc0	M	DIS-TF	E300.0:NO3	2	Y	
W-854-03	EW	Tnbs1-Tnsc0	M	DIS-TF	E300.0:NO3	2	Y	
W-854-03	EW	Tnbs1-Tnsc0	M	DIS-TF	E300.0:NO3	3	Y	
W-854-03	EW	Tnbs1-Tnsc0	M	DIS-TF	E300.0:NO3	3	Y	
W-854-03	EW	Tnbs1-Tnsc0	M	DIS-TF	E300.0:NO3	4	Y	
W-854-03	EW	Tnbs1-Tnsc0	M	DIS-TF	E300.0:NO3	4	Y	
W-854-03	EW	Tnbs1-Tnsc0	M	DIS-TF	E300.0:NO3	4	Y	
W-854-03	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:PERC	1	Y	
W-854-03	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:PERC	2	Y	
W-854-03	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:PERC	3	Y	
W-854-03	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:PERC	4	Y	
W-854-03	EW	Tnbs1-Tnsc0	Q	DIS-TF	E601:ALL	1	Y	
W-854-03	EW	Tnbs1-Tnsc0	Q	DIS-TF	E601:ALL	2	Y	
W-854-03	EW	Tnbs1-Tnsc0	Q	DIS-TF	E601:ALL	3	Y	
W-854-03	EW	Tnbs1-Tnsc0	Q	DIS-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	Y	
W-854-05	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-854-05	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-854-05	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	2	Y	
W-854-05	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-06	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-06	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-06	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-06	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-06	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-07	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-07	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-07	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-07	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-07	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-08	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-854-08	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	N	Insufficient water.
W-854-08	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	N	Insufficient water.
W-854-08	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	N	Insufficient water.
W-854-08	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	N	Insufficient water.
W-854-09	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-09	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-09	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-09	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-09	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-10	PTWM	Qls-Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-854-10	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-854-10	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-854-10	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	2	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-854-10	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-11	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	N	Dry.
W-854-11	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	N	Dry.
W-854-11	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	N	Dry.
W-854-11	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	N	Dry.
W-854-11	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	N	Dry.
W-854-12	PTWM	Tmss	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-854-12	PTWM	Tmss	S	CMP	E300.0:PERC	2	N	Insufficient water.
W-854-12	PTWM	Tmss	S	CMP	E300.0:PERC	4	N	Insufficient water.
W-854-12	PTWM	Tmss	S	CMP	E601:ALL	2	N	Insufficient water.
W-854-12	PTWM	Tmss	S	CMP	E601:ALL	4	N	Insufficient water.
W-854-13	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-13	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-13	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-13	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-13	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-14	PTWM	Qls-Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-854-14	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-854-14	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-854-14	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	2	Y	
W-854-14	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-15	PTWM	Qls-Tnbs1	A	CMP	E300.0:NO3	2	Y	
W-854-15	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	2	Y	
W-854-15	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	4	Y	
W-854-15	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	2	Y	
W-854-15	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	4	Y	
W-854-17	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-17	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-17	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-17	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-17	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-18A	EW	Tnbs1-Tnsc0	A	CMP-TF	E300.0:NO3	2	Y	
W-854-18A	EW	Tnbs1-Tnsc0	S	DIS-TF	E300.0:PERC	1	Y	
W-854-18A	EW	Tnbs1-Tnsc0	S	CMP-TF	E300.0:PERC	2	Y	
W-854-18A	EW	Tnbs1-Tnsc0	S	DIS-TF	E300.0:PERC	3	Y	
W-854-18A	EW	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-18A	EW	Tnbs1-Tnsc0	S	DIS-TF	E601:ALL	1	Y	
W-854-18A	EW	Tnbs1-Tnsc0	S	CMP-TF	E601:ALL	2	Y	
W-854-18A	EW	Tnbs1-Tnsc0	S	DIS-TF	E601:ALL	3	Y	
W-854-18A	EW	Tnbs1-Tnsc0	S	CMP-TF	E601:ALL	4	Y	
W-854-19	PTWM	Qls-Tnbs1	O	CMP	E300.0:NO3	2	N	Dry.
W-854-19	PTWM	Qls-Tnbs1	O	CMP	E300.0:PERC	2	N	Dry.
W-854-19	PTWM	Qls-Tnbs1	O	CMP	E601:ALL	2	N	Dry.
W-854-45	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-45	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-45	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-45	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-45	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-1701	PTWM	Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-1701	PTWM	Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-1701	PTWM	Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-1701	PTWM	Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-1701	PTWM	Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-1706	PTWM	Qls-Tnbs1	A	CMP	E300.0:NO3	2	N	Dry.
W-854-1706	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	2	N	Dry.
W-854-1706	PTWM	Qls-Tnbs1	S	CMP	E300.0:PERC	4	N	Dry.
W-854-1706	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	2	N	Dry.
W-854-1706	PTWM	Qls-Tnbs1	S	CMP	E601:ALL	4	N	Dry.
W-854-1707	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-1707	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-1707	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-1707	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-1707	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-1731	PTWM	Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-1731	PTWM	Tnsc0	S	CMP	E300.0:PERC	2	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-854-1731	PTWM	Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-1731	PTWM	Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-1731	PTWM	Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-1822	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-1822	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-1822	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-1822	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-1822	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-1823	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-1823	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-1823	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-1823	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-1823	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-1902	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	N	Dry.
W-854-1902	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	N	Dry.
W-854-1902	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	N	Dry.
W-854-1902	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	N	Dry.
W-854-1902	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	N	Dry.
W-854-2115	PTWM	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-2115	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-2115	PTWM	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-2115	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-2115	PTWM	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:NO3	1	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:NO3	2	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:NO3	3	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:NO3	4	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:PERC	1	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:PERC	2	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:PERC	3	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E300.0:PERC	4	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E601:ALL	1	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E601:ALL	2	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E601:ALL	3	Y	
W-854-2139	EW	Tnbs1-Tnsc0	Q	DIS-TF	E601:ALL	4	Y	
W-854-2218	EW	Tnbs1-Tnsc0	A	CMP-TF	E300.0:NO3	2	Y	
W-854-2218	EW	Tnbs1-Tnsc0	S	DIS-TF	E300.0:PERC	1	Y	
W-854-2218	EW	Tnbs1-Tnsc0	S	CMP-TF	E300.0:PERC	2	Y	
W-854-2218	EW	Tnbs1-Tnsc0	S	DIS-TF	E300.0:PERC	3	Y	
W-854-2218	EW	Tnbs1-Tnsc0	S	CMP-TF	E300.0:PERC	4	Y	
W-854-2218	EW	Tnbs1-Tnsc0	S	DIS-TF	E601:ALL	1	Y	
W-854-2218	EW	Tnbs1-Tnsc0	S	CMP-TF	E601:ALL	2	Y	
W-854-2218	EW	Tnbs1-Tnsc0	S	DIS-TF	E601:ALL	3	Y	
W-854-2218	EW	Tnbs1-Tnsc0	S	CMP-TF	E601:ALL	4	Y	
W-854-2611	PTMW	Tnbs1/Tnsc0	A	CMP	E300.0:NO3	2	Y	
W-854-2611	PTMW	Tnbs1/Tnsc0	S	CMP	E300.0:PERC	2	Y	
W-854-2611	PTMW	Tnbs1/Tnsc0	S	CMP	E300.0:PERC	4	Y	
W-854-2611	PTMW	Tnbs1/Tnsc0	S	CMP	E601:ALL	2	Y	
W-854-2611	PTMW	Tnbs1/Tnsc0	S	CMP	E601:ALL	4	Y	
W-854-F2	PTWM	Qls-Tnbs1	O	CMP	E300.0:NO3	2	N	Dry.
W-854-F2	PTWM	Qls-Tnbs1	O	CMP	E300.0:PERC	2	N	Dry.
W-854-F2	PTWM	Qls-Tnbs1	O	CMP	E601:ALL	2	N	Dry.
SPRING10	SPR	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	N	Dry.
SPRING10	SPR	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	N	Dry.
SPRING10	SPR	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	N	Dry.
SPRING10	SPR	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	N	Dry.
SPRING10	SPR	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	N	Dry.
SPRING11	SPR	Tnbs1-Tnsc0	A	CMP	E300.0:NO3	2	Y	
SPRING11	SPR	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	2	Y	
SPRING11	SPR	Tnbs1-Tnsc0	S	CMP	E300.0:PERC	4	Y	
SPRING11	SPR	Tnbs1-Tnsc0	S	CMP	E601:ALL	2	Y	
SPRING11	SPR	Tnbs1-Tnsc0	S	CMP	E601:ALL	4	Y	

Table 2.6-8. Building 854-Source (854-SRC) mass removed, July 1, 2013 through December 31, 2013.

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	84	18	0.98	22	NA	NA
	August	70	11	0.40	15	NA	NA
	September	78	14	0.70	17	NA	NA
	October	76	9.8	0.49	11	NA	NA
	November	85	9.2	0.46	11	NA	NA
	December	20	0.65	0	1.7	NA	NA
Total		410	61	3.0	78	NA	NA

Table 2.6-9. Building 854-Proximal (854-PRX) mass removed, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS/TKEBS mass removed (g)
854-PRX	July	NA	3.7	1.6	8.5	NA	NA
	August	NA	2.6	1.1	5.8	NA	NA
	September	NA	2.6	1.1	6.0	NA	NA
	October	NA	2.3	0.78	5.0	NA	NA
	November	NA	2.4	0.81	5.3	NA	NA
	December	NA	0.57	0.20	1.3	NA	NA
Total		NA	14	5.6	32	NA	NA

Table 2.6-10. Building 854-Distal (854-DIS) mass removed, July 1, 2013 through December 31, 2013.

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	0.070	0.013	0.048	NA	NA
	August	NA	0.073	0.013	0.050	NA	NA
	September	NA	0.088	0.016	0.060	NA	NA
	October	NA	0.055	0.0090	0.040	NA	NA
	November	NA	0.046	0.0075	0.033	NA	NA
	December	NA	0.0094	0.0015	0.0068	NA	NA
Total		NA	0.34	0.061	0.24	NA	NA

Table 2.7-1. Building 832-Source (832-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
832-SRC	July	888	792	220	9,292
	August	528	528	173	6,958
	September	840	840	230	9,750
	October	576	576	146	5,953
	November	624	624	178	6,521
	December	168	168	47	2,287
Total		3,624	3,528	994	40,761

Table 2.7-2. Building 830-Source (830-SRC) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
830-SRC	July	425	732	642	241,693
	August	313	363	476	165,567
	September	610	531	1,000	275,555
	October	658	402	1,077	190,855
	November	502	273	893	50,630
	December	192	41	324	2,614
Total		2,700	2,342	4,412	926,914

Table 2.7-3. Building 830-Distal South (830-DISS) volumes of ground water and soil vapor extracted and discharged, July 1, 2013 through December 31, 2013.

Treatment facility	Month	SVTS Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of cf)	Volume of ground water discharged (gal)
830-DISS	July	NA	840	NA	196,265
	August	NA	696	NA	159,791
	September	NA	768	NA	170,711
	October	NA	720	NA	139,524
	November	NA	624	NA	115,887
	December	NA	192	NA	35,814
Total		NA	3,840	NA	817,992

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

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 830-Distal South [a]															
Building 830-Source															
830-SRC-I	7/1/13	410 D	3	0.51	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-I	10/9/13	1,100 D	1.6	0.63	<0.5	<0.5	0.64	<0.5	0.53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-I2	7/1/13	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
830-SRC-I2	10/9/13	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-E	7/1/13	<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	<0.5
830-SRC-E	8/5/13	<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	<0.5
830-SRC-E	9/3/13	<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	<0.5
830-SRC-E	10/9/13	<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	<0.5
830-SRC-E	11/5/13	<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	<0.5
830-SRC-E	12/2/13	<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	<0.5
Building 832-Source															
832-SRC-I	7/1/13	57	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-I	10/15/13	51	<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
832-SRC-E	7/1/13	<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	<0.5
832-SRC-E	8/12/13	<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	<0.5
832-SRC-E	9/3/13	<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	<0.5
832-SRC-E	10/15/13	<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	<0.5
832-SRC-E	11/4/13	<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	<0.5
832-SRC-E	12/2/13	<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	<0.5

Notes:

[a] **No influent or effluent monitoring conducted due to VOC treatment at CGSA GWTS.**

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

Table 2.7-4 (Con't). Analyte detected but not reported in main table.

Location	Date	Detection frequency	1,2-Dichloroethene (total) (µg/L)
Building 830-Distal South[a]			
Building 830-Source			
830-SRC-I	7/1/13	0 of 18	-
830-SRC-I	10/9/13	0 of 18	-
830-SRC-I2	7/1/13	0 of 18	-
830-SRC-I2	10/9/13	0 of 18	-
830-SRC-E	7/1/13	0 of 18	-
830-SRC-E	8/5/13	0 of 18	-
830-SRC-E	9/3/13	0 of 18	-
830-SRC-E	10/9/13	0 of 18	-
830-SRC-E	11/5/13	0 of 18	-
830-SRC-E	12/2/13	0 of 18	-
Building 832-Source			
832-SRC-I	7/1/13	1 of 18	1.3
832-SRC-I	10/15/13	1 of 18	1.2
832-SRC-E	7/1/13	0 of 18	-
832-SRC-E	8/12/13	0 of 18	-
832-SRC-E	9/3/13	0 of 18	-
832-SRC-E	10/15/13	0 of 18	-
832-SRC-E	11/4/13	0 of 18	-
832-SRC-E	12/2/13	0 of 18	-

Notes:

[a] No influent or effluent monitoring conducted due to VOC treatment at CGSA GWTS.

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

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

Location	Date	Perchlorate (mg/L)
Building 830-Distal South		
830-DISS-I	7/10/13	<4
830-DISS-I	10/9/13	<4
830-DISS-E	7/10/13	<4
830-DISS-E	8/5/13	<4
830-DISS-E	9/4/13	<4
830-DISS-E	10/9/13	<4
830-DISS-E	11/4/13	<4
830-DISS-E	12/2/13	<4
Building 830-Source		
830-SRC-I	7/1/13	<4
830-SRC-I	10/9/13	<4
830-SRC-E	7/1/13	<4
830-SRC-E	8/5/13	<4
830-SRC-E	9/3/13	<4
830-SRC-E	10/9/13	<4
830-SRC-E	11/5/13	<4
830-SRC-E	12/2/13	<4
Building 832-Source		
832-SRC-I	7/1/13	6
832-SRC-I	10/15/13	5.6
832-SRC-E	7/1/13	<4
832-SRC-E	8/12/13	<4
832-SRC-E	9/3/13	<4
832-SRC-E	10/15/13	<4
832-SRC-E	11/4/13	<4
832-SRC-E	12/2/13	<4

Notes:
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

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

Sample location	Sample identification	Parameter	Frequency
832-SRC GWTS			
Influent Port	832-SRC-I	VOCs	Quarterly
		Perchlorate	Quarterly
		pH	Quarterly
Effluent Port	832-SRC-E	VOCs	Monthly
		Perchlorate	Monthly
		PH	Monthly
832-SRC SVTS			
Influent Port	832-SRC-VI	No Monitoring Requirements	
Effluent Port	832-SRC-VE	VOCs	Weekly[a]
Intermediate GAC	832-SRC-VCF3I	VOCs	Weekly[a]
830-SRC GWTS			
Influent Port	830-SRC-I	VOCs	Quarterly
		Perchlorate	Quarterly
		PH	Quarterly
Effluent Port	830-SRC-E	VOCs	Monthly
		Perchlorate	Monthly
		PH	Monthly
830-SRC SVTS			
Influent Port	830-SRC-VI	No Monitoring Requirements	
Effluent Port	830-SRC-VE	VOCs	Weekly[a]
Intermediate GAC	830-SRC-VCF3I	VOCs	Weekly[a]
830-DISS GWTS			
Influent Port	830-DISS-I	Perchlorate	Quarterly
		pH	Quarterly
Effluent Port	830-DISS-E	Perchlorate	Monthly
		pH	Monthly

Notes:

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

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

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

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
SPRING3	SPR	Qal/WBR	A	CMP	E300.0:NO3	1	Y	
SPRING3	SPR	Qal/WBR	A	CMP	E300.0:PERC	1	Y	
SPRING3	SPR	Qal/WBR	S	CMP	E601:ALL	1	Y	
SPRING3	SPR	Qal/WBR	S	CMP	E601:ALL	3	N	Dry.
SPRING4	SPR	Tpsg-Tps	O	CMP	E300.0:NO3	1	N	Dry.
SPRING4	SPR	Tpsg-Tps	O	CMP	E300.0:PERC	1	N	Dry.
SPRING4	SPR	Tpsg-Tps	O	CMP	E601:ALL	1	N	Dry.
SVI-830-031	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	Y	
SVI-830-031	PTMW	Qal/WBR	A	CMP	E300.0:PERC	1	Y	
SVI-830-031	PTMW	Qal/WBR	S	CMP	E601:ALL	1	Y	
SVI-830-031	PTMW	Qal/WBR	S	CMP	E601:ALL	3	Y	
SVI-830-032	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	Y	
SVI-830-032	PTMW	Qal/WBR	A	CMP	E300.0:PERC	1	Y	
SVI-830-032	PTMW	Qal/WBR	S	CMP	E601:ALL	1	Y	
SVI-830-032	PTMW	Qal/WBR	S	CMP	E601:ALL	3	Y	
SVI-830-033	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	Y	
SVI-830-033	PTMW	Qal/WBR	A	CMP	E300.0:PERC	1	Y	
SVI-830-033	PTMW	Qal/WBR	S	CMP	E601:ALL	1	Y	
SVI-830-033	PTMW	Qal/WBR	S	CMP	E601:ALL	3	Y	
SVI-830-035	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	Y	
SVI-830-035	PTMW	Qal/WBR	A	CMP	E300.0:PERC	1	Y	
SVI-830-035	PTMW	Qal/WBR	S	CMP	E601:ALL	1	Y	
SVI-830-035	PTMW	Qal/WBR	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	Tnsc1c	A	CMP	E300.0:NO3	1	Y	
W-830-05	PTMW	Tnsc1c	A	CMP	E300.0:PERC	1	Y	
W-830-05	PTMW	Tnsc1c	S	CMP	E601:ALL	1	Y	
W-830-05	PTMW	Tnsc1c	S	CMP	E601:ALL	3	Y	
W-830-07	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	N	Dry.
W-830-07	PTMW	Qal/WBR	A	CMP	E300.0:PERC	1	N	Dry.
W-830-07	PTMW	Qal/WBR	S	CMP	E601:ALL	1	N	Dry.
W-830-07	PTMW	Qal/WBR	S	CMP	E601:ALL	3	N	Dry.
W-830-09	PTMW	UTnbs1	O	CMP	E300.0:NO3	1	Y	
W-830-09	PTMW	UTnbs1	O	CMP	E300.0:PERC	1	Y	
W-830-09	PTMW	UTnbs1	S	CMP	E601:ALL	1	Y	
W-830-09	PTMW	UTnbs1	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	LTnbs1	Q	DIS	AS:UISO	1	Y	
W-830-12	GW	LTnbs1	S	CMP	E300.0:NO3	1	Y	
W-830-12	GW	LTnbs1	S	CMP	E300.0:NO3	3	Y	
W-830-12	GW	LTnbs1	S	CMP	E300.0:PERC	1	Y	
W-830-12	GW	LTnbs1	S	CMP	E300.0:PERC	3	Y	
W-830-12	GW	LTnbs1	Q	CMP	E601:ALL	1	Y	
W-830-12	GW	LTnbs1	Q	CMP	E601:ALL	2	Y	
W-830-12	GW	LTnbs1	Q	CMP	E601:ALL	3	Y	
W-830-12	GW	LTnbs1	Q	CMP	E601:ALL	4	Y	
W-830-12	GW	LTnbs1	Q	DIS	E9060:ALL	1	Y	
W-830-12	GW	LTnbs1	Q	DIS	GENMIN:ALL	1	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	N	To be sampled in 2014.
W-830-14	PTMW	Tnsc1b	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-830-14	PTMW	Tnsc1b	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
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	UTnbs1	S	CMP	E300.0:NO3	1	Y	
W-830-15	GW	UTnbs1	S	CMP	E300.0:NO3	3	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-15	GW	UTnbs1	S	CMP	E300.0:PERC	1	Y	
W-830-15	GW	UTnbs1	S	CMP	E300.0:PERC	3	Y	
W-830-15	GW	UTnbs1	Q	CMP	E601:ALL	1	Y	
W-830-15	GW	UTnbs1	Q	CMP	E601:ALL	2	Y	
W-830-15	GW	UTnbs1	Q	CMP	E601:ALL	3	Y	
W-830-15	GW	UTnbs1	Q	CMP	E601:ALL	4	Y	
W-830-16	PTMW	Tnsc1b	O	CMP	E300.0:NO3	1	Y	
W-830-16	PTMW	Tnsc1b	O	CMP	E300.0:PERC	1	Y	
W-830-16	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-16	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-830-18	PTMW	UTnbs1	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-830-18	PTMW	UTnbs1	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-830-18	PTMW	UTnbs1	S	CMP	E601:ALL	1	Y	
W-830-18	PTMW	UTnbs1	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	UTnbs1	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-830-20	PTMW	UTnbs1	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-830-20	PTMW	UTnbs1	S	CMP	E601:ALL	1	Y	
W-830-20	PTMW	UTnbs1	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-830-25	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	Y	
W-830-25	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	Y	
W-830-25	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-25	PTMW	Tnsc1b	S	CMP	E601:ALL	3	N	Dry.
W-830-26	PTMW	UTnbs1	E	CMP	E300.0:NO3	1	N	To be sampled in 2014.
W-830-26	PTMW	UTnbs1	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-830-26	PTMW	UTnbs1	S	CMP	E601:ALL	1	N	Dry.
W-830-26	PTMW	UTnbs1	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	UTnbs1	O	CMP	E300.0:NO3	1	Y	
W-830-28	PTMW	UTnbs1	O	CMP	E300.0:PERC	1	Y	
W-830-28	PTMW	UTnbs1	S	CMP	E601:ALL	1	Y	
W-830-28	PTMW	UTnbs1	S	CMP	E601:ALL	3	Y	
W-830-29	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
W-830-29	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
W-830-29	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	
W-830-29	PTMW	LTnbs1	S	CMP	E601:ALL	3	Y	
W-830-30	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	Y	
W-830-30	PTMW	Qal/WBR	A	CMP	E300.0:PERC	1	Y	
W-830-30	PTMW	Qal/WBR	S	CMP	E601:ALL	1	Y	
W-830-30	PTMW	Qal/WBR	S	CMP	E601:ALL	3	Y	
W-830-34	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	Y	
W-830-34	PTMW	Qal/WBR	A	CMP	E300.0:PERC	1	Y	
W-830-34	PTMW	Qal/WBR	S	CMP	E601:ALL	1	Y	
W-830-34	PTMW	Qal/WBR	S	CMP	E601:ALL	3	Y	
W-830-34	PTMW	Qal/WBR	E	CMP	E8330LOW:ALL	1	N	To be sampled in 2014.
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	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
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	Y	
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	
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	N	Insufficient water.
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	N	Insufficient water.
W-830-52	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	N	Insufficient water.
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	N	Insufficient water.
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	N	Insufficient water.
W-830-53	EW	Tnsc1b	S	DIS-TF	E601:ALL	4	N	Insufficient water.
W-830-54	PTMW	Tnsc1c	O	CMP	E300.0:NO3	1	Y	
W-830-54	PTMW	Tnsc1c	O	CMP	E300.0:PERC	1	Y	
W-830-54	PTMW	Tnsc1c	S	CMP	E601:ALL	1	Y	
W-830-54	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	N	To be sampled in 2014.
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	Y	
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	UTnbs1	A	CMP-TF	E300.0:NO3	1	Y	
W-830-57	EW	UTnbs1	A	CMP-TF	E300.0:PERC	1	Y	
W-830-57	EW	UTnbs1	S	CMP-TF	E601:ALL	1	Y	
W-830-57	EW	UTnbs1	S	DIS-TF	E601:ALL	2	Y	
W-830-57	EW	UTnbs1	S	CMP-TF	E601:ALL	3	Y	
W-830-57	EW	UTnbs1	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	UTnbs1	A	CMP-TF	E300.0:NO3	1	Y	
W-830-60	EW	UTnbs1	A	CMP-TF	E300.0:PERC	1	Y	
W-830-60	EW	UTnbs1	S	CMP-TF	E601:ALL	1	Y	
W-830-60	EW	UTnbs1	S	DIS-TF	E601:ALL	2	Y	
W-830-60	EW	UTnbs1	S	CMP-TF	E601:ALL	3	Y	
W-830-60	EW	UTnbs1	S	DIS-TF	E601:ALL	4	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	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
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-830-1807	EW	Qal/WBR-Tnsc1b	A	CMP-TF	E300.0:NO3	1	Y	
W-830-1807	EW	Qal/WBR-Tnsc1b	A	CMP-TF	E300.0:PERC	1	Y	
W-830-1807	EW	Qal/WBR-Tnsc1b	A	DIS-TF	E300.0:PERC	3	Y	
W-830-1807	EW	Qal/WBR-Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-830-1807	EW	Qal/WBR-Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-830-1807	EW	Qal/WBR-Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-830-1807	EW	Qal/WBR-Tnsc1b	S	DIS-TF	E601:ALL	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	
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	Y	
W-830-1831	PTMW	Tnsc1b	O	CMP	E300.0:PERC	1	Y	
W-830-1831	PTMW	Tnsc1b	S	CMP	E601:ALL	1	Y	
W-830-1831	PTMW	Tnsc1b	S	CMP	E601:ALL	3	Y	
W-830-1832	PTMW	UTnbs1	A	CMP	E300.0:NO3	1	Y	
W-830-1832	PTMW	UTnbs1	A	CMP	E300.0:PERC	1	Y	
W-830-1832	PTMW	UTnbs1	S	CMP	E601:ALL	1	Y	
W-830-1832	PTMW	UTnbs1	S	CMP	E601:ALL	3	Y	
W-830-2213	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-830-2213	PTMW	Tnsc1b	Q	DIS	E300.0:NO3	3	Y	
W-830-2213	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-830-2213	PTMW	Tnsc1b	Q	DIS	E300.0:PERC	3	Y	
W-830-2213	PTMW	Tnsc1b	S	CMP	E601:ALL	1	N	Insufficient water.
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	UTnbs1	A	CMP-TF	E300.0:NO3	1	Y	
W-830-2215	EW	UTnbs1	A	CMP-TF	E300.0:PERC	1	Y	
W-830-2215	EW	UTnbs1	S	CMP-TF	E601:ALL	1	Y	
W-830-2215	EW	UTnbs1	S	DIS-TF	E601:ALL	2	Y	
W-830-2215	EW	UTnbs1	S	CMP-TF	E601:ALL	3	Y	
W-830-2215	EW	UTnbs1	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	Y	
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	Y	
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	Y	
W-830-2701	PTMW	Tnsc1a	S	CMP	E300.0:NO3	1	Y	
W-830-2701	PTMW	Tnsc1a	S	CMP	E300.0:NO3	3	Y	
W-830-2701	PTMW	Tnsc1a	S	CMP	E300.0:PERC	1	Y	
W-830-2701	PTMW	Tnsc1a	S	CMP	E300.0:PERC	3	Y	
W-830-2701	PTMW	Tnsc1a	Q	CMP	E601:ALL	1	Y	
W-830-2701	PTMW	Tnsc1a	Q	CMP	E601:ALL	2	Y	
W-830-2701	PTMW	Tnsc1a	Q	CMP	E601:ALL	3	Y	
W-830-2701	PTMW	Tnsc1a	Q	CMP	E601:ALL	4	Y	
W-830-2806	PTMW	Tnsc1a	U	DIS	E300.0:PERC	1	Y	
W-830-2806	PTMW	Tnsc1a	S	CMP	E300.0:NO3	1	Y	
W-830-2806	PTMW	Tnsc1a	S	CMP	E300.0:PERC	1	Y	
W-830-2806	PTMW	Tnsc1a	Q	CMP	E601:ALL	1	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-2806	PTMW	Tnsc1a	U	DIS	DWMETALS:ALL	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	U	DIS	E200.7:SI	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	U	DIS	E300.0:PERC	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	U	DIS	E624:ALL	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	U	DIS	E8330LOW:ALL	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	U	DIS	E900:ALL	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	U	DIS	E906:ALL	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	U	DIS	GENMIN:ALL	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	U	DIS	KPA:UTOT	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	U	DIS	MS:UISO	2	Y	New well Baseline sampling.
W-830-2806	PTMW	Tnsc1a	Q	CMP	E601:ALL	2	Y	
W-830-2806	PTMW	Tnsc1a	S	CMP	E300.0:NO3	3	Y	
W-830-2806	PTMW	Tnsc1a	S	CMP	E300.0:PERC	3	Y	
W-830-2806	PTMW	Tnsc1a	Q	CMP	E601:ALL	3	Y	
W-830-2806	PTMW	Tnsc1a	Q	CMP	E601:ALL	4	Y	
W-831-01	PTMW	LTnbs1	O	CMP	E300.0:NO3	1	Y	
W-831-01	PTMW	LTnbs1	O	CMP	E300.0:PERC	1	Y	
W-831-01	PTMW	LTnbs1	O	CMP	E601:ALL	1	Y	
W-832-01	EW	Tnsc1b	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	Tnsc1a	A	CMP	E300.0:NO3	1	Y	
W-832-06	PTMW	Tnsc1a	A	CMP	E300.0:PERC	1	Y	
W-832-06	PTMW	Tnsc1a	S	CMP	E601:ALL	1	Y	
W-832-06	PTMW	Tnsc1a	S	CMP	E601:ALL	3	Y	
W-832-09	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
W-832-09	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
W-832-09	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	
W-832-09	PTMW	LTnbs1	S	CMP	E601:ALL	3	N	Inoperable pump.
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/WBR-Tnsc1b	A	CMP-TF	E300.0:NO3	1	Y	
W-832-12	EW	Qal/WBR-Tnsc1b	A	CMP-TF	E300.0:PERC	1	Y	
W-832-12	EW	Qal/WBR-Tnsc1b	A	DIS-TF	E300.0:PERC	3	Y	
W-832-12	EW	Qal/WBR-Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-832-12	EW	Qal/WBR-Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-832-12	EW	Qal/WBR-Tnsc1b	S	CMP-TF	E601:ALL	3	Y	
W-832-12	EW	Qal/WBR-Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-832-13	PTMW	Qal/WBR-Tnsc1b	A	CMP	E300.0:NO3	1	Y	
W-832-13	PTMW	Qal/WBR-Tnsc1b	A	CMP	E300.0:PERC	1	Y	
W-832-13	PTMW	Qal/WBR-Tnsc1b	S	CMP	E601:ALL	1	Y	
W-832-13	PTMW	Qal/WBR-Tnsc1b	S	CMP	E601:ALL	3	N	Insufficient water.
W-832-14	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-14	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-14	PTMW	Tnsc1b	S	CMP	E601:ALL	1	N	Insufficient water.
W-832-14	PTMW	Tnsc1b	S	CMP	E601:ALL	3	N	Dry.
W-832-15	EW	Qal/WBR-Tnsc1b	A	CMP-TF	E300.0:NO3	1	Y	
W-832-15	EW	Qal/WBR-Tnsc1b	A	DIS-TF	E300.0:NO3	3	Y	
W-832-15	EW	Qal/WBR-Tnsc1b	A	CMP-TF	E300.0:PERC	1	Y	
W-832-15	EW	Qal/WBR-Tnsc1b	A	DIS-TF	E300.0:PERC	3	Y	
W-832-15	EW	Qal/WBR-Tnsc1b	S	CMP-TF	E601:ALL	1	Y	
W-832-15	EW	Qal/WBR-Tnsc1b	S	DIS-TF	E601:ALL	2	Y	
W-832-15	EW	Qal/WBR-Tnsc1b	S	CMP-TF	E601:ALL	3	Y	

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-832-15	EW	Qal/WBR-Tnsc1b	S	DIS-TF	E601:ALL	4	Y	
W-832-15	EW	Qal/WBR-Tnsc1b	E	CMP-TF	E8330LOW:ALL	2	N	To be sampled in 2014.
W-832-16	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-16	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-16	PTMW	Tnsc1b	S	CMP	E601:ALL	1	N	Insufficient water.
W-832-16	PTMW	Tnsc1b	S	CMP	E601:ALL	3	N	Dry.
W-832-17	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	N	Dry.
W-832-17	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	N	Dry.
W-832-17	PTMW	Tnsc1b	S	CMP	E601:ALL	1	N	Dry.
W-832-17	PTMW	Tnsc1b	S	CMP	E601:ALL	3	N	Dry.
W-832-18	PTMW	Qal/WBR-Tnsc1b	A	CMP	E300.0:NO3	1	N	Dry.
W-832-18	PTMW	Qal/WBR-Tnsc1b	A	CMP	E300.0:PERC	1	N	Dry.
W-832-18	PTMW	Qal/WBR-Tnsc1b	S	CMP	E601:ALL	1	N	Dry.
W-832-18	PTMW	Qal/WBR-Tnsc1b	S	CMP	E601:ALL	3	N	Dry.
W-832-19	PTMW	Qal/WBR-Tnsc1b	A	CMP	E300.0:NO3	1	N	Dry.
W-832-19	PTMW	Qal/WBR-Tnsc1b	A	CMP	E300.0:PERC	1	N	Dry.
W-832-19	PTMW	Qal/WBR-Tnsc1b	S	CMP	E601:ALL	1	N	Dry.
W-832-19	PTMW	Qal/WBR-Tnsc1b	S	CMP	E601:ALL	3	N	Dry.
W-832-20	PTMW	Tnsc1b	A	CMP	E300.0:NO3	1	N	Dry.
W-832-20	PTMW	Tnsc1b	A	CMP	E300.0:PERC	1	N	Dry.
W-832-20	PTMW	Tnsc1b	S	CMP	E601:ALL	1	N	Dry.
W-832-20	PTMW	Tnsc1b	S	CMP	E601:ALL	3	N	Dry.
W-832-21	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	N	Dry.
W-832-21	PTMW	Qal/WBR	A	CMP	E300.0:PERC	1	N	Dry.
W-832-21	PTMW	Qal/WBR	S	CMP	E601:ALL	1	N	Dry.
W-832-21	PTMW	Qal/WBR	S	CMP	E601:ALL	3	N	Dry.
W-832-22	PTMW	UTnbs1	A	CMP	E300.0:NO3	1	N	Dry.
W-832-22	PTMW	UTnbs1	A	CMP	E300.0:PERC	1	N	Dry.
W-832-22	PTMW	UTnbs1	S	CMP	E601:ALL	1	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	Tnsc1a	A	CMP	E300.0:NO3	1	Y	
W-832-24	PTMW	Tnsc1a	A	CMP	E300.0:PERC	1	Y	
W-832-24	PTMW	Tnsc1a	S	CMP	E601:ALL	1	Y	
W-832-24	PTMW	Tnsc1a	S	CMP	E601:ALL	3	Y	
W-832-25	EW	Tnsc1a	A	CMP-TF	E300.0:NO3	1	Y	
W-832-25	EW	Tnsc1a	A	CMP-TF	E300.0:PERC	1	Y	
W-832-25	EW	Tnsc1a	A	DIS-TF	E300.0:PERC	3	Y	
W-832-25	EW	Tnsc1a	S	CMP-TF	E601:ALL	1	Y	
W-832-25	EW	Tnsc1a	S	DIS-TF	E601:ALL	2	Y	
W-832-25	EW	Tnsc1a	S	CMP-TF	E601:ALL	3	Y	
W-832-25	EW	Tnsc1a	S	DIS-TF	E601:ALL	4	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-832-2112	GW	UTnbs1	S	CMP	E300.0:NO3	1	Y	
W-832-2112	GW	UTnbs1	S	CMP	E300.0:NO3	3	Y	
W-832-2112	GW	UTnbs1	S	CMP	E300.0:PERC	1	Y	
W-832-2112	GW	UTnbs1	S	CMP	E300.0:PERC	3	Y	
W-832-2112	GW	UTnbs1	Q	CMP	E601:ALL	1	Y	
W-832-2112	GW	UTnbs1	Q	CMP	E601:ALL	2	Y	
W-832-2112	GW	UTnbs1	Q	CMP	E601:ALL	3	Y	
W-832-2112	GW	UTnbs1	Q	CMP	E601:ALL	4	Y	
W-832-2906	PTMW	UTnbs1	U	DIS	DWMETALS:ALL	4	Y	New well Baseline sampling.
W-832-2906	PTMW	UTnbs1	U	DIS	E200.7:SI	4	Y	New well Baseline sampling.
W-832-2906	PTMW	UTnbs1	U	DIS	E300.0:PERC	4	Y	
W-832-2906	PTMW	UTnbs1	U	DIS	E601:ALL	4	Y	
W-832-2906	PTMW	UTnbs1	U	DIS	E300.0:PERC	4	Y	New well Baseline sampling.
W-832-2906	PTMW	UTnbs1	U	DIS	E624:ALL	4	Y	New well Baseline sampling.
W-832-2906	PTMW	UTnbs1	U	DIS	E8330LOW:ALL	4	Y	New well Baseline sampling.
W-832-2906	PTMW	UTnbs1	U	DIS	E900:ALL	4	Y	New well Baseline sampling.
W-832-2906	PTMW	UTnbs1	U	DIS	E906:ALL	4	Y	New well Baseline sampling.
W-832-2906	PTMW	UTnbs1	U	DIS	GENMIN:ALL	4	Y	New well Baseline sampling.
W-832-2906	PTMW	UTnbs1	U	DIS	KPA:UTOT	4	Y	New well Baseline sampling.
W-832-2906	PTMW	UTnbs1	U	DIS	MS:UISO	4	Y	New well Baseline sampling.
W-832-SC1	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	N	Dry.

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-832-SC1	PTMW	Qal/WBR	A	CMP	E300.0:PERC	1	N	Dry.
W-832-SC1	PTMW	Qal/WBR	S	CMP	E601:ALL	1	N	Dry.
W-832-SC1	PTMW	Qal/WBR	S	CMP	E601:ALL	3	N	Dry.
W-832-SC2	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	N	Dry.
W-832-SC2	PTMW	Qal/WBR	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-832-SC2	PTMW	Qal/WBR	S	CMP	E601:ALL	1	N	Dry.
W-832-SC2	PTMW	Qal/WBR	S	CMP	E601:ALL	3	N	Dry.
W-832-SC3	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	Y	
W-832-SC3	PTMW	Qal/WBR	O	CMP	E300.0:PERC	1	Y	
W-832-SC3	PTMW	Qal/WBR	S	CMP	E601:ALL	1	Y	
W-832-SC3	PTMW	Qal/WBR	S	CMP	E601:ALL	3	N	Dry.
W-832-SC4	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	N	Dry.
W-832-SC4	PTMW	Qal/WBR	E	CMP	E300.0:PERC	1	N	To be sampled in 2014.
W-832-SC4	PTMW	Qal/WBR	S	CMP	E601:ALL	1	N	Dry.
W-832-SC4	PTMW	Qal/WBR	S	CMP	E601:ALL	3	N	Dry.
W-870-01	PTMW	Qal/WBR	A	CMP	E300.0:NO3	1	N	Dry.
W-870-01	PTMW	Qal/WBR	O	CMP	E300.0:PERC	1	N	Dry.
W-870-01	PTMW	Qal/WBR	S	CMP	E601:ALL	1	N	Dry.
W-870-01	PTMW	Qal/WBR	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	N	To be sampled in 2014.
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	E601: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/WBR	S	CMP	E300.0:NO3	1	Y	
W-880-02	GW	Qal/WBR	S	CMP	E300.0:NO3	3	N	Insufficient water.
W-880-02	GW	Qal/WBR	S	CMP	E300.0:PERC	1	Y	
W-880-02	GW	Qal/WBR	S	CMP	E300.0:PERC	3	N	Insufficient water.
W-880-02	GW	Qal/WBR	Q	CMP	E601:ALL	1	Y	
W-880-02	GW	Qal/WBR	Q	CMP	E601:ALL	2	Y	
W-880-02	GW	Qal/WBR	Q	CMP	E601:ALL	3	N	Insufficient water.
W-880-02	GW	Qal/WBR	Q	CMP	E601:ALL	4	N	Insufficient water.
W-880-02	GW	Qal/WBR	S	CMP	E8330LOW:ALL	1	Y	
W-880-02	GW	Qal/WBR	S	CMP	E8330LOW:ALL	3	N	Insufficient water.
W-880-03	GW	Tnsc1b	S	CMP	E300.0:NO3	1	Y	
W-880-03	GW	Tnsc1b	S	CMP	E300.0:NO3	3	Y	
W-880-03	GW	Tnsc1b	S	CMP	E300.0:PERC	1	Y	
W-880-03	GW	Tnsc1b	S	CMP	E300.0:PERC	3	Y	
W-880-03	GW	Tnsc1b	Q	CMP	E601:ALL	1	Y	
W-880-03	GW	Tnsc1b	Q	CMP	E601:ALL	2	Y	
W-880-03	GW	Tnsc1b	Q	CMP	E601:ALL	3	Y	
W-880-03	GW	Tnsc1b	Q	CMP	E601:ALL	4	Y	
W-880-03	GW	Tnsc1b	S	CMP	E8330LOW:ALL	1	Y	
W-880-03	GW	Tnsc1b	S	CMP	E8330LOW:ALL	3	Y	

Notes:

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, 2013 through December 31, 2013.

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	4.0	1.6	0.19	3.9	NA	NA
	August	6.6	1.1	0.15	2.9	NA	NA
	September	8.8	1.5	0.21	4.1	NA	NA
	October	5.6	0.97	0.13	2.5	NA	NA
	November	8.1	1.3	0.15	2.8	NA	NA
	December	2.1	0.46	0.047	0.96	NA	NA
Total		35	6.9	0.88	17	NA	NA

Table 2.7-9. Building 830-Source (830-SRC) mass removed, July 1, 2013 through December 31, 2013.

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	42	93	0.25	11	NA	NA
	August	14	50	0.12	6.4	NA	NA
	September	29	130	0.47	14	NA	NA
	October	31	97	0.36	10	NA	NA
	November	75	43	0.20	5.8	NA	NA
	December	29	7.7	0.024	1.1	NA	NA
Total		220	420	1.4	49	NA	NA

Table 2.7-10. Building 830-Distal South (830-DISS) mass removed, July 1, 2013 through December 31, 2013.

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	8.0	1.2	45	NA	NA
	August	NA	6.6	1.0	36	NA	NA
	September	NA	7.4	1.2	39	NA	NA
	October	NA	6.9	0.99	32	NA	NA
	November	NA	6.1	0.89	27	NA	NA
	December	NA	2.1	0.32	8.5	NA	NA
Total		NA	37	5.6	190	NA	NA

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K8-01	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
K8-01	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
K8-01	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
K8-01	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
K8-01	PTMW	Tnbs1-Tnbs0	S	CMP	E601:ALL	2	Y	
K8-01	PTMW	Tnbs1-Tnbs0	S	CMP	E601:ALL	4	Y	
K8-01	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
K8-01	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
K8-02B	DMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	4	Y	
K8-02B	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	2	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	4	Y	
K8-02B	DMW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	1	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	2	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	3	Y	
K8-02B	DMW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	4	Y	
K8-02B	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	1	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	2	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	3	Y	
K8-02B	DMW	Tnbs1-Tnbs0	Q	CMP	E906:ALL	4	Y	
K8-02B	DMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	N	Inoperable pump.
K8-02B	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	N	Inoperable pump.
K8-03B	PTMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
K8-03B	PTMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
K8-03B	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
K8-03B	PTMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
K8-03B	PTMW	Tnbs1-Tnbs0	S	CMP	E601:ALL	2	Y	
K8-03B	PTMW	Tnbs1-Tnbs0	S	CMP	E601:ALL	4	Y	
K8-03B	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
K8-03B	PTMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
K8-04	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	Y	
K8-04	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
K8-04	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
K8-04	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
K8-04	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	Y	
K8-04	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
K8-04	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K8-04	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
K8-04	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
K8-04	DMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	Y	
K8-04	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K8-05	DMW	Tnbs1-Tnbs0	O	CMP	AS:UISO	2	N	Dry.
K8-05	DMW	Tnbs1-Tnbs0	O	CMP	E200.7:LI	2	N	Dry.
K8-05	DMW	Tnbs1-Tnbs0	O	CMP	E300.0:NO3	2	N	Dry.
K8-05	DMW	Tnbs1-Tnbs0	O	CMP	E300.0:PERC	2	N	Dry.
K8-05	DMW	Tnbs1-Tnbs0	O	CMP	E340.2:ALL	2	N	Dry.
K8-05	DMW	Tnbs1-Tnbs0	O	CMP	E601:ALL	2	N	Dry.
K8-05	DMW	Tnbs1-Tnbs0	O	CMP	E8330LOW:ALL	2	N	Dry.
K8-05	DMW	Tnbs1-Tnbs0	O	CMP	E906:ALL	2	N	Dry.
K8-05	DMW	Tnbs1-Tnbs0	O	CMP	T26METALS:ALL	2	N	Dry.

Notes:

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	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-833-03	PTMW	Tpsg	A	CMP	E601:ALL	1	N	Dry.
W-833-12	PTMW	Tpsg	A	CMP	E601:ALL	1	N	Insufficient water.
W-833-18	PTMW	Tpsg	A	CMP	E601:ALL	1	N	Dry.
W-833-22	PTMW	Tpsg	A	CMP	E601:ALL	1	N	Dry.
W-833-28	PTMW	Tpsg	A	CMP	E601:ALL	1	N	Insufficient water.
W-833-30	PTMW	LTnbs1	S	CMP	E601:ALL	1	Y	
W-833-30	PTMW	LTnbs1	S	CMP	E601:ALL	3	Y	
W-833-33	PTMW	Tpsg	A	CMP	E601:ALL	1	Y	
W-833-34	PTMW	Tpsg	A	CMP	E601:ALL	1	N	Dry.
W-833-43	PTMW	Tpsg	A	CMP	E601:ALL	1	N	Dry.
W-840-01	PTMW	LTnbs1	A	CMP	E300.0:NO3	1	Y	
W-840-01	PTMW	LTnbs1	A	CMP	E300.0:PERC	1	Y	
W-840-01	PTMW	LTnbs1	A	CMP	E601:ALL	1	Y	
W-841-01	PTMW	UTnbs1	O	CMP	E300.0:NO3	1	N	Dry.
W-841-01	PTMW	UTnbs1	O	CMP	E300.0:PERC	1	N	Dry.
W-841-01	PTMW	UTnbs1	A	CMP	E601:ALL	1	N	Dry.

Notes:

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	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K9-01	DMW	Tnbs1/Tnbs0	A	CMP	E200.7:LI	2	Y	
K9-01	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:NO3	2	Y	
K9-01	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:PERC	2	Y	
K9-01	DMW	Tnbs1/Tnbs0	A	CMP	E340.2:ALL	2	Y	
K9-01	DMW	Tnbs1/Tnbs0	A	CMP	E601:ALL	2	Y	
K9-01	DMW	Tnbs1/Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K9-01	DMW	Tnbs1/Tnbs0	A	CMP	E906:ALL	2	Y	
K9-01	DMW	Tnbs1/Tnbs0	A	CMP	MS:UISO	2	Y	
K9-01	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K9-02	DMW	Tnbs1/Tnbs0	A	CMP	E200.7:LI	2	Y	
K9-02	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:NO3	2	Y	
K9-02	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:PERC	2	Y	
K9-02	DMW	Tnbs1/Tnbs0	A	CMP	E340.2:ALL	2	Y	
K9-02	DMW	Tnbs1/Tnbs0	A	CMP	E601:ALL	2	Y	
K9-02	DMW	Tnbs1/Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K9-02	DMW	Tnbs1/Tnbs0	A	CMP	E906:ALL	2	Y	
K9-02	DMW	Tnbs1/Tnbs0	A	DIS	MS:UISO	2	Y	
K9-02	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K9-03	DMW	Tnbs1/Tnbs0	A	CMP	E200.7:LI	2	Y	
K9-03	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:NO3	2	Y	
K9-03	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:PERC	2	Y	
K9-03	DMW	Tnbs1/Tnbs0	A	CMP	E340.2:ALL	2	Y	
K9-03	DMW	Tnbs1/Tnbs0	A	CMP	E601:ALL	2	Y	
K9-03	DMW	Tnbs1/Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
K9-03	DMW	Tnbs1/Tnbs0	A	CMP	E906:ALL	2	Y	
K9-03	DMW	Tnbs1/Tnbs0	A	CMP	MS:UISO	2	Y	
K9-03	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	Y	
K9-04	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:NO3	2	N	Inoperable pump.
K9-04	DMW	Tnbs1/Tnbs0	A	CMP	E300.0:PERC	2	N	Inoperable pump.
K9-04	DMW	Tnbs1/Tnbs0	A	CMP	E340.2:ALL	2	N	Inoperable pump.
K9-04	DMW	Tnbs1/Tnbs0	A	CMP	E601:ALL	2	N	Inoperable pump.
K9-04	DMW	Tnbs1/Tnbs0	A	CMP	E8330LOW:ALL	2	N	Inoperable pump.
K9-04	DMW	Tnbs1/Tnbs0	A	CMP	E906:ALL	2	N	Inoperable pump.
K9-04	DMW	Tnbs1/Tnbs0	A	CMP	MS:UISO	2	N	Inoperable pump.
K9-04	DMW	Tnbs1/Tnbs0	A	CMP	T26METALS:ALL	2	N	Inoperable pump.

Notes:

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	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-851-05	PTMW	Tmss	A	CMP	AS:UISO	4	Y	
W-851-05	PTMW	Tmss	O	CMP	E601:ALL	2	Y	
W-851-05	PTMW	Tmss	A	CMP	MS:UISO	2	Y	
W-851-06	PTMW	Tmss	A	CMP	AS:UISO	4	Y	
W-851-06	PTMW	Tmss	A	CMP	MS:UISO	2	Y	
W-851-07	PTMW	Tmss	A	CMP	AS:UISO	4	Y	
W-851-07	PTMW	Tmss	A	CMP	MS:UISO	2	Y	
W-851-08	PTMW	Tmss	A	CMP	AS:UISO	4	Y	
W-851-08	PTMW	Tmss	A	CMP	MS:UISO	2	Y	

Notes:

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	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K2-01C	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	A	CMP	MS:UISO	2	N	Inoperable pump.
K2-01C	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	N	Inoperable pump.
NC2-08	DMW	Tnbs1-Tnbs0	A	CMP	AS:UISO	2	Y	
NC2-08	DMW	Tnbs1-Tnbs0	A	CMP	E200.7:LI	2	Y	
NC2-08	DMW	Tnbs1-Tnbs0	A	CMP	E300.0:NO3	2	Y	
NC2-08	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	2	Y	
NC2-08	DMW	Tnbs1-Tnbs0	S	CMP	E300.0:PERC	4	Y	
NC2-08	DMW	Tnbs1-Tnbs0	A	CMP	E340.2:ALL	2	Y	
NC2-08	DMW	Tnbs1-Tnbs0	A	CMP	E601:ALL	2	Y	
NC2-08	DMW	Tnbs1-Tnbs0	A	CMP	E8330LOW:ALL	2	Y	
NC2-08	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	2	Y	
NC2-08	DMW	Tnbs1-Tnbs0	S	CMP	E906:ALL	4	Y	
NC2-08	DMW	Tnbs1-Tnbs0	A	DIS	MS:UISO	2	Y	
NC2-08	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	Y	
W-PIT2-1934	DMW	Tnbs1-Tnbs0	A	CMP	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	CMP	MS:UISO	2	Y	
W-PIT2-1934	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	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	CMP	MS:UISO	2	Y	
W-PIT2-1935	DMW	Tnbs1-Tnbs0	A	CMP	T26METALS:ALL	2	Y	
W-PIT2-2226	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	2	Y	
W-PIT2-2226	GW	Tnbs1-Tnbs0	S	CMP	AS:UISO	4	Y	
W-PIT2-2226	GW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	2	Y	
W-PIT2-2226	GW	Tnbs1-Tnbs0	S	CMP	E300.0:NO3	4	Y	
W-PIT2-2226	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	1	Y	
W-PIT2-2226	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	2	Y	
W-PIT2-2226	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	3	Y	
W-PIT2-2226	GW	Tnbs1-Tnbs0	Q	CMP	E300.0:PERC	4	Y	
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	E300.0:NO3	2	N	Insufficient water.
W-PIT2-2301	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	N	Insufficient water.
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	N	Insufficient water.
W-PIT2-2301	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Insufficient water.
W-PIT2-2301	PTMW	Qal/WBR	A	CMP	MS:UISO	2	N	Insufficient water.
W-PIT2-2302	PTMW	Qal/WBR	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-PIT2-2302	PTMW	Qal/WBR	S	CMP	E300.0:PERC	2	N	Insufficient water.
W-PIT2-2302	PTMW	Qal/WBR	S	CMP	E300.0:PERC	4	N	Insufficient water.
W-PIT2-2302	PTMW	Qal/WBR	S	CMP	E906:ALL	2	N	Insufficient water.

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

Sample location	Location type	Hydro unit	Sampling frequency	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-PIT2-2302	PTMW	Qal/WBR	S	CMP	E906:ALL	4	N	Insufficient water.
W-PIT2-2302	PTMW	Qal/WBR	A	CMP	MS:UISO	2	N	Insufficient water.
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	CMP	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.

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	8.8×10^{-5}	2.5×10^{1}	Based on a TCE concentration of 17,000 ug/L (12-Mar-2013) in well W-834-D13
	Indoor – JEM	PCE	1.4×10^{-6}	1.6×10^{-2}	Based on a PCE concentration of 130 ug/L (12-Mar-2013) in well W-834-D13
Cumulative risk and hazard index			**8.9×10^{-5}**	**2.5×10^{1}**	**Institutional controls in place, building only used for storage.**
Building 830	Indoor – JEM	Vinyl Chloride	1.2×10^{-5}	3.5×10^{-3}	Based on the Vinyl Chloride detection limit of 25 ug/L (25-Feb-2013 and 15-Aug-2013) in well SVI-830-035
	Indoor – JEM	TCE	8.9×10^{-6}	2.5×10^{0}	Based on a TCE concentration of 1,100 ug/L (2-Apr-2013) in well W-830-1807
Cumulative risk and hazard index			**2.1×10^{-5}**	**2.5×10^{-0}**	**Institutional controls in place.**

Notes:

JEM – Johnson-Ettinger Model for indoor air pathway (U.S. EPA, 2002) incorporates the updated risk values in DTSC (2011) Final Vapor Intrusion Guidance.

Table 4.2-1. Summary of contaminants of concern (COCs) in environmental media for Operable Units (OUs) 1 through 8 at Site 300.

OU	Ground water COCs	Surface water COCs	Surface soil COCs	Subsurface soil COCs
General Services Area (OU 1)	VOCs	None	None	VOCs[a]
Building 834 (OU 2)	VOCs TBOS/TKEBs Nitrate (as NO_3)	None	None	VOCs[b]
Pit 6 Landfill (OU 3)	VOCs Tritium Nitrate (as NO_3) Perchlorate	VOCs	None	None
HE Process Area (OU 4)	VOCs HE Compounds Nitrate (as NO_3) Perchlorate	VOCs	HE Compounds[a] (Cadmium)[c]	VOCs[a] HE Compounds[a]
Building 850 Firing Table (OU 5)	Tritium Uranium-238 Nitrate (as NO_3) Perchlorate	Tritium	Beryllium[d] Cadmium[d, e] Copper[d] HE Compounds[d] PCBs[f] Dioxins[f] Furans[f] Uranium-238[d]	Tritium[a] Uranium-238[a]
Pit 7 Complex (OU5)	Tritium VOCs Uranium Nitrate (as NO_3) Perchlorate[2]	None	None	Tritium[a] Uranium-238
Building 854 (OU 6)	VOCs Nitrate (as NO_3) Perchlorate	None	Lead[a] Zinc[a] HE Compounds[a] PCBs[g] Tritium[a]	VOCs[a]
Building 832 Canyon (OU 7)	VOCs Nitrate (as NO_3) Perchlorate	VOCs	HE Compounds[a]	VOCs[a] HE Compounds[a] Nitrate (as NO_3)[a]

Table 4.2-1 (Cont.). Summary of contaminants of concern (COCs) in environmental media for Operable Units (OUs) 1 through 8 at Site 300.

Operable unit (OU)	Ground water COCs	Surface water COCs	Surface soil COCs	Subsurface soil COCs
Building 801 Dry Well and the Pit 8 Landfill (OU 8)	VOCs Nitrate (as NO_3) Perchlorate	None	None (Cadmium)[c]	VOCs[a]
Building 833 Area (OU 8)	VOCs	None	None	VOCs[a]
Building 845 Firing Table and the Pit 9 Landfill (OU 8)	None	None	None	HE Compounds[a] Uranium-238[a]
Building 851 Firing Table (OU 8)	Uranium-238	None	Cadmium[c] Copper[a] Zinc[a] HE Compounds[a] Uranium-238[a]	VOCs[a] Uranium-238[a]
Pit 2 Landfill (OU 8)	Nitrate (as NO_3)	None	None	None

Notes:

COC = Contaminant of concern.
HE = High explosive.
OU = Operable Unit.
PCBs = Polychlorinated biphenyls.
TBOS/TKEBs = Tetrabutyl orthosilicate/tetrakis (2-ethylbutyl) silane.
VOCs = Volatile organic compound.

[a] No identified ecological risk associated with these constituents.
[b] VOCs in burrow air eliminated as an ecological COC (Dibley et al., 2004b).
[c] Potential hazard to individual squirrel or deer identified in the Site-Wide Remedial Investigation, however, subsequent wildlife survey's found no impact to populations. Additional evaluation in 2011 and 2012 eliminated cadmium as an ecological COC. Analytes in parentheses were not identified as a COC in Table 1-1 of the 2009 CMP/CP.
[d] These constituents in surface soil likely removed as part of 2009-2010 removal action (Dibley et al., 2010c).
[e] Results of 2004 exposure analysis for burrowing owls indicate cadmium is unlikely to pose a hazard to owls nesting in the vicinity of Building 850 (Dibley et al., 2004b).
[f] PCBs, dioxins, and furans in surface soil removed as part of 2009-2010 removal action (Dibley et al., 2010c).
[g] PCB-contaminated soil removed from 855 former lagoon in 2005 (U.S. DOE, 2005b).

Adapted from Table 1-1 in the 2009 Compliance Monitoring Plan/Contingency Plan (CMP/CP) (Dibley et al., 2009a).

Table 4.2-2. Special-status wildlife and invertebrate species known to occur at Site 300.

Taxa	Common name	Scientific name 2013	Regulatory status 2008	Regulatory status 2013
Invertebrates	Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT	FT
Amphibians	California tiger salamander	*Ambystoma californiense*	FT, CASSC	FT, CASSC, ST
	Coast Range newt	*Taricha torosa torosa*	CASSC	CASSC
	California red-legged frog	*Rana draytonii*	FT, CASSC	FT, CASSC
	Western spadefoot toad	*Spea hammondii*	CASSC	CASSC
Reptiles	Pacific pond turtle	*Actinemys marmorata*	CASSC	CASSC
	Alameda whipsnake	*Masticophis lateralis euryxanthus*	FT, ST	FT, ST
	San Joaquin coachwhip	*Masticophis flagellum ruddocki*	CASSC	CASSC
	Coast horned lizard	*Phrynosoma blainvillii*	CASSC	CASSC
	Silvery legless lizard	*Anniella pulchra pulchra*	CASSC	CASSC
Birds	Double-crested Cormorant	*Phalacrocorax auritus*	No special status	DFWWL
	Osprey	*Pandion haliaetus*	No special status	DFWWL
	Golden Eagle	*Aquila chrysaetos*	CAFPS, BGEPA	CAFPS, BGEPA
	Ferruginous Hawk	*Buteo regalis*	No special status	DFWWL
	Swainson's Hawk	*Buteo swainsoni*	ST	ST
	White-tailed Kite	*Elanus leucurus*	CAFPS	CAFPS
	Cooper's Hawk	*Accipiter cooperii*	No special status	DFWWL
	Sharp-shinned Hawk	*Accipiter striatus*	No special status	DFWWL
	Northern Harrier	*Circus cyaneus*	CASSC	CASSC
	Prairie Falcon	*Falco mexicanus*	No special status	DFWWL
	Short-eared Owl	*Asio flammeus*	CASSC	CASSC
	Burrowing Owl	*Athene cunicularia*	CASSC	BCC, CASSC
	Allen's Hummingbird	*Selasphorus sasin*	No special status	BCC
	Rufous Hummingbird	*Selasphorus rufus*	No special status	BCC
	Costa's Hummingbird	*Calypte costae*	No special status	BCC
	Nuttal's Woodpecker	*Picoides nuttallii*	No special status	BCC
	Willow Flycatcher	*Empidonax traillii*	SE	SE, BCC

Table 4.2-2 (Cont.). Special-status wildlife and invertebrate species known to occur at Site 300.

Taxa	Common name	Scientific name 2013	Regulatory status 2008	Regulatory Status 2013
Birds (continued)	Loggerhead Shrike	*Lanius ludovicianus*	CASSC	CASSC, BCC
	Oak Titmouse	*Baeolophus inornatus*	No special status	BCC
	Yellow Warbler	*Dendroica petechia brewsteri*	CASSC	CASSC, BCC
	Grasshopper Sparrow	*Ammodramus savannarum*	CASSC	CASSC
	Tricolored Blackbird	*Agelaius tricolor*	CASSC	CASSC, BCC
Mammals	Pallid bat	*Antrozous pallidus*	CASSC	CASSC
	Western red bat	*Lasiurus blossevillii*	CASSC	CASSC
	American badger	*Taxidea taxus*	CASSC	CASSC

Notes:

BCC = **U.S. Fish and Wildlife Service Birds of Conservation Concern (U.S. FWS, 2008).**
BGEPA = **Bald and Golden Eagle Protection Act.**
CAFPS = **California Department of Fish and Wildlife Fully Protected Species (CA Fish and Game Code Section 3511).**
CASSC = **California Species of Special Concern (CA Dept. of Fish and Wildlife, Special Animals List, January 2011).**
DFWWL = **California Department of Fish and Wildlife Taxa to Watch.**
FT = **Threatened under the Federal Endangered Species Act.**
SE = **Endangered under the State Endangered Species Act.**
ST = **Threatened under the State Endangered Species Act.**

Special-status wildlife and invertebrate species known to occur at Site 300 from Paterson and Woollett, 2014.

Table 4.2-3. Maximum concentration of contaminants of concern (COCs) in surface soil samples collected between January 1, 2008 and December 31, 2012 (Current Review Period) and through December 31, 2007 (Previous Review Period).

	Current Review Period			Previous Review Period		
COC	Frequency of detection (%)	Minimum concentration	Maximum concentration	Maximum concentration	Difference (%)	Current status
Building 801 Area (OU 8)						
Cadmium	0 of 6 (0%)	<0.5 mg/kg	<0.5 mg/kg	7.9 mg/kg	-94%	Maximum concentration in current review period less than in the previous review period in all three areas. Additional evaluation showed the COC does not pose an ecological hazard.[a, b]
Building 851 Area (OU 8)						
Cadmium	0 of 11 (0%)	<0.5 mg/kg	<0.5 mg/kg	12 mg/kg	-96%	
HE Process Area (OU 4)						
Cadmium	0 of 10 (0%)	<0.5 mg/kg	<0.5 mg/kg	15 mg/kg	-97%	
Building 850 Area (OU 5)						
1,2,3,4,6,7,8-HpCDD	2 of 5 (40%)	<0.199 ng/kg	10.4 ng/kg	57 ng/kg	-82%	With the exception of PCB 1254 and PCB 1260, maximum concentrations in the current review period below previous review period. Addressed in Building 850 removal action so that COC does not pose an ecological hazard.[c]
1,2,3,4,6,7,8-HpCDF	2 of 5 (40%)	0.559 ng/kg	0.914 ng/kg	640 ng/kg	-100%	
1,2,3,4,7,8-HxCDF	2 of 5 (40%)	<0.177 ng/kg	1.02 ng/kg	2300 ng/kg	-100%	
1,2,3,4,7,8,9-HpCDF	0 of 5 (0%)	<0.059 ng/kg	<0.250 ng/kg	200 ng/kg	-100%	
1,2,3,6,7,8-HxCDD	2 of 5 (40%)	<0.161 ng/kg	0.644 ng/kg	3.7 ng/kg	-83%	
1,2,3,6,7,8-HxCDF	1 of 5 (20%)	<0.111 ng/kg	0.520 ng/kg	2100 ng/kg	-100%	
1,2,3,7,8-PeCDD	1 of 5 (20%)	<0.095 ng/kg	0.535 ng/kg	<2.5 ng/kg	NC%	
1,2,3,7,8-PeCDF	3 of 5 (60%)	<0.106 ng/kg	1.45 ng/kg	2600 ng/kg	100%	
1,2,3,7,8,9-HxCDD	2 of 5 (40%)	0.700 ng/kg	1.02 ng/kg	2.4 ng/kg	-58%	
1,2,3,7,8,9-HxCDF	3 of 5 (60%)	<0.250 ng/kg	1.52 ng/kg	250 ng/kg	-99%	
2,3,4,6,7,8-HxCDF	1 of 5 (20%)	<0.124 ng/kg	0.345 ng/kg	750 ng/kg	-100%	
2,3,4,7,8-PeCDF	2 of 5 (40%)	<0.077 ng/kg	3.79 ng/kg	9100 ng/kg	-100%	
2,3,7,8-TCDD	0 of 5 (0%)	<0.040 ng/kg	<0.100 ng/kg	1.4 ng/kg	-93%	
2,3,7,8-TCDF	3 of 5 (60%)	<0.053	12.2 ng/kg	9600 ng/kg	-100%	
OCDD	4 of 5 (80%)	<0.835	103 ng/kg	550 ng/kg	-81%	
PCB 1016	0 of 158 (0%)	<0.5 mg/kg	<4.2 mg/kg	<20 mg/kg	NC	
PCB 1221	0 of 158 (0%)	<0.5 mg/kg	<4.2 mg/kg	<80 mg/kg	NC	
PCB 1232	0 of 158 (0%)	<0.5 mg/kg	<4.2 mg/kg	<20 mg/kg	NC	
PCB 1242	0 of 158 (0%)	<0.5 mg/kg	<4.2 mg/kg	34 mg/kg	-88%	
PCB 1248	0 of 158 (0%)	<0.5 mg/kg	<4.2 mg/kg	59 mg/kg	-93%	
PCB 1254	73 of 158 (46%)	<0.5 mg/kg	260 mg/kg	180 mg/kg	44%	
PCB 1260	27 of 158 (17%)	<0.5 mg/kg	14 mg/kg	4 mg/kg	250%	

Notes appear on the following page.

Table 4.2-3 (Cont.). Maximum concentration of contaminants of concern (COCs) in surface soil samples collected between January 1, 2008 and December 31, 2012 (Current Review Period) and through December 31, 2007 (Previous Review Period).

Notes:

COC = **Contaminant of Concern.**
HpCDD = **Heptachlorodibenzo-p-dioxin.**
HpCDF = **Heptachlorodibenzofuran.**
HxCDD = **Hexachlorodibenzo-p-dioxin.**
HxCDF = **Hexachlorodibenzofuran.**
mg/kg = **Milligram per kilogram.**
NC = **Not Calculated.**
ng/kg = **Nanogram per kilogram.**
OCDD = **Octachlorinated dibenzo-p-dioxin.**
OU = **Operable Unit.**
PCBs = **Polychlorinated biphenyls.**
PeCDD = **Pentachlorodibenzo-p-dioxin.**
PeCDF = **Pentachlorodibenzofuran.**
TCDD = **Tetrachlorobenzo-p-dioxin.**
TCDF = **Tetrachlorodibenzofuran.**

[a] **2011 Annual Compliance Monitoring Report (Dibley et al., 2012c).**
[b] **2012 Annual Compliance Monitoring Report (Dibley et al., 2013a).**
[c] **Remedial Action Completion Report for the Building 850/Pit 7 Complex Operable Unit (Dibley et al., 2010c).**

Table 4.2-4. Maximum concentration of contaminants of concern (COCs) detected in spring samples collected between January 1, 2008 and December 31, 2012 (Current Review Period) and through December 31, 2007 (Previous Review Period).

	Current Review Period			Previous Review Period		
Spring COC	Frequency of detection (%)	Minimum concentration	Maximum concentration	Maximum concentration	Difference (%)	Current status
Spring 3 (OU 7)						
cis-1,2-DCE	10 of 7 (30%)	<0.5 µg/L	3.3 µg/L	2.2 µg/L	50%	Concentration in current review period does not exceed previous review period by more than 50%. Below ESL (590 µg/L).[e] No ecological concern.
trans-1,2-DCE	10 of 7 (30%)	<0.5 µg/L	1.1 µg/L	0.94 µg/L	18%	Concentration in current review period does not exceed previous review period by more than 50%. Below ESL (590 µg/L).[e] No ecological concern.
Nitrate (as NO_3)[d]	5 of 5 (100%)	11 mg/L	33 mg/L	54 mg/L	-39%	Concentration in current review period below previous review period. Above ESL (0.4 mg/L).[g] Below Site 300 background.[i] No ecological concern.
TCE	10 of 10 (100%)	0.8 µg/L	32 µg/L	200 µg/L	-84%	Concentration in current review period below previous review period. Below ESL (360 µg/L).[e] No ecological concern.
Well 8 Spring (OU 5)						
HMX	1 of 3 (33%)	<1 µg/L	2 µg/L	<5 µg/L	NC	COC not detected in previous review period, detection limit higher than concentration detected in current review period. No ESL. Below RSL (780 µg/L).[f] No ecological concern.
Nitrate (as NO_3)[d]	2 of 2 (100%)	39 mg/L	42 mg/L	90 mg/L	-53%	Concentration in current review period below previous review period. Above ESL (0.4 mg/L).[g] Below Site 300 background.[i] No ecological concern.
Perchlorate	4 of 4 (100%)	16 µg/L	19 µg/L	25 µg/L	-24%	Concentration in current review below previous review period. Below ESL (600 µg/L).[e] No ecological concern.
Tritium	3 of 3 (100%)	15,600 pCi/L	17,500 pCi/L	770,000 pCi/L	-98%	Concentration in current review period below previous review period. Below SWRI ecological hazard level.[h] No ecological concern.

Table 4.2-4 (Cont.). Maximum concentration of contaminants of concern (COCs) detected in spring samples collected between January 1, 2008 and December 31, 2012 (Current Review Period) and through December 31, 2007 (Previous Review Period).

	Current Review Period			Previous Review Period		
Spring COC	Frequency of detection (%)	Minimum concentration	Maximum concentration	Maximum concentration	Difference (%)	Current status
Well 8 Spring (OU 5) (continued)						
Uranium 234[a]	2 of 2 (100%)	1.42 pCi/L	1.56 pCi/L	3.57 pCi/L	-56%	Uranium activities in current review period below previous review period. Sum of uranium isotopes equivalent to 0.0039 mg/L. Below ESL established for Building 812 (0.05 mg/L).[j] Below Site 300 background.[i] No ecological concern.
Uranium 238[c]	2 of 2 (100%)	1.23 pCi/L	1.29 pCi/L	5.85 pCi/L	-78%	
Spring 10 (OU 6)						
Nitrate (as NO_3)[d]	4 of 4 (100%)	14 mg/L	17 mg/L	26 mg/L	-35%	Concentration in current review period below previous review period. Above ESL (0.4 mg/L[g]). Below Site 300 background.[i] No ecological concern.
TCE	2 of 14 (14%)	<0.5 µg/L	0.9 µg/L	32 µg/L	-97%	Concentration in current review period lower than previous review period. Below ESL (360 µg/L).[e] No ecological concern.
Spring 11 (OU 6)						
trans-1,2-DCE	1 of 14 (7.1%)	<0.5 µg/L	0.6 µg/L	<0.5 µg/L	20%	COC not detected in previous review period, detected just over detection limit in current review period. Below ESL (590 µg/L).[e] No ecological concern.
TCE	4 of 14 (29%)	<0.5 µg/L	2.2 µg/L	1.6 µg/L	38%	Concentration in current review period does not exceed pervious review period by more than 50%. Below ESL (360 µg/L).[e] No ecological concern.

Table 4.2-4 (Cont.). Maximum concentration of contaminants of concern (COCs) detected in spring samples collected between January 1, 2008 and December 31, 2012 (Current Review Period) and through December 31, 2007 (Previous Review Period).

	Current Review Period			Previous Review Period		
Spring COC	Frequency of detection (%)	Minimum concentration	Maximum concentration	Maximum concentration	Difference (%)	Current status
Spring 11 (OU 6) (continued)						
Uranium 234[a]	1 of 1 (100%)	30 pCi/L	30 pCi/L	23.1 pCi/L	30%	Activities in current review period do not exceed pervious review period by more than 50%. Sum of uranium isotopes equivalent to 0.076 mg/L. Above ESL established for Building 812 (0.05 mg/L).[j] Above Site 300 background.[i] Natural isotopic ratio. Continued monitoring.
Uranium 235[b]	1 of 1 (100%)	1.2 pCi/L	1.2 pCi/L	7.6 pCi	-84%	
Uranium 238[c]	1 of 1 (100%)	25 pCi/L	25 pCi/L	20.8 pCi/L	20%	
Spring 14 (OU 4)						
Nitrate (as NO_3)[d]	2 of 2 (100%)	11 mg/L	11 mg/L	62 mg/L	-82%	Concentration in current review period below previous review period. Above ESL (0.4 mg/L).[g] Below Site 300 background.[i] No ecological concern.

Notes appear on the following page.

Table 4.2-4 (Cont.). Maximum concentration of contaminants of concern (COCs) detected in spring samples collected between January 1, 2008 and December 31, 2012 (Current Review Period) and through December 31, 2007 (Previous Review Period).

Notes:

COC =	Contaminant of concern.
DCE =	Dichloroethene.
ESL =	Ecological Screening Level.
mg/L =	Milligrams per liter.
NC =	Not Calculated.
OU =	Operable Unit.
pCi/L =	picocuries per liter.
RSL =	Regional Screening Level.
SWRI =	Site-Wide Remedial Investigation Report.
TCE =	Trichloroethene.
µg/L =	Microgram per liter.

[a] Includes uranium 234 by mass measurement and uranium 234 plus 233 by alpha spectrometry.

[b] Includes uranium 235 by mass measurement and uranium 235 plus 236 by alpha spectrometry.

[c] Includes uranium 238 by mass measurement and uranium 238 by alpha spectrometry.

[d] Includes Nitrate as N converted to Nitrate as NO_3, and Nitrate plus Nitrite converted to NO_3.

[e] CRWQCB (2008). Table F-4a, Lowest Fresh Water Aquatic Habitat Goal.

[f] U.S. EPA (May 2013). Tap water RSL for human health.

[g] U.S. EPA (2000). Ambient Water Quality Criteria Recommendations for rivers and streams in nutrient Ecoregion III.

[h] Webster-Scholten (1994). Site-Wide Remedial Investigation Report.

[i] Ferry et al. (1999). Site-Wide Feasibility Study, Appendix A.

[j] Carlsen et al. (2012a). Baseline Risk Assessment Work Plan for Building 812.

Table 4.2-5. Maximum concentrations of tetrachlorothene (PCE) and trichloroethene (TCE) in ground water samples collected between January 1, 2008 and December 31, 2012 (Current Review Period) and between 2003 and 2004 in the vicinity of burrows sampled for VOCs in burrow air in the Building 834 and Pit 6 OUs.

	PCE (µg/L)			TCE (µg/L)		
Well	Between 2003 and 2004	Current review period	Difference (%)	Between 2003 and 2004	Current review period	Difference (%)
Building 834 OU (OU 2)						
W-834-B2	120	8.2	-93%	4,400	1,000	-77%
W-834-B3	<10	0.86	-91%	370	400	8%
W-834-C2	4.1	5.6	37%	950	950	0%
W-834-C4	0.87	<0.5	-43%	130	167	28%
W-834-J1	1.4	<0.5	-64%	630	49	-92%
W-834-J2	3.6	<0.5	-86%	790	160	-80%
Pit 6 OU (OU 3)						
EP6-09	<0.5	<0.5	0%	5.9	5.9	0%
K6-01	<0.5	<0.5	0%	<0.5	<0.5	0%
K6-01S	<0.5	<0.5	0%	<0.5	<0.5	0%
K6-19	<0.5	<0.5	0%	4.1	2.6	-37%

Notes:

OU = Operable Unit.
PCE = Tetrachloroethene.
TCE = Trichloroethene.
µg/L = Microgram per liter.
VOC = Volatile Organic Compound.

Table 4.2-6. New constituents detected in surface soil samples collected between January 1, 2008 and December 31, 2012.

Constituent	Frequency of detection (%)	Minimum concentration	Maximum concentration	Current status
Building 850 Area (OU 5)				
1,2,3,4,6,7,8,9-OCDF	2 of 5 (40%)	<0.199 ng/kg	0.752 ng/kg	Addressed in Building 850 removal action so that COC does not pose an ecological hazard.[a]

Notes:

COC = Contaminant of Concern.
ng/kg = Nanogram per kilogram.
OCDF = Octachlorodibenzofuran.
OU = Operable Unit.

[a] Remedial Action Completion Report for the Building 850/Pit 7 Complex Operable Unit (Dibley et al., 2010c).

Table 4.2-7. Status of potential ecological hazards at Site 300 Operable Units (OUs) 1 through 8.

Media of concern	Exposure pathway	Receptors	COC	Baseline Risk Assessment[a] HQ/TQ	Baseline Risk Assessment[a] Comments	Additional assessments	Current status	Risk/Hazard management measures
General Services Area (OU 1)								
Eastern General Services Area								
Surface soil (Sewage Treatment Lagoon)	Ingestion	Ground squirrel Kit fox Deer	Cadmium	>1	Wildlife surveys found no impact to the Site 300 ground squirrel and deer populations and no evidence of kit fox.	Below mammalian herbivore and carnivore U.S. EPA Eco-SSL.[k] Wildlife surveys identified breeding populations of California tiger salamander. Insufficient amphibian toxicity data.	Small aerial extent limits potential ecological hazard.	No risk/hazard management measures needed.
Surface Water (GEOCRK)	Aquatic toxicity	Aquatic species	Copper Zinc	>1		Subsequent bioassays showed no aquatic toxicity.	No ecological hazard present.	No risk/hazard management measures needed.
Building 834 (OU 2)								
Surface soil	Ingestion	Ground squirrel Kit fox Deer	Cadmium	>1	Wildlife surveys found no impact to the Site 300 ground squirrel and deer populations and no evidence of kit fox.	Additional soil sampling conducted in 2003.[b] 95% UCL less than background.	No ecological hazard present.	No risk/hazard management measures needed.
Subsurface soil	Inhalation	Ground squirrel Kit fox	TCE	>1	Wildlife surveys found no impact to the Site 300 ground squirrel population and no evidence of kit fox.	Burrow air sampling completed in 2004 resulted in HQ<1.[c]	No ecological hazard present.[d]	No risk/hazard management measures needed.
Subsurface soil	Inhalation	Ground squirrel Kit fox	PCE	>1	Wildlife surveys found no impact to the Site 300 ground squirrel population and no evidence of kit fox.	Burrow air sampling completed in 2004 resulted in HQ<1.[c]	No ecological hazard present.[d]	No risk/hazard management measures needed.

Table 4.2-7 (Cont.). Status of potential ecological hazards at Site 300 Operable Units (OUs) 1 through 8.

Media of concern	Exposure pathway	Receptors	COC	Baseline Risk Assessment[a] HQ/TQ	Baseline Risk Assessment[a] Comments	Additional assessments	Current status	Risk/Hazard management measures
Pit 6 Landfill (OU 3)								
Subsurface soil	Inhalation	Ground squirrel Kit fox	TCE	>1	Wildlife surveys found no impact to the Site 300 ground squirrel population and no evidence of kit fox.	Burrow air sampling completed in 2004 resulted in HQ<1.[c]	No ecological hazard present.[d]	No risk/hazard management measures needed.
Subsurface soil	Inhalation	Ground squirrel Kit fox	PCE	>1	Wildlife surveys found no impact to the Site 300 ground squirrel population and no evidence of kit fox.	Burrow air sampling completed in 2004 resulted in HQ<1.[c]	No ecological hazard present.[d]	No risk/hazard management measures needed.
Subsurface soil	Inhalation	Ground squirrel Kit fox	Total VOCs	>1	Wildlife surveys found no impact to the Site 300 ground squirrel population and no evidence of kit fox.	Burrow air sampling completed in 2004 resulted in HQ<1.[c]	No ecological hazard present.[d]	No risk/hazard management measures needed.
High Explosives (HE) Process Area (OU 4)								
Surface soil	Ingestion	Ground squirrel Deer	Cadmium	>1	Wildlife surveys found no impact to the Site 300 ground squirrel and deer populations and no evidence of kit fox.	Additional soil sampling completed in 2011.[e] 95% UCL below background. Below mammalian herbivore and carnivore U.S. EPA Eco-SSL.[k]	No ecological hazard present.	No risk/hazard management measures needed.
Spring 5	Aquatic toxicity	Aquatic species	Copper	>1	No surface water currently present.	Most recent samples within range of background.	No ecological hazard present.	No risk/hazard management measures needed.
Spring 14	Aquatic toxicity	Aquatic species	Chloride	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Recent samples at or below background.[h]	No ecological hazard present.	On-going monitoring.
Spring 14	Aquatic toxicity	Aquatic species	Ortho-phosphate	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Background developed in 2010; below background.[i]	No ecological hazard present.	No risk/hazard management measures needed.

Table 4.2-7 (Cont). Status of potential ecological hazards at Site 300 Operable Units (OUs) 1 through 8.

Media of concern	Exposure pathway	Receptors	COC	Baseline Risk Assessment[a] HQ/TQ	Baseline Risk Assessment[a] Comments	Additional assessments	Current status	Risk/Hazard management measures
High Explosives (HE) Process Area (OU 4), continued								
Spring 14	Aquatic toxicity	Aquatic species	Total Phosphorus (as P, PO_4)	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Background developed in 2010, found to be below background.[i]	No ecological hazard present.	No risk/hazard management measures needed.
Building 850/ Pit 7 Complex (OU 5)								
Building 850								
Surface Soil	Ingestion	Ground squirrel Deer	Cadmium	>1	Wildlife surveys found no impact to the Site 300 ground squirrel and deer populations and no evidence of kit fox.	Likely addressed as part of Building 850 Soil Removal Action.[j]	No ecological hazard present.	No risk/hazard management measures needed.
Surface Soil	Ingestion	Ground squirrel Deer Kit fox	PCBs, dioxins, and furans	NC	Literature review indicated individual animals at risk due to the potential for bioaccumulation. Wildlife surveys found no impact to Site 300 ground squirrel or deer populations and no evidence of kit fox.	Addressed as part of Building 850 Soil Removal Action.[j]	No ecological hazard present.	No risk/hazard management measures needed.
Surface soil	Ingestion	Burrowing owl	Cadmium	NC	Burrowing owl not identified in area at time of baseline.	HQ estimate in 2004 indicated cadmium unlikely to pose a hazard.[c] Likely addressed as part of Building 850 Soil Removal Action.[j]	No ecological hazard present.	No risk/hazard management measures needed.

Table 4.2-7 (Cont). Status of potential ecological hazards at Site 300 Operable Units (OUs) 1 through 8.

Media of concern	Exposure pathway	Receptors	COC	Baseline Risk Assessment[a] HQ/TQ	Baseline Risk Assessment[a] Comments	Additional assessments	Current status	Risk/Hazard management measures
Building 850/ Pit 7 Complex (OU 5)								
Building 850 (continued)								
Surface soil	Ingestion	Burrowing owl	PCBs, dioxins, and furans	NC	Burrowing owl not identified in area at time of baseline.	HQ estimate in 2004 resulted in HQ>1.[c] Addressed as part of Building 850 Soil Removal Action.[j]	No ecological hazard present.	No risk/hazard management measures needed.
Sandpile	Absorbed radiation	Ground squirrel Kit Fox Burrowing owl	Thorium-228	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Addressed as part of Building 850 Soil Removal Action.[j]	No ecological hazard present.	No risk/hazard management measures needed.
Surface Soil	Absorbed radiation	Ground squirrel Kit Fox Burrowing owl	Potassium-40	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Background developed in 2012, found to be below background.[f]	No ecological hazard present.	No risk/hazard management measures needed.
Pit 7 Complex								
Subsurface soil (within landfill)	Ingestion	Ground squirrel Kit Fox Burrowing owl	Uranium	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Evaluated in the 2008 Five-Year Ecological review.[g]	Maximum activity greater than background, presents a potential risk to burrowing vertebrates.	Landfill inspected and maintained to prevent exposure of burrowing animals.
Building 854 (OU 6)								
Surface Soil	Ingestion	Amphibians	PCBs	NC	Literature review indicated individual animals at risk due to the potential for bioaccumulation.	Addressed when PCB-contaminated soils removed from Building 855 former lagoon in 2005.[l]	No ecological hazard present.	No risk/hazard management measures needed.

Table 4.2-7 (Cont). Status of potential ecological hazards at Site 300 Operable Units (OUs) 1 through 8.

Media of concern	Exposure pathway	Receptors	COC	Baseline Risk Assessment[a]		Additional assessments	Current status	Risk/Hazard management measures
				HQ/TQ	Comments			
Building 854 continued (OU 6)								
Spring 10	Aquatic toxicity	Aquatic species	Uranium	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Additional evaluation limited by small data set.	Currently dry. Most recent samples exceed background and ESL but have natural uranium ratios.[h]	Ongoing monitoring.
Spring 10	Ingestion	Amphibians	Uranium	NC	Identified during the 2008 Five-Year Ecologial Review.[g]	Additional evaluation limited by small data set and insufficient toxicity data; spring can serve as non-breeding habitat.	Currently dry. Most recent samples exceed background and ESL but has natural uranium ratios.[h]	Ongoing monitoring.
Spring 11	Aquatic toxicity	Aquatic species	Uranium	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Additional samples obtained in 2012.	Most recent samples exceed background and ESL but has natural uranium ratios.[h]	Ongoing monitoring.
Spring 11	Ingestion	Amphibians	Uranium	NC	Identified during the 2008 Five-Year Ecologial Review.[g]	Additional samples obtained in 2012, insufficient toxicity data limits additional evaluation; spring can serve as non-breeding habitat.	Most recent samples exceed background and ESL but has natural uranium ratios.[h]	Ongoing monitoring.
Building 832 Canyon (OU 7)								
Spring 3	Aquatic toxicity	Aquatic species	Nitrate plus Nitrite (as N)	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Additional evaluation in 2010 showed concentrations to be below background.[i]	No ecological hazard present.	No risk/hazard management measures needed.
Spring 4	Aquatic toxicity	Aquatic species	Ammonia Nitrogen (as N)	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Limited data set; background level developed in 2012.[f]	One historical maximum concentration exceeds background.[f]	Ongoing monitoring.

Table 4.2-7 (Cont). Status of potential ecological hazards at Site 300 Operable Units (OUs) 1 through 8.

Media of concern	Exposure pathway	Receptors	COC	Baseline Risk Assessment[a] HQ/TQ	Baseline Risk Assessment[a] Comments	Additional assessments	Current status	Risk/Hazard management measures
Building 832 Canyon (OU 7) (continued)								
Spring 4	Aquatic toxicity	Aquatic species	Ortho-phosphate	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Background developed in 2010; found to be below background.[i]	No ecological hazard present.	No risk/hazard management measures needed.
Spring 4	Aquatic toxicity	Aquatic species	Total Phosphorus (as P)	>1	Identified during the 2008 Five-Year Ecologial Review.[g]	Limited data set; background developed in 2010.[i]	Single historical result exceeds background.[i]	Ongoing monitoring.
Site Wide (OU 8)								
Building 801/Pit 8 Landfill								
Surface soil	Ingestion Inhalation	Ground squirrels Deer	Cadmium	>1	Wildlife surveys found no impact to the Site 300 ground squirrel and deer populations.	Additional soil sampling completed in 2011.[e] 95% UCL below background. Below mammalian herbivore and carnivore U.S. EPA Eco-SSL.[k]	No ecological hazard present.	No risk/hazard management measures needed.
Building 851 Firing Table								
Surface soil	Ingestion	Ground squirrels Deer	Cadmium	>1	Wildlife surveys found no impact to the Site 300 ground squirrel and deer populations.	Additional soil sampling completed in 2012.[f] 95% UCL below background. Below mammalian herbivore and carnivore U.S. EPA Eco-SSL.[k]	No ecological hazard present.	No risk/hazard management measures needed.

Notes appear on the following page.

Table 4.2-7 (Cont). Status of potential ecological hazards at Site 300 Operable Units (OUs) 1 through 8.

Notes:

Eco-SSL = Ecological Soil Screening Level.
ESL = Ecological Screening Level.
EWFA = East-West Firing Area.
COC = Contaminant of Concern.
HE = High explosives.
HQ = Hazard quotient.
NC = Not calculated.
OU = Operable unit.
PCBs = Polychlorinated biphenyls.
PCE = Perchloroethylene.
SWFS = Site-Wide Feasibility Study.
TCE = Trichloroethylene.
TQ = Toxicity quotient.
UCL= Upper confidence limit.
VOCs = Volatile organic compounds.

[a] Unless otherwise noted, baseline risk assessment includes assessments presented in the Site-Wide Remedial Investigation (Webster-Scholten, 1994), Site-Wide Feasibility Study (Ferry et al., 1999), and the Pit 7 Complex Remedial Investigation/Feasibility Study (Taffet et al., 2005).
[b] 2003 Annual Compliance Monitoring Report (Dibley et al., 2004a).
[c] 2004 First Semester Compliance Monitoring Report (Dibley et al., 2004b).
[d] Volatile organic compounds in burrow air have been deleted from the list of ecological contaminants of concern and are no longer included in the Ecological Risk and Hazard Management Program.
[e] 2011 Annual Compliance Monitoring Report (Dibley et al., 2012c).
[f] 2012 Annual Compliance Monitoring Report (Dibley et al., 2013a).
[g] 2008 Annual Compliance Monitoring Plan (Dibley et al., 2009b).
[h] 2013 First Semester Compliance Monitoring Report (Dibley et al., 2013b).
[i] 2010 First Semester Compliance Monitoring Report (Dibley et al., 2010b).
[j] Remedial Action Completion Report for the Building 850/Pit 7 Complex Operable Unit (Dibley et al., 2010c).
[k] Ecological Soil Screening Levels for Cadmium (U.S. EPA, 2005).
[l] Letter report on PCB-contaminated soil removal from the Building 855 lagoon (U.S. DOE, 2005b).

Appendix A

Results of Influent and Effluent pH Monitoring

Appendix A

Results of Influent and Effluent pH Monitoring

Table A-1. Results of influent and effluent pH, and effluent dissolved oxygen monitoring, July through December 2013.

A-1. Results of infuent and effluent pH, July through December 2013.

Sample Location	Sample Date	Effluent pH Result
GSA OU		
CGSA GWTS	**07/09/2013**	**7.2**
CGSA GWTS	**08/05/2013**	**7.2**
CGSA GWTS	**09/02/2013**	**7.2**
CGSA GWTS	**10/09/2013**	**7.0**
CGSA GWTS	**11/04/2013**	**7.0**
CGSA GWTS	**12/02/2013**	**7.0**
Building 834 OU		
834 GWTS	**06/25/2013**	**7.6**
834 GWTS	**08/05/2013**	**7.1**
834 GWTS	**09/03/2013**	**7.8**
834 GWTS	**10/01/2013**	**8.2**
834 GWTS	**11/04/2013**	**8.0**
834 GWTS	**12/02/2013**	**7.3**
HEPA OU		
815-SRC GWTS	**07/01/2013**	**6.9**
815-SRC GWTS	**08/12/2013**	**7.1**
815-SRC GWTS	**09/04/2013**	**7.1**
815-SRC GWTS	**10/15/2013**	**7.1**
815-SRC GWTS	**11/04/2013**	**7.2**
815-SRC GWTS	**12/03/2013**	**7.5**
815-PRX GWTS	**07/01/2013**	**7.5**
815-PRX GWTS	**08/12/2013**	**7.3**
815-PRX GWTS	**09/04/2013**	**7.7**
815-PRX GWTS	**10/15/2013**	**7.6**
815-PRX GWTS	**11/04/2013**	**7.3**
815-PRX GWTS	**12/31/2013**	**NM**
815-DSB GWTS	**07/08/2013**	**7.0**
815-DSB GWTS	**08/05/2013**	**7.0**

A-1. Results of infuent and effluent pH, July through December 2013.

Sample Location	Sample Date	Effluent pH Result
815-DSB GWTS	09/04/2013	7.0
815-DSB GWTS	10/09/2013	7.0
815-DSB GWTS	11/04/2013	7.0
815-DSB GWTS	12/02/2013	7.0
817-SRC GWTS	07/01/2013	7.5
817-SRC GWTS	08/19/2013	7.3
817-SRC GWTS	09/04/2013	7.1
817-SRC GWTS	10/15/2013	7.4
817-SRC GWTS	11/04/2013	7.0
817-SRC GWTS	12/31/2013	NM
817-PRX GWTS	07/10/2013	7.8
817-PRX GWTS	08/12/2013	7.5
817-PRX GWTS	09/04/2013	7.5
817-PRX GWTS	10/15/2013	7.6
817-PRX GWTS	11/04/2013	7.4
817-PRX GWTS	12/03/2013	7.3
829-SRC GWTS	07/08/2013	7.1
829-SRC GWTS	08/31/2013	NM
829-SRC GWTS	09/30/2013	NM
829-SRC GWTS	10/31/2013	NM
829-SRC GWTS	11/30/2013	NM
829-SRC GWTS	12/31/2013	NM
Building 850/Pit 7 Complex OU		
PIT7-SRC GWTS	07/02/2013	7.0
PIT7-SRC GWTS	08/05/2013	7.0
PIT7-SRC GWTS	09/04/2013	7.0
PIT7-SRC GWTS	10/15/2013	7.0
PIT7-SRC GWTS	11/04/2013	7.0
PIT7-SRC GWTS	12/02/2013	7.0

A-1. Results of infuent and effluent pH, July through December 2013.

Sample Location	Sample Date	Effluent pH Result
Building 854 OU		
854-SRC GWTS	**07/01/2013**	**7.0**
854-SRC GWTS	**08/05/2013**	**7.0**
854-SRC GWTS	**09/03/2013**	**7.0**
854-SRC GWTS	**10/15/2013**	**7.0**
854-SRC GWTS	**11/04/2013**	**7.0**
854-SRC GWTS	**12/02/2013**	**7.0**
854-PRX GWTS	**07/01/2013**	**7.0**
854-PRX GWTS	**08/05/2013**	**7.0**
854-PRX GWTS	**09/03/2013**	**7.0**
854-PRX GWTS	**10/15/2013**	**7.0**
854-PRX GWTS	**11/04/2013**	**7.0**
854-PRX GWTS	**12/02/2013**	**7.0**
854-DIS GWTS	**07/01/2013**	**7.0**
854-DIS GWTS	**08/05/2013**	**7.0**
854-DIS GWTS	**09/03/2013**	**7.0**
854-DIS GWTS	**10/15/2013**	**7.0**
854-DIS GWTS	**11/04/2013**	**7.0**
854-DIS GWTS	**12/02/2013**	**7.0**
832 Canyon OU		
832-SRC GWTS	**07/01/2013**	**7.4**
832-SRC GWTS	**08/12/2013**	**7.5**
832-SRC GWTS	**09/03/2013**	**7.1**
832-SRC GWTS	**10/15/2013**	**7.3**
832-SRC GWTS	**11/04/2013**	**7.5**
832-SRC GWTS	**12/02/2013**	**6.8**
830-SRC GWTS	**07/01/2013**	**7.3**
830-SRC GWTS	**08/05/2013**	**7.4**
830-SRC GWTS	**09/03/2013**	**7.5**

A-1. Results of infuent and effluent pH, July through December 2013.

Sample Location	Sample Date	Effluent pH Result
830-SRC GWTS	10/01/2013	7.4
830-SRC GWTS	11/05/2013	8.0
830-SRC GWTS	12/02/2013	7.1
830-DISS GWTS	07/10/2013	7.0
830-DISS GWTS	08/05/2013	7.0
830-DISS GWTS	09/04/2013	7.0
830-DISS GWTS	10/09/2013	7.0
830-DISS GWTS	11/04/2013	7.0
830-DISS GWTS	12/02/2013	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.

Appendix B

Analytical Results for Routine Monitoring During 2013

Appendix B

Analytical Results for Routine Monitoring During 2013

Table B-1.01. 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 tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CDF1	1/22/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	1/22/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	1/22/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
CDF1	1/22/13 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	2/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	2/21/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	3/13/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	3/13/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	4/18/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	4/18/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	5/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	5/16/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	6/19/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	6/19/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	7/18/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	7/18/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	8/22/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	8/22/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	9/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	9/11/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	10/31/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	10/31/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	11/25/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	11/25/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	12/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CDF1	12/12/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	1/22/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	1/22/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	1/22/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
CON1	1/22/13 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	2/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	2/21/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-1.01. 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 tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CON1	3/13/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	3/13/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	4/18/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	4/18/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	5/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	5/16/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	6/18/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	6/18/13 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	7/18/13	E601	<0.5	<0.5	<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	7/18/13 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	8/21/13	E601	<0.5	<0.5	<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	8/21/13 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	9/11/13	E601	<0.5	<0.5	<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	9/11/13 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	10/31/13	E601	<0.5	<0.5	<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	10/31/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CON1	11/25/13	E601	<0.5	<0.5	<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	11/25/13 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	12/12/13	E601	<0.5	<0.5	<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	12/12/13 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	1/22/13	E601	<0.5	<0.5	<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	2/21/13	E601	<0.5	<0.5	<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	3/13/13	E601	<0.5	<0.5	<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	5/16/13	E601	<0.5	<0.5	<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	6/19/13	E601	<0.5	<0.5	<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	7/18/13	E601	<0.5	<0.5	<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	8/21/13	E601	<0.5	<0.5	<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	9/11/13	E601	<0.5	<0.5	<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	10/31/13	E601	<0.5	<0.5	<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	10/31/13 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	11/25/13	E601	<0.5	<0.5	<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	11/25/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-1.01. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CON2	12/12/13	E601	<0.5	<0.5	<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	12/12/13 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-26R-06	5/23/13	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-26R-06	12/18/13	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-26R-11	5/6/13	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-26R-11	11/18/13	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-35A-01	6/13/13	E601	72	4.3	0.68	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-01	6/13/13 DUP	E601	56 D	5.4	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	1.3	<0.5	<0.5
W-35A-01	12/18/13	E601	23	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-02	6/12/13	E601	<0.5	<0.5	<0.5	<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	12/16/13	E601	<0.5	<0.5	<0.5	<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	6/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-03	12/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35A-04	5/7/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-35A-04	12/2/13	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	12/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-35A-05	6/12/13	E601	<0.5	<0.5	<0.5	<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	12/17/13	E601	<0.5	<0.5	<0.5	<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	6/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-35A-07	6/12/13	E601	<0.5	<0.5	<0.5	<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	12/16/13	E601	<0.5	<0.5	<0.5	<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	3/4/13	E601	<0.5	<0.5	<0.5	<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	6/12/13	E601	<0.5	<0.5	<0.5	<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	8/28/13	E601	<0.5	<0.5	<0.5	<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	12/16/13	E601	<0.5	<0.5	<0.5	<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	6/12/13	E601	0.95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5
W-35A-09	12/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5
W-35A-10	6/12/13	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.8	<0.5	<0.5
W-35A-10	6/12/13 DUP	E601	9.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	8.6	<0.5	<0.5
W-35A-10	12/16/13	E601	4.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.4	<0.5	<0.5
W-35A-11	12/17/13	E601	<0.5	<0.5	<0.5	<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	6/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-1.01. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-35A-12	12/17/13	E601	<0.5	<0.5	<0.5	<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	6/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-35A-13	12/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-35A-14	3/4/13	E601	<0.5	<0.5	<0.5	<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	6/12/13	E601	<0.5	<0.5	<0.5	<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	8/28/13	E601	<0.5	<0.5	<0.5	<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	12/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7A	12/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7B	5/28/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7B	12/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7B	12/10/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7C	8/13/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-7C	12/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7DS	5/6/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7DS	12/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7E	5/7/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7E	12/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7E	12/2/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7ES	5/7/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7ES	5/7/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7ES	12/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7F	4/1/13	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-7F	12/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7G	5/20/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7G	12/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7H	4/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7H	12/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7I	1/9/13	E601	400 D	14	27	1.1	<0.5	<0.5	<0.5	<0.5	4.4	<0.5	<0.5	<0.5	<0.5	<0.5
W-7I	4/8/13	E601	210 D	9.8	42	2	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5
W-7I	7/9/13	E601	170 D	5.2	42	2.2	<0.5	<0.5	<0.5	<0.5	2.6	<0.5	<0.5	<0.5	<0.5	<0.5
W-7I	11/4/13	E601	230 D	5	55	3.3	<0.5	<0.5	<0.5	<0.5	3	<0.5	<0.5	<0.5	<0.5	<0.5
W-7J	4/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-1.01. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-7J	12/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7K	5/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7K	12/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7L	5/28/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7L	12/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7M	5/28/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7M	12/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7N	5/28/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7N	12/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-7O	1/9/13	E601	63	4.3	0.59	<0.5	<0.5	<0.5	<0.5	<0.5	0.84	<0.5	<0.5	<0.5	<0.5	<0.5
W-7O	4/8/13	E601	90	6.7	0.72	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	0.66	<0.5	<0.5
W-7O	7/9/13	E601	28	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-7O	11/4/13	E601	24	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-7P	3/4/13	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-7P	7/9/13	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	5/21/13	E601	6.9	0.97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7Q	12/9/13	E601	13	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7R	3/4/13	E601	5.6	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-7R	4/8/13	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-7R	7/9/13	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-7R	11/4/13	E601	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7S	5/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7S	12/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7T	5/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-7T	12/11/13	E601	<0.5	<0.5	<0.5	<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	5/23/13	E601	<0.5	<0.5	<0.5	<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	12/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-843-02	6/13/13	E601	<0.5	<0.5	<0.5	<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	12/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-872-02	1/9/13	E601	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.7	<0.5	<0.5
W-872-02	4/8/13	E601	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.8	<0.5	<0.5
W-872-02	7/9/13	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5

Table B-1.01. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-872-02	11/4/13	E601	8.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5
W-873-01	6/4/13	E601	<0.5	<0.5	<0.5	<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	12/9/13	E601	<0.5	<0.5	<0.5	<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	6/4/13	E601	6.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-873-02	12/9/13	E601	6.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5
W-873-02	12/9/13 DUP	E601	6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-873-03	6/13/13	E601	<0.5	<0.5	<0.5	<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	12/9/13	E601	<0.5	<0.5	<0.5	<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	6/4/13	E601	<0.5	<0.5	<0.5	<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	12/9/13	E601	<0.5	<0.5	<0.5	<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	6/4/13	E601	3.7	<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-873-06	12/4/13	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-873-06	12/4/13 DUP	E601	3.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-873-07	1/9/13	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-873-07	4/8/13	E601	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5
W-873-07	7/9/13	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<0.5
W-873-07	11/4/13	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-875-01	5/23/13	E601	0.9	<0.5	3.9	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-01	5/23/13 DUP	E601	0.95	<0.5	3.9	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-01	12/5/13	E601	1.2	<0.5	3.6	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-01	12/5/13 DUP	E601	1.2	<0.5	3.6	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-02	5/30/13	E601	<0.5	<0.5	<0.5	<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	12/5/13	E601	<0.5	<0.5	<0.5	<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	5/30/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-03	12/5/13	E601	<0.5	<0.5	<0.5	<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	5/30/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-04	12/5/13	E601	<0.5	<0.5	<0.5	<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	5/23/13	E601	<0.5	<0.5	<0.5	<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	12/5/13	E601	<0.5	<0.5	<0.5	<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	5/30/13	E601	<0.5	<0.5	<0.5	<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	12/4/13	E601	<0.5	<0.5	<0.5	<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	12/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5

Table B-1.01. General Services Area Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-875-08	1/9/13	E601	270 D	2.8	36	3	<0.5	<0.5	<0.5	<0.5	5.2	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	4/8/13	E601	78	3.6	8.4	0.84	<0.5	<0.5	<0.5	<0.5	0.98	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	4/8/13 DUP	E601	75	3.4	8.3	0.84	<0.5	<0.5	<0.5	<0.5	0.98	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	7/9/13	E601	330 D	1.6	42	3.6	<0.5	<0.5	<0.5	<0.5	6.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-875-08	11/4/13	E601	280 D	1.4	35	3.1	<0.5	<0.5	<0.5	<0.5	5.4	<0.5	<0.5	<0.5	<0.5	<0.5
W-876-01	5/22/13	E601	6.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-876-01	12/5/13	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-879-01	5/22/13	E601	<0.5	<0.5	<0.5	<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	12/9/13	E601	<0.5	<0.5	<0.5	<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	6/13/13	E601	7.8	<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-889-01	12/11/13	E601	6.8	<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
W-CGSA-1732	12/9/13	E601	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1736	5/28/13	E601	3.8	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-CGSA-1736	12/4/13	E601	4.3	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-CGSA-1737	5/28/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-CGSA-1737	12/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-CGSA-1739	5/22/13	E601	2.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-1739	12/11/13	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-CGSA-2708	6/17/13	E601	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-2708	6/17/13 DUP	E601	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-CGSA-2708	12/11/13	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-CGSA-2708	12/11/13 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

Table B-1.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
CDF1	1/22/13	E502.2	0 of 46	-
CDF1	1/22/13	E601	0 of 18	-
CDF1	1/22/13 DUP	E502.2	0 of 45	-
CDF1	1/22/13 DUP	E601	0 of 18	-
CDF1	2/21/13	E601	0 of 18	-
CDF1	2/21/13 DUP	E601	0 of 18	-
CDF1	3/13/13	E601	0 of 18	-
CDF1	3/13/13 DUP	E601	0 of 18	-
CDF1	4/18/13	E601	0 of 18	-
CDF1	4/18/13 DUP	E601	0 of 18	-
CDF1	5/16/13	E601	0 of 18	-
CDF1	5/16/13 DUP	E601	0 of 18	-
CDF1	6/19/13	E601	0 of 18	-
CDF1	6/19/13 DUP	E601	0 of 18	-
CDF1	7/18/13	E601	0 of 18	-
CDF1	7/18/13 DUP	E601	0 of 18	-
CDF1	8/22/13	E601	0 of 18	-
CDF1	8/22/13 DUP	E601	0 of 18	-
CDF1	9/11/13	E601	0 of 18	-
CDF1	9/11/13 DUP	E601	0 of 18	-
CDF1	10/31/13	E601	0 of 18	-
CDF1	10/31/13 DUP	E601	0 of 18	-
CDF1	11/25/13	E601	0 of 18	-
CDF1	11/25/13 DUP	E601	0 of 18	-
CDF1	12/12/13	E601	0 of 18	-
CDF1	12/12/13 DUP	E601	0 of 18	-
CON1	1/22/13	E502.2	0 of 46	-
CON1	1/22/13	E601	0 of 18	-
CON1	1/22/13 DUP	E502.2	0 of 45	-
CON1	1/22/13 DUP	E601	0 of 18	-
CON1	2/21/13	E601	0 of 18	-

Table B-1.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
CON1	2/21/13 DUP	E601	0 of 18	-
CON1	3/13/13	E601	0 of 18	-
CON1	3/13/13 DUP	E601	0 of 18	-
CON1	4/18/13	E601	0 of 18	-
CON1	4/18/13 DUP	E601	0 of 18	-
CON1	5/16/13	E601	0 of 18	-
CON1	5/16/13 DUP	E601	0 of 18	-
CON1	6/18/13	E601	0 of 18	-
CON1	6/18/13 DUP	E601	0 of 18	-
CON1	7/18/13	E601	0 of 18	-
CON1	7/18/13 DUP	E601	0 of 18	-
CON1	8/21/13	E601	0 of 18	-
CON1	8/21/13 DUP	E601	0 of 18	-
CON1	9/11/13	E601	0 of 18	-
CON1	9/11/13 DUP	E601	0 of 18	-
CON1	10/31/13	E601	0 of 18	-
CON1	10/31/13 DUP	E601	0 of 18	-
CON1	11/25/13	E601	0 of 18	-
CON1	11/25/13 DUP	E601	0 of 18	-
CON1	12/12/13	E601	0 of 18	-
CON1	12/12/13 DUP	E601	0 of 18	-
CON2	1/22/13	E601	0 of 18	-
CON2	2/21/13	E601	0 of 18	-
CON2	3/13/13	E601	0 of 18	-
CON2	5/16/13	E601	0 of 18	-
CON2	6/19/13	E601	0 of 18	-
CON2	7/18/13	E601	0 of 18	-
CON2	8/21/13	E601	0 of 18	-
CON2	9/11/13	E601	0 of 18	-
CON2	10/31/13	E601	0 of 18	-
CON2	10/31/13 DUP	E601	0 of 18	-

Table B-1.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
CON2	11/25/13	E601	0 of 18	-
CON2	11/25/13 DUP	E601	0 of 18	-
CON2	12/12/13	E601	0 of 18	-
CON2	12/12/13 DUP	E601	0 of 18	-
W-26R-06	5/23/13	E601	0 of 18	-
W-26R-06	12/18/13	E601	0 of 18	-
W-26R-11	5/6/13	E601	0 of 18	-
W-26R-11	11/18/13	E601	0 of 18	-
W-35A-01	6/13/13	E601	0 of 18	-
W-35A-01	6/13/13 DUP	E601	0 of 18	-
W-35A-01	12/18/13	E601	0 of 18	-
W-35A-02	6/12/13	E601	0 of 18	-
W-35A-02	12/16/13	E601	0 of 18	-
W-35A-03	6/12/13	E601	0 of 18	-
W-35A-03	12/17/13	E601	0 of 18	-
W-35A-04	5/7/13	E601	0 of 18	-
W-35A-04	12/2/13	E502.2	0 of 46	-
W-35A-04	12/2/13	E601	0 of 18	-
W-35A-05	6/12/13	E601	0 of 18	-
W-35A-05	12/17/13	E601	0 of 18	-
W-35A-06	6/5/13	E601	0 of 18	-
W-35A-07	6/12/13	E601	0 of 18	-
W-35A-07	12/16/13	E601	0 of 18	-
W-35A-08	3/4/13	E601	0 of 18	-
W-35A-08	6/12/13	E601	0 of 18	-
W-35A-08	8/28/13	E601	0 of 18	-
W-35A-08	12/16/13	E601	0 of 18	-
W-35A-09	6/12/13	E601	0 of 18	-
W-35A-09	12/16/13	E601	0 of 18	-
W-35A-10	6/12/13	E601	0 of 18	-
W-35A-10	6/12/13 DUP	E601	0 of 18	-

Table B-1.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
W-35A-10	12/16/13	E601	0 of 18	-
W-35A-11	12/17/13	E601	0 of 18	-
W-35A-12	6/12/13	E601	0 of 18	-
W-35A-12	12/17/13	E601	0 of 18	-
W-35A-13	6/5/13	E601	0 of 18	-
W-35A-13	12/17/13	E601	0 of 18	-
W-35A-14	3/4/13	E601	0 of 18	-
W-35A-14	6/12/13	E601	0 of 18	-
W-35A-14	8/28/13	E601	0 of 18	-
W-35A-14	12/16/13	E601	0 of 18	-
W-7A	12/11/13	E601	0 of 18	-
W-7B	5/28/13	E601	0 of 18	-
W-7B	12/10/13	E601	0 of 18	-
W-7B	12/10/13 DUP	E601	0 of 18	-
W-7C	8/13/13	E624	0 of 30	-
W-7C	12/10/13	E601	0 of 18	-
W-7DS	5/6/13	E601	0 of 18	-
W-7DS	12/4/13	E601	0 of 18	-
W-7E	5/7/13	E601	0 of 18	-
W-7E	12/2/13	E601	0 of 18	-
W-7E	12/2/13 DUP	E601	0 of 18	-
W-7ES	5/7/13	E601	0 of 18	-
W-7ES	5/7/13 DUP	E601	0 of 18	-
W-7ES	12/2/13	E601	0 of 18	-
W-7F	4/1/13	E601	0 of 18	-
W-7F	12/9/13	E601	0 of 18	-
W-7G	5/20/13	E601	0 of 18	-
W-7G	12/11/13	E601	0 of 18	-
W-7H	4/1/13	E601	0 of 18	-
W-7H	12/9/13	E601	0 of 18	-
W-7I	1/9/13	E601	1 of 18	28

Table B-1.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
W-7I	4/8/13	E601	1 of 18	44
W-7I	7/9/13	E601	1 of 18	44
W-7I	11/4/13	E601	1 of 18	59
W-7J	4/1/13	E601	0 of 18	-
W-7J	12/9/13	E601	0 of 18	-
W-7K	5/21/13	E601	0 of 18	-
W-7K	12/11/13	E601	0 of 18	-
W-7L	5/28/13	E601	0 of 18	-
W-7L	12/10/13	E601	0 of 18	-
W-7M	5/28/13	E601	0 of 18	-
W-7M	12/11/13	E601	0 of 18	-
W-7N	5/28/13	E601	0 of 18	-
W-7N	12/11/13	E601	0 of 18	-
W-7O	1/9/13	E601	0 of 18	-
W-7O	4/8/13	E601	0 of 18	-
W-7O	7/9/13	E601	0 of 18	-
W-7O	11/4/13	E601	0 of 18	-
W-7P	3/4/13	E601	0 of 18	-
W-7P	7/9/13	E601	0 of 18	-
W-7Q	5/21/13	E601	0 of 18	-
W-7Q	12/9/13	E601	0 of 18	-
W-7R	3/4/13	E601	0 of 18	-
W-7R	4/8/13	E601	0 of 18	-
W-7R	7/9/13	E601	0 of 18	-
W-7R	11/4/13	E601	0 of 18	-
W-7S	5/21/13	E601	0 of 18	-
W-7S	12/11/13	E601	0 of 18	-
W-7T	5/21/13	E601	0 of 18	-
W-7T	12/11/13	E601	0 of 18	-
W-843-01	5/23/13	E601	0 of 18	-
W-843-01	12/9/13	E601	0 of 18	-

Table B-1.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
W-843-02	6/13/13	E601	0 of 18	-
W-843-02	12/9/13	E601	0 of 18	-
W-872-02	1/9/13	E601	0 of 18	-
W-872-02	4/8/13	E601	0 of 18	-
W-872-02	7/9/13	E601	0 of 18	-
W-872-02	11/4/13	E601	0 of 18	-
W-873-01	6/4/13	E601	0 of 18	-
W-873-01	12/9/13	E601	0 of 18	-
W-873-02	6/4/13	E601	0 of 18	-
W-873-02	12/9/13	E601	0 of 18	-
W-873-02	12/9/13 DUP	E601	0 of 18	-
W-873-03	6/13/13	E601	0 of 18	-
W-873-03	12/9/13	E601	0 of 18	-
W-873-04	6/4/13	E601	0 of 18	-
W-873-04	12/9/13	E601	0 of 18	-
W-873-06	6/4/13	E601	0 of 18	-
W-873-06	12/4/13	E601	0 of 18	-
W-873-06	12/4/13 DUP	E601	0 of 18	-
W-873-07	1/9/13	E601	0 of 18	-
W-873-07	4/8/13	E601	0 of 18	-
W-873-07	7/9/13	E601	0 of 18	-
W-873-07	11/4/13	E601	0 of 18	-
W-875-01	5/23/13	E601	1 of 18	5.8
W-875-01	5/23/13 DUP	E601	1 of 18	5.9
W-875-01	12/5/13	E601	1 of 18	5.5
W-875-01	12/5/13 DUP	E601	1 of 18	5.7
W-875-02	5/30/13	E601	0 of 18	-
W-875-02	12/5/13	E601	0 of 18	-
W-875-03	5/30/13	E601	0 of 18	-
W-875-03	12/5/13	E601	0 of 18	-
W-875-04	5/30/13	E601	0 of 18	-

Table B-1.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
W-875-04	12/5/13	E601	0 of 18	-
W-875-05	5/23/13	E601	0 of 18	-
W-875-05	12/5/13	E601	0 of 18	-
W-875-06	5/30/13	E601	0 of 18	-
W-875-06	12/4/13	E601	0 of 18	-
W-875-06	12/4/13 DUP	E601	0 of 18	-
W-875-08	1/9/13	E601	1 of 18	39
W-875-08	4/8/13	E601	1 of 18	9.2
W-875-08	4/8/13 DUP	E601	1 of 18	9.1
W-875-08	7/9/13	E601	1 of 18	45
W-875-08	11/4/13	E601	1 of 18	39
W-876-01	5/22/13	E601	0 of 18	-
W-876-01	12/5/13	E601	0 of 18	-
W-879-01	5/22/13	E601	0 of 18	-
W-879-01	12/9/13	E601	0 of 18	-
W-889-01	6/13/13	E601	1 of 18	1.2
W-889-01	12/11/13	E601	1 of 18	1.1
W-CGSA-1732	12/9/13	E601	0 of 18	-
W-CGSA-1736	5/28/13	E601	0 of 18	-
W-CGSA-1736	12/4/13	E601	0 of 18	-
W-CGSA-1737	5/28/13	E601	0 of 18	-
W-CGSA-1737	12/4/13	E601	0 of 18	-
W-CGSA-1739	5/22/13	E601	0 of 18	-
W-CGSA-1739	12/11/13	E601	0 of 18	-
W-CGSA-2708	6/17/13	E601	0 of 18	-
W-CGSA-2708	6/17/13 DUP	E601	0 of 18	-
W-CGSA-2708	12/11/13	E601	0 of 18	-
W-CGSA-2708	12/11/13 DUP	E601	0 of 18	-

Table B-1.02. General Services Area Operable Unit general minerals in ground water.

Constituents of concern	W-879-01
	12/9/13
Total Alkalinity (as CaCO3) (mg/L)	220
Aluminum (mg/L)	<0.2
Bicarbonate Alk (as CaCO3) (mg/L)	210 D
Calcium (mg/L)	34
Carbonate Alk (as CaCO3) (mg/L)	<8.2 D
Chloride (mg/L)	260 D
Copper (mg/L)	<0.05
Fluoride (mg/L)	0.39 D
Hydroxide Alk (as CaCO3) (mg/L)	<8.2 D
Iron (mg/L)	<0.1
Magnesium (mg/L)	6.5
Manganese (mg/L)	<0.01
Nickel (mg/L)	<0.1
Nitrate (as N) (mg/L)	<1 D
Nitrate (as NO3) (mg/L)	<0.88
Nitrite (as N) (mg/L)	<0.5
pH (Units)	8.32 H
Ortho-Phosphate (mg/L)	<1
Total Phosphorus (as PO4) (mg/L)	0.49 H
Potassium (mg/L)	13
Sodium (mg/L)	330
Total dissolved solids (TDS) (mg/L)	1,100 D
Specific Conductance (µmhos/cm)	1,700 H
Sulfate (mg/L)	280 D
Surfactants (mg/L)	<0.5
Total Hardness (as CaCO3) (mg/L)	110
Zinc (mg/L)	<0.05

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Location	Date	Uranium 234 and Uranium 233 (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 238 (pCi/L)
W-879-01	12/9/13	0.169 ± 0.0582	<0.1	0.108 ± 0.0458 O

Table B-1.04. General Services Area Operable Unit oil and grease in ground water.

Location	Date	Oil and Grease (mg/L)
W-7C	8/13/13	52

Table B-1.05. General Services Area Operable Unit semi-volatile compounds in ground water.

Constituents of concern	W-7C
	8/13/13
Acenaphthene (µg/L)	<25
Acenaphthylene (µg/L)	<5
Anthracene (µg/L)	<5
Benzo(a)anthracene (µg/L)	<5
Benzo(b)fluoranthene (µg/L)	<5
Benzo(k)fluoranthene (µg/L)	<5
Benzo(g,h,i)perylene (µg/L)	<5
Benzo(a)pyrene (µg/L)	<5
Benzoic Acid (µg/L)	<25
Benzyl Alcohol (µg/L)	<10
Bis(2-chloroethoxy)methane (µg/L)	<5
Bis(2-chloroisopropyl)ether (µg/L)	<5
Bis(2-ethylhexyl)phthalate (µg/L)	14
4-Bromophenylphenylether (µg/L)	<5
Butylbenzylphthalate (µg/L)	<5
4-Chloroaniline (µg/L)	<10
4-Chloro-3-methylphenol (µg/L)	<10
2-Chloronaphthalene (µg/L)	<5
2-Chlorophenol (µg/L)	<5
4-Chlorophenylphenylether (µg/L)	<5
Chrysene (µg/L)	<5
m- and p- Cresol (µg/L)	<5
o-Cresol (µg/L)	<5
Dibenzo(a,h)anthracene (µg/L)	<5
Dibenzofuran (µg/L)	<5
Dibutylphthalate (µg/L)	<5
1,2-Dichlorobenzene (µg/L)	<5
1,3-Dichlorobenzene (µg/L)	<5
1,4-Dichlorobenzene (µg/L)	<5
3,3-Dichlorobenzidine (µg/L)	<10
2,4-Dichlorophenol (µg/L)	<5
Diethylphthalate (µg/L)	<5
2,4-Dimethylphenol (µg/L)	<5
Dimethylphthalate (µg/L)	<5
2,4-Dinitrophenol (µg/L)	<25
2,4-Dinitrotoluene (µg/L)	<5
2,6-Dinitrotoluene (µg/L)	<5
Di-n-octylphthalate (µg/L)	<5
Fluoranthene (µg/L)	<5
Fluorene (µg/L)	<5
Hexachlorobenzene (µg/L)	<5
Hexachlorobutadiene (µg/L)	<5
Hexachlorocyclopentadiene (µg/L)	<5
Hexachloroethane (µg/L)	<5
Indeno(1,2,3-c,d)pyrene (µg/L)	<5

Table B-1.05. General Services Area Operable Unit semi-volatile compounds in ground water.

Constituents of concern	W-7C
Isophorone (µg/L)	<5
2-Methyl-4,6-dinitrophenol (µg/L)	<25
2-Methylnaphthalene (µg/L)	<5
Naphthalene (µg/L)	<5
2-Nitroaniline (µg/L)	<25
3-Nitroaniline (µg/L)	<5
4-Nitroaniline (µg/L)	<25
Nitrobenzene (µg/L)	<5
4-Nitrophenol (µg/L)	<25
N-Nitrosodi-n-propylamine (µg/L)	<5
Pentachlorophenol (µg/L)	<5
Phenanthrene (µg/L)	<5
Phenol (µg/L)	<5
Pyrene (µg/L)	<5
1,2,4-Trichlorobenzene (µg/L)	<5
2,4,5-Trichlorophenol (µg/L)	<5
2,4,6-Trichlorophenol (µg/L)	<5

Table B-2.01. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-834-1709	2/13/13	E601	2,100 D	9.9 D	76 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-1709	7/29/13	E601	3,500 D	<31 D	410 D	<31 D	<31 D	<31 D	<31 D	<31 D	<31 D	<31 D	<31 D	<63 D	<130 D	<31 D
W-834-1711	2/13/13	E601	1,300 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<20 D	<40 D	<10 D
W-834-1711	7/29/13	E601	1,300 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<20 D	<40 D	<10 D
W-834-1824	1/28/13	E601	68	<0.5	34	0.59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	23
W-834-1824	1/28/13 DUP	E601	50 D	<2.5 D	21 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	14 D
W-834-1824	8/7/13	E601	320 D	<4.2 D	130 D	<4.2 D	<4.2 D	<4.2 D	<4.2 D	<4.2 D	<4.2 D	<4.2 D	<4.2 D	<8.3 D	<17 D	15 D
W-834-1824	8/7/13 DUP	E601	410 D	<2.5 D	140 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	<5 D	<10 D	12 D
W-834-1825	1/29/13	E601	9.2	<0.5	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1
W-834-1825	8/7/13	E601	54	<0.5	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	7.3
W-834-1833	1/28/13	E601	3,900 D	8.4 D	44 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-1833	1/28/13 DUP	E601	4,100 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D
W-834-1833	8/7/13	E601	3,500 D	<25 D	65 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<50 D	<100 D	<25 D
W-834-2001	3/18/13	E601	140 D	3.3	580 D	<5 D	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-2001	4/3/13	E624	200 D	<5 D	580 D	<50 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-2001	4/3/13 DUP	E624	340 D	<25 D	1,000 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<50 D	<25 D
W-834-2001	7/9/13	E601	310 D	5.1	390 D	<5 D	<0.5	<0.5	<0.5	<0.5	0.77	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-2001	11/5/13	E624	180 D	18	170 D	<5 D	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-834-2113	2/13/13	E601	14,000 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<100 D	<200 D	<400 D	<100 D
W-834-2113	8/7/13	E601	10,000 D	<83 D	<83 D	<83 D	<83 D	<83 D	<83 D	<83 D	<83 D	<83 D	<83 D	<170 D	<330 D	<83 D
W-834-2117	2/13/13	E601	6,200 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D
W-834-2117	8/1/13	E601	5,500 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D
W-834-2118	2/6/13	E601	230 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	<10 D
W-834-2118	8/8/13	E601	120 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	<10 D
W-834-2119	2/13/13	E601	13,000 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D
W-834-2119	8/1/13	E601	15,000 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D	<500 D
W-834-A1	2/13/13	E601	170,000 D	<1,000 D	1,900 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	<2,000 D	<4,000 D	<1,000 D
W-834-A1	7/29/13	E601	190,000 D	1,000 D	2,300 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	<2,000 D	<4,000 D	<1,000 D
W-834-A1	7/29/13 DUP	E601	210,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D	<5,000 D
W-834-B2	3/12/13	E601	590 D	9.5	260 D	<25 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.65	<0.5	<0.5	<0.5
W-834-B2	4/3/13	E601	1,000 D	6.5 D	390 D	<25 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D
W-834-B2	7/9/13	E601	580 D	7.6	270 D	<25 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.59	<0.5	<0.5	<0.5

Table B-2.01. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-834-B2	11/5/13	E601	2,800 D	13	2,200 D	<25 D	<0.5	0.62	<0.5	<0.5	1.7	<0.5	1	<0.5	<0.5	<0.5 J
W-834-B3	3/12/13	E601	240 D	<2.5 D	1,100 D	<25 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	2.6 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-834-B3	4/3/13	E601	370 D	<2.5 D	1,400 D	<25 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	3.4 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-834-B3	7/9/13	E601	1,100 D	<25 D	7,700 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-B3	11/5/13	E601	61	<0.5	370 D	<50 D	<0.5	<0.5	<0.5	<0.5	2	<0.5	<0.5	<0.5	<0.5	<0.5 J
W-834-B4	2/7/13	E601	1,400 D	<25 D	2,900 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-C4	2/7/13	E601	33	<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
W-834-C4	7/29/13	E601	58	<0.5	46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-C4	7/29/13 DUP	E601	77	<0.5	59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-834-C5	2/7/13	E601	20,000 D	<1,000 D	8,600 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-C5	7/29/13	E601	37,000 D	<310 D	23,000 D	<310 D	<310 D	<310 D	<310 D	<310 D	<310 D	<310 D	<310 D	<630 D	<1,300 D	<310 D
W-834-D3	2/11/13	E601	12 D	<2.5 D	1,400 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	39 D
W-834-D3	8/5/13	E601	33 D	<2.5 D	360 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	<5 D	<10 D	59 D
W-834-D4	3/12/13	E601	5,200 D	27 D	6,000 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	4/3/13	E601	3,200 D	22 D	5,200 D	<50 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D
W-834-D4	7/9/13	E601	2,600 D	18 D	6,800 D	<50 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D	<12 D
W-834-D4	11/5/13	E601	1,500 D	17	910 D	<12 D	<0.5	<0.5	<0.5	0.55	0.76	<0.5	1.8	<0.5	<0.5	<0.5 J
W-834-D5	3/12/13	E601	1,300 D	<5 D	3,100 D	28 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	8 D
W-834-D5	7/9/13	E601	710 D	<5 D	2,000 D	<25 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	9.1 D
W-834-D6	3/12/13	E601	270 D	0.76	190 D	<25 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.66	<0.5	2	<0.5
W-834-D6	4/3/13	E601	210 D	0.77	120 D	<5 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.59	<0.5	3.6	<0.5
W-834-D6	7/9/13	E601	260 D	0.98	83	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5
W-834-D6	11/5/13	E601	340 D	1.6	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.4	<0.5
W-834-D7	3/12/13	E601	790 D	4.9 D	52 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D
W-834-D7	4/3/13	E601	3,000 D	16 D	110 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	7/9/13	E601	7,100 D	30 D	150 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-D7	11/5/13	E601	4,700 D	53	93	0.98	1.1	1	<0.5	<0.5	2	<0.5	<0.5	2.5	<0.5	<0.5 J
W-834-D12	3/12/13	E601	110 D	0.61	45	<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	4/3/13	E601	110 D	0.8	43	<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	7/9/13	E601	94 D	0.6	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-D12	11/5/13	E601	88 D	0.91	8.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-D13	3/12/13	E601	17,000 D	130 D	1,000 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D

Table B-2.01. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-834-D13	4/3/13	E601	2,200 D	27 D	150 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-D13	7/9/13	E601	4,700 D	37 D	190 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-D13	11/5/13	E601	7,700 D	95	230 D	<25 D	<0.5	1.2	<0.5	<0.5	1.4	<0.5	2.6	<0.5	<0.5	<0.5 J
W-834-D14	2/11/13	E601	3,600 D	12 D	500 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-D15	2/7/13	E601	4,100 D	<25 D	210 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-D18	8/5/13	E601	88 D	<1.3 D	150 D	<1.3 D	<1.3 D	<1.3 D	<1.3 D	<1.3 D	<1.3 D	<1.3 D	<1.3 D	<2.5 D	<5 D	<1.3 D
W-834-D18	8/5/13 DUP	E601	86 D	<1 D	160 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<2 D	<4 D	<1 D
W-834-J1	3/12/13	E601	82	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J1	4/3/13	E601	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-J1	7/9/13	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-J1	11/5/13	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-834-J2	2/11/13	E601	200 D	<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-834-J2	8/6/13	E601	17	<0.5	2.3	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-834-M1	2/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	0.85	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-M1	8/6/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-834-S1	3/18/13	E601	4,000 D	65 D	190 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	4/3/13	E601	3,500 D	41 D	170 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-834-S1	4/3/13 DUP	E601	3,700 D	55 D	240 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
W-834-S1	7/9/13	E601	150 D	3.2	4.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S1	11/5/13	E601	3,300 D	51	120 D	<1 D	<0.5	0.65	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
W-834-S12A	3/18/13	E601	1,200 D	<2.5 D	2.8 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	4/3/13	E601	880 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-834-S12A	7/9/13	E601	750 D	0.56	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.99	<0.5	<0.5	<0.5
W-834-S12A	11/5/13	E601	640 D	0.75	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.69	<0.5	<0.5	<0.5 J
W-834-S13	3/18/13	E601	100	0.55	5.8	<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	4/3/13	E601	55	<0.5	2.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S13	7/9/13	E601	120 D	0.65	6.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-834-S13	11/5/13	E601	74	0.69	3.2	<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	2/11/13	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-834-S4	8/6/13	E601	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-834-S8	2/26/13	E601	3,000 DO	30 D	46 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<20 D	<40 D	<80 D	<20 D
W-834-S9	2/26/13	E601	2,000 DO	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<25 D	<50 D	<13 D

Table B-2.01. Building 834 Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-834-S9	2/26/13 DUP	E601	2,000 DO	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<25 D	<50 D	<13 D
W-834-S9	8/6/13	E601	1,800 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<13 D	<25 D	<50 D	<13 D
W-834-T1	2/12/13	E601	<0.5	<0.5	<0.5	<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	6/6/13	E601	<0.5	<0.5	<0.5	<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	8/12/13	E601	<0.5	<0.5	<0.5	<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	12/4/13	E601	<0.5	<0.5	<0.5	<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	12/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-834-T2	1/28/13	E601	35	<0.5	1,000 D	<25 D	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	380 D
W-834-T2	8/12/13	E601	14 D	<8.3 D	1,100 D	<8.3 D	<8.3 D	<8.3 D	<8.3 D	<8.3 D	<8.3 D	<8.3 D	<8.3 D	<17 D	<33 D	650 D
W-834-T2A	1/28/13	E601	6,900 D	14 D	26 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-T2A	1/28/13 DUP	E601	5,000 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D	<250 D
W-834-T2A	8/12/13	E601	5,000 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<71 D	<140 D	<36 D
W-834-T2D	1/29/13	E601	5,700 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-834-T2D	1/29/13 DUP	E601	5,600 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-834-T2D	8/8/13	E601	4,700 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<36 D	<71 D	<140 D	<36 D
W-834-T3	2/12/13	E601	<0.5	<0.5	<0.5	<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	6/6/13	E601	<0.5	<0.5	<0.5	<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	6/6/13 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-T3	8/1/13	E601	<0.5	<0.5	<0.5	<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	12/4/13	E601	<0.5	<0.5	<0.5	<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	2/12/13	E601	<0.5	<0.5	<0.5	<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	8/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-834-U1	2/13/13	E624	48,000 D	<630 D	4,300 D	<630 D	<630 D	<630 D	<630 D	<630 D	<630 D	<630 D	<630 D	<630 D	<1,300 D	<630 D
W-834-U1	7/29/13	E624	57,000 D	<630 D	3,900 D	<630 D	<630 D	<630 D	<630 D	<630 D	<630 D	<630 D	<630 D	<630 D	<1,300 D	<630 D

Table B-2.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-834-1709	2/13/13	E601	1 of 18	76 D	-
W-834-1709	7/29/13	E601	1 of 18	410 D	-
W-834-1711	2/13/13	E601	0 of 18	-	-
W-834-1711	7/29/13	E601	0 of 18	-	-
W-834-1824	1/28/13	E601	1 of 18	35	-
W-834-1824	1/28/13 DUP	E601	1 of 18	21 D	-
W-834-1824	8/7/13	E601	1 of 18	130 D	-
W-834-1824	8/7/13 DUP	E601	1 of 18	140 D	-
W-834-1825	1/29/13	E601	1 of 18	2.1	-
W-834-1825	8/7/13	E601	1 of 18	19	-
W-834-1833	1/28/13	E601	1 of 18	44 D	-
W-834-1833	1/28/13 DUP	E601	0 of 18	-	-
W-834-1833	8/7/13	E601	1 of 18	65 D	-
W-834-2001	3/18/13	E601	1 of 18	580 D	-
W-834-2001	4/3/13	E624	1 of 30	580 D	-
W-834-2001	4/3/13 DUP	E624	1 of 30	1,000 D	-
W-834-2001	7/9/13	E601	1 of 18	390 D	-
W-834-2001	11/5/13	E624	1 of 30	170 D	-
W-834-2113	2/13/13	E601	0 of 18	-	-
W-834-2113	8/7/13	E601	0 of 18	-	-
W-834-2117	2/13/13	E601	0 of 18	-	-
W-834-2117	8/1/13	E601	0 of 18	-	-
W-834-2118	2/6/13	E601	0 of 18	-	-
W-834-2118	8/8/13	E601	0 of 18	-	-
W-834-2119	2/13/13	E601	0 of 18	-	-
W-834-2119	8/1/13	E601	0 of 18	-	-
W-834-A1	2/13/13	E601	1 of 18	1,900 D	-
W-834-A1	7/29/13	E601	1 of 18	2,300 D	-
W-834-A1	7/29/13 DUP	E601	0 of 18	-	-
W-834-B2	3/12/13	E601	1 of 18	260 D	-
W-834-B2	4/3/13	E601	1 of 18	390 D	-

Table B-2.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-834-B2	7/9/13	E601	1 of 18	270 D	-
W-834-B2	11/5/13	E601	1 of 18	2,200 D	-
W-834-B3	3/12/13	E601	1 of 18	1,100 D	-
W-834-B3	4/3/13	E601	1 of 18	1,400 D	-
W-834-B3	7/9/13	E601	1 of 18	7,700 D	-
W-834-B3	11/5/13	E601	1 of 18	370 D	-
W-834-B4	2/7/13	E601	1 of 18	2,900 D	-
W-834-C4	2/7/13	E601	1 of 18	41	-
W-834-C4	7/29/13	E601	1 of 18	46	-
W-834-C4	7/29/13 DUP	E601	1 of 18	59	-
W-834-C5	2/7/13	E601	1 of 18	8,600 D	-
W-834-C5	7/29/13	E601	1 of 18	23,000 D	-
W-834-D3	2/11/13	E601	1 of 18	1,400 D	-
W-834-D3	8/5/13	E601	1 of 18	360 D	-
W-834-D4	3/12/13	E601	1 of 18	6,000 D	-
W-834-D4	4/3/13	E601	1 of 18	5,200 D	-
W-834-D4	7/9/13	E601	1 of 18	6,800 D	-
W-834-D4	11/5/13	E601	1 of 18	910 D	-
W-834-D5	3/12/13	E601	1 of 18	3,200 D	-
W-834-D5	7/9/13	E601	1 of 18	2,000 D	-
W-834-D6	3/12/13	E601	1 of 18	190 D	-
W-834-D6	4/3/13	E601	1 of 18	120 D	-
W-834-D6	7/9/13	E601	1 of 18	83	-
W-834-D6	11/5/13	E601	1 of 18	100	-
W-834-D7	3/12/13	E601	1 of 18	52 D	-
W-834-D7	4/3/13	E601	1 of 18	120 D	-
W-834-D7	7/9/13	E601	1 of 18	150 D	-
W-834-D7	11/5/13	E601	1 of 18	94	-
W-834-D12	3/12/13	E601	1 of 18	45	-
W-834-D12	4/3/13	E601	1 of 18	43	-
W-834-D12	7/9/13	E601	1 of 18	17	-

Table B-2.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-834-D12	11/5/13	E601	1 of 18	8.6	-
W-834-D13	3/12/13	E601	1 of 18	1,000 D	-
W-834-D13	4/3/13	E601	1 of 18	150 D	-
W-834-D13	7/9/13	E601	1 of 18	190 D	-
W-834-D13	11/5/13	E601	1 of 18	230 D	-
W-834-D14	2/11/13	E601	1 of 18	500 D	-
W-834-D15	2/7/13	E601	1 of 18	210 D	-
W-834-D18	8/5/13	E601	1 of 18	150 D	-
W-834-D18	8/5/13 DUP	E601	1 of 18	160 D	-
W-834-J1	3/12/13	E601	0 of 18	-	-
W-834-J1	4/3/13	E601	0 of 18	-	-
W-834-J1	7/9/13	E601	0 of 18	-	-
W-834-J1	11/5/13	E601	0 of 18	-	-
W-834-J2	2/11/13	E601	1 of 18	2.2	-
W-834-J2	8/6/13	E601	1 of 18	3.2	-
W-834-M1	2/11/13	E601	0 of 18	-	-
W-834-M1	8/6/13	E601	0 of 18	-	-
W-834-S1	3/18/13	E601	1 of 18	190 D	-
W-834-S1	4/3/13	E601	1 of 18	170 D	-
W-834-S1	4/3/13 DUP	E601	1 of 18	240 D	-
W-834-S1	7/9/13	E601	1 of 18	4.8	-
W-834-S1	11/5/13	E601	1 of 18	120 D	-
W-834-S12A	3/18/13	E601	0 of 18	-	-
W-834-S12A	4/3/13	E601	0 of 18	-	-
W-834-S12A	7/9/13	E601	1 of 18	1.7	-
W-834-S12A	11/5/13	E601	1 of 18	1.5	-
W-834-S13	3/18/13	E601	1 of 18	5.8	-
W-834-S13	4/3/13	E601	1 of 18	2.6	-
W-834-S13	7/9/13	E601	1 of 18	6.9	-
W-834-S13	11/5/13	E601	1 of 18	3.2	-
W-834-S4	2/11/13	E601	0 of 18	-	-

Table B-2.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-834-S4	8/6/13	E601	0 of 18	-	-
W-834-S8	2/26/13	E601	1 of 18	46 D	-
W-834-S9	2/26/13	E601	0 of 18	-	-
W-834-S9	2/26/13 DUP	E601	0 of 18	-	-
W-834-S9	8/6/13	E601	0 of 18	-	-
W-834-T1	2/12/13	E601	0 of 18	-	-
W-834-T1	6/6/13	E601	0 of 18	-	-
W-834-T1	8/12/13	E601	0 of 18	-	-
W-834-T1	12/4/13	E601	0 of 18	-	-
W-834-T1	12/4/13 DUP	E601	0 of 18	-	-
W-834-T2	1/28/13	E601	2 of 18	1,000 D	30
W-834-T2	8/12/13	E601	2 of 18	1,100 D	46 D
W-834-T2A	1/28/13	E601	1 of 18	26 D	-
W-834-T2A	1/28/13 DUP	E601	0 of 18	-	-
W-834-T2A	8/12/13	E601	0 of 18	-	-
W-834-T2D	1/29/13	E601	0 of 18	-	-
W-834-T2D	1/29/13 DUP	E601	0 of 18	-	-
W-834-T2D	8/8/13	E601	0 of 18	-	-
W-834-T3	2/12/13	E601	0 of 18	-	-
W-834-T3	6/6/13	E601	0 of 18	-	-
W-834-T3	6/6/13 DUP	E601	0 of 18	-	-
W-834-T3	8/1/13	E601	0 of 18	-	-
W-834-T3	12/4/13	E601	0 of 18	-	-
W-834-T5	2/12/13	E601	0 of 18	-	-
W-834-T5	8/12/13	E601	0 of 18	-	-
W-834-U1	2/13/13	E624	1 of 30	4,300 D	-
W-834-U1	7/29/13	E624	1 of 30	3,900 D	-

Table B-2.02. Building 834 Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-834-1709	2/13/13	5.7	-
W-834-1711	2/13/13	81 D	-
W-834-1824	1/28/13	<50 D	-
W-834-1824	1/28/13 DUP	<0.5	-
W-834-1825	1/29/13	<1 D	-
W-834-1833	1/28/13	50	-
W-834-1833	1/28/13 DUP	43 D	-
W-834-2001	3/18/13	14	-
W-834-2113	2/13/13	56 D	-
W-834-2117	2/13/13	110 DL	-
W-834-2118	2/6/13	120 DL	5.5
W-834-2118	8/8/13	-	5.1
W-834-2119	2/13/13	84 DL	-
W-834-A1	2/13/13	<0.22	-
W-834-B2	3/12/13	65	-
W-834-B3	3/12/13	13	-
W-834-B4	2/7/13	12	-
W-834-C4	2/7/13	160 D	-
W-834-C5	2/7/13	71 D	-
W-834-D3	2/11/13	<0.5	-
W-834-D4	3/12/13	<0.5	-
W-834-D5	3/12/13	<0.5	-
W-834-D6	3/12/13	30	-
W-834-D7	3/12/13	86	-
W-834-D12	3/12/13	120 D	-
W-834-D13	3/12/13	24	-
W-834-D14	2/11/13	32	-
W-834-D15	2/7/13	45 D	-
W-834-J1	3/12/13	150 D	-
W-834-J2	2/11/13	180 D	-
W-834-M1	2/11/13	320 D	-
W-834-S1	3/18/13	140 D	-
W-834-S12A	3/18/13	130 D	-
W-834-S13	3/18/13	140 D	-
W-834-S4	2/11/13	180 D	-
W-834-S8	2/26/13	120 D	-
W-834-S9	2/26/13	84 D	-
W-834-S9	2/26/13 DUP	83 D	-
W-834-T1	2/12/13	<0.5	-
W-834-T1	8/12/13	<0.5	-
W-834-T2	1/28/13	<0.5	-
W-834-T2A	1/28/13	61	-
W-834-T2A	1/28/13 DUP	52 D	-
W-834-T2D	1/29/13	120 D	-
W-834-T2D	1/29/13 DUP	120 D	-

Table B-2.02. Building 834 Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-834-T3	2/12/13	<0.5	-
W-834-T3	8/1/13	<0.5	-
W-834-T5	2/12/13	87	-
W-834-U1	2/13/13	<0.22	-

Table B-2.03. Building 834 Operable Unit tetrabutyl orthosilicate/tetrakis (2-ethylbutyl) silane (TBOS/TKEBS) in ground water.

Location	Date	TBOS/TKEBS (µg/L)
W-834-1709	2/13/13	55 DO
W-834-1825	1/29/13	<10
W-834-2001	3/18/13	<10
W-834-2001	7/9/13	<50 D
W-834-2117	2/13/13	<10
W-834-2118	2/6/13	<10
W-834-A1	2/13/13	<10
W-834-B2	3/12/13	<10
W-834-B2	7/9/13	110 D
W-834-B3	3/12/13	<10
W-834-B3	7/9/13	26
W-834-B4	2/7/13	<10
W-834-C4	2/7/13	<10
W-834-C5	2/7/13	<10
W-834-D3	2/11/13	13,000 DIJO
W-834-D4	3/12/13	<10
W-834-D4	7/9/13	110
W-834-D5	3/12/13	<10
W-834-D6	3/12/13	<10
W-834-D6	7/9/13	<50 D
W-834-D7	3/12/13	<10
W-834-D7	7/9/13	23
W-834-D12	3/12/13	<10
W-834-D12	7/9/13	11
W-834-D13	3/12/13	<10
W-834-D13	7/9/13	<10
W-834-D14	2/11/13	<10 O
W-834-D15	2/7/13	<10
W-834-J1	3/12/13	<10
W-834-J1	7/9/13	<10
W-834-J2	2/11/13	<10 O
W-834-S1	3/18/13	<10
W-834-S1	7/9/13	<10
W-834-S12A	3/18/13	<10
W-834-S12A	7/9/13	<10
W-834-S13	3/18/13	<10
W-834-S13	7/9/13	14
W-834-S4	2/11/13	<10 O
W-834-S8	2/26/13	<10
W-834-T1	2/12/13	<10 O
W-834-T1	8/12/13	<10
W-834-T2	1/28/13	<10 D
W-834-T3	2/12/13	<10 O
W-834-T3	8/1/13	<10
W-834-U1	2/13/13	<10

Table B-2.04. Building 834 Operable Unit diesel range organic compounds in ground water.

Location	Date	Diesel Fuel (µg/L)	Diesel Range Organics (C12-C24) (µg/L)
W-834-2001	3/18/13	1,100	-
W-834-2001	7/9/13	2,800	-
W-834-S8	2/26/13	-	100
W-834-U1	2/13/13	650	-

Table B-2.05. Building 834 Operable Unit metals in ground water.

Location	Date	Iron (mg/L)	Manganese (mg/L)
W-834-1824	1/28/13	180 D	15 D
W-834-1824	1/28/13 DUP	85 D	11 D
W-834-1825	1/29/13	<0.1	0.32
W-834-1833	1/28/13	<0.1	<0.03
W-834-1833	1/28/13 DUP	<0.1	<0.0005
W-834-T2	1/28/13	<0.1	1

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
BC6-10	1/8/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
BC6-10	7/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
CARNRW1	1/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	1/3/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	1/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	1/3/13 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	2/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	2/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	3/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	3/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	4/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	4/2/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	4/2/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	4/2/13 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 O	<1	<1 O
CARNRW1	5/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	5/1/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	6/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	6/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	7/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	7/1/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	7/1/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	7/1/13 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	8/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	8/12/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	9/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	9/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	10/29/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	10/29/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	10/29/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	10/29/13 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
CARNRW1	11/19/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	11/19/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CARNRW1	12/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW1	12/11/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	1/7/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	1/7/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	1/7/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
CARNRW2	1/7/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	2/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	2/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	3/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	3/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	4/4/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	4/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	4/4/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<1	<0.5
CARNRW2	4/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	5/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	5/1/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	6/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	6/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	7/1/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	7/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	7/1/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
CARNRW2	7/1/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	8/20/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	8/20/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	9/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	9/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	10/29/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	10/29/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	10/29/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
CARNRW2	10/29/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	12/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW2	12/11/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CARNRW3	1/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	1/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	2/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	2/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	3/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	3/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	4/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	4/2/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	5/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	5/1/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	6/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	6/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	7/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	7/1/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	8/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	8/12/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	9/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	9/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	10/29/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	10/29/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	11/19/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	11/19/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	12/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW3	12/9/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	1/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	1/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	2/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	2/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	3/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	3/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	4/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	4/2/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
CARNRW4	5/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	5/1/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	6/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	6/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	7/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	7/1/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	8/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	8/12/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	9/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	9/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	10/29/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	10/29/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	11/19/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	11/19/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	12/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CARNRW4	12/9/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-06	1/8/13	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-06	7/3/13	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP6-07	1/7/13	E601	<0.5	<0.5	<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	7/2/13	E601	<0.5	<0.5	<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	1/10/13	E8260	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
EP6-09	7/3/13	E8260	4.9	<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
EP6-09	7/3/13 DUP	E8260	4.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01	1/7/13	E601	<0.5	<0.5	<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	7/8/13	E601	<0.5	<0.5	<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	1/8/13	E8260	<0.5	<0.5	2.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-01S	7/2/13	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
K6-14	1/8/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
K6-14	7/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
K6-16	1/8/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
K6-16	1/8/13 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
K6-16	7/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
K6-16	7/9/13 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	1/3/13	E601	<0.5	<0.5	<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	4/2/13	E601	<0.5	<0.5	<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	7/8/13	E601	<0.5	<0.5	<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	10/1/13	E601	<0.5	<0.5	<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	10/1/13 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	1/8/13	E601	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
K6-18	1/8/13 DUP	E601	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
K6-18	7/9/13	E601	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
K6-18	7/9/13 DUP	E601	<0.5	<0.5	0.79	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-19	1/8/13	E8260	2.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-19	1/8/13 DUP	E8260	2.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-19	7/2/13	E8260	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
K6-22	1/7/13	E601	<0.5	<0.5	<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	4/2/13	E601	<0.5	<0.5	<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	7/8/13	E601	<0.5	<0.5	<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	10/1/13	E601	<0.5	<0.5	<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	1/3/13	E601	<0.5	<0.5	<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	7/8/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K6-26	1/3/13	E601	<0.5	<0.5	<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	7/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
K6-27	1/3/13	E601	<0.5	<0.5	<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	7/2/13	E601	<0.5	<0.5	<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	1/2/13	E601	<0.5	<0.5	<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	4/2/13	E601	<0.5	<0.5	<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	7/1/13	E601	<0.5	<0.5	<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	10/1/13	E601	<0.5	<0.5	<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	1/7/13	E601	<0.5	<0.5	<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	7/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-33C-01	1/8/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-33C-01	7/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-PIT6-1819	1/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-3.01. Pit 6 Landfill Operable Unit volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-PIT6-1819	4/2/13	E601	<0.5	<0.5	<0.5	<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	7/1/13	E601	<0.5	<0.5	<0.5	<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	10/1/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT6-2816	1/7/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT6-2816	7/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT6-2817	1/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT6-2817	7/2/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-3.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
BC6-10	1/8/13	E601	0 of 18	-
BC6-10	7/9/13	E601	0 of 18	-
CARNRW1	1/3/13	E601	0 of 18	-
CARNRW1	1/3/13	E624	0 of 30	-
CARNRW1	1/3/13 DUP	E601	0 of 18	-
CARNRW1	1/3/13 DUP	E624	0 of 30	-
CARNRW1	2/4/13	E601	0 of 18	-
CARNRW1	2/4/13 DUP	E601	0 of 18	-
CARNRW1	3/4/13	E601	0 of 18	-
CARNRW1	3/4/13 DUP	E601	0 of 18	-
CARNRW1	4/2/13	E601	0 of 18	-
CARNRW1	4/2/13	E624	0 of 30	-
CARNRW1	4/2/13 DUP	E601	0 of 18	-
CARNRW1	4/2/13 DUP	E624	0 of 30	-
CARNRW1	5/1/13	E601	0 of 18	-
CARNRW1	5/1/13 DUP	E601	0 of 18	-

Table B-3.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
CARNRW1	6/3/13	E601	0 of 18	-
CARNRW1	6/3/13 DUP	E601	0 of 18	-
CARNRW1	7/1/13	E601	0 of 18	-
CARNRW1	7/1/13	E624	0 of 30	-
CARNRW1	7/1/13 DUP	E601	0 of 18	-
CARNRW1	7/1/13 DUP	E624	0 of 30	-
CARNRW1	8/12/13	E601	0 of 18	-
CARNRW1	8/12/13 DUP	E601	0 of 18	-
CARNRW1	9/3/13	E601	0 of 18	-
CARNRW1	9/3/13 DUP	E601	0 of 18	-
CARNRW1	10/29/13	E601	0 of 18	-
CARNRW1	10/29/13	E624	0 of 30	-
CARNRW1	10/29/13 DUP	E601	0 of 18	-
CARNRW1	10/29/13 DUP	E624	0 of 30	-
CARNRW1	11/19/13	E601	0 of 18	-
CARNRW1	11/19/13 DUP	E601	0 of 18	-
CARNRW1	12/11/13	E601	0 of 18	-
CARNRW1	12/11/13 DUP	E601	0 of 18	-
CARNRW2	1/7/13	E502.2	0 of 46	-
CARNRW2	1/7/13	E601	0 of 18	-
CARNRW2	1/7/13 DUP	E502.2	0 of 45	-
CARNRW2	1/7/13 DUP	E601	0 of 18	-
CARNRW2	2/4/13	E601	0 of 18	-
CARNRW2	2/4/13 DUP	E601	0 of 18	-
CARNRW2	3/4/13	E601	0 of 18	-
CARNRW2	3/4/13 DUP	E601	0 of 18	-
CARNRW2	4/4/13	E502.2	0 of 46	-
CARNRW2	4/4/13	E601	0 of 18	-
CARNRW2	4/4/13 DUP	E502.2	0 of 45	-
CARNRW2	4/4/13 DUP	E601	0 of 18	-
CARNRW2	5/1/13	E601	0 of 18	-

Table B-3.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
CARNRW2	5/1/13 DUP	E601	0 of 18	-
CARNRW2	6/3/13	E601	0 of 18	-
CARNRW2	6/3/13 DUP	E601	0 of 18	-
CARNRW2	7/1/13	E502.2	0 of 46	-
CARNRW2	7/1/13	E601	0 of 18	-
CARNRW2	7/1/13 DUP	E502.2	0 of 45	-
CARNRW2	7/1/13 DUP	E601	0 of 18	-
CARNRW2	8/20/13	E601	0 of 18	-
CARNRW2	8/20/13 DUP	E601	0 of 18	-
CARNRW2	9/3/13	E601	0 of 18	-
CARNRW2	9/3/13 DUP	E601	0 of 18	-
CARNRW2	10/29/13	E502.2	0 of 46	-
CARNRW2	10/29/13	E601	0 of 18	-
CARNRW2	10/29/13 DUP	E502.2	0 of 45	-
CARNRW2	10/29/13 DUP	E601	0 of 18	-
CARNRW2	12/11/13	E601	0 of 18	-
CARNRW2	12/11/13 DUP	E601	0 of 18	-
CARNRW3	1/3/13	E601	0 of 18	-
CARNRW3	1/3/13 DUP	E601	0 of 18	-
CARNRW3	2/4/13	E601	0 of 18	-
CARNRW3	2/4/13 DUP	E601	0 of 18	-
CARNRW3	3/4/13	E601	0 of 18	-
CARNRW3	3/4/13 DUP	E601	0 of 18	-
CARNRW3	4/2/13	E601	0 of 18	-
CARNRW3	4/2/13 DUP	E601	0 of 18	-
CARNRW3	5/1/13	E601	0 of 18	-
CARNRW3	5/1/13 DUP	E601	0 of 18	-
CARNRW3	6/3/13	E601	0 of 18	-
CARNRW3	6/3/13 DUP	E601	0 of 18	-
CARNRW3	7/1/13	E601	0 of 18	-
CARNRW3	7/1/13 DUP	E601	0 of 18	-

Table B-3.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
CARNRW3	8/12/13	E601	0 of 18	-
CARNRW3	8/12/13 DUP	E601	0 of 18	-
CARNRW3	9/3/13	E601	0 of 18	-
CARNRW3	9/3/13 DUP	E601	0 of 18	-
CARNRW3	10/29/13	E601	0 of 18	-
CARNRW3	10/29/13 DUP	E601	0 of 18	-
CARNRW3	11/19/13	E601	0 of 18	-
CARNRW3	11/19/13 DUP	E601	0 of 18	-
CARNRW3	12/9/13	E601	0 of 18	-
CARNRW3	12/9/13 DUP	E601	0 of 18	-
CARNRW4	1/3/13	E601	0 of 18	-
CARNRW4	1/3/13 DUP	E601	0 of 18	-
CARNRW4	2/4/13	E601	0 of 18	-
CARNRW4	2/4/13 DUP	E601	0 of 18	-
CARNRW4	3/4/13	E601	0 of 18	-
CARNRW4	3/4/13 DUP	E601	0 of 18	-
CARNRW4	4/2/13	E601	0 of 18	-
CARNRW4	4/2/13 DUP	E601	0 of 18	-
CARNRW4	5/1/13	E601	0 of 18	-
CARNRW4	5/1/13 DUP	E601	0 of 18	-
CARNRW4	6/3/13	E601	0 of 18	-
CARNRW4	6/3/13 DUP	E601	0 of 18	-
CARNRW4	7/1/13	E601	0 of 18	-
CARNRW4	7/1/13 DUP	E601	0 of 18	-
CARNRW4	8/12/13	E601	0 of 18	-
CARNRW4	8/12/13 DUP	E601	0 of 18	-
CARNRW4	9/3/13	E601	0 of 18	-
CARNRW4	9/3/13 DUP	E601	0 of 18	-
CARNRW4	10/29/13	E601	0 of 18	-
CARNRW4	10/29/13 DUP	E601	0 of 18	-
CARNRW4	11/19/13	E601	0 of 18	-

Table B-3.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
CARNRW4	11/19/13 DUP	E601	0 of 18	-
CARNRW4	12/9/13	E601	0 of 18	-
CARNRW4	12/9/13 DUP	E601	0 of 18	-
EP6-06	1/8/13	E8260	0 of 36	-
EP6-06	7/3/13	E8260	0 of 36	-
EP6-07	1/7/13	E601	0 of 18	-
EP6-07	7/2/13	E601	0 of 18	-
EP6-07	7/31/13	E602	0 of 9	-
EP6-09	1/10/13	E8260	0 of 36	-
EP6-09	7/3/13	E8260	0 of 36	-
EP6-09	7/3/13 DUP	E8260	0 of 36	-
K6-01	1/7/13	E601	0 of 18	-
K6-01	7/8/13	E601	0 of 18	-
K6-01S	1/8/13	E8260	1 of 36	2.4
K6-01S	7/2/13	E8260	0 of 36	-
K6-14	1/8/13	E601	0 of 18	-
K6-14	7/9/13	E601	0 of 18	-
K6-16	1/8/13	E601	0 of 18	-
K6-16	1/8/13 DUP	E601	0 of 18	-
K6-16	7/9/13	E601	0 of 18	-
K6-16	7/9/13 DUP	E601	0 of 18	-
K6-17	1/3/13	E601	0 of 18	-
K6-17	4/2/13	E601	0 of 18	-
K6-17	7/8/13	E601	0 of 18	-
K6-17	10/1/13	E601	0 of 18	-
K6-17	10/1/13 DUP	E601	0 of 18	-
K6-18	1/8/13	E601	0 of 18	-
K6-18	1/8/13 DUP	E601	0 of 18	-
K6-18	7/9/13	E601	1 of 18	0.8
K6-18	7/9/13 DUP	E601	0 of 18	-
K6-19	1/8/13	E8260	0 of 36	-

Table B-3.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
K6-19	1/8/13 DUP	E8260	0 of 36	-
K6-19	7/2/13	E8260	0 of 36	-
K6-22	1/7/13	E601	0 of 18	-
K6-22	4/2/13	E601	0 of 18	-
K6-22	7/8/13	E601	0 of 18	-
K6-22	10/1/13	E601	0 of 18	-
K6-23	1/3/13	E601	0 of 18	-
K6-23	7/8/13	E601	0 of 18	-
K6-26	1/3/13	E601	0 of 18	-
K6-26	7/9/13	E601	0 of 18	-
K6-27	1/3/13	E601	0 of 18	-
K6-27	7/2/13	E601	0 of 18	-
K6-34	1/2/13	E601	0 of 18	-
K6-34	4/2/13	E601	0 of 18	-
K6-34	7/1/13	E601	0 of 18	-
K6-34	10/1/13	E601	0 of 18	-
K6-35	1/7/13	E601	0 of 18	-
K6-35	7/2/13	E601	0 of 18	-
K6-35	7/31/13	E602	0 of 9	-
W-33C-01	1/8/13	E601	0 of 18	-
W-33C-01	7/9/13	E601	0 of 18	-
W-PIT6-1819	1/2/13	E601	0 of 18	-
W-PIT6-1819	4/2/13	E601	0 of 18	-
W-PIT6-1819	7/1/13	E601	0 of 18	-
W-PIT6-1819	10/1/13	E601	0 of 18	-
W-PIT6-2816	1/7/13	E601	0 of 18	-
W-PIT6-2816	7/2/13	E601	0 of 18	-
W-PIT6-2817	1/3/13	E601	0 of 18	-
W-PIT6-2817	7/2/13	E601	0 of 18	-

Table B-3.02. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
BC6-10	1/8/13	1.3	<4
CARNRW1	1/3/13	<0.5	<4
CARNRW1	1/3/13 DUP	<0.5	<4
CARNRW1	2/4/13	<0.5	<4
CARNRW1	2/4/13 DUP	<0.5	<4
CARNRW1	3/4/13	<0.5	<4
CARNRW1	3/4/13 DUP	<0.5	<4
CARNRW1	4/2/13	<0.5	<4
CARNRW1	4/2/13 DUP	<0.5	<4
CARNRW1	5/1/13	<0.5	<4
CARNRW1	5/1/13 DUP	<0.5	<4
CARNRW1	6/3/13	<0.5	<4
CARNRW1	6/3/13 DUP	<0.5	<4
CARNRW1	7/1/13	<0.5	<4
CARNRW1	7/1/13 DUP	<0.5	<4
CARNRW1	8/12/13	<0.5	<4
CARNRW1	8/12/13 DUP	<0.5	<4
CARNRW1	9/3/13	<0.5	<4 L
CARNRW1	9/3/13 DUP	<0.5	<4
CARNRW1	10/29/13	<0.5	<4
CARNRW1	10/29/13 DUP	<0.5	<4
CARNRW1	11/19/13	<0.5	<4
CARNRW1	11/19/13 DUP	<0.5	<4
CARNRW1	12/11/13	<0.5	<4
CARNRW1	12/11/13 DUP	<0.5	<4
CARNRW2	1/7/13	1.6	<4
CARNRW2	1/7/13 DUP	1.2	<4
CARNRW2	2/4/13	0.83	<4
CARNRW2	2/4/13 DUP	<0.5	<4
CARNRW2	3/4/13	2.6	<4
CARNRW2	3/4/13 DUP	2.2	<4
CARNRW2	4/4/13	1.9	<4
CARNRW2	4/4/13 DUP	1.7	<4
CARNRW2	5/1/13	1.8	<4
CARNRW2	5/1/13 DUP	1.4	<4
CARNRW2	6/3/13	0.91	<4
CARNRW2	6/3/13 DUP	0.74	<4
CARNRW2	7/1/13	1.5	<4
CARNRW2	7/1/13 DUP	1.2	<4
CARNRW2	8/20/13	2.2 D	<4
CARNRW2	8/20/13 DUP	1.6	<4
CARNRW2	9/3/13	0.62	<4 L
CARNRW2	9/3/13 DUP	<0.5	<4
CARNRW2	10/29/13	1.6 D	<4
CARNRW2	10/29/13 DUP	1.2	<4

Table B-3.02. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
CARNRW2	12/11/13	<0.5	<4
CARNRW2	12/11/13 DUP	<0.5	<4
CARNRW3	1/3/13	<0.5	<4
CARNRW3	1/3/13 DUP	<0.5	<4
CARNRW3	2/4/13	<0.5	<4
CARNRW3	2/4/13 DUP	<0.5	<4
CARNRW3	3/4/13	<0.5	<4
CARNRW3	3/4/13 DUP	<0.5	<4
CARNRW3	4/2/13	<0.5 O	<4
CARNRW3	4/2/13 DUP	<0.5	<4
CARNRW3	5/1/13	<0.5	<4
CARNRW3	5/1/13 DUP	<0.5	<4
CARNRW3	6/3/13	<0.5	<4
CARNRW3	6/3/13 DUP	<0.5	<4
CARNRW3	7/1/13	<0.5	<4
CARNRW3	7/1/13 DUP	<0.5	<4
CARNRW3	8/12/13	<0.5	<4
CARNRW3	8/12/13 DUP	<0.5	<4
CARNRW3	9/3/13	<0.5	<4 L
CARNRW3	9/3/13 DUP	<0.5	<4
CARNRW3	10/29/13	<1 D	<4
CARNRW3	10/29/13 DUP	<0.5	<4
CARNRW3	11/19/13	<0.5	<4
CARNRW3	11/19/13 DUP	<1 D	<4
CARNRW3	12/9/13	<1 D	<4
CARNRW3	12/9/13 DUP	<0.5	<4
CARNRW4	1/3/13	7.5	<4
CARNRW4	1/3/13 DUP	6.6	<4
CARNRW4	2/4/13	11 D	<4
CARNRW4	2/4/13 DUP	9.6	<4
CARNRW4	3/4/13	9.2	<4
CARNRW4	3/4/13 DUP	8.5	<4
CARNRW4	4/2/13	6.8 O	<4
CARNRW4	4/2/13 DUP	5.8	<4
CARNRW4	5/1/13	4.8	<4
CARNRW4	5/1/13 DUP	4	<4
CARNRW4	6/3/13	2.1 D	<4
CARNRW4	6/3/13 DUP	1.5	<4
CARNRW4	7/1/13	<1 D	<4
CARNRW4	7/1/13 DUP	<0.5	<4
CARNRW4	8/12/13	<0.5	<4
CARNRW4	8/12/13 DUP	<0.5	<4
CARNRW4	9/3/13	1.1 D	<4 L
CARNRW4	9/3/13 DUP	<0.5	<4
CARNRW4	10/29/13	<1 D	<4

Table B-3.02. Pit 6 Landfill Operable Unit nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
CARNRW4	10/29/13 DUP	<0.5	<4
CARNRW4	11/19/13	<0.5	<4
CARNRW4	11/19/13 DUP	<0.5	<4
CARNRW4	12/9/13	<0.5	<4
CARNRW4	12/9/13 DUP	<0.5	<4
EP6-06	1/8/13	<0.5	<4
EP6-07	1/7/13	<0.5	<4
EP6-07	7/31/13	<0.22	<4
EP6-09	1/10/13	12 D	<4
K6-01	1/7/13	<0.5	<4
K6-01S	1/8/13	<2.5 D	<4
K6-14	1/8/13	1.1	<4
K6-16	1/8/13	14 D	<20 D
K6-16	1/8/13 DUP	10	<4
K6-17	1/3/13	<1 D	<4
K6-17	7/8/13	<2.5 D	<4
K6-18	1/8/13	2.7	<4
K6-18	1/8/13 DUP	17	<4
K6-19	1/8/13	<0.5	<4
K6-19	1/8/13 DUP	<0.5	<4
K6-22	1/7/13	<1 D	<4
K6-22	7/8/13	<2.5 D	<4
K6-23	1/3/13	150 D	<4
K6-23	7/8/13	180 D	-
K6-26	1/3/13	<0.5	<4
K6-27	1/3/13	<0.5	<4
K6-34	1/2/13	<0.5	<4
K6-34	7/1/13	<0.5	<4
K6-35	1/7/13	<0.5	<4
K6-35	7/31/13	<0.22	<4
W-33C-01	1/8/13	1.3	<4
W-PIT6-1819	1/2/13	2.1	<4
W-PIT6-1819	7/1/13	<0.5	<4
W-PIT6-2816	1/7/13	<0.5	<4
W-PIT6-2817	1/3/13	0.62	<4

Table B-3.03. Pit 6 Landfill Operable Unit tritium in ground water.

Location	Date	Tritium (pCi/L)
BC6-10	1/8/13	<100
BC6-10	7/9/13	<100
CARNRW1	1/3/13	<100
CARNRW1	1/3/13 DUP	<100
CARNRW1	2/4/13	<100
CARNRW1	2/4/13 DUP	<100
CARNRW1	3/4/13	<100
CARNRW1	3/4/13 DUP	<100
CARNRW1	4/2/13	<100
CARNRW1	4/2/13 DUP	<100
CARNRW1	5/1/13	<100
CARNRW1	5/1/13 DUP	<100
CARNRW1	6/3/13	<100
CARNRW1	6/3/13 DUP	<100
CARNRW1	7/1/13	<100
CARNRW1	7/1/13 DUP	<100
CARNRW1	8/12/13	<100
CARNRW1	8/12/13 DUP	<100
CARNRW1	9/3/13	<100
CARNRW1	9/3/13 DUP	<100
CARNRW1	10/29/13	<100
CARNRW1	11/19/13	<100
CARNRW1	11/19/13 DUP	<100
CARNRW1	12/11/13	<100
CARNRW1	12/11/13 DUP	<100
CARNRW2	1/7/13	<100
CARNRW2	1/7/13 DUP	<100
CARNRW2	2/4/13	<100
CARNRW2	2/4/13 DUP	<100
CARNRW2	3/4/13	<100
CARNRW2	3/4/13 DUP	<100
CARNRW2	4/4/13	<100
CARNRW2	4/4/13 DUP	<100
CARNRW2	5/1/13	<100
CARNRW2	5/1/13 DUP	<100
CARNRW2	6/3/13	<100
CARNRW2	6/3/13 DUP	<100
CARNRW2	7/1/13	<100
CARNRW2	7/1/13 DUP	<100
CARNRW2	8/20/13	<100
CARNRW2	8/20/13 DUP	<100
CARNRW2	9/3/13	<100
CARNRW2	9/3/13 DUP	<100
CARNRW2	10/29/13	<100
CARNRW2	10/29/13 DUP	<100

Table B-3.03. Pit 6 Landfill Operable Unit tritium in ground water.

Location	Date	Tritium (pCi/L)
CARNRW2	12/11/13	<100
CARNRW2	12/11/13 DUP	<100
CARNRW3	1/3/13	<100
CARNRW3	1/3/13 DUP	<100
CARNRW3	2/4/13	<100
CARNRW3	2/4/13 DUP	<100
CARNRW3	3/4/13	<100
CARNRW3	3/4/13 DUP	<100
CARNRW3	4/2/13	<100
CARNRW3	4/2/13 DUP	<100
CARNRW3	5/1/13	<100
CARNRW3	5/1/13 DUP	<100
CARNRW3	6/3/13	<100
CARNRW3	6/3/13 DUP	<100
CARNRW3	7/1/13	<100
CARNRW3	7/1/13 DUP	<100
CARNRW3	8/12/13	<100
CARNRW3	8/12/13 DUP	<100
CARNRW3	9/3/13	<100
CARNRW3	9/3/13 DUP	<100
CARNRW3	10/29/13	<100
CARNRW3	11/19/13	<100
CARNRW3	11/19/13 DUP	<100
CARNRW3	12/9/13	<100
CARNRW3	12/9/13 DUP	<100
CARNRW4	1/3/13	<100
CARNRW4	1/3/13 DUP	<100
CARNRW4	2/4/13	<100
CARNRW4	2/4/13 DUP	<100
CARNRW4	3/4/13	<100
CARNRW4	3/4/13 DUP	<100
CARNRW4	4/2/13	<100
CARNRW4	4/2/13 DUP	<100
CARNRW4	5/1/13	<100
CARNRW4	5/1/13 DUP	<100
CARNRW4	6/3/13	<100
CARNRW4	6/3/13 DUP	<100
CARNRW4	7/1/13	<100
CARNRW4	7/1/13 DUP	<100
CARNRW4	8/12/13	<100
CARNRW4	8/12/13 DUP	<100
CARNRW4	9/3/13	<100
CARNRW4	9/3/13 DUP	<100
CARNRW4	10/29/13	<100
CARNRW4	10/29/13 DUP	<100

Table B-3.03. Pit 6 Landfill Operable Unit tritium in ground water.

Location	Date	Tritium (pCi/L)
CARNRW4	11/19/13	<100
CARNRW4	11/19/13 DUP	<100
CARNRW4	12/9/13	<100
CARNRW4	12/9/13 DUP	<100
EP6-06	1/8/13	<100
EP6-06	7/3/13	<100
EP6-07	1/7/13	<100
EP6-07	7/2/13	<100
EP6-09	1/10/13	<100
EP6-09	7/3/13	<100
EP6-09	7/3/13 DUP	<100
K6-01	1/7/13	<100
K6-01	7/8/13	<100
K6-01S	1/8/13	<100
K6-01S	7/2/13	<100
K6-14	1/8/13	<100
K6-14	7/9/13	<100
K6-16	1/8/13	<100
K6-16	1/8/13 DUP	<100
K6-16	7/9/13	<100
K6-16	7/9/13 DUP	<100
K6-17	1/3/13	<100
K6-17	4/2/13	<100
K6-17	7/8/13	<100
K6-17	10/1/13	<100
K6-17	10/1/13 DUP	<100
K6-18	1/8/13	126 ± 68.1
K6-18	1/8/13 DUP	112 ± 66.6
K6-18	7/9/13	<100
K6-18	7/9/13 DUP	<100
K6-19	1/8/13	271 ± 106
K6-19	1/8/13 DUP	165 ± 92.0
K6-19	7/2/13	209 ± 82.6
K6-22	1/7/13	<100
K6-22	4/2/13	<100
K6-22	7/8/13	<100
K6-22	10/1/13	<100
K6-23	1/3/13	<100
K6-23	7/8/13	<100
K6-26	1/3/13	<100
K6-26	7/9/13	<100
K6-27	1/3/13	<100
K6-27	7/2/13	<100
K6-34	1/2/13	<100
K6-34	4/2/13	<100

Table B-3.03. Pit 6 Landfill Operable Unit tritium in ground water.

Location	Date	Tritium (pCi/L)
K6-34	7/1/13	<100
K6-34	10/1/13	<100
K6-35	1/7/13	<100
K6-35	7/2/13	<100
W-33C-01	1/8/13	<100
W-33C-01	7/9/13	<100
W-PIT6-1819	1/2/13	123 ± 66.0
W-PIT6-1819	4/2/13	122 ± 77.6
W-PIT6-1819	7/1/13	149 ± 74.5
W-PIT6-1819	10/1/13	<100
W-PIT6-2816	1/7/13	<100
W-PIT6-2816	7/2/13	<100
W-PIT6-2817	1/3/13	209 ± 89.0
W-PIT6-2817	7/2/13	234 ± 86.1

Table B-3.04. Pit 6 Landfill Operable Unit total uranium and uranium isotopes in ground water.

Location	Date	Uranium 234 and Uranium 233 (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 238 (pCi/L)
CARNRW2	1/7/13	<0.1	<0.1	<0.1
CARNRW2	1/7/13 DUP	<0.1	<0.1	<0.1
CARNRW2	4/4/13	<0.1	<0.1	<0.1
CARNRW2	4/4/13 DUP	<0.1	<0.1	<0.1
CARNRW2	7/1/13	<0.1	<0.1	<0.1
CARNRW2	7/1/13 DUP	<0.1	<0.1	<0.1
CARNRW2	10/29/13	<0.1	<0.1	<0.1
CARNRW2	10/29/13 DUP	<0.1	<0.1	<0.1
EP6-06	1/8/13	0.444 ± 0.0895	<0.1	0.291 ± 0.0647
EP6-07	7/31/13	0.168 ± 0.0481	<0.1	0.178 ± 0.0481
EP6-09	1/10/13	1.60 ± 0.230	<0.1	1.41 ± 0.205
K6-01S	1/8/13	2.26 ± 0.311	<0.1	1.69 ± 0.240
K6-19	1/8/13	1.53 ± 0.236	<0.1	0.997 ± 0.165
K6-19	1/8/13 DUP	1.78 ± 0.306	<0.1	1.06 ± 0.201
K6-35	7/31/13	<0.1	<0.1	<0.1

Table B-3.05. Pit 6 Landfill Post-closure Monitoring Plan constituents of concern, detection monitoring wells, SLs, MCLs, and analytical results for 2013.

COC	Well	SL	MCL	Q1	Q1 DUP	Q3	Q3 DUP
Beryllium (mg/L)	EP6-06	0.0002	0.004	<0.0002	-	-	-
	EP6-07	-	0.004	-	-	<0.001	-
	EP6-09	0.0002	0.004	<0.0002	-	-	-
	K6-01S	0.0002	0.004	<0.0004 D	-	-	-
	K6-19	0.0002	0.004	<0.0002	<0.0002	-	-
	K6-35	-	0.004	-	-	<0.001	-
Mercury (mg/L)	EP6-06	0.0002	0.002	<0.0002	-	-	-
	EP6-07	-	-	-	-	<0.0002	-
	EP6-09	0.0002	0.002	<0.0002	-	-	-
	K6-01S	0.0002	0.002	<0.0002	-	-	-
	K6-19	0.0002	0.002	<0.0002	<0.0002	-	-
	K6-35	-	-	-	-	<0.0002	-
Tritium (pCi/L)	EP6-06	100	20000	<100	-	<100	-
	EP6-07	141	20000	<100	-	<100	-
	EP6-09	138	20000	<100	-	<100	<100
	K6-01	121	20000	<100	-	<100	-
	K6-01S	167	20000	<100	-	<100	-
	K6-19	317	20000	271 ± 106	165 ± 92	209 ± 82.6	-
	K6-35	157	20000	<100	-	<100	-
Total Uranium (calculated) (pCi/L)	EP6-06	-	-	0.76 ± 0.113	-	-	-
	EP6-07	-	-	-	-	0.365 ± 0.0708	-
	EP6-09	-	-	3.08 ± 0.31	-	-	-
	K6-01S	-	-	3.99 ± 0.394	-	-	-
	K6-19	-	-	2.57 ± 0.29	2.91 ± 0.37	-	-
	K6-35	-	-	-	-	<0.3	-
Gross alpha (pCi/L)	EP6-06	7.7	15	<2	-	-	-
	EP6-07	-	15	-	-	<2	-
	EP6-09	4.9	15	<2	-	-	-
	K6-01S	26	15	5.97 ± 3.39	-	-	-
	K6-19	9.2	15	3.06 ± 1.61	2.38 ± 1.5	-	-
	K6-35	-	15	-	-	<2	-
Gross beta (pCi/L)	EP6-06	21.3	50	7.14 ± 1.87	-	-	-
	EP6-07	-	50	-	-	5.2 ± 1.3	-
	EP6-09	21.3	50	9.15 ± 2.17 F	-	-	-
	K6-01S	57.7	50	20.4 ± 5.3	-	-	-
	K6-19	21.3	50	9.97 ± 2.17	7.37 ± 1.69	-	-
	K6-35	-	50	-	-	5.86 ± 1.45	-
Benzene (µg/L)	EP6-06	0.5	1	<0.5	-	<0.5	-
	EP6-07	-	1	-	-	<0.5	-
	EP6-09	0.5	1	<0.5	-	<0.5	<0.5
	K6-01S	0.5	1	<0.5	-	<0.5	-
	K6-19	0.5	1	<0.5	<0.5	<0.5	-
	K6-35	-	1	-	-	<0.5	-

Table B-3.05. Pit 6 Landfill Post-closure Monitoring Plan constituents of concern, detection monitoring wells, SLs, MCLs, and analytical results for 2013.

COC	Well	SL	MCL	Q1	Q1 DUP	Q3	Q3 DUP
Carbon disulfide (µg/L)	EP6-06	-	-	<5	-	<5	-
	EP6-09	-	-	<5	-	<5	<5
	K6-01S	-	-	<5	-	<5	-
	K6-19	-	-	<5	<5	<5	-
Chloroform (µg/L)	EP6-06	0.5	80	<0.5	-	<0.5	-
	EP6-07	-	80	<0.5	-	<0.5	-
	EP6-09	0.5	80	<0.5	-	<0.5	<0.5
	K6-01	0.5	80	<0.5	-	<0.5	-
	K6-01S	0.5	80	<0.5	-	<0.5	-
	K6-19	1.5	80	<0.5	<0.5	<0.5	-
	K6-35	-	80	<0.5	-	<0.5	-
1,2-Dichloroethane (µg/L)	EP6-06	0.5	0.5	<0.5	-	<0.5	-
	EP6-07	-	0.5	<0.5	-	<0.5	-
	EP6-09	0.5	0.5	<0.5	-	<0.5	<0.5
	K6-01	0.5	0.5	<0.5	-	<0.5	-
	K6-01S	0.5	0.5	<0.5	-	<0.5	-
	K6-19	0.5	0.5	<0.5	<0.5	<0.5	-
	K6-35	-	0.5	<0.5	-	<0.5	-
cis-1,2-Dichloroethene (µg/L)	EP6-06	0.5	6	<0.5	-	<0.5	-
	EP6-07	-	6	<0.5	-	<0.5	-
	EP6-09	0.5	6	<0.5	-	<0.5	<0.5
	K6-01	0.5	6	<0.5	-	<0.5	-
	K6-01S	7	6	2.4	-	2.3	-
	K6-19	0.5	6	<0.5	<0.5	<0.5	-
	K6-35	-	6	<0.5	-	<0.5	-
Ethylbenzene (µg/L)	EP6-06	0.5	700	<0.5	-	<0.5	-
	EP6-07	-	700	-	-	<0.5	-
	EP6-09	0.5	700	<0.5	-	<0.5	<0.5
	K6-01S	0.5	700	<0.5	-	<0.5	-
	K6-19	0.5	700	<0.5	<0.5	<0.5	-
	K6-35	-	700	-	-	<0.5	-
Methylene chloride (µg/L)	EP6-06	1	5	<1	-	<1	-
	EP6-07	-	5	<1	-	<1	-
	EP6-09	1	5	<1	-	<1	<1
	K6-01	1	5	<0.5	-	<0.5	-
	K6-01S	1	5	<1	-	<1	-
	K6-19	1	5	<1	<1	<1	-
	K6-35	-	5	<0.5	-	<0.5	-

Table B-3.05. Pit 6 Landfill Post-closure Monitoring Plan constituents of concern, detection monitoring wells, SLs, MCLs, and analytical results for 2013.

COC	Well	SL	MCL	Q1	Q1 DUP	Q3	Q3 DUP
Tetrachloroethene (µg/L)	EP6-06	0.5	5	<0.5	-	<0.5	-
	EP6-07	-	5	<0.5	-	<0.5	-
	EP6-09	0.5	5	<0.5	-	<0.5	<0.5
	K6-01	0.5	5	<0.5	-	<0.5	-
	K6-01S	0.5	5	<0.5	-	<0.5	-
	K6-19	0.5	5	<0.5	<0.5	<0.5	-
	K6-35	-	5	<0.5	-	<0.5	-
Toluene (µg/L)	EP6-06	0.5	150	<0.5	-	<0.5	-
	EP6-07	-	150	-	-	<0.5	-
	EP6-09	0.5	150	<0.5	-	<0.5	<0.5
	K6-01S	0.5	150	<0.5	-	<0.5	-
	K6-19	0.5	150	<0.5	<0.5	<0.5	-
	K6-35	-	150	-	-	<0.5	-
1,1,1-Trichloroethane (µg/L)	EP6-06	0.5	200	<0.5	-	<0.5	-
	EP6-07	-	200	<0.5	-	<0.5	-
	EP6-09	0.5	200	<0.5	-	<0.5	<0.5
	K6-01	0.5	200	<0.5	-	<0.5	-
	K6-01S	0.5	200	<0.5	-	<0.5	-
	K6-19	0.5	200	<0.5	<0.5	<0.5	-
	K6-35	-	200	<0.5	-	<0.5	-
Trichloroethene (TCE) (µg/L)	EP6-06	0.5	5	<0.5	-	<0.5	-
	EP6-07	-	5	<0.5	-	<0.5	-
	EP6-09	17	5	5.8	-	4.9	4.9
	K6-01	0.5	5	<0.5	-	<0.5	-
	K6-01S	1.5	5	<0.5	-	<0.5	-
	K6-19	13	5	2.9	2.9	1.6	-
	K6-35	-	5	<0.5	-	<0.5	-
Total xylene isomers (µg/L)	EP6-06	1	1750	<1	-	<1	-
	EP6-07	-	1750	-	-	<0.5	-
	EP6-09	1	1750	<1	-	<1	<1
	K6-01S	1	1750	<1	-	<1	-
	K6-19	1	1750	<1	<1	<1	-
	K6-35	-	1750	-	-	<0.5	-

Table B-3.06. Pit 6 Landfill detection monitoring physical parameters for 2013.

Location	Date	Field Temperature (Degrees C)	Field pH (Units)	Field Specific Conductance (µmhos/cm)	Total dissolved solids (TDS) (mg/L)
EP6-06	1/8/13	20.1	7.62	1,284	800 D
EP6-06	7/3/13	22.2	7.34	1,246	-
EP6-07	1/7/13	20.6	7.69	1,071	-
EP6-07	7/2/13	25.5	7.99	1,044	-
EP6-07	7/31/13	22.8	7.93	1,047	700 D
EP6-09	1/10/13	21	7.56	1,649	1,100 D
EP6-09	7/3/13	22.1	7.31	1,608	-
K6-01	1/7/13	17.4	7.46	1,648	-
K6-01	7/8/13	23	7.42	1,593	-
K6-01S	1/8/13	21.7	7.06	3,590	2,800 D
K6-01S	7/2/13	22.7	7.03	3,526	-
K6-19	1/8/13	21.4	7.48	1,202	760 D
K6-19	1/8/13 DUP	-	-	-	730 D
K6-19	7/2/13	22.2	7.27	1,186	-
K6-35	1/7/13	21.1	7.76	1,041	-
K6-35	7/2/13	25.1	8.1	1,004	-
K6-35	7/31/13	21.5	7.17	1,049	670 D

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
GALLO1	1/24/13	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
GALLO1	1/24/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	1/24/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
GALLO1	1/24/13 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	2/20/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	2/20/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	3/13/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	3/13/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	4/29/13	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
GALLO1	4/29/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	4/29/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
GALLO1	4/29/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	5/15/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	5/15/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	6/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	6/17/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	7/24/13	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
GALLO1	7/24/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	7/24/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
GALLO1	7/24/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	8/20/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	8/20/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	9/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	9/4/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	10/30/13	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
GALLO1	10/30/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	10/30/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
GALLO1	10/30/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	11/25/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	11/25/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	12/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GALLO1	12/11/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
SPRING14	3/18/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-01	2/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-01	6/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-01	8/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-01	12/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-02	2/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-02	6/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-02	8/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-02	12/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-03	2/27/13	E601	<0.5	<0.5	<0.5	<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	6/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-03	8/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-03	12/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-04	2/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-04	6/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-04	8/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-04	12/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-05	2/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-05	6/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-05	8/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35B-05	12/16/13	E601	<0.5	<0.5	<0.5	<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	3/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-35C-01	9/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-02	3/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-02	9/19/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-04	1/8/13	E601	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-04	4/3/13	E601	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-04	7/8/13	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	10/9/13	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	2/28/13	E601	<0.5	<0.5	<0.5	<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	8/13/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-35C-06	9/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-35C-07	2/28/13	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-35C-07	2/28/13 DUP	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-35C-07	8/13/13	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-35C-08	2/28/13	E601	<0.5	<0.5	<0.5	<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	8/13/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4A	3/20/13	E601	8.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4A	9/18/13	E601	8.1	<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-4A	9/18/13 DUP	E601	8.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4AS	3/20/13	E601	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4AS	3/20/13 DUP	E601	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4AS	9/18/13	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	9/18/13 DUP	E601	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-4B	3/6/13	E601	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
W-4B	9/10/13	E601	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
W-4C	3/6/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	6/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	9/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-4C	12/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BD	3/6/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BD	9/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BS	3/6/13	E601	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BS	9/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6BS	9/10/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CD	3/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CD	3/11/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CD	9/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CI	3/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CI	9/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CS	3/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6CS	9/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6EI	2/28/13	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-6EI	8/19/13	E601	4.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-6ER	1/8/13	E601	14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6ER	4/3/13	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	7/8/13	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-6ER	10/9/13	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-6ES	9/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6F	3/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6F	9/19/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6G	3/11/13	E601	5.1	<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-6G	9/19/13	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-6G	9/19/13 DUP	E601	4.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6H	3/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-6H	6/13/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6H	9/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6H	12/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6I	3/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-6I	9/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	3/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-6J	6/13/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	9/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6J	12/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-6K	3/6/13	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-6K	8/13/13	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-6L	3/6/13	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-6L	8/13/13	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-808-01	3/11/13	E601	<0.5	<0.5	<0.5	<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	9/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-808-03	3/11/13	E601	<0.5	<0.5	<0.5	<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	9/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-01	3/19/13	E601	3.1	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-01	3/19/13 DUP	E601	2.8	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	1.8	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-01	9/3/13	E601	2.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-01	9/3/13 DUP	E601	2.2	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	1.9	<0.5	<0.5	<1	<2	<0.5

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-809-02	3/14/13	E601	<0.5	<0.5	<0.5	<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	9/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-03	3/13/13	E601	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-809-03	9/4/13	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-809-04	3/13/13	E601	<0.5	<0.5	<0.5	<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	9/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-810-01	3/11/13	E601	<0.5	<0.5	<0.5	<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	9/3/13	E601	<0.5	<0.5	<0.5	<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	3/19/13	E601	2.1	<0.5	1	<0.5	0.5	0.7	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-01	9/9/13	E601	1.9	<0.5	1	<0.5	0.6	0.6	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-814-02	3/25/13	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-814-02	9/9/13	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-814-04	3/21/13	E601	<0.5	<0.5	<0.5	<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	6/12/13	E601	<0.5	<0.5	<0.5	<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	9/9/13	E601	<0.5	<0.5	<0.5	<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	3/19/13	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
W-814-2138	9/9/13	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-815-02	1/23/13	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.79	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-02	4/3/13	E601	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.76	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-02	4/3/13 DUP	E601	7.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-815-02	7/1/13	E601	11	<0.5	<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-815-02	10/15/13	E601	12	<0.5	<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-815-04	1/23/13	E601	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-04	4/3/13	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	8/12/13	E601	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-04	10/15/13	E601	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-06	3/12/13	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-06	9/10/13	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-07	3/12/13	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-815-07	3/12/13 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-815-07	9/10/13	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-815-08	3/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-815-1928	3/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-1928	9/4/13	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-815-2110	3/21/13	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-815-2110	6/13/13	E601	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2110	9/11/13	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-815-2110	12/3/13	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-815-2111	3/21/13	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-815-2111	6/13/13	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-815-2111	9/11/13	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-815-2111	12/3/13	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-815-2111	12/3/13 DUP	E601	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-815-2217	3/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2217	9/17/13	E601	<0.5	<0.5	<0.5	<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	1/8/13	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-815-2608	4/3/13	E601	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2608	4/3/13 DUP	E601	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2608	7/8/13	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-815-2608	10/9/13	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-815-2621	3/12/13	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-815-2621	6/12/13	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-815-2621	6/12/13 DUP	E601	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2621	9/5/13	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-815-2803	1/23/13	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-815-2803	4/3/13	E601	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2803	7/1/13	E601	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	<0.5	<0.5	<0.5	<0.5	<0.5
W-815-2803	10/15/13	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-817-01	2/25/13	E601	<0.5	<0.5	<0.5	<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	4/2/13	E601	<0.5	<0.5	<0.5	<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	4/2/13 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	7/1/13	E601	<0.5	<0.5	<0.5	<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	10/15/13	E601	<0.5	<0.5	<0.5	<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	1/24/13	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

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-817-03	4/2/13	E601	7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-03	4/2/13 DUP	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-817-03	7/10/13	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
W-817-03	10/15/13	E601	6.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-03A	3/14/13	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-04	3/14/13	E601	12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-04	9/5/13	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-04	9/5/13 DUP	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-05	3/19/13	E601	<0.5	<0.5	<0.5	<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	9/4/13	E601	<0.5	<0.5	<0.5	<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	3/14/13	E601	<0.5	<0.5	<0.5	<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	9/5/13	E601	<0.5	<0.5	<0.5	<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	3/4/13	E601	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-2318	4/2/13	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	7/10/13	E601	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-817-2318	10/15/13	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-817-2609	3/14/13	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-817-2609	6/12/13	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-817-2609	9/5/13	E601	6.6	<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-818-01	3/19/13	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-818-01	8/28/13	E601	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-03	3/21/13	E601	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-03	8/28/13	E601	13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-04	3/18/13	E601	<0.5	<0.5	<0.5	<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	9/10/13	E601	<0.5	<0.5	<0.5	<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	3/18/13	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-818-06	3/18/13 DUP	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-818-06	9/10/13	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	3/18/13	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-818-07	9/10/13	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-818-08	3/5/13	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 J
W-818-08	4/8/13	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

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-818-08	4/8/13 DUP	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-818-08	7/1/13	E601	36	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-08	10/9/13	E601	38	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-09	3/5/13	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 J
W-818-09	4/8/13	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	7/1/13	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	10/9/13	E601	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-11	3/19/13	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-818-11	9/10/13	E601	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-818-11	9/10/13 DUP	E601	45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-819-02	3/18/13	E601	<0.5	<0.5	<0.5	<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	9/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-01	3/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-823-01	9/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-02	3/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-823-02	9/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-823-03	3/12/13	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 O	<0.5	<0.5 O
W-823-03	9/9/13	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-823-13	3/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-823-13	9/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-827-02	3/21/13	E601	1.8	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-827-02	3/21/13 DUP	E601	1.8	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-827-05	3/25/13	E601	<0.5	<0.5	<0.5	<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	9/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-829-06	3/25/13	E601	3.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-829-06	6/10/13	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-829-06	6/10/13 DUP	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O
W-829-06	7/8/13	E601	11	<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-829-06	11/5/13	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-829-15	4/16/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-15	4/16/13 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	1/30/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-829-1938	1/30/13 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	4/17/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	7/17/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	7/17/13 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	11/6/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1938	11/6/13 DUP	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-829-1940	3/20/13	E601	<0.5	<0.5	<0.5	<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	9/12/13	E601	<0.5	<0.5	<0.5	<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	4/16/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
WELL18	1/24/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	1/24/13 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	2/19/13	E601	<0.5	<0.5	<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	2/19/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	3/20/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	3/20/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	4/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	4/17/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	5/15/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	5/15/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	6/6/13	E601	<0.5	<0.5	<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	6/6/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	7/23/13	E601	<0.5	<0.5	<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	7/23/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	8/20/13	E601	<0.5	<0.5	<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	8/20/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	9/12/13	E601	<0.5	<0.5	<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	9/12/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	10/30/13	E601	<0.5	<0.5	<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	10/30/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL18	11/20/13	E601	<0.5	<0.5	<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	11/20/13 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
WELL20	1/24/13	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

Table B-4.01. High Explosives Process Area Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
WELL20	1/24/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	2/19/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	2/19/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	3/20/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	3/20/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<1	<0.5 O
WELL20	4/17/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	4/17/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	5/15/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	5/15/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	6/6/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	6/6/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	7/23/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	7/23/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	9/12/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	9/12/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	10/30/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	10/30/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
WELL20	11/20/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	11/20/13 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
WELL20	12/10/13	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WELL20	12/10/13 DUP	E502.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
GALLO1	1/24/13	E502.2	0 of 46	-	-	-	-
GALLO1	1/24/13	E601	0 of 18	-	-	-	-
GALLO1	1/24/13 DUP	E502.2	0 of 45	-	-	-	-
GALLO1	1/24/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	2/20/13	E601	0 of 18	-	-	-	-
GALLO1	2/20/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	3/13/13	E601	0 of 18	-	-	-	-
GALLO1	3/13/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	4/29/13	E502.2	0 of 46	-	-	-	-
GALLO1	4/29/13	E601	0 of 18	-	-	-	-
GALLO1	4/29/13 DUP	E502.2	0 of 45	-	-	-	-
GALLO1	4/29/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	5/15/13	E601	0 of 18	-	-	-	-
GALLO1	5/15/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	6/17/13	E601	0 of 18	-	-	-	-
GALLO1	6/17/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	7/24/13	E502.2	0 of 46	-	-	-	-
GALLO1	7/24/13	E601	0 of 18	-	-	-	-
GALLO1	7/24/13 DUP	E502.2	0 of 45	-	-	-	-
GALLO1	7/24/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	8/20/13	E601	0 of 18	-	-	-	-
GALLO1	8/20/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	9/4/13	E601	0 of 18	-	-	-	-
GALLO1	9/4/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	10/30/13	E502.2	0 of 46	-	-	-	-
GALLO1	10/30/13	E601	0 of 18	-	-	-	-
GALLO1	10/30/13 DUP	E502.2	0 of 45	-	-	-	-
GALLO1	10/30/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	11/25/13	E601	0 of 18	-	-	-	-
GALLO1	11/25/13 DUP	E601	0 of 18	-	-	-	-
GALLO1	12/11/13	E601	0 of 18	-	-	-	-

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
GALLO1	12/11/13 DUP	E601	0 of 18	-	-	-	-
SPRING14	3/18/13	E601	0 of 18	-	-	-	-
W-35B-01	2/27/13	E601	0 of 18	-	-	-	-
W-35B-01	6/11/13	E601	0 of 18	-	-	-	-
W-35B-01	8/27/13	E601	0 of 18	-	-	-	-
W-35B-01	12/16/13	E601	0 of 18	-	-	-	-
W-35B-02	2/27/13	E601	0 of 18	-	-	-	-
W-35B-02	6/11/13	E601	0 of 18	-	-	-	-
W-35B-02	8/27/13	E601	0 of 18	-	-	-	-
W-35B-02	12/16/13	E601	0 of 18	-	-	-	-
W-35B-03	2/27/13	E601	0 of 18	-	-	-	-
W-35B-03	6/11/13	E601	0 of 18	-	-	-	-
W-35B-03	8/27/13	E601	0 of 18	-	-	-	-
W-35B-03	12/16/13	E601	0 of 18	-	-	-	-
W-35B-04	2/27/13	E601	0 of 18	-	-	-	-
W-35B-04	6/11/13	E601	0 of 18	-	-	-	-
W-35B-04	8/27/13	E601	0 of 18	-	-	-	-
W-35B-04	12/16/13	E601	0 of 18	-	-	-	-
W-35B-05	2/27/13	E601	0 of 18	-	-	-	-
W-35B-05	6/11/13	E601	0 of 18	-	-	-	-
W-35B-05	8/27/13	E601	0 of 18	-	-	-	-
W-35B-05	12/16/13	E601	0 of 18	-	-	-	-
W-35C-01	3/12/13	E601	0 of 18	-	-	-	-
W-35C-01	9/10/13	E601	0 of 18	-	-	-	-
W-35C-02	3/11/13	E601	0 of 18	-	-	-	-
W-35C-02	9/19/13	E601	0 of 18	-	-	-	-
W-35C-04	1/8/13	E601	0 of 18	-	-	-	-
W-35C-04	4/3/13	E601	0 of 18	-	-	-	-
W-35C-04	7/8/13	E601	0 of 18	-	-	-	-
W-35C-04	10/9/13	E601	0 of 18	-	-	-	-
W-35C-05	2/28/13	E601	0 of 18	-	-	-	-

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-35C-05	8/13/13	E601	0 of 18	-	-	-	-
W-35C-06	9/16/13	E601	0 of 18	-	-	-	-
W-35C-07	2/28/13	E601	0 of 18	-	-	-	-
W-35C-07	2/28/13 DUP	E601	1 of 18	-	-	-	0.5
W-35C-07	8/13/13	E601	0 of 18	-	-	-	-
W-35C-08	2/28/13	E601	0 of 18	-	-	-	-
W-35C-08	8/13/13	E601	0 of 18	-	-	-	-
W-4A	3/20/13	E601	0 of 18	-	-	-	-
W-4A	9/18/13	E601	0 of 18	-	-	-	-
W-4A	9/18/13 DUP	E601	0 of 18	-	-	-	-
W-4AS	3/20/13	E601	0 of 18	-	-	-	-
W-4AS	3/20/13 DUP	E601	0 of 18	-	-	-	-
W-4AS	9/18/13	E601	0 of 18	-	-	-	-
W-4AS	9/18/13 DUP	E601	0 of 18	-	-	-	-
W-4B	3/6/13	E601	0 of 18	-	-	-	-
W-4B	9/10/13	E601	0 of 18	-	-	-	-
W-4C	3/6/13	E601	0 of 18	-	-	-	-
W-4C	6/17/13	E601	0 of 18	-	-	-	-
W-4C	9/10/13	E601	0 of 18	-	-	-	-
W-4C	12/3/13	E601	0 of 18	-	-	-	-
W-6BD	3/6/13	E601	0 of 18	-	-	-	-
W-6BD	9/10/13	E601	0 of 18	-	-	-	-
W-6BS	3/6/13	E601	0 of 18	-	-	-	-
W-6BS	9/10/13	E601	0 of 18	-	-	-	-
W-6BS	9/10/13 DUP	E601	0 of 18	-	-	-	-
W-6CD	3/11/13	E601	0 of 18	-	-	-	-
W-6CD	3/11/13 DUP	E601	0 of 18	-	-	-	-
W-6CD	9/17/13	E601	0 of 18	-	-	-	-
W-6CI	3/11/13	E601	0 of 18	-	-	-	-
W-6CI	9/17/13	E601	0 of 18	-	-	-	-
W-6CS	3/11/13	E601	0 of 18	-	-	-	-

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-6CS	9/17/13	E601	0 of 18	-	-	-	-
W-6EI	2/28/13	E601	0 of 18	-	-	-	-
W-6EI	8/19/13	E601	0 of 18	-	-	-	-
W-6ER	1/8/13	E601	0 of 18	-	-	-	-
W-6ER	4/3/13	E601	0 of 18	-	-	-	-
W-6ER	7/8/13	E601	0 of 18	-	-	-	-
W-6ER	10/9/13	E601	0 of 18	-	-	-	-
W-6ES	9/16/13	E601	0 of 18	-	-	-	-
W-6F	3/11/13	E601	0 of 18	-	-	-	-
W-6F	9/19/13	E601	0 of 18	-	-	-	-
W-6G	3/11/13	E601	0 of 18	-	-	-	-
W-6G	9/19/13	E601	0 of 18	-	-	-	-
W-6G	9/19/13 DUP	E601	0 of 18	-	-	-	-
W-6H	3/12/13	E601	0 of 18	-	-	-	-
W-6H	6/13/13	E601	0 of 18	-	-	-	-
W-6H	9/9/13	E601	0 of 18	-	-	-	-
W-6H	12/3/13	E601	0 of 18	-	-	-	-
W-6I	3/12/13	E601	0 of 18	-	-	-	-
W-6I	9/9/13	E601	0 of 18	-	-	-	-
W-6J	3/12/13	E601	0 of 18	-	-	-	-
W-6J	6/13/13	E601	0 of 18	-	-	-	-
W-6J	9/9/13	E601	0 of 18	-	-	-	-
W-6J	12/3/13	E601	0 of 18	-	-	-	-
W-6K	3/6/13	E601	0 of 18	-	-	-	-
W-6K	8/13/13	E601	0 of 18	-	-	-	-
W-6L	3/6/13	E601	0 of 18	-	-	-	-
W-6L	8/13/13	E601	0 of 18	-	-	-	-
W-808-01	3/11/13	E601	0 of 18	-	-	-	-
W-808-01	9/3/13	E601	0 of 18	-	-	-	-
W-808-03	3/11/13	E601	0 of 18	-	-	-	-
W-808-03	9/3/13	E601	0 of 18	-	-	-	-

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-809-01	3/19/13	E601	0 of 18	-	-	-	-
W-809-01	3/19/13 DUP	E601	0 of 18	-	-	-	-
W-809-01	9/3/13	E601	0 of 18	-	-	-	-
W-809-01	9/3/13 DUP	E601	0 of 18	-	-	-	-
W-809-02	3/14/13	E601	0 of 18	-	-	-	-
W-809-02	9/3/13	E601	0 of 18	-	-	-	-
W-809-03	3/13/13	E601	0 of 18	-	-	-	-
W-809-03	9/4/13	E601	0 of 18	-	-	-	-
W-809-04	3/13/13	E601	0 of 18	-	-	-	-
W-809-04	9/4/13	E601	0 of 18	-	-	-	-
W-810-01	3/11/13	E601	0 of 18	-	-	-	-
W-810-01	9/3/13	E601	0 of 18	-	-	-	-
W-814-01	3/19/13	E601	0 of 18	-	-	-	-
W-814-01	9/9/13	E601	1 of 18	1	-	-	-
W-814-02	3/25/13	E601	0 of 18	-	-	-	-
W-814-02	9/9/13	E601	0 of 18	-	-	-	-
W-814-04	3/21/13	E601	0 of 18	-	-	-	-
W-814-04	6/12/13	E601	0 of 18	-	-	-	-
W-814-04	9/9/13	E601	0 of 18	-	-	-	-
W-814-2138	3/19/13	E601	0 of 18	-	-	-	-
W-814-2138	9/9/13	E601	0 of 18	-	-	-	-
W-815-02	1/23/13	E601	0 of 18	-	-	-	-
W-815-02	4/3/13	E601	0 of 18	-	-	-	-
W-815-02	4/3/13 DUP	E601	0 of 18	-	-	-	-
W-815-02	7/1/13	E601	0 of 18	-	-	-	-
W-815-02	10/15/13	E601	0 of 18	-	-	-	-
W-815-04	1/23/13	E601	0 of 18	-	-	-	-
W-815-04	4/3/13	E601	0 of 18	-	-	-	-
W-815-04	8/12/13	E601	0 of 18	-	-	-	-
W-815-04	10/15/13	E601	0 of 18	-	-	-	-
W-815-06	3/12/13	E601	0 of 18	-	-	-	-

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-815-06	9/10/13	E601	0 of 18	-	-	-	-
W-815-07	3/12/13	E601	0 of 18	-	-	-	-
W-815-07	3/12/13 DUP	E601	0 of 18	-	-	-	-
W-815-07	9/10/13	E601	0 of 18	-	-	-	-
W-815-08	3/12/13	E601	0 of 18	-	-	-	-
W-815-1928	3/12/13	E601	1 of 18	-	0.8	-	-
W-815-1928	9/4/13	E601	1 of 18	-	0.7	-	-
W-815-2110	3/21/13	E601	0 of 18	-	-	-	-
W-815-2110	6/13/13	E601	0 of 18	-	-	-	-
W-815-2110	9/11/13	E601	0 of 18	-	-	-	-
W-815-2110	12/3/13	E601	0 of 18	-	-	-	-
W-815-2111	3/21/13	E601	0 of 18	-	-	-	-
W-815-2111	6/13/13	E601	0 of 18	-	-	-	-
W-815-2111	9/11/13	E601	0 of 18	-	-	-	-
W-815-2111	12/3/13	E601	0 of 18	-	-	-	-
W-815-2111	12/3/13 DUP	E601	0 of 18	-	-	-	-
W-815-2217	3/11/13	E601	0 of 18	-	-	-	-
W-815-2217	9/17/13	E601	0 of 18	-	-	-	-
W-815-2608	1/8/13	E601	0 of 18	-	-	-	-
W-815-2608	4/3/13	E601	0 of 18	-	-	-	-
W-815-2608	4/3/13 DUP	E601	0 of 18	-	-	-	-
W-815-2608	7/8/13	E601	0 of 18	-	-	-	-
W-815-2608	10/9/13	E601	0 of 18	-	-	-	-
W-815-2621	3/12/13	E601	0 of 18	-	-	-	-
W-815-2621	6/12/13	E601	0 of 18	-	-	-	-
W-815-2621	6/12/13 DUP	E601	0 of 18	-	-	-	-
W-815-2621	9/5/13	E601	0 of 18	-	-	-	-
W-815-2803	1/23/13	E601	0 of 18	-	-	-	-
W-815-2803	4/3/13	E601	0 of 18	-	-	-	-
W-815-2803	7/1/13	E601	0 of 18	-	-	-	-
W-815-2803	10/15/13	E601	0 of 18	-	-	-	-

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-817-01	2/25/13	E601	0 of 18	-	-	-	-
W-817-01	4/2/13	E601	0 of 18	-	-	-	-
W-817-01	4/2/13 DUP	E601	0 of 18	-	-	-	-
W-817-01	7/1/13	E601	0 of 18	-	-	-	-
W-817-01	10/15/13	E601	0 of 18	-	-	-	-
W-817-03	1/24/13	E601	0 of 18	-	-	-	-
W-817-03	4/2/13	E601	0 of 18	-	-	-	-
W-817-03	4/2/13 DUP	E601	0 of 18	-	-	-	-
W-817-03	7/10/13	E601	0 of 18	-	-	-	-
W-817-03	10/15/13	E601	0 of 18	-	-	-	-
W-817-03A	3/14/13	E601	0 of 18	-	-	-	-
W-817-04	3/14/13	E601	0 of 18	-	-	-	-
W-817-04	9/5/13	E601	0 of 18	-	-	-	-
W-817-04	9/5/13 DUP	E601	0 of 18	-	-	-	-
W-817-05	3/19/13	E601	0 of 18	-	-	-	-
W-817-05	9/4/13	E601	0 of 18	-	-	-	-
W-817-07	3/14/13	E601	0 of 18	-	-	-	-
W-817-07	9/5/13	E601	0 of 18	-	-	-	-
W-817-2318	3/4/13	E601	0 of 18	-	-	-	-
W-817-2318	4/2/13	E601	0 of 18	-	-	-	-
W-817-2318	7/10/13	E601	0 of 18	-	-	-	-
W-817-2318	10/15/13	E601	0 of 18	-	-	-	-
W-817-2609	3/14/13	E601	0 of 18	-	-	-	-
W-817-2609	6/12/13	E601	0 of 18	-	-	-	-
W-817-2609	9/5/13	E601	0 of 18	-	-	-	-
W-818-01	3/19/13	E601	0 of 18	-	-	-	-
W-818-01	8/28/13	E601	0 of 18	-	-	-	-
W-818-03	3/21/13	E601	0 of 18	-	-	-	-
W-818-03	8/28/13	E601	0 of 18	-	-	-	-
W-818-04	3/18/13	E601	0 of 18	-	-	-	-
W-818-04	9/10/13	E601	0 of 18	-	-	-	-

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-818-06	3/18/13	E601	0 of 18	-	-	-	-
W-818-06	3/18/13 DUP	E601	0 of 18	-	-	-	-
W-818-06	9/10/13	E601	0 of 18	-	-	-	-
W-818-07	3/18/13	E601	0 of 18	-	-	-	-
W-818-07	9/10/13	E601	0 of 18	-	-	-	-
W-818-08	3/5/13	E601	0 of 18	-	-	-	-
W-818-08	4/8/13	E601	0 of 18	-	-	-	-
W-818-08	4/8/13 DUP	E601	0 of 18	-	-	-	-
W-818-08	7/1/13	E601	0 of 18	-	-	-	-
W-818-08	10/9/13	E601	0 of 18	-	-	-	-
W-818-09	3/5/13	E601	0 of 18	-	-	-	-
W-818-09	4/8/13	E601	0 of 18	-	-	-	-
W-818-09	7/1/13	E601	0 of 18	-	-	-	-
W-818-09	10/9/13	E601	0 of 18	-	-	-	-
W-818-11	3/19/13	E601	0 of 18	-	-	-	-
W-818-11	9/10/13	E601	0 of 18	-	-	-	-
W-818-11	9/10/13 DUP	E601	0 of 18	-	-	-	-
W-819-02	3/18/13	E601	0 of 18	-	-	-	-
W-819-02	9/9/13	E601	0 of 18	-	-	-	-
W-823-01	3/12/13	E601	0 of 18	-	-	-	-
W-823-01	9/9/13	E601	0 of 18	-	-	-	-
W-823-02	3/12/13	E601	0 of 18	-	-	-	-
W-823-02	9/9/13	E601	0 of 18	-	-	-	-
W-823-03	3/12/13	E601	0 of 18	-	-	-	-
W-823-03	9/9/13	E601	0 of 18	-	-	-	-
W-823-13	3/12/13	E601	0 of 18	-	-	-	-
W-823-13	9/10/13	E601	0 of 18	-	-	-	-
W-827-02	3/21/13	E601	1 of 18	-	0.8	-	-
W-827-02	3/21/13 DUP	E601	1 of 18	-	0.8	-	-
W-827-05	3/25/13	E601	0 of 18	-	-	-	-
W-827-05	9/12/13	E601	0 of 18	-	-	-	-

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
W-829-06	3/25/13	E601	0 of 18	-	-	-	-
W-829-06	6/10/13	E601	0 of 18	-	-	-	-
W-829-06	6/10/13 DUP	E601	0 of 18	-	-	-	-
W-829-06	7/8/13	E601	1 of 18	-	-	0.83	-
W-829-06	11/5/13	E601	0 of 18	-	-	-	-
W-829-15	4/16/13	E624	0 of 30	-	-	-	-
W-829-15	4/16/13 DUP	E624	0 of 30	-	-	-	-
W-829-1938	1/30/13	E624	0 of 30	-	-	-	-
W-829-1938	1/30/13 DUP	E624	0 of 30	-	-	-	-
W-829-1938	4/17/13	E624	0 of 30	-	-	-	-
W-829-1938	7/17/13	E624	0 of 30	-	-	-	-
W-829-1938	7/17/13 DUP	E624	0 of 30	-	-	-	-
W-829-1938	11/6/13	E624	0 of 30	-	-	-	-
W-829-1938	11/6/13 DUP	E624	0 of 30	-	-	-	-
W-829-1940	3/20/13	E601	0 of 18	-	-	-	-
W-829-1940	9/12/13	E601	0 of 18	-	-	-	-
W-829-22	4/16/13	E624	0 of 30	-	-	-	-
WELL18	1/24/13	E601	0 of 18	-	-	-	-
WELL18	1/24/13 DUP	E601	0 of 18	-	-	-	-
WELL18	2/19/13	E601	0 of 18	-	-	-	-
WELL18	2/19/13 DUP	E601	0 of 18	-	-	-	-
WELL18	3/20/13	E601	0 of 18	-	-	-	-
WELL18	3/20/13 DUP	E601	0 of 18	-	-	-	-
WELL18	4/17/13	E601	0 of 18	-	-	-	-
WELL18	4/17/13 DUP	E601	0 of 18	-	-	-	-
WELL18	5/15/13	E601	0 of 18	-	-	-	-
WELL18	5/15/13 DUP	E601	0 of 18	-	-	-	-
WELL18	6/6/13	E601	0 of 18	-	-	-	-
WELL18	6/6/13 DUP	E601	0 of 18	-	-	-	-
WELL18	7/23/13	E601	0 of 18	-	-	-	-
WELL18	7/23/13 DUP	E601	0 of 18	-	-	-	-

Table B-4.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Bromo-dichloro-methane (µg/L)	Chloro-methane (µg/L)	Methylene chloride (µg/L)
WELL18	8/20/13	E601	0 of 18	-	-	-	-
WELL18	8/20/13 DUP	E601	0 of 18	-	-	-	-
WELL18	9/12/13	E601	0 of 18	-	-	-	-
WELL18	9/12/13 DUP	E601	0 of 18	-	-	-	-
WELL18	10/30/13	E601	0 of 18	-	-	-	-
WELL18	10/30/13 DUP	E601	0 of 18	-	-	-	-
WELL18	11/20/13	E601	0 of 18	-	-	-	-
WELL18	11/20/13 DUP	E601	0 of 18	-	-	-	-
WELL20	1/24/13	E502.2	0 of 46	-	-	-	-
WELL20	1/24/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	2/19/13	E502.2	0 of 46	-	-	-	-
WELL20	2/19/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	3/20/13	E502.2	0 of 46	-	-	-	-
WELL20	3/20/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	4/17/13	E502.2	0 of 46	-	-	-	-
WELL20	4/17/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	5/15/13	E502.2	0 of 46	-	-	-	-
WELL20	5/15/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	6/6/13	E502.2	0 of 46	-	-	-	-
WELL20	6/6/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	7/23/13	E502.2	0 of 46	-	-	-	-
WELL20	7/23/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	9/12/13	E502.2	0 of 46	-	-	-	-
WELL20	9/12/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	10/30/13	E502.2	0 of 46	-	-	-	-
WELL20	10/30/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	11/20/13	E502.2	0 of 46	-	-	-	-
WELL20	11/20/13 DUP	E502.2	0 of 45	-	-	-	-
WELL20	12/10/13	E502.2	0 of 46	-	-	-	-
WELL20	12/10/13 DUP	E502.2	0 of 45	-	-	-	-

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
GALLO1	1/24/13	<0.5	<4
GALLO1	1/24/13 DUP	<0.5	<4
GALLO1	2/20/13	<0.5	<4
GALLO1	2/20/13 DUP	<0.5	<4
GALLO1	3/13/13	<0.5	<4
GALLO1	3/13/13 DUP	<0.5	<4
GALLO1	4/29/13	<0.5	<4
GALLO1	4/29/13 DUP	<0.5 L	<4
GALLO1	5/15/13	<0.5	<4
GALLO1	5/15/13 DUP	<0.5	<4
GALLO1	6/17/13	<0.5	<4
GALLO1	6/17/13 DUP	<0.5	<4
GALLO1	7/24/13	<0.5	<4
GALLO1	7/24/13 DUP	<0.5	<4
GALLO1	8/20/13	<1 D	<4
GALLO1	8/20/13 DUP	<0.5	<4
GALLO1	9/4/13	<1 D	<4
GALLO1	9/4/13 DUP	<0.5	<4
GALLO1	10/30/13	<0.5	<4
GALLO1	10/30/13 DUP	<0.5	<4
GALLO1	11/25/13	<0.5	<4
GALLO1	11/25/13 DUP	<0.5	<4
GALLO1	12/11/13	<0.5	<4
GALLO1	12/11/13 DUP	<0.5	<4
SPRING14	3/18/13	3.2	<4
W-35B-01	2/27/13	<0.5	<4
W-35B-01	8/27/13	<0.5	<4
W-35B-02	2/27/13	12	<4
W-35B-02	8/27/13	15	<4
W-35B-03	2/27/13	8.3	<4
W-35B-03	8/27/13	8.2	<4
W-35B-04	2/27/13	1.3	<4
W-35B-04	8/27/13	0.93	<4
W-35B-05	2/27/13	1	<4
W-35B-05	8/27/13	0.99	<4
W-35C-01	3/12/13	0.75 LO	<4
W-35C-02	3/11/13	<0.5	<4
W-35C-04	1/8/13	<0.5	<4
W-35C-05	2/28/13	4.2	<4
W-35C-08	2/28/13	1.2	<4
W-4AS	3/20/13	0.63	-
W-4AS	3/20/13 DUP	0.77	-
W-4B	3/6/13	<0.5	<4
W-4C	3/6/13	<0.5	<4
W-4C	9/10/13	<0.5	<4

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-6BD	3/6/13	<0.5	-
W-6BS	3/6/13	16 D	-
W-6CI	3/11/13	<0.5	<4
W-6CS	3/11/13	700 D	18 D
W-6EI	2/28/13	<0.5	<4
W-6ER	1/8/13	<0.5	<4
W-6F	3/11/13	1.3	<4
W-6G	3/11/13	19	4.1
W-6H	3/12/13	<0.5 LO	<4
W-6H	9/9/13	<0.5	<4
W-6I	3/12/13	<0.5 LO	<4
W-6J	3/12/13	<0.5 LO	<4
W-6J	9/9/13	<0.5	<4
W-6L	3/6/13	8.9	<4
W-808-01	3/11/13	85 D	<4
W-808-03	3/11/13	<0.5	<4
W-809-01	3/19/13	86 D	4.1
W-809-01	3/19/13 DUP	95 D	4.5
W-809-02	3/14/13	100 DL	11
W-809-02	9/3/13	-	9.9
W-809-03	3/13/13	97 D	9.5
W-809-03	9/4/13	-	10
W-809-04	3/13/13	0.85	<4
W-810-01	3/11/13	<0.5	<4
W-814-01	3/19/13	58 D	4.9
W-814-02	3/25/13	69 DLO	<4
W-814-04	3/21/13	<0.5	<4
W-814-04	9/9/13	<0.5	<4
W-814-2138	3/19/13	74 D	<4
W-815-02	1/23/13	94 D	4.2
W-815-02	7/1/13	-	<4
W-815-04	1/23/13	97 D	<4
W-815-04	8/12/13	-	<4
W-815-06	3/12/13	76 DLO	6.6
W-815-07	3/12/13	75 DLO	6.4
W-815-07	3/12/13 DUP	88	5.2
W-815-08	3/12/13	<0.5 LO	<4
W-815-1928	3/12/13	71 DLO	<4
W-815-2110	3/21/13	5 DO	<4
W-815-2110	9/11/13	<1 D	<4
W-815-2111	3/21/13	<1 DO	<4
W-815-2111	9/11/13	<1 D	<4
W-815-2217	3/11/13	0.97	<4
W-815-2608	1/8/13	<0.5	<4
W-815-2621	3/12/13	20 D	<4

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-815-2803	1/23/13	98 D	13
W-815-2803	7/1/13	49	7.9
W-817-01	2/25/13	85	31 D
W-817-01	4/2/13	-	30 D
W-817-01	4/2/13 DUP	-	30 D
W-817-01	7/1/13	-	29 D
W-817-01	10/15/13	-	29 D
W-817-03	1/24/13	92 D	23 D
W-817-03	7/10/13	-	24 D
W-817-03A	3/14/13	32 DL	7
W-817-04	3/14/13	97 D	20
W-817-05	3/19/13	1.3	<4
W-817-07	3/14/13	76 DL	13
W-817-2318	3/4/13	130 D	14
W-817-2318	7/10/13	-	12
W-817-2609	3/14/13	140 D	16
W-818-01	3/19/13	80 D	6.1
W-818-03	3/21/13	42 D	<4
W-818-04	3/18/13	<0.5	<4
W-818-06	3/18/13	20 D	<4
W-818-06	3/18/13 DUP	21 D	<4
W-818-07	3/18/13	<0.5	<4
W-818-08	3/5/13	84	8.5
W-818-08	7/1/13	-	7.6
W-818-09	3/5/13	82	7
W-818-09	7/1/13	-	6
W-818-11	3/19/13	77 D	10
W-819-02	3/18/13	<0.5	<4
W-823-01	3/12/13	15 LO	<4
W-823-02	3/12/13	<0.5 LO	<4
W-823-03	3/12/13	31 LO	-
W-823-13	3/12/13	41 DLO	<4
W-827-02	3/21/13	6.8	<4
W-827-02	3/21/13 DUP	6.6	<4
W-827-05	3/25/13	-	<4
W-827-05	3/28/13	<0.5	-
W-829-06	3/25/13	55 D	8.3
W-829-06	6/10/13	75 D	11
W-829-06	6/10/13 DUP	69 D	11
W-829-06	7/8/13	63 D	11
W-829-06	11/5/13	72 D	12
W-829-15	4/16/13	-	<4
W-829-15	4/16/13 DUP	-	<4
W-829-1938	1/30/13	-	<4
W-829-1938	1/30/13 DUP	-	<4

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-829-1938	4/17/13	-	<4
W-829-1938	7/17/13	-	<4
W-829-1938	7/17/13 DUP	-	<4
W-829-1938	11/6/13	-	<4 O
W-829-1938	11/6/13 DUP	-	<4 O
W-829-1940	3/20/13	37 D	<4
W-829-22	4/16/13	<0.5	<4
WELL18	1/24/13	<0.5	<4
WELL18	1/24/13 DUP	<0.5	<4
WELL18	2/19/13	<0.5	<4
WELL18	2/19/13 DUP	<0.5	<4
WELL18	3/20/13	<0.5	<4
WELL18	3/20/13 DUP	<0.5	<4
WELL18	4/17/13	<0.5	<4
WELL18	4/17/13 DUP	<0.5	<4
WELL18	5/15/13	<0.5	<4
WELL18	5/15/13 DUP	<0.5	<4
WELL18	6/6/13	<0.5	<4
WELL18	6/6/13 DUP	<0.5	<4
WELL18	7/23/13	<0.5	<4
WELL18	7/23/13 DUP	<0.5	<4
WELL18	8/20/13	<0.5	<4
WELL18	8/20/13 DUP	<0.5	<4
WELL18	9/12/13	<0.5	<4
WELL18	9/12/13 DUP	<0.5	<4
WELL18	10/30/13	<1 D	<4
WELL18	10/30/13 DUP	<0.5	<4
WELL18	11/20/13	<0.5	<4
WELL18	11/20/13 DUP	<0.5	<4
WELL20	1/24/13	<0.5	<4
WELL20	1/24/13 DUP	<0.5	<4
WELL20	2/19/13	<0.5	<4
WELL20	2/19/13 DUP	<0.5	<4
WELL20	3/20/13	<0.5	<4
WELL20	3/20/13 DUP	<0.5	<4
WELL20	4/17/13	<0.5	<4
WELL20	4/17/13 DUP	<0.5	<4
WELL20	5/15/13	<0.5	<4
WELL20	5/15/13 DUP	<0.5	<4
WELL20	6/6/13	<0.5	<4
WELL20	6/6/13 DUP	<0.5	<4
WELL20	7/23/13	<0.5	<4
WELL20	7/23/13 DUP	<0.5	<4
WELL20	9/12/13	<0.5	<4
WELL20	9/12/13 DUP	<0.5	<4

Table B-4.02. High Explosives Process Area Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
WELL20	10/30/13	<0.5	<4
WELL20	10/30/13 DUP	<0.5	<4
WELL20	11/20/13	<0.5	<4
WELL20	11/20/13 DUP	<0.5	<4
WELL20	12/10/13	<0.5	<4
WELL20	12/10/13 DUP	<0.5	<4

Table B-4.03. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
GALLO1	1/24/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	1/24/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	2/20/13	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 D	<1 D	<2 D
GALLO1	2/20/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	3/13/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	3/13/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	4/29/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	<1	<2
GALLO1	4/29/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	5/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	5/15/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	6/17/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	6/17/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	7/24/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	7/24/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	8/20/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	8/20/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	9/4/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1 O	<2	<1	<2
GALLO1	9/4/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	10/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	10/30/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	11/25/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	11/25/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	12/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
GALLO1	12/11/13 DUP	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR
SPRING14	3/18/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-01	2/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-01	8/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-02	2/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-02	8/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-03	2/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-03	8/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-04	2/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-04	8/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-05	2/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35B-05	8/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35C-01	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35C-02	3/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-4.03. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
W-35C-04	1/8/13	<2	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<1 O	<2 O	<1	<2 O
W-35C-05	2/28/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-35C-08	2/28/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-4B	3/6/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6CI	3/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6CS	3/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6EI	2/28/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6ER	1/8/13	<2	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<1 O	<2 O	<1	<2 O
W-6F	3/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6G	3/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6H	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6H	9/9/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6I	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6J	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6J	9/9/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-6L	3/6/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-808-01	3/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-808-03	3/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-809-01	3/19/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-809-01	3/19/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-809-02	3/14/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-809-03	3/13/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-809-03	9/4/13	<2	<2	<2	<2	<2	<2	<2	13	<2	20	<2	100 D	<2
W-809-04	3/13/13	<2	<2	<2	<2	-	<2	<2	14 D	<2	21	<2	110 D	<2
W-810-01	3/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-814-01	3/19/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-814-02	3/25/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-814-2138	3/19/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-815-02	1/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	10	<2	60	<2
W-815-02	7/1/13	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	8.2	<1.4	47	<1.4
W-815-04	1/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	7.3	<2	45	<2
W-815-04	8/12/13	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	5.8	<1.7	34	<1.7
W-815-06	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	6.9	<2
W-815-07	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	1.2	<2
W-815-07	3/12/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-815-08	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-815-1928	3/12/13	IR	IR	IR	IR	-	IR	IR	DIR	IR	14 IJ	IR	78 DIJ	IR

Table B-4.03. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
W-815-2110	3/21/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-815-2110	9/11/13	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<2 D	<1 D	<2 DO	<1 D	<2 D
W-815-2111	3/21/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-815-2111	9/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2 O	<1	<2
W-815-2217	3/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-815-2608	1/8/13	<2	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<2 O	<1 O	<2 O	<1	<2 O
W-815-2621	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-815-2803	1/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	4.5	<2	23	<2
W-815-2803	7/1/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	7.5	<2	50	<2
W-817-01	2/25/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	23	<2	44	<2
W-817-01	4/2/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	10	<2	24	<2
W-817-01	4/2/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	19	<2	44	<2
W-817-01	7/1/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	18	<2	41	<2
W-817-01	10/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	10	<2	38	<2
W-817-03	1/24/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	4.6	<2	9.1	<2
W-817-03	7/10/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	6.8	<2
W-817-03A	3/14/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-817-04	3/14/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	12	<2
W-817-05	3/19/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-817-07	3/14/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-817-2318	3/4/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-817-2318	7/10/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-817-2609	3/14/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-818-01	3/19/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	4.1	<2
W-818-03	3/21/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-818-04	3/18/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-818-06	3/18/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-818-06	3/18/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-818-08	3/5/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-818-09	3/5/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-818-11	3/19/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	14	<2
W-819-02	3/18/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-823-01	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-823-02	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-823-13	3/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-827-02	3/21/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-827-02	3/21/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-4.03. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
W-827-05	3/25/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-829-06	3/25/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-829-15	4/16/13	-	-	<5	<5	-	-	-	-	-	<0.82	<5	<0.82	<4.1
W-829-15	4/16/13 DUP	-	-	<5	<5	-	-	-	-	-	<0.83	<5	<0.83	<4.1
W-829-1938	1/30/13	-	-	<5	<5	-	-	-	-	-	<0.99	<5	<0.99	<5
W-829-1938	1/30/13 DUP	-	-	<5	<5	-	-	-	-	-	<1	<5	<1	<5
W-829-1938	4/17/13	-	-	<5	<5	-	-	-	-	-	<0.85	<5	<0.85	<4.2
W-829-1938	7/17/13	-	-	<5	<5	-	-	-	-	-	<1	<5	<1	<4.4
W-829-1938	7/17/13 DUP	-	-	<5	<5	-	-	-	-	-	<1	<5	<1	<5
W-829-1938	11/6/13	-	-	<5	<5	-	-	-	-	-	<0.77	<5	<0.77	<3.8
W-829-1938	11/6/13 DUP	-	-	<5	<5	-	-	-	-	-	<0.67	<5	<0.67	<3.3
W-829-1940	3/20/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-829-22	4/16/13	-	-	<5	<5	-	-	-	-	-	<0.85	<5	<0.85	<4.2
WELL18	1/24/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	1/24/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	2/19/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	2/19/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	3/20/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	3/20/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	4/17/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	4/17/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	5/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	5/15/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	6/6/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	6/6/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	7/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	7/23/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	8/20/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	8/20/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	9/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	9/12/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	10/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	10/30/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	11/20/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL18	11/20/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	1/24/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	1/24/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-4.03. High Explosives Process Area Operable Unit high explosive compounds in ground and surface water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
WELL20	2/19/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	2/19/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	3/20/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	3/20/13 DUP	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR
WELL20	4/17/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	4/17/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	5/15/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	5/15/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	6/6/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	6/6/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	7/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	7/23/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	9/12/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	9/12/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	10/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	10/30/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	11/20/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	11/20/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	12/10/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
WELL20	12/10/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-4.04. High Explosives Process Area Operable Unit diesel range organic compounds in ground water.

Location	Date	Diesel Fuel (µg/L)	Oil (µg/L)
W-823-01	3/12/13	<50	<200
W-823-02	3/12/13	<50	<200
W-823-03	3/12/13	52	<200

Table B-4.05. High Explosives Process Area Operable Unit total uranium and uranium isotopes in ground water.

Location	Date	Uranium 234 and Uranium 233 (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 238 (pCi/L)
W-4A	9/18/13	24.8 ± 4.71 O	1.01 ± 0.361 O	22.1 ± 4.22 LO
W-4A	9/18/13 DUP	21.9 ± 4.16 O	0.932 ± 0.338 O	20.3 ± 3.88 LO

Table B-4.06. High Explosives Process Area Operable Unit general minerals in ground water.

Constituents of concern	W-4A	W-4A
	9/18/13	9/18/13 DUP
Total Alkalinity (as CaCO3) (mg/L)	202	201
Aluminum (mg/L)	<0.2	<0.2
Bicarbonate Alk (as CaCO3) (mg/L)	198	196
Calcium (mg/L)	14	14
Carbonate Alk (as CaCO3) (mg/L)	<10	<10
Chloride (mg/L)	190 D	190 D
Copper (mg/L)	<0.01	<0.01
Fluoride (mg/L)	0.96	0.9
Hydroxide Alk (as CaCO3) (mg/L)	<10	<10
Iron (mg/L)	<0.1	<0.1
Magnesium (mg/L)	3.8	3.9
Manganese (mg/L)	0.033 LO	0.034 LO
Nickel (mg/L)	<0.1	<0.1
Nitrate (as N) (mg/L)	0.36	0.37
Nitrate (as NO3) (mg/L)	1.6	1.7
Nitrite (as N) (mg/L)	<0.1	<0.1
pH (Units)	8.2	8.3
Ortho-Phosphate (mg/L)	<0.1	<0.1
Total Phosphorus (as PO4) (mg/L)	<0.1 HLO	<0.1 HLO
Potassium (mg/L)	13	13
Sodium (mg/L)	240 D	250 D
Total dissolved solids (TDS) (mg/L)	770	810
Specific Conductance (µmhos/cm)	1,300 H	1,300 H
Sulfate (mg/L)	130 D	130 D
Surfactants (mg/L)	<0.5 O	<0.5 O
Total Hardness (as CaCO3) (mg/L)	50	51
Zinc (mg/L)	<0.05	<0.05

Table B-4.07. High Explosives Process Area Operable Unit metals in ground water.

Location	Date	Iron (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Sodium (mg/L)
W-829-15	4/16/13	<0.05	<0.01	23	180
W-829-15	4/16/13 DUP	<0.05	<0.01	25	180
W-829-1938	1/30/13	<0.05	0.037	12	150
W-829-1938	1/30/13 DUP	<0.05	0.037	12	150
W-829-1938	4/17/13	<0.05	0.062	13	160 L
W-829-1938	7/17/13	0.067	0.019	12	160
W-829-1938	7/17/13 DUP	0.061	0.02	12	150
W-829-1938	11/6/13	<0.05	0.027	13	160
W-829-1938	11/6/13 DUP	<0.05	0.028	12	150
W-829-22	4/16/13	<0.05	<0.01	9	230

Table B-5.01. Building 850 area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
K1-02B	1/28/13	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-02B	1/28/13 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	4/10/13	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	4/10/13 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	7/10/13	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	7/10/13 DUP	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K1-02B	11/5/13	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	1/14/13	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	4/23/13	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	7/16/13	E8260	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5
K1-04	11/11/13	E8260	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ	<0.5 IJ
K1-05	2/14/13	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	4/10/13	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
K1-05	7/15/13	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	27	<0.5
K1-05	11/7/13	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
K1-07	1/16/13	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	4/22/13	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	7/16/13	E8260	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 J	<0.5	<0.5
K1-07	11/5/13	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	1/15/13	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	22	<0.5
K1-08	4/22/13	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	23	<0.5
K1-08	7/15/13	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	31	<0.5
K1-08	11/5/13	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
K1-09	1/16/13	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	4/23/13	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	65	<0.5
K1-09	7/15/13	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	70	<0.5
K1-09	11/4/13	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	46	<0.5
W-865-02	1/10/13	E601	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	58 D	<0.5
W-865-02	7/15/13	E601	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	46 D	<0.5
W-865-1802	1/10/13	E601	<0.5	<0.5	<0.5	<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	7/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-865-2005	1/23/13	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	6	<0.5

Table B-5.01. Building 850 area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-865-2005	1/23/13 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	6	<0.5
W-865-2005	7/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.5	<0.5
W-865-2005	7/9/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	5.7	<0.5
W-865-2121	1/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	16	<0.5
W-865-2121	7/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	11 D	<0.5
W-865-2133	1/16/13	E601	<0.5	<0.5	<0.5	<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	7/16/13	E601	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-865-2224	5/21/13	E601	<0.5	<0.5	<0.5	<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	11/11/13	E601	<0.5	<0.5	<0.5	<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	4/11/13	E601	<0.5	<0.5	<0.5	<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	11/6/13	E601	<0.5	<0.5	<0.5	<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	2/13/13	E8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT1-2326	5/8/13	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	7/10/13	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	11/13/13	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	11/13/13 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
W-PIT1-2620	5/6/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT1-2620	11/26/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-5.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	Methylene chloride (µg/L)
K1-02B	1/28/13	E8260	0 of 36	-
K1-02B	1/28/13 DUP	E8260	0 of 36	-
K1-02B	4/10/13	E8260	0 of 36	-
K1-02B	4/10/13 DUP	E8260	0 of 36	-
K1-02B	7/10/13	E8260	0 of 36	-
K1-02B	7/10/13 DUP	E8260	0 of 36	-
K1-02B	11/5/13	E8260	0 of 36	-
K1-04	1/14/13	E8260	0 of 36	-
K1-04	4/23/13	E8260	0 of 36	-
K1-04	7/16/13	E8260	0 of 36	-
K1-04	11/11/13	E8260	0 of 36	-
K1-05	2/14/13	E8260	0 of 36	-
K1-05	4/10/13	E8260	0 of 36	-
K1-05	7/15/13	E8260	0 of 36	-
K1-05	11/7/13	E8260	0 of 36	-
K1-07	1/16/13	E8260	0 of 36	-
K1-07	4/22/13	E8260	0 of 36	-
K1-07	7/16/13	E8260	0 of 36	-
K1-07	11/5/13	E8260	0 of 36	-
K1-08	1/15/13	E8260	0 of 36	-
K1-08	4/22/13	E8260	0 of 36	-
K1-08	7/15/13	E8260	0 of 36	-
K1-08	11/5/13	E8260	0 of 36	-
K1-09	1/16/13	E8260	0 of 36	-
K1-09	4/23/13	E8260	0 of 36	-
K1-09	7/15/13	E8260	0 of 36	-
K1-09	11/4/13	E8260	0 of 36	-
W-865-02	1/10/13	E601	0 of 18	-
W-865-02	7/15/13	E601	1 of 18	1 S
W-865-1802	1/10/13	E601	0 of 18	-
W-865-1802	7/11/13	E601	0 of 18	-
W-865-2005	1/23/13	E601	0 of 18	-
W-865-2005	1/23/13 DUP	E601	0 of 18	-

Table B-5.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	Methylene chloride (µg/L)
W-865-2005	7/9/13	E601	0 of 18	-
W-865-2005	7/9/13 DUP	E601	0 of 18	-
W-865-2121	1/17/13	E601	0 of 18	-
W-865-2121	7/16/13	E601	1 of 18	0.8 S
W-865-2133	1/16/13	E601	0 of 18	-
W-865-2133	7/16/13	E601	0 of 18	-
W-865-2224	5/21/13	E601	0 of 18	-
W-865-2224	11/11/13	E601	0 of 18	-
W-PIT1-2209	4/11/13	E601	0 of 18	-
W-PIT1-2209	11/6/13	E601	0 of 18	-
W-PIT1-2326	2/13/13	E8260	0 of 36	-
W-PIT1-2326	5/8/13	E8260	0 of 36	-
W-PIT1-2326	7/10/13	E8260	0 of 36	-
W-PIT1-2326	11/13/13	E8260	0 of 36	-
W-PIT1-2326	11/13/13 DUP	E8260	0 of 36	-
W-PIT1-2620	5/6/13	E601	0 of 18	-
W-PIT1-2620	11/26/13	E601	0 of 18	-

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
K1-02B	1/28/13	32	4.5
K1-02B	1/28/13 DUP	31	4.3
K1-02B	4/10/13	32	6.9
K1-02B	4/10/13 DUP	32	4.2
K1-02B	7/10/13	31	5.5
K1-02B	7/10/13 DUP	31	5.7
K1-02B	11/5/13	32	6.4
K1-04	1/14/13	24	<4
K1-04	4/23/13	31	<4
K1-04	7/16/13	26 O	<4
K1-04	11/11/13	30	<4
K1-05	2/14/13	35	<4
K1-05	4/10/13	36	<4
K1-05	7/15/13	36	<4
K1-05	11/7/13	36	<4
K1-07	1/16/13	31	<4
K1-07	4/22/13	33	<4
K1-07	7/16/13	32 O	<4
K1-07	11/5/13	32	<4
K1-08	1/15/13	32	<4
K1-08	4/22/13	34	<4
K1-08	7/15/13	34	<4
K1-08	11/5/13	34	<4
K1-09	1/16/13	33	<4
K1-09	4/23/13	35	<4
K1-09	7/15/13	34	<4
K1-09	11/4/13	35	<4
K2-03	4/11/13	9.5	<4
K2-03	11/4/13	-	<4
K2-04D	5/2/13	-	<4
K2-04D	10/31/13	-	<4
K2-04S	5/2/13	49	5.1
K2-04S	5/2/13 DUP	49	4.9
K2-04S	10/31/13	-	<4
NC2-05A	5/6/13	35 DL	5.8
NC2-05A	5/6/13 DUP	35 DL	5.9
NC2-05A	11/12/13	-	6.1
NC2-06	5/7/13	34 D	5.9
NC2-06	11/12/13	-	5.5
NC2-06A	5/7/13	<0.5	<4
NC2-06A	11/12/13	-	<4
NC2-09	5/21/13	<0.5	<4
NC2-10	5/22/13	44 D	<4
NC2-11D	5/14/13	31	<4
NC2-11D	11/12/13	-	4

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
NC2-11I	5/28/13	31 D	4.7
NC2-11I	11/13/13	-	4.7
NC2-11S	5/28/13	33 D	5.3
NC2-11S	11/13/13	-	4.9
NC2-12D	5/2/13	28 D	4.1
NC2-12D	5/2/13 DUP	29 D	4.1
NC2-12D	11/13/13	-	5.8
NC2-12I	5/28/13	31 D	6.6
NC2-12I	11/13/13	-	6.3
NC2-12S	5/28/13	100 D	4.5
NC2-12S	11/13/13	-	<4
NC2-13	5/7/13	32 D	<4
NC2-13	11/14/13	-	<4
NC2-14S	1/14/13	-	<4
NC2-14S	1/14/13 DUP	-	<4
NC2-14S	5/2/13	32 D	-
NC2-14S	7/16/13	-	<4
NC2-14S	7/16/13 DUP	-	<4
NC2-15	5/9/13	33 D	<4
NC2-15	5/9/13 DUP	35	<4
NC2-15	11/5/13	-	<4
NC2-16	2/5/13	-	<4
NC2-16	5/7/13	2.2	-
NC2-16	7/16/13	-	<4
NC2-17	11/5/13	-	7.7
NC2-18	5/2/13	32 D	7.5
NC2-18	11/5/13	-	7.6
NC2-18	11/5/13 DUP	-	7.1
NC2-19	5/9/13	76 D	<4
NC2-19	11/7/13	-	<4
NC2-20	5/21/13	-	<4
NC2-21	5/9/13	30 D	<4
NC7-10	1/9/13	-	14
NC7-10	4/24/13	44 D	-
NC7-10	7/10/13	-	15
NC7-11	4/24/13	45 D	15
NC7-11	10/23/13	-	18
NC7-15	4/22/13	-	<4
NC7-19	4/23/13	30	<4
NC7-19	10/23/13	-	<4
NC7-27	4/23/13	51 D	11
NC7-27	10/30/13	-	11
NC7-27	10/30/13 DUP	-	7.8
NC7-28	1/30/13	-	<4
NC7-28	2/26/13	-	5.8

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
NC7-28	5/29/13	-	<4
NC7-28	5/29/13 DUP	<0.5	<4
NC7-28	9/12/13	-	<4
NC7-28	12/4/13	<0.5	<4
NC7-28	12/4/13 DUP	-	<4
NC7-29	4/29/13	190 DL	10
NC7-29	10/28/13	-	13
NC7-43	4/29/13	1.3 L	<4
NC7-43	10/28/13	-	<4
NC7-44	5/8/13	58 DL	4.2
NC7-44	5/8/13 DUP	62 D	4.5
NC7-44	10/28/13	-	<4
NC7-46	4/29/13	<0.5 L	<4
NC7-56	5/1/13	-	8.5
NC7-58	5/1/13	33 D	6.3
NC7-58	10/29/13	-	6.7
NC7-59	5/1/13	-	8
NC7-59	10/29/13	-	7.5
NC7-60	1/14/13	-	<4
NC7-60	4/23/13	0.85	-
NC7-60	7/10/13	-	<4
NC7-61	1/30/13	-	41 D
NC7-61	1/30/13 DUP	-	43 D
NC7-61	2/26/13	-	42 D
NC7-61	2/26/13 DUP	-	44 D
NC7-61	4/24/13	51	39 D
NC7-61	4/24/13 DUP	51	40 D
NC7-61	5/29/13	-	41 D
NC7-61	5/29/13 DUP	-	39 D
NC7-61	8/7/13	-	40 D
NC7-61	8/7/13 DUP	-	42 D
NC7-61	9/12/13	-	42 D
NC7-61	9/12/13 DUP	-	<4 S
NC7-61	12/5/13	-	41 DL
NC7-61	12/5/13 DUP	-	43 DL
NC7-62	5/1/13	34 D	7.9
NC7-62	10/29/13	-	8.4
NC7-69	4/24/13	<0.5	<4
NC7-69	10/31/13	-	<4
NC7-70	1/9/13	4.4	32 D
NC7-70	2/26/13	-	9.3
NC7-70	7/31/13	-	52 D
NC7-70	9/12/13	-	<4
NC7-70	12/9/13	-	<4
NC7-70	12/9/13 DUP	<0.5	<4

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
NC7-71	1/30/13	0.6	<4
NC7-71	2/26/13	-	<4
NC7-71	5/29/13	0.54	<4
NC7-71	9/12/13	-	<4
NC7-71	12/4/13	<0.5	<4
NC7-72	5/1/13	36 D	7.1
NC7-72	10/29/13	-	6.7
NC7-73	5/1/13	-	8.5
NC7-73	10/29/13	-	7.3
W-850-05	4/29/13	<0.5 L	<4
W-850-05	10/30/13	-	<4
W-850-05	10/30/13 DUP	-	<4
W-850-2145	5/7/13	29 D	7.4
W-850-2145	11/5/13	-	7.4
W-850-2312	5/2/13	-	<4
W-850-2312	11/5/13	-	<4
W-850-2313	4/24/13	-	17
W-850-2313	10/23/13	-	18
W-850-2314	4/23/13	<0.5	<4
W-850-2314	10/23/13	-	<4
W-850-2315	4/29/13	89 D	9.8
W-850-2315	10/28/13	-	11
W-850-2316	5/2/13	-	<4
W-850-2316	11/5/13	-	<4
W-850-2416	1/30/13	-	<4
W-850-2416	2/26/13	-	<4
W-850-2416	5/29/13	1.4	<4
W-850-2416	9/12/13	-	<4
W-850-2416	12/4/13	0.96	<4
W-850-2417	1/30/13	-	<4
W-850-2417	2/26/13	-	<4
W-850-2417	5/29/13	<0.5	<4
W-850-2417	9/12/13	-	<4
W-850-2417	12/4/13	<0.5	<4
W-850-2805	6/4/13	1.9	<4
W-850-2805	11/14/13	-	<4 HL
W-865-02	1/10/13	42	<4
W-865-02	7/15/13	37 D	-
W-865-1802	4/11/13	29 D	<4
W-865-1803	4/11/13	-	<4
W-865-1803	11/4/13	-	<4
W-865-2005	1/23/13	34	<4
W-865-2005	1/23/13 DUP	34	<4
W-865-2005	4/29/13	-	<4
W-865-2005	4/29/13 DUP	-	<4

Table B-5.02. Building 850 area in Operable Unit 5 nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-865-2005	7/9/13	30 D	<4
W-865-2005	7/9/13 DUP	31 D	<4
W-865-2005	11/12/13	-	<4
W-865-2005	11/12/13 DUP	-	<4
W-865-2121	1/17/13	42 DLO	<4
W-865-2121	7/16/13	44 D	-
W-865-2133	1/16/13	<0.5	<4
W-865-2133	5/21/13	-	<4
W-865-2133	7/16/13	<0.5	<4
W-865-2133	11/11/13	-	<4
W-865-2224	1/16/13	-	<4
W-865-2224	5/21/13	<0.5	<4
W-865-2224	7/16/13	-	<4
W-865-2224	11/11/13	<0.5	<4
W-PIT1-2209	1/17/13	-	<4
W-PIT1-2209	4/11/13	50	<4
W-PIT1-2209	7/9/13	-	<4
W-PIT1-2209	11/6/13	52	<4
W-PIT1-2225	1/15/13	-	<4
W-PIT1-2225	5/23/13	<0.5	<4
W-PIT1-2225	7/17/13	-	<4
W-PIT1-2225	11/7/13	<0.5	<4
W-PIT1-2326	2/13/13	33	7.5
W-PIT1-2326	5/8/13	34	4.9
W-PIT1-2326	7/10/13	33	6.4
W-PIT1-2326	11/13/13	32	6.6
W-PIT1-2326	11/13/13 DUP	32	6.1
W-PIT1-2620	2/12/13	-	5.7
W-PIT1-2620	5/6/13	40 DL	5.5
W-PIT1-2620	7/9/13	-	6.5
W-PIT1-2620	11/26/13	-	5.8
W-PIT7-16	4/22/13	<0.5	<4
W-PIT7-16	10/22/13	-	<4

Table B-5.03. Building 850 area in Operable Unit 5 metals in ground water.

Location	Date	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Vanadium (mg/L)	Zinc (mg/L)
K1-02B	1/28/13	0.014	<0.025	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	<0.002	<0.0005	41	0.056	<0.02
K1-02B	1/28/13 DUP	0.014	<0.025	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	0.002	<0.0005	41	0.057	<0.02
K1-02B	4/10/13	0.011	<0.025	<0.0005	<0.0005	-	<0.025	0.013	-	<0.002	-	-	<0.005	-	-	-	0.039	<0.02
K1-02B	4/10/13 DUP	0.011	<0.025	<0.0005	<0.0005	-	<0.025	0.015	-	<0.002	-	-	<0.005	-	-	-	0.041	0.022
K1-02B	7/10/13	0.012	0.025	<0.0005	<0.0005	<0.003	<0.025	0.011	<0.05	<0.002	<0.01	<0.0002	<0.005	0.0021	<0.0005	45	0.049	0.025
K1-02B	7/10/13 DUP	0.012	<0.025	<0.0005	<0.0005	<0.003	<0.025	0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	0.0021	<0.0005	46	0.048	0.023
K1-02B	11/5/13	0.011	0.025	<0.0005	<0.0005	-	<0.025	0.013	-	<0.002	-	-	<0.005	-	-	-	0.047	0.021
K1-04	1/14/13	0.0068	0.026	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	0.018	<0.0002	<0.005	0.0025	<0.0005	39	0.026	0.077
K1-04	2/25/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01 O
K1-04	3/5/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01 B
K1-04	4/23/13	0.0093	0.028	<0.0005	<0.0005	-	<0.025	<0.01 F	-	<0.002	-	-	<0.005	-	-	-	0.028	0.036
K1-04	7/16/13	0.0069	0.029	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	0.014	<0.0002 O	<0.005	0.0026	<0.0005	38	0.025	0.058
K1-04	8/12/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.019
K1-04	8/19/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005
K1-04	11/11/13	0.011	0.028	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.034	<0.02
K1-05	2/14/13	0.013	0.036	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	<0.002 O	<0.0005	42	0.064 F	<0.02
K1-05	4/10/13	0.014	0.033	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.056	<0.02
K1-05	7/15/13	0.013	0.036	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	<0.002	<0.0005	46	0.054	<0.02
K1-05	11/7/13	0.014	0.039	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.064	<0.02
K1-07	1/16/13	0.013	0.029	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	<0.002	<0.0005	45	0.069	<0.02 J
K1-07	4/22/13	0.013	0.028	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.06	<0.02
K1-07	7/16/13	0.013	0.031	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002 O	<0.005	<0.002	<0.0005	42	0.064	<0.02
K1-07	11/5/13	0.013	0.029	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.067	<0.02
K1-08	1/15/13	0.016	0.043	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	<0.002	<0.0005	45	0.066	<0.02
K1-08	4/22/13	0.015	0.044	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.059	<0.02
K1-08	7/15/13	0.013	0.038	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	<0.002	<0.0005	45	0.055	<0.02
K1-08	11/5/13	0.014	0.042	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.062	<0.02
K1-09	1/16/13	0.013	0.044	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	<0.002	<0.0005	45	0.059	<0.02 J
K1-09	4/23/13	0.014	0.046	<0.0005	<0.0005	-	<0.025	<0.01 F	-	<0.002	-	-	<0.005	-	-	-	0.057	<0.02
K1-09	7/15/13	0.013	0.043	<0.0005	<0.0005	<0.003	<0.025	<0.01	<0.05	<0.002	<0.01	<0.0002	<0.005	<0.002	<0.0005	48	0.052	<0.02
K1-09	11/4/13	0.013	0.045	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.06	<0.02
NC7-28	1/30/13	0.022	0.35	-	<0.001	0.0047	-	-	-	<0.001	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-28	5/29/13	0.035	0.25	-	<0.001	<0.001	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-28	12/4/13	0.025	0.18	-	<0.001	<0.001	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-61	1/30/13	0.019	0.093	-	<0.001	0.0032	-	-	-	<0.001	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-61	1/30/13 DUP	0.019	0.092	-	<0.001	0.0031	-	-	-	<0.001	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-61	4/24/13	0.02	0.088	-	<0.001	<0.001	-	-	-	<0.005	-	<0.0002	-	0.0023	<0.001	-	-	-
NC7-61	4/24/13 DUP	0.02	0.089	-	<0.001	<0.001	-	-	-	<0.005	-	<0.0002	-	0.0023	<0.001	-	-	-
NC7-61	8/7/13	0.018	0.088	-	<0.001	<0.003	-	-	-	<0.001	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-61	8/7/13 DUP	0.018	0.087	-	<0.001	<0.003	-	-	-	<0.001	-	<0.0002	-	0.002	<0.001	-	-	-
NC7-61	12/5/13	0.019	0.088	-	<0.001	0.002	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-61	12/5/13 DUP	0.019	0.087	-	<0.001	0.002	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-70	1/9/13	0.017	0.046	-	<0.001	<0.003	-	-	-	<0.001	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-70	12/9/13	0.0078	0.15	-	<0.001	0.0018	-	-	-	<0.005	-	<0.0002	-	0.014	<0.001	-	-	-

Table B-5.03. Building 850 area in Operable Unit 5 metals in ground water.

Location	Date	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Vanadium (mg/L)	Zinc (mg/L)
NC7-71	1/30/13	0.0061	0.04	-	<0.0005	<0.001	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-71	5/29/13	0.0055	0.04	-	<0.0005	<0.001	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
NC7-71	12/4/13	0.0064	0.04	-	<0.0005	<0.001	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
W-850-2416	1/30/13	<0.002	0.035	-	<0.001	<0.003	-	-	-	<0.001	-	<0.0002	-	<0.002	<0.001	-	-	-
W-850-2416	5/29/13	0.0022	0.032	-	<0.001	<0.001	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
W-850-2416	12/4/13	<0.002	0.034	-	<0.001	<0.001	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
W-850-2417	1/30/13	0.019	0.15	-	<0.001	0.0035	-	-	-	<0.001	-	<0.0002	-	<0.002	<0.001	-	-	-
W-850-2417	5/29/13	0.0061	0.12	-	<0.001	<0.001	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
W-850-2417	12/4/13	0.002	0.13	-	<0.001	<0.001	-	-	-	<0.005	-	<0.0002	-	<0.002	<0.001	-	-	-
W-865-02	1/10/13	0.0087	<0.02	-	<0.0005	<0.001	-	-	-	<0.005	-	<0.0002 L	-	<0.002	<0.001	-	-	-
W-865-2005	1/23/13	0.012	0.03	-	0.003	<0.001	-	-	-	<0.005	-	<0.0002	-	0.0021	<0.001	-	-	-
W-865-2005	1/23/13 DUP	0.012	0.03	-	0.001	<0.001	-	-	-	<0.005	-	<0.0002	-	0.002	<0.001	-	-	-
W-865-2121	1/17/13	0.008	<0.02	-	<0.0005	<0.001	-	-	-	<0.005	-	<0.0002	-	0.0028	<0.001	-	-	-
W-865-2133	1/16/13	0.017	0.02	-	<0.0001	0.0006	-	-	-	<0.0002	-	<0.0002	-	<0.002	<0.0001	-	-	-
W-PIT1-2326	2/13/13	0.012	0.036	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.047	<0.02
W-PIT1-2326	5/8/13	0.012	0.035	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.048	<0.02
W-PIT1-2326	7/10/13	0.012	0.034	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.048	<0.02
W-PIT1-2326	11/13/13	0.011	0.036 B	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.048	<0.02
W-PIT1-2326	11/13/13 DUP	0.012	0.035	<0.0005	<0.0005	-	<0.025	<0.01	-	<0.002	-	-	<0.005	-	-	-	0.049	<0.02
W-PIT1-2620	5/6/13	0.014	0.04	-	<0.0005	<0.001	-	-	-	<0.005	-	<0.0002	-	0.003	<0.001	-	-	-

Table B-5.04. Building 850 area in Operable Unit 5 polychlorinated biphenyl (PCB) compounds in ground water.

Location	Date	PCB 1016 (µg/L)	PCB 1221 (µg/L)	PCB 1232 (µg/L)	PCB 1242 (µg/L)	PCB 1248 (µg/L)	PCB 1254 (µg/L)	PCB 1260 (µg/L)
NC7-61	4/24/13	<0.5 D	<0.5 D	<0.5 D	<0.5 D	<0.5 D	<0.5 D	<0.5 D
NC7-61	4/24/13 DUP	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-5.05. Building 850 area in Operable Unit 5 total uranium and uranium isotopes in ground water.

Location	Date	Uranium (pCi/L)	Uranium (µg/L)	Uranium 234 and Uranium 233 (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 (pCi/L)	Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
K1-02B	1/28/13	-	-	2.58 ± 0.433	-	<0.1	-	-	1.35 ± 0.264	-	-
K1-02B	1/28/13 DUP	-	-	2.60 ± 0.466	-	<0.1	-	-	1.15 ± 0.252	-	-
K1-02B	4/10/13	-	-	2.72 ± 0.688	-	0.152 ± 0.135	-	-	1.62 ± 0.472	-	-
K1-02B	4/10/13 DUP	-	-	2.34 ± 0.504	-	<0.1	-	-	1.40 ± 0.343	-	-
K1-02B	7/10/13	-	-	2.78 ± 0.676	-	0.140 ± 0.124	-	-	1.41 ± 0.412	-	-
K1-02B	7/10/13 DUP	-	-	2.40 ± 0.522	-	<0.1	-	-	1.64 ± 0.393	-	-
K1-02B	11/5/13	-	-	2.68 ± 0.424	-	<0.1	-	-	1.44 ± 0.254	-	-
K1-04	1/14/13	-	-	0.999 ± 0.206	-	<0.1	-	-	0.536 ± 0.133	-	-
K1-04	4/23/13	-	-	1.01 ± 0.395	-	<0.1	-	-	0.583 ± 0.282	-	-
K1-04	7/16/13	-	-	1.19 ± 0.321	-	<0.1	-	-	0.767 ± 0.238	-	-
K1-04	11/11/13	-	-	1.29 ± 0.265	-	<0.1 O	-	-	0.462 ± 0.133 O	-	-
K1-05	2/14/13	-	-	2.19 ± 0.391	-	<0.1	-	-	0.845 ± 0.191	-	-
K1-05	4/10/13	-	-	1.83 ± 0.393	-	0.101 ± 0.0786	-	-	1.03 ± 0.261	-	-
K1-05	7/15/13	-	-	2.21 ± 0.525	-	0.151 ± 0.120	-	-	1.04 ± 0.307	-	-
K1-05	11/7/13	-	-	2.02 ± 0.367	-	<0.1 O	-	-	1.02 ± 0.220 O	-	-
K1-07	1/16/13	-	-	2.03 ± 0.391	-	<0.1	-	-	0.938 ± 0.222	-	-
K1-07	4/22/13	2.90 ± 0.0820	-	1.68 ± 0.493	1.90 ± 0.0810	<0.1	0.0420 ± 0.000490	<0.00017	0.808 ± 0.307	0.900 ± 0.00850	0.00725 ± 0.0000510
K1-07	7/16/13	-	-	2.17 ± 0.370	-	<0.1	-	-	0.851 ± 0.181	-	-
K1-07	11/5/13	-	-	2.01 ± 0.325	-	<0.1	-	-	0.844 ± 0.166	-	-
K1-08	1/15/13	-	-	1.82 ± 0.348	-	<0.1	-	-	0.833 ± 0.195	-	-
K1-08	4/22/13	-	-	2.04 ± 0.318	-	<0.1	-	-	1.02 ± 0.182	-	-
K1-08	7/15/13	-	-	1.64 ± 0.420	-	<0.1	-	-	1.04 ± 0.311	-	-
K1-08	11/5/13	-	-	2.02 ± 0.339	-	<0.1	-	-	0.858 ± 0.177	-	-
K1-09	1/16/13	-	-	2.11 ± 0.391	-	0.109 ± 0.0673	-	-	0.926 ± 0.211	-	-
K1-09	4/23/13	-	-	2.00 ± 0.559	-	<0.1	-	-	0.812 ± 0.307	-	-
K1-09	7/15/13	-	-	2.09 ± 0.465	-	<0.1	-	-	1.26 ± 0.320	-	-
K1-09	11/4/13	-	-	2.34 ± 0.375	-	<0.1	-	-	1.06 ± 0.199	-	-
K2-03	4/11/13	-	-	4.07 ± 0.781	-	<0.1	-	-	3.19 ± 0.638	-	-
K2-04D	5/2/13	-	-	1.95 ± 0.386	-	<0.1	-	-	0.997 ± 0.235	-	-
NC2-05A	5/6/13	-	-	2.22 ± 0.393	-	<0.1	-	-	1.41 ± 0.274	-	-
NC2-05A	5/6/13 DUP	-	-	2.09 ± 0.404	-	<0.1	-	-	1.56 ± 0.323	-	-
NC2-06	5/7/13	-	-	1.78 ± 0.376	-	<0.1	-	-	0.968 ± 0.242	-	-
NC2-06A	5/7/13	0.380 ± 0.0160	-	-	0.210 ± 0.0160	-	0.00650 ± 0.000110	<0.00021	-	0.160 ± 0.00140	0.00636 ± 0.0000890
NC2-09	5/21/13	-	-	<0.1	-	<0.1	-	-	<0.1	-	-
NC2-10	5/22/13	-	-	2.63 ± 0.495	-	<0.1	-	-	1.58 ± 0.332	-	-
NC2-11D	5/14/13	4.90 ± 0.0950	-	-	2.90 ± 0.0940	-	0.0860 ± 0.000870	<0.00036	-	1.90 ± 0.00860	0.00718 ± 0.0000650
NC2-11I	5/28/13	-	-	2.39 ± 0.484	-	<0.1	-	-	1.37 ± 0.318	-	-
NC2-11S	5/28/13	-	-	2.54 ± 0.488	-	<0.1	-	-	1.41 ± 0.311	-	-
NC2-12D	5/2/13	-	-	1.99 ± 0.416	-	<0.1	-	-	1.13 ± 0.274	-	-
NC2-12D	5/2/13 DUP	-	-	1.82 ± 0.395	-	<0.1	-	-	1.02 ± 0.262	-	-
NC2-12I	5/28/13	-	-	1.85 ± 0.387	-	<0.1	-	-	1.25 ± 0.291	-	-
NC2-12S	5/28/13	-	-	3.60 ± 0.866	-	0.130 ± 0.130	-	-	2.22 ± 0.597	-	-
NC2-13	5/7/13	-	-	4.07 ± 0.759	-	0.136 ± 0.0922	-	-	2.66 ± 0.533	-	-
NC2-14S	5/2/13	-	-	2.13 ± 0.440	-	0.116 ± 0.0829	-	-	1.27 ± 0.300	-	-
NC2-15	5/9/13	-	-	1.87 ± 0.370	-	<0.1	-	-	1.08 ± 0.245	-	-
NC2-15	5/9/13 DUP	-	-	1.97 ± 0.380	-	<0.1	-	-	1.09 ± 0.230	-	-
NC2-18	5/2/13	-	-	1.90 ± 0.453	-	<0.1	-	-	1.63 ± 0.403	-	-
NC2-18	11/5/13	-	-	1.83 ± 0.300	-	<0.1	-	-	1.56 ± 0.263	-	-
NC2-18	11/5/13 DUP	-	-	1.97 ± 0.321	-	0.111 ± 0.0550	-	-	1.58 ± 0.268	-	-
NC2-20	5/21/13	-	-	2.92 ± 0.644	-	0.111 ± 0.109	-	-	2.31 ± 0.536	-	-

Table B-5.05. Building 850 area in Operable Unit 5 total uranium and uranium isotopes in ground water.

Location	Date	Uranium (pCi/L)	Uranium (µg/L)	Uranium 234 and Uranium 233 (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 (pCi/L)	Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
NC7-10	4/24/13	2.60 ± 0.0580	-	-	1.50 ± 0.0580	-	0.0450 ± 0.000310	<0.00089	-	1.00 ± 0.00610	0.00683 ± 0.0000240
NC7-11	4/24/13	-	-	1.46 ± 0.324	-	<0.1	-	-	0.958 ± 0.242	-	-
NC7-15	4/22/13	-	-	1.06 ± 0.188	-	<0.1	-	-	1.04 ± 0.185	-	-
NC7-27	4/23/13	-	-	1.93 ± 0.409	-	0.143 ± 0.0912	-	-	1.49 ± 0.336	-	-
NC7-28	1/30/13	24.0 ± 0.460	66.7 ± 6.72	-	6.20 ± 0.450	-	0.300 ± 0.00380	0.0930 ± 0.000480	-	17.0 ± 0.120	0.00272 ± 0.0000290
NC7-28	2/26/13	-	67.6 ± 6.75	-	-	-	-	-	-	-	-
NC7-28	5/29/13	9.80 ± 0.130	18.6 ± 1.73	-	2.50 ± 0.130	-	0.120 ± 0.00190	0.0390 ± 0.000180	-	7.20 ± 0.0230	0.00270 ± 0.0000410
NC7-28	9/12/13	-	13.5 ± 1.17	-	-	-	-	-	-	-	-
NC7-28	12/4/13	4.60 ± 0.0460	9.73 ± 0.837	-	1.30 ± 0.0440	-	0.0560 ± 0.000340	0.0180 ± 0.0000310	-	3.20 ± 0.0120	0.00270 ± 0.0000130
NC7-29	4/29/13	-	-	10.0 ± 1.37	-	0.392 ± 0.107	-	-	8.48 ± 1.17	-	-
NC7-43	4/29/13	-	-	0.129 ± 0.0708	-	<0.1	-	-	<0.1	-	-
NC7-44	5/8/13	-	-	1.33 ± 0.293	-	<0.1	-	-	0.769 ± 0.200	-	-
NC7-44	5/8/13 DUP	-	-	1.13 ± 0.240	-	0.104 ± 0.0500	-	-	0.650 ± 0.150	-	-
NC7-46	4/29/13	-	-	<0.1	-	<0.1	-	-	<0.1	-	-
NC7-56	5/1/13	-	-	2.04 ± 0.336	-	<0.1	-	-	1.51 ± 0.264	-	-
NC7-59	5/1/13	-	-	1.87 ± 0.310	-	<0.1	-	-	1.63 ± 0.277	-	-
NC7-61	1/30/13	-	8.31 ± 0.836	-	-	-	-	-	-	-	-
NC7-61	1/30/13 DUP	-	8.67 ± 0.873	-	-	-	-	-	-	-	-
NC7-61	2/26/13	-	8.69 ± 0.869	-	-	-	-	-	-	-	-
NC7-61	2/26/13 DUP	-	9.30 ± 0.928	-	-	-	-	-	-	-	-
NC7-61	4/24/13	4.50 ± 0.130	7.30 ± 0.676	-	2.00 ± 0.130	-	0.0660 ± 0.000550	0.00930 ± 0.0000180	-	2.40 ± 0.00580	0.00422 ± 0.0000330
NC7-61	4/24/13 DUP	4.60 ± 0.120	6.94 ± 0.645	-	2.10 ± 0.120	-	0.0670 ± 0.00100	0.00880 ± 0.000140	-	2.40 ± 0.0220	0.00427 ± 0.0000560
NC7-61	5/29/13	-	7.50 ± 0.702	-	-	-	-	-	-	-	-
NC7-61	5/29/13 DUP	-	8.03 ± 0.751	-	-	-	-	-	-	-	-
NC7-61	8/7/13	-	6.60 ± 0.838 O	-	-	-	-	-	-	-	-
NC7-61	8/7/13 DUP	-	6.70 ± 0.846 O	-	-	-	-	-	-	-	-
NC7-61	9/12/13	-	6.86 ± 0.591	-	-	-	-	-	-	-	-
NC7-61	9/12/13 DUP	-	<0.1 S	-	-	-	-	-	-	-	-
NC7-61	12/5/13	-	6.66 ± 0.572 O	-	-	-	-	-	-	-	-
NC7-61	12/5/13 DUP	-	6.58 ± 0.566 O	-	-	-	-	-	-	-	-
NC7-69	4/24/13	-	-	<0.1	-	<0.1	-	-	<0.1	-	-
NC7-70	1/9/13	1.30 ± 0.0290	1.44 ± 0.130	-	0.870 ± 0.0290	-	0.0200 ± 0.000310	<0.00032	-	0.440 ± 0.00340	0.00687 ± 0.0000960
NC7-70	2/26/13	-	2.07 ± 0.208	-	-	-	-	-	-	-	-
NC7-70	9/12/13	-	0.489 ± 0.0424	-	-	-	-	-	-	-	-
NC7-70	12/9/13	0.120 ± 0.00390	0.236 ± 0.0204 O	-	0.0790 ± 0.00380	-	0.00170 ± 0.0000280	<0.00004	-	0.0420 ± 0.000460	0.00646 ± 0.0000750
NC7-71	1/30/13	<0.0627	<0.1	-	<0.04	-	0.000620 ± 0.0000160	<0.000087	-	0.0140 ± 0.000160	0.00679 ± 0.000161
NC7-71	2/26/13	-	<0.1	-	-	-	-	-	-	-	-
NC7-71	5/29/13	<0.0627	<0.1	-	<0.038	-	<0.00071	<0.000079	-	0.0150 ± 0.000630	<0.007327
NC7-71	9/12/13	-	<0.1	-	-	-	-	-	-	-	-
NC7-71	12/4/13	<0.0627	<0.1	-	<0.062	-	0.000650 ± 0.0000210	<0.000032	-	0.0160 ± 0.000150	0.00644 ± 0.000201
NC7-73	5/1/13	-	-	2.07 ± 0.340	-	<0.1	-	-	1.86 ± 0.310	-	-
W-850-05	4/29/13	-	-	<0.1	-	<0.1	-	-	<0.1	-	-
W-850-05	10/30/13	0.0890 ± 0.00330	-	-	<0.062	-	0.00130 ± 0.0000140	<0.0000056	-	0.0290 ± 0.000100	0.00710 ± 0.0000730
W-850-2313	4/24/13	5.00 ± 0.130	-	2.69 ± 0.417	2.70 ± 0.130	0.108 ± 0.0598	0.100 ± 0.00120	<0.00042	2.18 ± 0.348	2.20 ± 0.0160	0.00729 ± 0.0000690
W-850-2314	4/23/13	-	-	<0.1	-	<0.1	-	-	<0.1	-	-
W-850-2315	4/29/13	-	-	11.4 ± 1.56	-	0.531 ± 0.130	-	-	8.67 ± 1.20	-	-
W-850-2316	5/2/13	-	-	7.45 ± 1.21	-	0.237 ± 0.111	-	-	5.34 ± 0.895	-	-
W-850-2416	1/30/13	<0.0627	<0.1	-	<0.055	-	0.00110 ± 0.0000290	<0.000086	-	0.0290 ± 0.000320	0.00595 ± 0.000141
W-850-2416	2/26/13	-	0.136 ± 0.0163	-	-	-	-	-	-	-	-
W-850-2416	5/29/13	<0.0627	<0.1	-	<0.044	-	0.00100 ± 0.0000490	<0.000058	-	0.0260 ± 0.000530	0.00626 ± 0.000265

Table B-5.05. Building 850 area in Operable Unit 5 total uranium and uranium isotopes in ground water.

Location	Date	Uranium (pCi/L)	Uranium (µg/L)	Uranium 234 and Uranium 233 (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 (pCi/L)	Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
W-850-2416	9/12/13	-	<0.1	-	-	-	-	-	-	-	-
W-850-2416	12/4/13	<0.0627	<0.1	-	<0.046	-	0.00110 ± 0.0000220	<0.000052	-	0.0300 ± 0.000460	0.00581 ± 0.0000700
W-850-2417	1/30/13	0.600 ± 0.0160	1.59 ± 0.160	-	0.160 ± 0.0160	-	0.00780 ± 0.0000590	<0.007	-	0.430 ± 0.00150	0.00279 ± 0.0000190
W-850-2417	2/26/13	-	2.11 ± 0.220	-	-	-	-	-	-	-	-
W-850-2417	5/29/13	3.10 ± 0.0650	7.98 ± 0.746	-	0.780 ± 0.0650	-	0.0380 ± 0.000530	0.0120 ± 0.0000650	-	2.20 ± 0.0110	0.00262 ± 0.0000340
W-850-2417	9/12/13	-	6.90 ± 0.594	-	-	-	-	-	-	-	-
W-850-2417	12/4/13	2.10 ± 0.0140	4.20 ± 0.362	-	0.560 ± 0.0120	-	0.0250 ± 0.000300	0.00830 ± 0.0000260	-	1.50 ± 0.00610	0.00259 ± 0.0000290
W-850-2805	6/4/13	-	-	<0.1	-	<0.1	-	-	<0.1	-	-
W-865-1802	4/11/13	-	-	1.04 ± 0.278	-	<0.1	-	-	0.812 ± 0.237	-	-
W-865-2133	1/16/13	-	-	1.79 ± 0.376	-	<0.1	-	-	1.49 ± 0.323	-	-
W-865-2133	7/16/13	-	-	2.09 ± 0.542	-	<0.1	-	-	1.59 ± 0.444	-	-
W-865-2224	5/21/13	-	-	0.167 ± 0.0946	-	<0.1	-	-	<0.1	-	-
W-865-2224	11/11/13	-	-	0.195 ± 0.0894	-	<0.1 O	-	-	0.104 ± 0.0608 O	-	-
W-PIT1-2209	4/11/13	-	-	1.74 ± 0.424	-	0.105 ± 0.0924	-	-	0.896 ± 0.268	-	-
W-PIT1-2209	11/6/13	-	-	2.03 ± 0.322	-	<0.1	-	-	1.07 ± 0.194	-	-
W-PIT1-2225	5/23/13	-	-	<0.1	-	<0.1	-	-	<0.1	-	-
W-PIT1-2225	11/7/13	-	-	<0.1	-	<0.1 O	-	-	<0.1 O	-	-
W-PIT1-2326	2/13/13	-	-	2.14 ± 0.364	-	<0.1	-	-	1.07 ± 0.211	-	-
W-PIT1-2326	5/8/13	-	-	2.32 ± 0.498	-	<0.1	-	-	1.33 ± 0.329	-	-
W-PIT1-2326	7/10/13	-	-	2.18 ± 0.526	-	<0.1	-	-	1.31 ± 0.365	-	-
W-PIT1-2326	11/13/13	-	-	2.42 ± 0.454	-	<0.1 O	-	-	1.42 ± 0.301 O	-	-
W-PIT1-2326	11/13/13 DUP	-	-	2.20 ± 0.384	-	<0.1 O	-	-	1.02 ± 0.212 O	-	-
W-PIT7-16	4/22/13	-	-	0.107 ± 0.108	-	<0.1	-	-	<0.1	-	-

Table B-5.06. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
K1-02B	1/28/13	3650 ± 735
K1-02B	1/28/13 DUP	3860 ± 775
K1-02B	4/10/13	3780 ± 765
K1-02B	4/10/13 DUP	3580 ± 721
K1-02B	7/10/13	3070 ± 624
K1-02B	11/5/13	3170 ± 643
K1-04	1/14/13	416 ± 118
K1-04	4/23/13	438 ± 125
K1-04	7/16/13	408 ± 118
K1-04	11/11/13	549 ± 143
K1-05	2/14/13	184 ± 76.4
K1-05	4/10/13	227 ± 92.9
K1-05	7/15/13	207 ± 84.2
K1-05	11/7/13	235 ± 88.8
K1-07	1/16/13	<100
K1-07	4/22/13	<100
K1-07	7/16/13	<100
K1-07	11/5/13	<100
K1-08	1/15/13	188 ± 78.2
K1-08	4/22/13	190 ± 84.4
K1-08	7/15/13	198 ± 83.6
K1-08	11/5/13	125 ± 80.8
K1-09	1/16/13	267 ± 92.6
K1-09	2/25/13	128 ± 71.2
K1-09	3/5/13	186 ± 76.7
K1-09	4/23/13	199 ± 84.9
K1-09	7/25/13	229 ± 82.9
K1-09	11/4/13	233 ± 93.9
K2-03	4/11/13	104 ± 65.5
K2-03	11/4/13	<100
K2-04D	5/2/13	3400 ± 691
K2-04D	10/31/13	3120 ± 637
K2-04S	5/2/13	4630 ± 927
K2-04S	5/2/13 DUP	4650 ± 932
K2-04S	10/31/13	4010 ± 810
NC2-05A	5/6/13	3110 ± 635
NC2-05A	5/6/13 DUP	2730 ± 556
NC2-05A	11/12/13	3160 ± 647
NC2-06	5/7/13	5100 ± 1020
NC2-06	11/12/13	5410 ± 1080
NC2-06A	5/7/13	<100
NC2-06A	11/12/13	<100
NC2-09	5/21/13	<100
NC2-09	11/12/13	<100
NC2-10	5/22/13	426 ± 128

Table B-5.06. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
NC2-10	11/13/13	516 ± 144
NC2-11D	5/14/13	2810 ± 577
NC2-11D	11/12/13	2760 ± 568
NC2-11I	5/28/13	3700 ± 746
NC2-11I	11/13/13	4100 ± 827
NC2-11S	5/28/13	3650 ± 737
NC2-11S	11/13/13	3890 ± 787
NC2-12D	5/2/13	4880 ± 976
NC2-12D	5/2/13 DUP	4580 ± 915
NC2-12D	11/13/13	5430 ± 1090
NC2-12I	5/28/13	4740 ± 946
NC2-12I	11/13/13	5060 ± 1010
NC2-12S	5/28/13	2330 ± 483
NC2-12S	11/13/13	2670 ± 553
NC2-13	5/7/13	1250 ± 276
NC2-13	11/14/13	1060 ± 247
NC2-14S	5/2/13	2810 ± 578
NC2-14S	11/4/13	3190 ± 653
NC2-15	5/9/13	3310 ± 675
NC2-15	5/9/13 DUP	3440 ± 530
NC2-15	11/5/13	3030 ± 618
NC2-16	5/7/13	565 ± 146
NC2-16	11/4/13	656 ± 168
NC2-17	11/5/13	8140 ± 1600
NC2-18	5/2/13	8330 ± 1640
NC2-18	11/5/13	7280 ± 1440
NC2-18	11/5/13 DUP	7460 ± 1470
NC2-19	5/9/13	<100
NC2-19	11/7/13	<100
NC2-20	5/21/13	<100
NC2-21	5/9/13	<100
NC7-10	4/24/13	12600 ± 2460
NC7-10	10/30/13	12600 ± 2470
NC7-10	10/30/13 DUP	13200 ± 2000
NC7-11	4/24/13	8830 ± 1740
NC7-11	10/23/13	10200 ± 2000
NC7-15	4/22/13	646 ± 167
NC7-15	10/22/13	658 ± 164
NC7-19	4/23/13	1920 ± 402
NC7-19	10/23/13	1710 ± 364
NC7-27	4/23/13	7630 ± 1500
NC7-27	10/30/13	7820 ± 1540
NC7-27	10/30/13 DUP	8100 ± 1200
NC7-28	5/29/13	19200 ± 3740
NC7-28	12/4/13	16800 ± 3280

Table B-5.06. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
NC7-29	4/29/13	<100
NC7-29	10/28/13	<100
NC7-43	4/29/13	6070 ± 1200
NC7-43	10/28/13	5800 ± 1150
NC7-44	5/8/13	<100
NC7-44	5/8/13 DUP	<100
NC7-44	10/28/13	<100
NC7-46	4/29/13	<100
NC7-56	5/1/13	6730 ± 1330
NC7-58	5/1/13	5190 ± 1030
NC7-58	10/29/13	5530 ± 1100
NC7-59	5/1/13	6620 ± 1310
NC7-59	10/29/13	6310 ± 1250
NC7-60	4/23/13	1020 ± 235
NC7-60	10/23/13	994 ± 226
NC7-61	4/24/13	19500 ± 3800
NC7-61	4/24/13 DUP	19000 ± 3710
NC7-61	12/5/13	19200 ± 3740
NC7-61	12/5/13 DUP	19000 ± 3710
NC7-62	5/1/13	6320 ± 1250
NC7-62	10/29/13	7490 ± 1480
NC7-69	4/24/13	<100
NC7-69	10/31/13	<100
NC7-70	12/9/13	24000 ± 4670
NC7-71	5/29/13	3480 ± 704
NC7-71	12/4/13	3180 ± 642
NC7-72	5/1/13	6210 ± 1230
NC7-72	10/29/13	6740 ± 1340
NC7-73	5/1/13	7240 ± 1430
NC7-73	10/29/13	7460 ± 1470
W-850-05	4/29/13	18200 ± 3550
W-850-05	10/30/13	17000 ± 3330
W-850-2145	5/7/13	8560 ± 1690
W-850-2145	11/5/13	7570 ± 1490
W-850-2312	5/2/13	892 ± 211
W-850-2312	11/5/13	546 ± 145
W-850-2313	4/24/13	13700 ± 2680
W-850-2313	10/23/13	13000 ± 2550
W-850-2314	4/23/13	1470 ± 318
W-850-2314	10/23/13	1240 ± 273
W-850-2315	4/29/13	<100
W-850-2315	10/28/13	<100
W-850-2316	5/2/13	8450 ± 1670
W-850-2316	11/5/13	8490 ± 1670
W-850-2416	5/29/13	<100

Table B-5.06. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
W-850-2416	12/4/13	<100
W-850-2417	5/29/13	19200 ± 3740
W-850-2417	12/4/13	18000 ± 3510
W-850-2805	6/4/13	502 ± 132
W-850-2805	11/14/13	542 ± 149
W-865-02	1/10/13	<100
W-865-02	7/15/13	<100
W-865-1802	4/11/13	379 ± 110
W-865-1802	11/4/13	323 ± 109
W-865-1803	4/11/13	2390 ± 491
W-865-1803	11/4/13	2350 ± 490
W-865-2005	1/23/13	<100
W-865-2005	1/23/13 DUP	<100
W-865-2005	4/29/13	<100
W-865-2005	4/29/13 DUP	<100
W-865-2005	7/9/13	<100
W-865-2005	7/9/13 DUP	<100
W-865-2005	11/12/13	<100
W-865-2005	11/12/13 DUP	<100
W-865-2121	6/3/13	<100
W-865-2121	11/14/13	<100
W-865-2133	1/16/13	<100
W-865-2133	5/21/13	<100
W-865-2133	7/16/13	<100
W-865-2133	11/11/13	<100
W-865-2224	1/16/13	<100
W-865-2224	5/21/13	<100
W-865-2224	7/16/13	<100
W-865-2224	11/11/13	<100
W-PIT1-2209	1/17/13	<100
W-PIT1-2209	4/11/13	<100
W-PIT1-2209	7/9/13	<100
W-PIT1-2209	11/6/13	<100
W-PIT1-2225	1/15/13	<100
W-PIT1-2225	5/23/13	<100
W-PIT1-2225	7/17/13	<100
W-PIT1-2225	11/7/13	<100
W-PIT1-2326	2/13/13	2370 ± 488
W-PIT1-2326	5/8/13	2540 ± 522
W-PIT1-2326	7/10/13	2710 ± 555
W-PIT1-2326	11/13/13	2380 ± 491
W-PIT1-2326	11/13/13 DUP	2510 ± 517
W-PIT1-2620	2/12/13	2000 ± 417
W-PIT1-2620	5/6/13	2000 ± 419
W-PIT1-2620	7/9/13	1960 ± 415

Table B-5.06. Building 850 area in Operable Unit 5 tritium in ground and surface water.

Location	Date	Tritium (pCi/L)
W-PIT1-2620	11/26/13	2180 ± 453
W-PIT7-16	4/22/13	<100
W-PIT7-16	10/22/13	<100

Table B-5.07. Building 850 area in Operable Unit 5 high explosive compounds in ground water water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
NC7-10	4/24/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	1.7	<2	<1	<2
NC7-10	10/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	2	<2	<1	<2
NC7-10	10/30/13 DUP	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	1.7	<1.1	2.1	<1.1
NC7-11	10/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-15	4/22/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-15	10/22/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-19	4/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-19	10/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-27	4/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-27	10/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-27	10/30/13 DUP	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
NC7-28	1/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-28	5/29/13	<1.8	<1.8	<1.8 O	<1.8	<1.8 O	<1.8	<1.8	<1.8	<1.8	4.3	4.1	<0.88	<1.8
NC7-28	12/4/13	<1.7 O	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	4.1	<1.7	<0.83 O	<1.7 O
NC7-43	4/29/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-43	10/28/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-44	5/8/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-44	5/8/13 DUP	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
NC7-44	10/28/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-56	5/1/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-60	4/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-60	10/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-61	1/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	8.1	<2	4.2	<2
NC7-61	1/30/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	7.2	<2	4.2	<2
NC7-61	4/24/13	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	4.8	2.7	2.5	<1.5
NC7-61	4/24/13 DUP	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	6.8	3.5	3.6	<1.7
NC7-61	8/7/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	4.7	<2	3	<2
NC7-61	8/7/13 DUP	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	3.4	<1.8	2	<1.8
NC7-61	12/5/13	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	4.5	<1.6	3.1	<1.6
NC7-61	12/5/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	3.9	<2	3	<2
NC7-69	4/24/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-69	10/31/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-70	1/9/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-70	12/9/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-71	1/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-71	5/29/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-71	12/4/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-5.07. Building 850 area in Operable Unit 5 high explosive compounds in ground water water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
NC7-72	5/1/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-72	10/29/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-73	5/1/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-73	10/29/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-850-05	4/29/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-850-05	10/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-850-05	10/30/13 DUP	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
W-850-2313	4/24/13	<1.7 O	<1.7	<1.7	<1.7	<1.7 O	<1.7	<1.7	<1.7	<1.7	<0.85 O	<1.7	<0.85 O	<1.7
W-850-2313	10/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-850-2314	4/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-850-2314	10/23/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-850-2416	1/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-850-2416	5/29/13	<2	<2	<2 O	<2	<2 O	<2	<2	<2	<2	<1	<2	<1	<2
W-850-2416	12/4/13	<2 O	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1 O	<2 O
W-850-2417	1/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.99	<2	<0.99	<2
W-850-2417	5/29/13	<1.8	<1.8	<1.8 O	<1.8	<1.8 O	<1.8	<1.8	<1.8	<1.8	5.4	4.3	<0.88	<1.8
W-850-2417	12/4/13	<2 O	<2	<2	<2	<2	<2	<2	<2	<2	4	<2	<1 O	<2 O
W-PIT7-16	4/22/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-PIT7-16	10/22/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-5.08. Building 850 area in Operable Unit 5 general minerals in ground water.

Constituents of concern	NC7-28	NC7-28	NC7-28	NC7-61	NC7-61	NC7-61	NC7-61	NC7-61	NC7-61	NC7-61	NC7-61	NC7-70
	1/30/13	5/29/13	12/4/13	1/30/13	1/30/13 DUP	4/24/13	4/24/13 DUP	8/7/13	8/7/13 DUP	12/5/13	12/5/13 DUP	1/9/13
Total Alkalinity (as CaCO3) (mg/L)	490	340	250	200	200	200	200	200	200	200	200	160
Aluminum (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bicarbonate Alk (as CaCO3) (mg/L)	490 D	340	250	200	200	200	200	200	200	200	200	160
Calcium (mg/L)	92	68 L	52	50	51	51	51	52	51	50	50	46
Carbonate Alk (as CaCO3) (mg/L)	<8.2 D	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1
Chloride (mg/L)	50	52	51	50	50	49	49	51	51	51	51	52
Copper (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoride (mg/L)	0.6	0.64	0.67 H	0.44	0.44	0.42	0.44	0.47	0.48	0.53	0.5	0.5
Hydroxide Alk (as CaCO3) (mg/L)	<8.2 D	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1
Iron (mg/L)	0.23	0.37 L	0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Magnesium (mg/L)	46	34 L	27	24	24	25	25	25	25	24	24	22
Manganese (mg/L)	3.6	2.7	2.1	<0.03	<0.03	<0.01	<0.01	<0.03	<0.03	<0.01	<0.01	<0.03
Nickel (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate (as N) (mg/L)	<0.5	<0.5	<0.5	12	12	11	12	12	12	11	11	7.3
Nitrate (as NO3) (mg/L)	0.54	<0.44	<0.44	52	52	51	51	51	51	51	51	32
Nitrite (as N) (mg/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
pH (Units)	7.12	7.06	7.55 H	7.67	7.68	7.92 H	7.83 H	7.61 H	7.63 H	7.83 H	7.91 H	7.9
Ortho-Phosphate (mg/L)	0.086 O	<1	<1	0.22 O	0.21 O	<1	<1	0.2	0.2	<1	<1	<0.05
Total Phosphorus (as P) (mg/L)	-	-	-	-	-	-	-	-	-	-	-	<0.15 H
Total Phosphorus (as PO4) (mg/L)	0.71	0.41 H	0.39 H	0.21	0.22	0.19 H	0.22 H	0.21 H	0.37 H	0.28 H	0.21 H	-
Potassium (mg/L)	4.3	3.8	3.6	3.4	3.5	3.4	3.4	3.6	3.6	3.5	3.5	3.8
Sodium (mg/L)	71	61 L	57 L	61	62	62	61	62	62	63	64	46 L
Total dissolved solids (TDS) (mg/L)	660 D	560 D	490 D	480 D	470 D	490 D	480 D	400 DH	480 DH	500 DH	540 DH	400 D
Specific Conductance (µmhos/cm)	1,060 O	824	673 H	708 O	709 O	688 H	684 H	646 H	660 H	666 H	684 H	601
Sulfate (mg/L)	18	30	34	41	41	41	41	41	41	41	42	53
Surfactants (mg/L)	<1 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1 D
Total Hardness (as CaCO3) (mg/L)	420	310	240	220	220	230	230	230	230	220	220	200
Zinc (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Table B-5.08. Building 850 area in Operable Unit 5 general minerals in ground water.

Constituents of concern	NC7-70	NC7-71	NC7-71	NC7-71	W-850-2416	W-850-2416	W-850-2416	W-850-2417	W-850-2417	W-850-2417
	12/9/13	1/30/13	5/29/13	12/4/13	1/30/13	5/29/13	12/4/13	1/30/13	5/29/13	12/4/13
Total Alkalinity (as CaCO3) (mg/L)	160	162	159	161	160	150	160	290	260	250
Aluminum (mg/L)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bicarbonate Alk (as CaCO3) (mg/L)	160	162	159	161	160	150	160	290	260	250
Calcium (mg/L)	35	50	50	49	47	46 L	48	58	51 L	51
Carbonate Alk (as CaCO3) (mg/L)	<4.1	<10	<10	<10	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1
Chloride (mg/L)	61	45 D	45 D	45 D	65	65	64	51	51	51
Copper (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoride (mg/L)	<0.05	0.37	0.38	0.43	0.27	0.28	0.25 H	0.85	0.75	0.74 H
Hydroxide Alk (as CaCO3) (mg/L)	<4.1	<10	<10	<10	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1
Iron (mg/L)	0.43	<0.1	<0.1	<0.1	<0.1	<0.1 L	<0.1	2.6	0.37 L	<0.1
Magnesium (mg/L)	23	20	20	20	20	20 L	20	26	24 L	25
Manganese (mg/L)	0.074	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	2	1.5	1.6
Nickel (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate (as N) (mg/L)	<0.5	-	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrate (as NO3) (mg/L)	<0.44	-	<0.5	<0.5	1	1.4	0.96	<0.5	<0.44	<0.44
Nitrite (as N) (mg/L)	<0.5	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
pH (Units)	6.77 H	7.9	7.7	7.9 H	8.11	8.09	8.05 H	6.79	6.85	6.98 H
Ortho-Phosphate (mg/L)	<1	<0.1	<0.1	<0.1	0.11 O	<1	<1	0.65 O	<1	<1
Total Phosphorus (as P) (mg/L)	-	-	-	-	-	-	-	-	-	-
Total Phosphorus (as PO4) (mg/L)	<0.15 H	<0.1 H	<0.1 H	<0.1 H	<0.15	0.17 H	0.16 H	2.5	0.87 H	1.3 H
Potassium (mg/L)	4.3	6.3	6.2	7	6	5.8	5.6	3.8	3.7	3.8
Sodium (mg/L)	51	45	44	47	60	59 L	59 L	54	52 L	54 L
Total dissolved solids (TDS) (mg/L)	470 D	420	410	400	410 D	420 D	430 D	460 D	450 D	560 D
Specific Conductance (µmhos/cm)	532 H	640 H	620 H	620 H	679 O	666	657 H	728 O	672	636 H
Sulfate (mg/L)	1.8	81 D	80 D	76 DH	85	86	85	16	16	18 H
Surfactants (mg/L)	<0.5	<0.5	<0.5 O	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Hardness (as CaCO3) (mg/L)	180	210	210	210	200	200	200	250	230	230
Zinc (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Table B-5.09. Pit 2 Landfill volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
NC2-08	5/6/13	E601	<0.5	<0.5	<0.5	<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	5/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT2-1935	5/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-5.09 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency
NC2-08	5/6/13	E601	0 of 18
W-PIT2-1934	5/9/13	E601	0 of 18
W-PIT2-1935	5/9/13	E601	0 of 18

Table B-5.10. Pit 2 Landfill total uranium and uranium isotopes in ground water.

Location	Date	Uranium (pCi/L)	Uranium 234 and Uranium 233 (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 (pCi/L)	Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
NC2-08	5/6/13	2.70 ± 0.0790	1.81 ± 0.368	1.60 ± 0.0790	<0.1	0.0460 ± 0.000430	<0.00019	0.863 ± 0.217	1.00 ± 0.00270	0.00713 ± 0.0000640
W-PIT2-1934	5/9/13	3.90 ± 0.0760	-	2.30 ± 0.0760	-	0.0610 ± 0.000880	<0.007	-	1.50 ± 0.00910	0.00643 ± 0.0000830
W-PIT2-1935	5/9/13	2.70 ± 0.0340	-	1.70 ± 0.0330	-	0.0440 ± 0.000490	<0.00018	-	0.950 ± 0.00860	0.00720 ± 0.0000480
W-PIT2-2226	5/23/13	-	<0.1	-	<0.1	-	-	<0.1	-	-
W-PIT2-2226	11/6/13	-	<0.1	-	<0.1	-	-	<0.1	-	-

Table B-5.11. Pit 2 Landfill nitrate, perchlorate, and flouride in ground water.

Location	Date	Fluoride (mg/L)	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
NC2-08	5/6/13	0.3	30 DL	<4
NC2-08	11/12/13	-	-	<4
W-PIT2-1934	5/9/13	<0.05	44 D	<4
W-PIT2-1934	11/11/13	-	-	<4
W-PIT2-1935	5/9/13	<0.05	36 D	<4
W-PIT2-1935	11/11/13	-	-	<4
W-PIT2-2226	1/15/13	-	-	<4
W-PIT2-2226	5/23/13	-	<0.5	<4
W-PIT2-2226	7/17/13	-	-	<4
W-PIT2-2226	11/6/13	-	<0.5	<4

Table B-5.12. Pit 2 Landfill high explosive compounds in ground water.

Location	Date	1,3,5-Trinitro-benzene (µg/L)	1,3-Dinitro-benzene (µg/L)	2,4-Dinitro-toluene (µg/L)	2,6-Dinitro-toluene (µg/L)	2-Amino-4,6-Dinitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6-Dinitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitrobenzene (µg/L)	RDX (µg/L)	TNT (µg/L)
NC2-08	5/6/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-PIT2-1934	5/9/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-PIT2-1935	5/9/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-5.13. Pit 2 Landfill tritium in ground water.

Location	Date	Tritium (pCi/L)
NC2-08	5/6/13	3330 ± 678
NC2-08	11/12/13	3250 ± 664
W-PIT2-1934	5/9/13	1100 ± 252
W-PIT2-1934	11/11/13	1120 ± 250
W-PIT2-1935	5/9/13	1740 ± 374
W-PIT2-1935	11/11/13	1610 ± 344
W-PIT2-2226	1/15/13	<100
W-PIT2-2226	5/23/13	<100
W-PIT2-2226	7/17/13	<100
W-PIT2-2226	11/6/13	<100

Table B-5.14. Pit 2 Landfill metals in ground water.

Constituents of concern	NC2-08	W-PIT2-1934	W-PIT2-1935
	5/6/13	5/9/13	5/9/13
Antimony (mg/L)	<0.0005	<0.0005	<0.0005
Arsenic (mg/L)	0.01	0.01	0.01
Barium (mg/L)	0.04	0.02	0.03
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 (mg/L)	0.027	0.02	0.026
Mercury (mg/L)	<0.0005	<0.0002 L	<0.0002 L
Molybdenum (mg/L)	0.004	0.003	0.002
Nickel (mg/L)	<0.0005	<0.0005	<0.0005
Selenium (mg/L)	0.002	0.001	0.002
Silver (mg/L)	<0.0001	<0.0001	<0.0001
Thallium (mg/L)	<0.0001	<0.0001	<0.0001
Vanadium (mg/L)	0.06	0.07	0.06
Zinc (mg/L)	<0.01	<0.01	<0.01

Table B-5.15. Pit 7 Complex area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
K7-01	6/3/13	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
K7-01	6/3/13 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
K7-03	4/17/13	E601	0.94	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K7-06	4/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K7-09	4/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K7-10	4/16/13	E601	<0.5	<0.5	<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	4/22/13	E601	<0.5	<0.5	<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	4/16/13	E601	<0.5	<0.5	<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	4/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-18	4/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-20	4/23/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5
NC7-21	4/17/13	E601	<0.5	<0.5	<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	4/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-25	10/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-26	4/22/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-34	4/8/13	E601	<0.5	<0.5	<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	4/8/13	E601	<0.5	<0.5	<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	4/22/13	E601	<0.5	<0.5	<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	4/11/13	E601	<0.5	<0.5	<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	4/10/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-51	4/4/13	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
NC7-52	5/8/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5
NC7-52	5/8/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
NC7-64	4/8/13	E601	<0.5	<0.5	<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	10/21/13	E601	<0.5	<0.5	<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	4/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
NC7-67	4/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-75	4/4/13	E601	<0.5	<0.5	<0.5	<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	1/14/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-865-01	7/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-865-1804	1/14/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-865-1804	7/11/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-5.15. Pit 7 Complex area in Operable Unit 5 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-PIT7-03	5/8/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5
W-PIT7-03	5/8/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-PIT7-03	10/30/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-10	4/16/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-12	4/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-PIT7-13	4/3/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-PIT7-13	4/3/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-PIT7-1918	4/22/13	E601	<0.5	<0.5	<0.5	<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	10/22/13	E601	<0.5	<0.5	<0.5	<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	10/22/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-PIT7-2305	4/8/13	E601	<0.5	<0.5	<0.5	<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	10/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2307	6/19/13	E601	4.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2307	10/22/13	E601	4.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2309	4/17/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2703	4/9/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2703	10/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2705	4/15/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2705	4/15/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-PIT7-2705	10/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-5.16 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	Chloro-ethane (µg/L)	Methylene chloride (µg/L)
K7-01	6/3/13	E601	0 of 18	-	-
K7-01	6/3/13 DUP	E601	0 of 18	-	-
K7-03	4/17/13	E601	0 of 18	-	-
K7-06	4/10/13	E601	0 of 18	-	-
K7-09	4/16/13	E601	0 of 18	-	-
K7-10	4/16/13	E601	0 of 18	-	-
NC7-12	4/22/13	E601	0 of 18	-	-
NC7-16	4/16/13	E601	0 of 18	-	-
NC7-17	4/10/13	E601	0 of 18	-	-
NC7-18	4/16/13	E601	0 of 18	-	-
NC7-20	4/23/13	E601	0 of 18	-	-
NC7-21	4/17/13	E601	0 of 18	-	-
NC7-25	4/9/13	E601	0 of 18	-	-
NC7-25	10/21/13	E601	0 of 18	-	-
NC7-26	4/22/13	E601	0 of 18	-	-
NC7-34	4/8/13	E601	0 of 18	-	-
NC7-36	4/8/13	E601	0 of 18	-	-
NC7-40	4/22/13	E601	0 of 18	-	-
NC7-47	4/11/13	E601	0 of 18	-	-
NC7-48	4/10/13	E601	0 of 18	-	-
NC7-51	4/4/13	E601	0 of 18	-	-
NC7-52	5/8/13	E601	0 of 18	-	-
NC7-52	5/8/13 DUP	E601	0 of 18	-	-
NC7-64	4/8/13	E601	0 of 18	-	-
NC7-64	10/21/13	E601	0 of 18	-	-
NC7-65	4/3/13	E601	0 of 18	-	-
NC7-67	4/17/13	E601	0 of 18	-	-
NC7-75	4/4/13	E601	0 of 18	-	-
W-865-01	1/14/13	E601	0 of 18	-	-
W-865-01	7/11/13	E601	0 of 18	-	-
W-865-1804	1/14/13	E601	0 of 18	-	-
W-865-1804	7/11/13	E601	1 of 18	-	0.6 S
W-PIT7-03	5/8/13	E601	0 of 18	-	-

Table B-5.16 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	Chloro-ethane (µg/L)	Methylene chloride (µg/L)
W-PIT7-03	5/8/13 DUP	E601	0 of 18	-	-
W-PIT7-03	10/30/13	E601	0 of 18	-	-
W-PIT7-10	4/16/13	E601	0 of 18	-	-
W-PIT7-12	4/3/13	E601	0 of 18	-	-
W-PIT7-13	4/3/13	E601	0 of 18	-	-
W-PIT7-13	4/3/13 DUP	E601	0 of 18	-	-
W-PIT7-1918	4/22/13	E601	0 of 18	-	-
W-PIT7-1918	10/22/13	E601	0 of 18	-	-
W-PIT7-1918	10/22/13 DUP	E601	0 of 18	-	-
W-PIT7-2305	4/8/13	E601	0 of 18	-	-
W-PIT7-2305	10/21/13	E601	0 of 18	-	-
W-PIT7-2307	6/19/13	E601	0 of 18	-	-
W-PIT7-2307	10/22/13	E601	0 of 18	-	-
W-PIT7-2309	4/17/13	E601	0 of 18	-	-
W-PIT7-2703	4/9/13	E601	0 of 18	-	-
W-PIT7-2703	10/21/13	E601	1 of 18	0.56	-
W-PIT7-2705	4/15/13	E601	0 of 18	-	-
W-PIT7-2705	4/15/13 DUP	E601	0 of 18	-	-
W-PIT7-2705	10/21/13	E601	0 of 18	-	-

Table B-5.16. Pit 7 Complex area in Operable Unit 5 nitrate, perchlorate, flouride, and orthophosphate in ground water.

Location	Date	Fluoride (mg/L)	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)	Ortho-Phosphate (mg/L)
K7-01	6/3/13	0.44	46	9.1	-
K7-01	6/3/13 DUP	0.36	41 D	9.9	-
K7-03	4/17/13	0.25 O	30	7.6	-
K7-06	4/10/13	0.16	15	<4	-
K7-06	10/7/13	-	-	<4	-
K7-09	4/16/13	0.14	<0.5	<4	-
K7-09	10/8/13	-	-	<4	-
K7-10	4/16/13	<0.05	2.2	<4	-
NC7-12	4/22/13	-	-	<4	-
NC7-16	4/16/13	-	23	<4	-
NC7-17	4/10/13	-	36 D	-	-
NC7-18	4/16/13	-	26	<4	-
NC7-20	4/23/13	-	29	<4	-
NC7-21	4/17/13	-	32 D	4.6	-
NC7-25	4/9/13	-	36	12	-
NC7-25	10/21/13	-	-	9.6	-
NC7-26	4/22/13	0.13	0.89	<4	-
NC7-34	4/8/13	-	25	11	-
NC7-36	4/8/13	-	29	<4	-
NC7-40	4/22/13	-	42	8.2	-
NC7-47	4/11/13	0.58 O	64	<4	-
NC7-48	4/10/13	0.24	17	<4	-
NC7-51	4/4/13	-	37 D	12	-
NC7-52	5/8/13	-	11 L	<4	-
NC7-52	5/8/13 DUP	-	14	<4	-
NC7-53	4/8/13	-	17	<4	-
NC7-64	4/8/13	-	43	6.6	-
NC7-64	10/21/13	-	-	7.8	-
NC7-65	4/3/13	-	<0.5	<4	-
NC7-67	4/17/13	-	1.3	<4	-
NC7-68	4/17/13	-	17 D	11	-
NC7-75	4/4/13	-	<0.5	<4	-
NC7-75	10/9/13	-	-	<4	-
NC7-76	4/23/13	-	28	<4	-
W-865-01	1/14/13	-	15	<4	-
W-865-03	1/14/13	-	42	<4	-
W-865-1804	1/14/13	-	-	<4	-
W-865-1804	7/11/13	-	-	<4	-
W-PIT7-02	5/6/13	-	<0.5 L	<4	-
W-PIT7-03	5/8/13	-	32 DL	6.8	-
W-PIT7-03	5/8/13 DUP	-	34 D	6	-
W-PIT7-10	4/16/13	-	26	<4	-
W-PIT7-12	4/3/13	-	41 D	<4	-

Table B-5.16. Pit 7 Complex area in Operable Unit 5 nitrate, perchlorate, flouride, and orthophosphate in ground water.

Location	Date	Fluoride	Nitrate	Perchlorate	Ortho-Phosphate
W-PIT7-12	10/2/13	-	-	<4	-
W-PIT7-13	4/3/13	-	60 D	<4	-
W-PIT7-13	4/3/13 DUP	-	60 D	<4	-
W-PIT7-14	4/3/13	-	-	<4	-
W-PIT7-15	4/11/13	-	<0.5	<4	-
W-PIT7-1861	4/10/13	-	22 D	<4	-
W-PIT7-1904	4/18/13	-	-	-	1.6 D
W-PIT7-1905	4/18/13	-	-	-	16 D
W-PIT7-1907	4/18/13	-	-	-	88 D
W-PIT7-1915	4/18/13	-	-	-	8.4 D
W-PIT7-1916	4/18/13	-	-	-	0.27
W-PIT7-1918	4/22/13	-	27	8.4	<1
W-PIT7-1918	10/22/13	-	-	7.9	-
W-PIT7-1918	10/22/13 DUP	-	-	4.4	-
W-PIT7-1919	4/18/13	-	-	-	0.35
W-PIT7-2141	4/3/13	-	36 D	6.3	-
W-PIT7-2141	10/2/13	-	-	5.5	-
W-PIT7-2305	4/8/13	-	42	12	-
W-PIT7-2305	10/21/13	-	-	14	-
W-PIT7-2307	6/19/13	-	36	10	-
W-PIT7-2307	10/22/13	-	-	11	-
W-PIT7-2309	4/17/13	-	24	6.9	-
W-PIT7-2703	4/9/13	-	37	11	-
W-PIT7-2703	10/21/13	-	-	11	-
W-PIT7-2705	4/15/13	-	29	12	-
W-PIT7-2705	4/15/13 DUP	-	28	12	-
W-PIT7-2705	10/21/13	-	-	11	-

Table B-5.17. Pit 7 Complex area in Operable Unit 5 metals and silica in ground water.

Constituents of concern	K7-01	K7-01	K7-03	K7-06	K7-09	K7-10	NC7-17	NC7-26	NC7-47	NC7-48	W-865-01
	6/3/13	6/3/13 DUP	4/17/13	4/10/13	4/16/13	4/16/13	4/10/13	4/22/13	4/11/13	4/10/13	1/14/13
Antimony (mg/L)	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.06	<0.06	-
Arsenic (mg/L)	-	0.008	<0.0005	0.02	0.001	0.002	-	0.002	0.012	0.006	0.0031
Barium (mg/L)	-	0.19	0.01	0.08	0.02	0.18	-	0.02	0.056	0.12	0.08
Beryllium (mg/L)	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.002	<0.002	-
Cadmium (mg/L)	-	0.001	<0.0001	0.0004	<0.0001	<0.0001	-	<0.0001	<0.005	<0.005	<0.0005
Chromium (mg/L)	-	<0.0005	<0.0005	<0.0005	<0.0005	0.004	-	<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)	-	0.002	<0.0005	<0.0005	<0.0005	0.002	-	<0.0005	<0.01	<0.01	-
Lead (mg/L)	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.003	<0.003	<0.005
Lithium (mg/L)	0.035	0.03	0.033	0.031	0.091	0.079	-	0.022	0.028	0.061	-
Mercury (mg/L)	-	<0.0005	<0.0002	<0.0005 L	<0.0002 L	<0.0002 L	-	<0.0002	<0.0002	<0.0002	<0.0002 L
Molybdenum (mg/L)	-	0.003	0.02	0.003	0.003	0.003	-	0.006	<0.02	<0.02	-
Nickel (mg/L)	-	0.002	<0.0005	<0.0005	<0.0005	0.0009	-	<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 SiO2) (mg/L)	-	-	-	-	-	-	82	-	-	-	-
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	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.005	<0.005	-
Vanadium (mg/L)	-	0.01	<0.002	0.04	<0.002	<0.002	-	<0.002	0.056	0.016	-
Zinc (mg/L)	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.05	<0.05	-

Table B-5.18. Pit 7 Complex area in Operable Unit 5 polychlorinated biphenyl (PCBs) compounds in ground water.

Location	Date	PCB 1016 (µg/L)	PCB 1221 (µg/L)	PCB 1232 (µg/L)	PCB 1242 (µg/L)	PCB 124 8 (µg/L)	PCB 1254 (µg/L)	PCB 1260 (µg/L)
K7-01	6/3/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K7-01	6/3/13 DUP	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
K7-03	4/17/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K7-06	4/10/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K7-09	4/16/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K7-10	4/16/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-26	4/22/13	<0.5 D	<0.5 D	<0.5 D	<0.5 D	<0.5 D	<0.5 D	<0.5 D
NC7-47	4/11/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NC7-48	4/10/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-5.19. Pit 7 Complex area in Operable Unit 5 total uranium and uranium isotopes in ground water.

Location	Date	Uranium (pCi/L)	Uranium (µg/L)	Uranium 234 and Uranium 233 (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 (pCi/L)	Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
K7-01	6/3/13	16.0 ± 0.160	-	-	8.50 ± 0.150	-	0.350 ± 0.00300	<0.0015	-	7.60 ± 0.0630	0.00722 ± 0.0000160
K7-03	4/17/13	4.20 ± 0.130	-	-	2.10 ± 0.130	-	0.0930 ± 0.00180	<0.00038	-	2.00 ± 0.0200	0.00731 ± 0.000117
K7-06	4/10/13	-	-	0.423 ± 0.155	-	<0.1	-	-	0.346 ± 0.138	-	-
K7-09	4/16/13	-	-	<0.1	-	<0.1	-	-	<0.1	-	-
K7-10	4/16/13	-	-	0.305 ± 0.141	-	<0.1	-	-	<0.1	-	-
NC7-12	4/22/13	2.70 ± 0.0690	-	1.57 ± 0.394	1.40 ± 0.0680	<0.1	0.0580 ± 0.000680	<0.00024	1.30 ± 0.344	1.30 ± 0.00720	0.00718 ± 0.0000730
NC7-16	1/9/13	7.60 ± 0.110	-	-	3.00 ± 0.110	-	0.130 ± 0.000920	0.0130 ± 0.0000970	-	4.40 ± 0.0140	0.00469 ± 0.0000290
NC7-16	4/16/13	9.20 ± 0.220	-	-	3.80 ± 0.220	-	0.170 ± 0.00250	0.0120 ± 0.000100	-	5.20 ± 0.0550	0.00517 ± 0.0000530
NC7-16	7/10/13	10.0 ± 0.210	-	-	4.00 ± 0.210	-	0.190 ± 0.00240	0.0170 ± 0.000210	-	5.80 ± 0.0460	0.00504 ± 0.0000510
NC7-17	4/10/13	-	-	0.653 ± 0.205	-	<0.1	-	-	0.566 ± 0.185	-	-
NC7-18	4/16/13	-	-	1.29 ± 0.338	-	<0.1	-	-	1.39 ± 0.356	-	-
NC7-21	4/17/13	-	-	5.41 ± 1.17	-	0.298 ± 0.184	-	-	5.91 ± 1.27	-	-
NC7-25	4/9/13	-	50.3 ± 4.70	17.9 ± 3.06	-	0.555 ± 0.222	-	-	14.8 ± 2.54	-	-
NC7-25	10/21/13	35.0 ± 0.240	-	-	19.0 ± 0.240	-	0.720 ± 0.00240	<0.003	-	15.0 ± 0.0340	0.00731 ± 0.0000190
NC7-26	4/22/13	0.310 ± 0.0120	-	-	0.170 ± 0.0120	-	0.00600 ± 0.000140	<0.000025	-	0.130 ± 0.00110	0.00743 ± 0.000161
NC7-34	4/8/13	-	-	3.13 ± 0.655	-	0.164 ± 0.113	-	-	4.78 ± 0.931	-	-
NC7-36	4/8/13	-	-	1.70 ± 0.371	-	<0.1	-	-	1.39 ± 0.320	-	-
NC7-40	1/9/13	77.0 ± 1.50	-	-	20.0 ± 1.50	-	1.10 ± 0.0170	0.250 ± 0.000630	-	56.0 ± 0.330	0.00314 ± 0.0000420
NC7-40	4/22/13	77.0 ± 1.40	-	-	21.0 ± 1.40	-	1.10 ± 0.0100	0.270 ± 0.00220	-	55.0 ± 0.210	0.00320 ± 0.0000270
NC7-40	7/10/13	77.0 ± 1.70	-	-	21.0 ± 1.70	-	1.10 ± 0.0160	0.230 ± 0.000540	-	55.0 ± 0.520	0.00313 ± 0.0000330
NC7-40	10/21/13	76.0 ± 0.230	-	-	21.0 ± 0.220	-	1.10 ± 0.00330	0.270 ± 0.000180	-	53.0 ± 0.0740	0.00319 ± 0.00000900
NC7-47	4/11/13	-	-	1.24 ± 0.329	-	<0.1	-	-	0.652 ± 0.216	-	-
NC7-48	4/10/13	6.90 ± 0.190	-	-	1.70 ± 0.190	-	0.0960 ± 0.000920	0.0220 ± 0.000140	-	5.00 ± 0.0410	0.00296 ± 0.0000160
NC7-49A	4/8/13	-	-	0.980 ± 0.265	-	<0.1	-	-	0.602 ± 0.195	-	-
NC7-51	1/9/13	78.0 ± 2.60	-	-	35.0 ± 2.60	-	1.50 ± 0.0100	0.0800 ± 0.000350	-	41.0 ± 0.110	0.00571 ± 0.0000340
NC7-51	4/4/13	71.0 ± 2.50	-	-	32.0 ± 2.50	-	1.30 ± 0.0120	0.0920 ± 0.000850	-	38.0 ± 0.210	0.00538 ± 0.0000390
NC7-51	7/10/13	81.0 ± 2.20	-	-	36.0 ± 2.20	-	1.50 ± 0.0190	0.100 ± 0.00320	-	44.0 ± 0.460	0.00532 ± 0.0000390
NC7-51	10/9/13	88.0 ± 0.360	-	-	39.0 ± 0.340	-	1.60 ± 0.00670	0.120 ± 0.000290	-	47.0 ± 0.120	0.00532 ± 0.0000170
NC7-51	10/9/13 DUP	88.0 ± 0.690	-	-	39.0 ± 0.680	-	1.60 ± 0.00660	0.120 ± 0.000290	-	47.0 ± 0.0430	0.00529 ± 0.0000210
NC7-52	5/8/13	-	-	0.513 ± 0.152	-	<0.1	-	-	0.496 ± 0.149	-	-
NC7-52	5/8/13 DUP	-	-	0.600 ± 0.150	-	<0.1	-	-	0.520 ± 0.140	-	-
NC7-53	4/8/13	-	-	0.634 ± 0.225	-	<0.1	-	-	0.537 ± 0.202	-	-
NC7-64	1/14/13	-	152 ± 13.8 L	-	-	-	-	-	-	-	-
NC7-64	4/8/13	-	26.6 ± 2.49	50.2 ± 9.59	-	2.62 ± 0.711	-	-	53.2 ± 10.2	-	-
NC7-64	10/21/13	98.0 ± 0.600	139 ± 11.9	-	49.0 ± 0.600	-	2.00 ± 0.00320	0.0500 ± 0.000720	-	47.0 ± 0.0260	0.00658 ± 0.0000100
NC7-65	4/3/13	1.00 ± 0.0410	-	0.668 ± 0.152	0.580 ± 0.0410	<0.1	0.0210 ± 0.000320	<0.000085	0.494 ± 0.124	0.440 ± 0.00390	0.00742 ± 0.0000930
NC7-67	4/17/13	-	-	<0.1	-	<0.1	-	-	<0.1	-	-
NC7-68	4/17/13	-	-	1.43 ± 0.380	-	0.127 ± 0.107	-	-	1.61 ± 0.413	-	-
NC7-75	4/4/13	-	-	0.117 ± 0.0872	-	<0.1	-	-	0.142 ± 0.0909	-	-
NC7-76	4/23/13	-	-	1.70 ± 0.423	-	<0.1	-	-	1.48 ± 0.384	-	-
W-PIT7-02	5/6/13	-	-	0.264 ± 0.112	-	<0.1	-	-	0.142 ± 0.0776	-	-
W-PIT7-03	5/8/13	-	-	12.3 ± 2.43	-	0.453 ± 0.234	-	-	11.5 ± 2.29	-	-
W-PIT7-03	5/8/13 DUP	-	-	11.8 ± 2.00	-	0.730 ± 0.170	-	-	10.7 ± 1.80	-	-
W-PIT7-10	4/16/13	-	-	1.23 ± 0.395	-	<0.1	-	-	0.995 ± 0.344	-	-

Table B-5.19. Pit 7 Complex area in Operable Unit 5 total uranium and uranium isotopes in ground water.

Location	Date	Uranium (pCi/L)	Uranium (µg/L)	Uranium 234 and Uranium 233 (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 (pCi/L)	Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
W-PIT7-12	4/3/13	-	-	1.76 ± 0.321	-	<0.1	-	-	1.05 ± 0.218	-	-
W-PIT7-13	4/3/13	-	-	3.87 ± 0.650	-	0.126 ± 0.0764	-	-	2.87 ± 0.505	-	-
W-PIT7-13	4/3/13 DUP	-	-	3.82 ± 0.690	-	0.209 ± 0.0800	-	-	2.35 ± 0.450	-	-
W-PIT7-14	4/3/13	<0.06273	-	<0.1	<0.0042	<0.1	<0.000041	<0.000052	<0.1	0.000650 ± 0.000017(	<0.00985
W-PIT7-15	4/11/13	<0.06273	-	-	<0.041	-	<0.0011	<0.000023	-	0.0200 ± 0.000440	<0.008244
W-PIT7-1861	4/10/13	-	-	0.281 ± 0.126	-	<0.1	-	-	0.210 ± 0.108	-	-
W-PIT7-1904	4/18/13	-	-	17.4 ± 4.62	-	1.36 ± 0.637	-	-	37.1 ± 9.52	-	-
W-PIT7-1905	4/18/13	-	-	11.1 ± 3.33	-	0.580 ± 0.441	-	-	34.0 ± 9.47	-	-
W-PIT7-1907	4/18/13	-	-	0.101 ± 0.0812	-	<0.1	-	-	0.180 ± 0.103	-	-
W-PIT7-1915	4/18/13	-	-	1.38 ± 0.381	-	<0.1	-	-	0.820 ± 0.271	-	-
W-PIT7-1916	4/18/13	-	-	20.0 ± 5.00	-	1.40 ± 0.609	-	-	51.7 ± 12.4	-	-
W-PIT7-1918	4/22/13	44.0 ± 0.890	-	-	15.0 ± 0.830	-	0.680 ± 0.0110	0.120 ± 0.000870	-	28.0 ± 0.330	0.00382 ± 0.0000430
W-PIT7-2141	4/3/13	6.10 ± 0.130	-	-	3.60 ± 0.130	-	0.110 ± 0.00100	<0.00045	-	2.30 ± 0.00570	0.00729 ± 0.0000670
W-PIT7-2305	1/14/13	-	62.0 ± 5.63 L	-	-	-	-	-	-	-	-
W-PIT7-2305	4/8/13	-	150 ± 14.1	7.62 ± 1.38	-	0.414 ± 0.177	-	-	7.13 ± 1.30	-	-
W-PIT7-2305	7/2/13	-	24.8 ± 2.40	-	-	-	-	-	-	-	-
W-PIT7-2305	10/21/13	16.0 ± 0.110	22.9 ± 1.97	-	8.10 ± 0.0980	-	0.330 ± 0.00380	<0.0034	-	7.30 ± 0.0480	0.00711 ± 0.0000660
W-PIT7-2307	1/14/13	-	30.7 ± 2.79 L	-	-	-	-	-	-	-	-
W-PIT7-2307	6/19/13	-	30.9 ± 2.93	10.5 ± 1.96	-	0.426 ± 0.196	-	-	9.62 ± 1.81	-	-
W-PIT7-2307	10/22/13	22.0 ± 0.220	29.6 ± 2.54	-	12.0 ± 0.220	-	0.450 ± 0.00180	0.00770 ± 0.000230	-	10.0 ± 0.0190	0.00673 ± 0.0000240
W-PIT7-2309	4/17/13	2.00 ± 0.0740	-	-	1.00 ± 0.0730	-	0.0430 ± 0.000770	<0.00018	-	0.920 ± 0.0130	0.00730 ± 0.0000760
W-PIT7-2703	1/14/13	-	130 ± 11.8 L	-	-	-	-	-	-	-	-
W-PIT7-2703	4/9/13	-	137 ± 12.8	51.9 ± 9.76	-	2.26 ± 0.623	-	-	48.6 ± 9.14	-	-
W-PIT7-2703	7/2/13	-	134 ± 12.9	-	-	-	-	-	-	-	-
W-PIT7-2703	10/21/13	94.0 ± 0.700	128 ± 11.0	-	49.0 ± 0.680	-	1.90 ± 0.00900	0.0350 ± 0.000860	-	43.0 ± 0.170	0.00676 ± 0.0000190
W-PIT7-2705	1/14/13	-	25.8 ± 2.34 L	-	-	-	-	-	-	-	-
W-PIT7-2705	4/15/13	-	56.5 ± 5.20	11.7 ± 2.62	-	0.690 ± 0.344	-	-	18.9 ± 4.10	-	-
W-PIT7-2705	4/15/13 DUP	-	56.9 ± 5.24	10.2 ± 2.17	-	0.729 ± 0.321	-	-	17.0 ± 3.49	-	-
W-PIT7-2705	7/2/13	-	57.2 ± 5.51	-	-	-	-	-	-	-	-
W-PIT7-2705	10/21/13	30.0 ± 0.130	54.3 ± 4.67	-	11.0 ± 0.130	-	0.510 ± 0.00180	0.0660 ± 0.0000840	-	18.0 ± 0.0340	0.00433 ± 0.0000130

Table B-5.23. Pit 7 Complex area in Operable Unit 5 tritium in ground water.

Location	Date	Tritium (pCi/L)
K7-01	6/3/13	28900 ± 5620
K7-01	6/3/13 DUP	32800 ± 5000
K7-01	10/21/13	32800 ± 6380 L
K7-01	10/21/13 DUP	33200 ± 5000
K7-03	4/17/13	62200 ± 12100
K7-03	10/9/13	73700 ± 14300
K7-06	4/10/13	<100
K7-06	10/7/13	<100
K7-09	4/16/13	<100
K7-09	10/8/13	<100
K7-10	4/16/13	<100
K7-10	10/8/13	<100
NC7-12	4/22/13	2570 ± 532
NC7-12	10/22/13	2010 ± 421
NC7-16	1/9/13	22500 ± 4370
NC7-16	4/16/13	29800 ± 5790
NC7-16	7/10/13	28000 ± 5440
NC7-17	4/10/13	<100
NC7-17	10/7/13	<100
NC7-18	4/16/13	<100
NC7-18	10/8/13	<100
NC7-20	4/23/13	7440 ± 1470
NC7-20	10/22/13	6870 ± 1360
NC7-21	4/17/13	36300 ± 7050
NC7-21	10/21/13	36900 ± 7180 L
NC7-25	4/9/13	206000 ± 40100
NC7-25	10/21/13	193000 ± 37500
NC7-26	4/22/13	1730 ± 370
NC7-34	4/8/13	453 ± 132
NC7-34	10/7/13	757 ± 181
NC7-36	4/8/13	<100
NC7-36	10/7/13	<100
NC7-40	1/9/13	54900 ± 10700
NC7-40	1/9/13 DUP	54300 ± 8300
NC7-40	4/22/13	54100 ± 10500
NC7-40	7/10/13	51100 ± 9920
NC7-40	10/21/13	52900 ± 10300 L
NC7-47	4/11/13	<100
NC7-48	4/10/13	<100
NC7-48	10/7/13	<100
NC7-49A	4/8/13	<100
NC7-49A	10/7/13	<100
NC7-51	1/9/13	126000 ± 24500
NC7-51	4/4/13	141000 ± 27400
NC7-51	7/10/13	142000 ± 27500

Table B-5.23. Pit 7 Complex area in Operable Unit 5 tritium in ground water.

Location	Date	Tritium (pCi/L)
NC7-51	7/10/13 DUP	144000 ± 22000
NC7-51	10/9/13	124000 ± 24100
NC7-51	10/9/13 DUP	133000 ± 25900
NC7-52	1/9/13	30200 ± 5870
NC7-52	7/10/13	28400 ± 5510
NC7-53	4/8/13	<100
NC7-64	4/8/13	94900 ± 18400
NC7-64	10/21/13	88600 ± 17200
NC7-65	4/3/13	357 ± 116
NC7-65	10/2/13	370 ± 108
NC7-67	4/17/13	1770 ± 373
NC7-67	10/21/13	1880 ± 400 L
NC7-68	4/17/13	1840 ± 387
NC7-68	10/21/13	1760 ± 378 L
NC7-75	4/4/13	<100
NC7-75	10/9/13	<100
NC7-76	4/23/13	2230 ± 462
NC7-76	10/22/13	1940 ± 409
W-865-01	1/14/13	<100
W-865-01	7/11/13	<100
W-865-03	1/14/13	<100
W-865-1804	1/14/13	1310 ± 284
W-865-1804	7/11/13	984 ± 224
W-PIT7-02	1/9/13	<100
W-PIT7-02	7/11/13	<100
W-PIT7-03	1/9/13	88900 ± 17300
W-PIT7-03	1/9/13 DUP	90000 ± 17500
W-PIT7-10	4/16/13	<100
W-PIT7-10	10/8/13	<100
W-PIT7-12	4/3/13	2180 ± 457
W-PIT7-12	10/2/13	1890 ± 397
W-PIT7-13	4/3/13	32200 ± 6260
W-PIT7-13	4/3/13 DUP	32400 ± 4900
W-PIT7-13	10/2/13	31400 ± 6100
W-PIT7-13	10/2/13 DUP	34700 ± 5300 L
W-PIT7-14	4/3/13	<100
W-PIT7-15	4/11/13	<100
W-PIT7-15	11/4/13	<100
W-PIT7-1861	4/10/13	<100
W-PIT7-1918	4/22/13	41200 ± 8010
W-PIT7-1918	10/22/13	37100 ± 7200
W-PIT7-1918	10/22/13 DUP	41300 ± 6300
W-PIT7-2141	4/3/13	14700 ± 2880
W-PIT7-2141	10/2/13	13600 ± 2670
W-PIT7-2305	4/8/13	39700 ± 7710

Table B-5.23. Pit 7 Complex area in Operable Unit 5 tritium in ground water.

Location	Date	Tritium (pCi/L)
W-PIT7-2305	10/21/13	35600 ± 6930
W-PIT7-2307	6/19/13	40700 ± 7900 L
W-PIT7-2307	10/22/13	39000 ± 7570
W-PIT7-2309	4/17/13	57300 ± 11100
W-PIT7-2309	10/9/13	58600 ± 11400
W-PIT7-2703	4/9/13	80100 ± 15600
W-PIT7-2703	10/21/13	82800 ± 16100
W-PIT7-2705	4/15/13	33600 ± 6520
W-PIT7-2705	4/15/13 DUP	32300 ± 6270
W-PIT7-2705	10/21/13	33600 ± 6530

Table B-5.21. Pit 7 Complex area in Operable Unit 5 high explosive compounds in ground water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
K7-01	6/3/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
K7-01	6/3/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
K7-03	4/17/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
K7-06	4/10/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
K7-09	4/16/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
K7-10	4/16/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-26	4/22/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-47	4/11/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
NC7-48	4/10/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-6.01. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-854-01	5/15/13	E601	<0.5	<0.5	<0.5	<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	11/19/13	E601	<0.5	<0.5	<0.5	<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	2/4/13	E601	92	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-02	4/2/13	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-854-02	7/1/13	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
W-854-02	10/21/13	E601	94	<0.5	<0.5	<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	3/12/13	E601	8.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-03	4/2/13	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-854-03	4/2/13 DUP	E601	19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-03	7/1/13	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	10/15/13	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-854-04	5/15/13	E601	<0.5	<0.5	<0.5	<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	11/20/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-05	5/14/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5
W-854-05	11/19/13	E601	<0.5	<0.5	<0.5	<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	5/29/13	E601	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-06	11/18/13	E601	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-07	5/13/13	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-854-07	5/13/13 DUP	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-854-07	11/18/13	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-854-09	5/14/13	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 O	<0.5	<0.5
W-854-09	5/14/13 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 O	<0.5	<0.5
W-854-09	11/18/13	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-854-10	5/14/13	E601	3.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5
W-854-10	5/14/13 DUP	E601	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-10	11/19/13	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-854-10	11/19/13 DUP	E601	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-13	5/15/13	E601	<0.5	<0.5	<0.5	<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	11/20/13	E601	<0.5	<0.5	<0.5	<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	5/29/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-14	11/25/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-15	5/13/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-6.01. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-854-15	11/19/13	E601	<0.5	<0.5	<0.5	<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	5/15/13	E601	4.1	<0.5	2.1	<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	11/19/13	E601	3.9	<0.5	0.74	<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	11/19/13 DUP	E601	4	<0.5	0.71	<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	2/19/13	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-854-18A	4/16/13	E601	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-18A	8/13/13	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	11/20/13	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-854-45	5/29/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-45	11/25/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-1701	5/29/13	E601	<0.5	<0.5	<0.5	<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	11/18/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-1707	6/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-1707	11/25/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-1731	5/29/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-1731	11/25/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-1822	5/13/13	E601	<0.5	<0.5	<0.5	<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	11/18/13	E601	<0.5	<0.5	<0.5	<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	5/13/13	E601	<0.5	<0.5	<0.5	<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	11/20/13	E601	<0.5	<0.5	<0.5	<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	5/13/13	E601	<0.5	<0.5	<0.5	<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	11/18/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2139	2/19/13	E601	31	<0.5	0.59	<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	4/2/13	E601	32	<0.5	0.66	<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	4/2/13 DUP	E601	33	<0.5	0.64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2139	7/1/13	E601	30	<0.5	0.64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2139	10/15/13	E601	27	<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	1/8/13	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-854-2218	4/16/13	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-854-2218	4/16/13 DUP	E601	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-2218	7/1/13	E601	22	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-854-2218	10/22/13	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

Table B-6.01. Building 854 Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-854-2218	10/22/13 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-854-2218	10/22/13 DUP	E601	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-854-2611	5/14/13	E601	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5
W-854-2611	11/19/13	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
SPRING11	6/5/13	E601	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
SPRING11	11/25/13	E601	1.1	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5

Table B-6.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
W-854-01	5/15/13	E601	0 of 18	-
W-854-01	11/19/13	E601	0 of 18	-
W-854-02	2/4/13	E601	0 of 18	-
W-854-02	4/2/13	E601	0 of 18	-
W-854-02	7/1/13	E601	0 of 18	-
W-854-02	10/21/13	E601	0 of 18	-
W-854-03	3/12/13	E601	0 of 18	-
W-854-03	4/2/13	E601	0 of 18	-
W-854-03	4/2/13 DUP	E601	0 of 18	-
W-854-03	7/1/13	E601	0 of 18	-
W-854-03	10/15/13	E601	0 of 18	-
W-854-04	5/15/13	E601	0 of 18	-
W-854-04	11/20/13	E601	0 of 18	-
W-854-05	5/14/13	E601	0 of 18	-
W-854-05	11/19/13	E601	0 of 18	-
W-854-06	5/29/13	E601	0 of 18	-
W-854-06	11/18/13	E601	0 of 18	-
W-854-07	5/13/13	E601	0 of 18	-
W-854-07	5/13/13 DUP	E601	0 of 18	-
W-854-07	11/18/13	E601	0 of 18	-
W-854-09	5/14/13	E601	0 of 18	-
W-854-09	5/14/13 DUP	E601	0 of 18	-
W-854-09	11/18/13	E601	0 of 18	-
W-854-10	5/14/13	E601	0 of 18	-
W-854-10	5/14/13 DUP	E601	0 of 18	-
W-854-10	11/19/13	E601	0 of 18	-
W-854-10	11/19/13 DUP	E601	0 of 18	-
W-854-13	5/15/13	E601	0 of 18	-
W-854-13	11/20/13	E601	0 of 18	-
W-854-14	5/29/13	E601	0 of 18	-
W-854-14	11/25/13	E601	0 of 18	-

Table B-6.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
W-854-15	5/13/13	E601	0 of 18	-
W-854-15	11/19/13	E601	0 of 18	-
W-854-17	5/15/13	E601	1 of 18	2.1
W-854-17	11/19/13	E601	0 of 18	-
W-854-17	11/19/13 DUP	E601	0 of 18	-
W-854-18A	2/19/13	E601	0 of 18	-
W-854-18A	4/16/13	E601	0 of 18	-
W-854-18A	8/13/13	E601	0 of 18	-
W-854-18A	11/20/13	E601	0 of 18	-
W-854-45	5/29/13	E601	0 of 18	-
W-854-45	11/25/13	E601	0 of 18	-
W-854-1701	5/29/13	E601	0 of 18	-
W-854-1701	11/18/13	E601	0 of 18	-
W-854-1707	6/5/13	E601	0 of 18	-
W-854-1707	11/25/13	E601	0 of 18	-
W-854-1731	5/29/13	E601	0 of 18	-
W-854-1731	11/25/13	E601	0 of 18	-
W-854-1822	5/13/13	E601	0 of 18	-
W-854-1822	11/18/13	E601	0 of 18	-
W-854-1823	5/13/13	E601	0 of 18	-
W-854-1823	11/20/13	E601	0 of 18	-
W-854-2115	5/13/13	E601	0 of 18	-
W-854-2115	11/18/13	E601	0 of 18	-
W-854-2139	2/19/13	E601	0 of 18	-
W-854-2139	4/2/13	E601	0 of 18	-
W-854-2139	4/2/13 DUP	E601	0 of 18	-
W-854-2139	7/1/13	E601	0 of 18	-
W-854-2139	10/15/13	E601	0 of 18	-
W-854-2218	1/8/13	E601	0 of 18	-
W-854-2218	4/16/13	E601	0 of 18	-
W-854-2218	4/16/13 DUP	E601	0 of 18	-

Table B-6.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)
W-854-2218	7/1/13	E601	0 of 18	-
W-854-2218	10/22/13	E601	0 of 18	-
W-854-2218	10/22/13 DUP	E601	0 of 18	-
W-854-2218	10/22/13 DUP	E601	0 of 18	-
W-854-2611	5/14/13	E601	0 of 18	-
W-854-2611	11/19/13	E601	0 of 18	-
SPRING11	6/5/13	E601	0 of 18	-
SPRING11	11/25/13	E601	1 of 18	0.5

Table B-6.02. Building 854 Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-854-01	5/15/13	<0.5	<4
W-854-01	11/19/13	-	<4
W-854-02	2/4/13	-	7
W-854-02	4/2/13	54	5.7
W-854-02	7/1/13	-	6.4
W-854-02	10/21/13	-	6.7
W-854-03	3/12/13	37	7.5
W-854-03	4/2/13	39	6.7
W-854-03	4/2/13 DUP	38 D	7.2
W-854-03	5/7/13	39 O	-
W-854-03	6/3/13	38	-
W-854-03	7/1/13	37	6.8
W-854-03	8/5/13	35	-
W-854-03	9/3/13	36 D	-
W-854-03	10/15/13	37 D	5.8
W-854-03	11/4/13	38	-
W-854-03	12/2/13	38 D	-
W-854-04	5/15/13	<0.5	<4
W-854-04	11/20/13	-	<4
W-854-05	5/14/13	62 D	<4
W-854-05	11/19/13	-	<4
W-854-06	5/29/13	<0.5	<4
W-854-06	11/18/13	-	<4
W-854-07	5/13/13	29 D	5.9
W-854-07	5/13/13 DUP	29 D	5.8
W-854-07	11/18/13	-	5.7
W-854-09	5/14/13	38 D	<4
W-854-09	5/14/13 DUP	38 D	4.3
W-854-09	11/18/13	-	<4
W-854-10	5/14/13	2.6	<4
W-854-10	5/14/13 DUP	3	<4
W-854-10	11/19/13	-	<4
W-854-10	11/19/13 DUP	-	<4
W-854-13	5/15/13	0.53	<4
W-854-13	11/20/13	-	<4
W-854-14	5/29/13	140 D	<4
W-854-14	11/25/13	-	<4
W-854-15	5/13/13	7.1	<4
W-854-15	11/19/13	-	<4
W-854-17	5/15/13	2.5 D	<4
W-854-17	11/19/13	-	<4
W-854-17	11/19/13 DUP	-	<4
W-854-18A	2/19/13	-	<4
W-854-18A	4/16/13	29	<4
W-854-18A	8/13/13	-	<4

Table B-6.02. Building 854 Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-854-18A	11/20/13	-	<4
W-854-45	5/29/13	63 D	9
W-854-45	11/25/13	-	15
W-854-1701	5/29/13	<0.5	<4
W-854-1701	11/18/13	-	<4
W-854-1707	6/5/13	7.1	<4
W-854-1707	11/25/13	-	<4
W-854-1731	5/29/13	3.6	<4
W-854-1731	11/25/13	-	<4
W-854-1822	5/13/13	1.6	<4
W-854-1822	11/18/13	-	<4
W-854-1823	5/13/13	25 D	16
W-854-1823	11/20/13	-	15
W-854-2115	5/13/13	2	<4
W-854-2115	11/18/13	-	<4
W-854-2139	2/19/13	21	<4
W-854-2139	4/2/13	22	5.7
W-854-2139	4/2/13 DUP	22	4.6
W-854-2139	7/1/13	21	5.7
W-854-2139	10/15/13	20	4.5
W-854-2218	1/8/13	-	<4
W-854-2218	4/16/13	42	<4
W-854-2218	4/16/13 DUP	41 D	<4
W-854-2218	7/1/13	-	<4
W-854-2218	10/22/13	-	<4
W-854-2218	10/22/13 DUP	-	<4
W-854-2218	10/22/13 DUP	-	<4
W-854-2611	5/14/13	53 D	5.3
W-854-2611	11/19/13	-	4.9
SPRING11	6/5/13	0.6	<4
SPRING11	11/25/13	-	<4

Table B-6.03. Building 854 Operable Unit metals in ground water.

Location	Date	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)
W-854-03	3/12/13	0.054	0.049	<0.001	0.0032	<0.001	<0.0002	0.0064	<0.001
W-854-04	2/27/13	0.0021	0.027	<0.001	<0.003	<0.001	<0.0002	<0.002	<0.001

Table B-6.04. Building 854 Operable Unit general minerals in ground water.

Constituents of concern	W-854-03	W-854-04
	3/12/13	2/27/13
Total Alkalinity (as CaCO3) (mg/L)	270	220
Aluminum (mg/L)	<0.2	<0.2
Bicarbonate Alk (as CaCO3) (mg/L)	270 D	220 D
Calcium (mg/L)	37	320 L
Carbonate Alk (as CaCO3) (mg/L)	<8.2 D	<8.2 D
Chloride (mg/L)	160	160 D
Copper (mg/L)	<0.05	<0.05
Fluoride (mg/L)	0.43	0.26 D
Hydroxide Alk (as CaCO3) (mg/L)	<8.2 D	<8.2 D
Iron (mg/L)	<0.1	<0.1
Magnesium (mg/L)	23	67
Manganese (mg/L)	<0.03	0.51
Nickel (mg/L)	<0.1	<0.1
Nitrate (as N) (mg/L)	8.1	<1 D
Nitrate (as NO3) (mg/L)	36 H	<0.44
Nitrite (as N) (mg/L)	<0.5	<0.5
pH (Units)	8.02	7.53
Ortho-Phosphate (mg/L)	0.061	<0.05
Total Phosphorus (as PO4) (mg/L)	<0.15 H	<0.15 H
Potassium (mg/L)	7.5	16
Sodium (mg/L)	190	310 L
Total dissolved solids (TDS) (mg/L)	720 D	2,500 D
Specific Conductance (µmhos/cm)	1,170	2,830
Sulfate (mg/L)	68	1,300 D
Surfactants (mg/L)	<0.5	<1 D
Total Hardness (as CaCO3) (mg/L)	180	1,100
Zinc (mg/L)	<0.05	<0.05

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
SPRING3	3/7/13	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
SVI-830-031	2/21/13	E601	130 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
SVI-830-031	8/15/13	E601	180 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
SVI-830-032	2/21/13	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
SVI-830-032	8/15/13	E601	210 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
SVI-830-033	2/21/13	E601	50	<0.5	<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-830-033	8/15/13	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
SVI-830-035	2/21/13	E601	890 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	8/15/13	E601	540 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-830-04A	2/28/13	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	2/28/13 DUP	E601	7.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-04A	8/20/13	E601	7.4	<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-830-04A	8/20/13 DUP	E601	7.4	<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-830-05	3/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-05	8/20/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-09	2/26/13	E601	<0.5 O	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-09	8/19/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-10	2/27/13	E601	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-10	8/20/13	E601	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-10	8/20/13 DUP	E601	26	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-11	2/28/13	E601	<0.5	<0.5	<0.5	<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	8/20/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-12	2/20/13	E601	<0.5	<0.5	<0.5	<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	6/6/13	E601	<0.5	<0.5	<0.5	<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	8/15/13	E601	<0.5	<0.5	<0.5	<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	12/5/13	E601	<0.5	<0.5	<0.5	<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	2/27/13	E601	4.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-13	8/21/13	E601	4.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-14	2/27/13	E601	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-14	8/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-15	2/27/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-15	6/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-830-15	8/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-15	12/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-16	3/13/13	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-16	8/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-17	3/4/13	E601	<0.5	<0.5	<0.5	<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	8/28/13	E601	<0.5	<0.5	<0.5	<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	2/25/13	E601	23	<0.5	1	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-18	8/19/13	E601	27	<0.5	2.1	2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-19	3/4/13	E601	2,200 D	2.8 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-830-19	4/2/13	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-830-19	7/8/13	E601	2,400 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-830-19	11/5/13	E601	2,100 D	3.4	0.57	<0.5	<0.5	0.92	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-20	2/28/13	E601	<0.5	<0.5	<0.5	<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	8/20/13	E601	<0.5	<0.5	<0.5	<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	2/25/13	E601	34	<0.5	5.9	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-21	2/25/13 DUP	E601	35	<0.5	5.9	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-21	8/19/13	E601	42	<0.5	1.2	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-22	2/25/13	E601	20	<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-830-22	8/14/13	E601	18	<0.5	3.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-25	3/6/13	E601	450 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	<10 D
W-830-27	3/6/13	E601	710 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-830-27	8/26/13	E601	830 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-830-28	3/6/13	E601	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-28	8/26/13	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-830-29	2/28/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-29	8/14/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-30	2/21/13	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-830-30	2/21/13 DUP	E601	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-30	8/15/13	E601	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-830-34	2/21/13	E601	700 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	<10 D
W-830-34	8/15/13	E601	260 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	<10 D
W-830-49	3/4/13	E601	790 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

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-830-49	4/2/13	E601	800 D	1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D	<1 D
W-830-49	7/8/13	E601	1,000 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-49	11/5/13	E601	920 D	1.6	<0.5	<0.5	<0.5	0.57	<0.5	0.64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-50	2/28/13	E601	14	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-50	8/22/13	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-830-51	1/9/13	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-830-51	4/2/13	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	7/10/13	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-830-51	10/9/13	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-830-52	1/9/13	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-830-52	4/2/13	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-830-53	1/9/13	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-830-53	4/2/13	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-830-54	3/4/13	E601	<0.5	<0.5	<0.5	<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	8/28/13	E601	<0.5	<0.5	<0.5	<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	3/4/13	E601	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-55	8/28/13	E601	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-55	8/28/13 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-830-56	3/4/13	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-830-56	8/28/13	E601	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-57	1/14/13	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-830-57	4/2/13	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-830-57	7/8/13	E601	8.5	<0.5	<0.5	<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	11/5/13	E601	8.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-58	3/6/13	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
W-830-58	8/26/13	E601	890 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	3/4/13	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-830-59	4/2/13	E601	1,300 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-830-59	7/8/13	E601	1,300 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-830-59	11/5/13	E601	1,100 D	1.6	<0.5	<0.5	<0.5	0.82	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-60	1/14/13	E601	22	<0.5	0.51	<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	4/2/13	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

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-830-60	7/8/13	E601	20	<0.5	0.52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-60	11/5/13	E601	21	<0.5	0.55	<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	2/27/13	E601	<0.5	<0.5	<0.5	<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	2/27/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-1730	6/6/13	E601	<0.5	<0.5	<0.5	<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	8/22/13	E601	<0.5	<0.5	<0.5	<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	12/4/13	E601	<0.5	<0.5	<0.5	<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	3/4/13	E601	700 D	1.1	0.81	<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	4/2/13	E601	1,000 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-1807	4/2/13 DUP	E601	1,100 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
W-830-1807	7/8/13	E601	250 D	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1807	11/5/13	E601	260 D	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-830-1829	2/26/13	E601	1,700 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-1829	8/14/13	E601	1,900 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-830-1830	2/25/13	E601	1,500 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	8/19/13	E601	2,100 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D	<50 D
W-830-1831	3/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1831	8/22/13	E601	<0.5	<0.5	<0.5	<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	3/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-1832	8/22/13	E601	<0.5	<0.5	<0.5	<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	8/19/13	E601	160 D	<0.5	2.7	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2214	3/4/13	E601	1,000 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D	<2.5 D
W-830-2214	4/2/13	E601	980 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	7/8/13	E601	1,100 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	11/5/13	E601	820 D	1.2	1.4	<0.5	<0.5	0.51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2215	1/14/13	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-830-2215	4/2/13	E601	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2215	7/8/13	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-830-2215	11/5/13	E601	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2216	3/20/13	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-830-2216	4/2/13	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-830-2216	4/2/13 DUP	E601	7.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-830-2216	7/10/13	E601	3.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2216	10/9/13	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-830-2311	2/28/13	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-830-2311	8/20/13	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-830-2701	2/28/13	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-830-2701	6/12/13	E601	15	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-830-2701	6/12/13 DUP	E601	15	<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
W-830-2701	8/19/13	E601	12	<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
W-830-2701	12/5/13	E601	12	<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-830-2701	12/5/13 DUP	E601	12	<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
W-830-2806	3/13/13	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-2806	4/2/13	E624	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-830-2806	6/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-2806	8/21/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-830-2806	12/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-831-01	2/19/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-01	3/25/13	E601	140 D	<0.5	3.3	<0.5	<0.5	0.57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-01	4/3/13	E601	150 D	<0.5	3	<0.5	<0.5	0.58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-01	7/9/13	E601	200 D	<0.5	4.4	<0.5	<0.5	0.73	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-01	11/5/13	E601	220	<0.5	6.8	<0.5	<0.5	0.64	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-06	2/19/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-06	8/12/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-06	8/12/13 DUP	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-832-09	2/20/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-10	3/25/13	E601	120 D	<0.5	2.9	<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	6/3/13	E601	96	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5
W-832-10	6/3/13 DUP	E601	98	<0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5
W-832-10	7/9/13	E601	81	<0.5	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	<0.5
W-832-10	11/18/13	E601	39	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5
W-832-11	3/25/13	E601	130 D	<0.5	3.2	<0.5	<0.5	0.67	<0.5	<0.5	<0.5	<0.5	<0.5	0.83	<0.5	<0.5
W-832-11	4/3/13	E601	99	<0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.65	<0.5	<0.5
W-832-11	8/27/13	E601	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-832-11	11/5/13	E601	80	<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	2/25/13	E601	44	<0.5	0.94	<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	4/3/13	E601	41	<0.5	0.79	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-12	7/9/13	E601	34	<0.5	0.69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-12	11/5/13	E601	45	<0.5	0.77	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-13	2/19/13	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-832-15	2/25/13	E601	40	<0.5	0.77	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-15	4/3/13	E601	42	<0.5	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-832-15	7/9/13	E601	35	<0.5	0.71	<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	11/5/13	E601	44	<0.5	0.83	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-23	2/26/13	E601	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-832-23	2/26/13 DUP	E601	96 O	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-832-23	8/14/13	E601	260 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-832-23	8/14/13 DUP	E601	250 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-832-24	2/20/13	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-832-24	8/14/13	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-832-24	8/14/13 DUP	E601	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-832-25	3/25/13	E601	150 D	<0.5	3.7	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-25	4/3/13	E601	52	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-25	7/9/13	E601	24	<0.5	0.74	<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	11/5/13	E601	27	<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-832-1927	3/13/13	E601	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-832-1927	3/13/13 DUP	E601	36 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5
W-832-1927	8/22/13	E601	37	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-2112	3/5/13	E601	<0.5	<0.5	<0.5	<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	6/6/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-2112	8/22/13	E601	<0.5	<0.5	<0.5	<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	12/4/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-832-2906	12/17/13	E624	12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
W-832-SC3	3/7/13	E601	6.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-870-02	3/13/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O	<0.5	<0.5 O
W-870-02	3/13/13 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<2	<0.5

Table B-7.01. Building 832 Canyon Operable Unit volatile organic compounds (VOCs) in ground and surface water.

Location	Date	Method	TCE	PCE	cis-1,2-DCE	trans-1,2-DCE	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-870-02	8/27/13	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-880-01	3/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 J
W-880-01	6/11/13	E601	<0.5	<0.5	<0.5	<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	8/27/13	E601	<0.5	<0.5	<0.5	<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	12/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-02	3/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 J
W-880-02	6/11/13	E601	<0.5	0.52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
W-880-03	3/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 J
W-880-03	6/11/13	E601	<0.5	<0.5	<0.5	<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	8/27/13	E601	<0.5	<0.5	<0.5	<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	12/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-7.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
SPRING3	3/7/13	E601	0 of 18	-	-
SVI-830-031	2/21/13	E601	0 of 18	-	-
SVI-830-031	8/15/13	E601	0 of 18	-	-
SVI-830-032	2/21/13	E601	0 of 18	-	-
SVI-830-032	8/15/13	E601	0 of 18	-	-
SVI-830-033	2/21/13	E601	0 of 18	-	-
SVI-830-033	8/15/13	E601	0 of 18	-	-
SVI-830-035	2/21/13	E601	0 of 18	-	-
SVI-830-035	8/15/13	E601	0 of 18	-	-
W-830-04A	2/28/13	E601	0 of 18	-	-
W-830-04A	2/28/13 DUP	E601	0 of 18	-	-
W-830-04A	8/20/13	E601	0 of 18	-	-
W-830-04A	8/20/13 DUP	E601	0 of 18	-	-
W-830-05	3/4/13	E601	0 of 18	-	-
W-830-05	8/20/13	E601	0 of 18	-	-
W-830-09	2/26/13	E601	0 of 18	-	-
W-830-09	8/19/13	E601	0 of 18	-	-
W-830-10	2/27/13	E601	0 of 18	-	-
W-830-10	8/20/13	E601	0 of 18	-	-
W-830-10	8/20/13 DUP	E601	0 of 18	-	-
W-830-11	2/28/13	E601	0 of 18	-	-
W-830-11	8/20/13	E601	0 of 18	-	-
W-830-12	2/20/13	E601	0 of 18	-	-
W-830-12	6/6/13	E601	0 of 18	-	-
W-830-12	8/15/13	E601	0 of 18	-	-
W-830-12	12/5/13	E601	0 of 18	-	-
W-830-13	2/27/13	E601	0 of 18	-	-
W-830-13	8/21/13	E601	0 of 18	-	-
W-830-14	2/27/13	E601	1 of 18	0.6	-
W-830-14	8/21/13	E601	0 of 18	-	-
W-830-15	2/27/13	E601	0 of 18	-	-

Table B-7.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-830-15	6/5/13	E601	0 of 18	-	-
W-830-15	8/21/13	E601	0 of 18	-	-
W-830-15	12/4/13	E601	0 of 18	-	-
W-830-16	3/13/13	E601	0 of 18	-	-
W-830-16	8/21/13	E601	0 of 18	-	-
W-830-17	3/4/13	E601	0 of 18	-	-
W-830-17	8/28/13	E601	0 of 18	-	-
W-830-18	2/25/13	E601	1 of 18	2	-
W-830-18	8/19/13	E601	1 of 18	4.6	-
W-830-19	3/4/13	E601	0 of 18	-	-
W-830-19	4/2/13	E601	0 of 18	-	-
W-830-19	7/8/13	E601	0 of 18	-	-
W-830-19	11/5/13	E601	0 of 18	-	-
W-830-20	2/28/13	E601	0 of 18	-	-
W-830-20	8/20/13	E601	0 of 18	-	-
W-830-21	2/25/13	E601	1 of 18	24	-
W-830-21	2/25/13 DUP	E601	1 of 18	24	-
W-830-21	8/19/13	E601	1 of 18	4.7	-
W-830-22	2/25/13	E601	1 of 18	2.2	-
W-830-22	8/14/13	E601	1 of 18	3.9	-
W-830-25	3/6/13	E601	0 of 18	-	-
W-830-27	3/6/13	E601	0 of 18	-	-
W-830-27	8/26/13	E601	0 of 18	-	-
W-830-28	3/6/13	E601	0 of 18	-	-
W-830-28	8/26/13	E601	0 of 18	-	-
W-830-29	2/28/13	E601	0 of 18	-	-
W-830-29	8/14/13	E601	0 of 18	-	-
W-830-30	2/21/13	E601	0 of 18	-	-
W-830-30	2/21/13 DUP	E601	0 of 18	-	-
W-830-30	8/15/13	E601	0 of 18	-	-
W-830-34	2/21/13	E601	0 of 18	-	-

Table B-7.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-830-34	8/15/13	E601	0 of 18	-	-
W-830-49	3/4/13	E601	0 of 18	-	-
W-830-49	4/2/13	E601	0 of 18	-	-
W-830-49	7/8/13	E601	0 of 18	-	-
W-830-49	11/5/13	E601	0 of 18	-	-
W-830-50	2/28/13	E601	0 of 18	-	-
W-830-50	8/22/13	E601	0 of 18	-	-
W-830-51	1/9/13	E601	0 of 18	-	-
W-830-51	4/2/13	E601	0 of 18	-	-
W-830-51	7/10/13	E601	0 of 18	-	-
W-830-51	10/9/13	E601	0 of 18	-	-
W-830-52	1/9/13	E601	0 of 18	-	-
W-830-52	4/2/13	E601	0 of 18	-	-
W-830-53	1/9/13	E601	0 of 18	-	-
W-830-53	4/2/13	E601	0 of 18	-	-
W-830-54	3/4/13	E601	0 of 18	-	-
W-830-54	8/28/13	E601	0 of 18	-	-
W-830-55	3/4/13	E601	0 of 18	-	-
W-830-55	8/28/13	E601	0 of 18	-	-
W-830-55	8/28/13 DUP	E601	0 of 18	-	-
W-830-56	3/4/13	E601	0 of 18	-	-
W-830-56	8/28/13	E601	0 of 18	-	-
W-830-57	1/14/13	E601	0 of 18	-	-
W-830-57	4/2/13	E601	0 of 18	-	-
W-830-57	7/8/13	E601	0 of 18	-	-
W-830-57	11/5/13	E601	0 of 18	-	-
W-830-58	3/6/13	E601	0 of 18	-	-
W-830-58	8/26/13	E601	0 of 18	-	-
W-830-59	3/4/13	E601	0 of 18	-	-
W-830-59	4/2/13	E601	0 of 18	-	-
W-830-59	7/8/13	E601	0 of 18	-	-

Table B-7.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-830-59	11/5/13	E601	0 of 18	-	-
W-830-60	1/14/13	E601	0 of 18	-	-
W-830-60	4/2/13	E601	0 of 18	-	-
W-830-60	7/8/13	E601	0 of 18	-	-
W-830-60	11/5/13	E601	0 of 18	-	-
W-830-1730	2/27/13	E601	0 of 18	-	-
W-830-1730	2/27/13 DUP	E601	0 of 18	-	-
W-830-1730	6/6/13	E601	0 of 18	-	-
W-830-1730	8/22/13	E601	0 of 18	-	-
W-830-1730	12/4/13	E601	0 of 18	-	-
W-830-1807	3/4/13	E601	0 of 18	-	-
W-830-1807	4/2/13	E601	0 of 18	-	-
W-830-1807	4/2/13 DUP	E601	0 of 18	-	-
W-830-1807	7/8/13	E601	0 of 18	-	-
W-830-1807	11/5/13	E601	0 of 18	-	-
W-830-1829	2/26/13	E601	0 of 18	-	-
W-830-1829	8/14/13	E601	0 of 18	-	-
W-830-1830	2/25/13	E601	0 of 18	-	-
W-830-1830	8/19/13	E601	0 of 18	-	-
W-830-1831	3/4/13	E601	0 of 18	-	-
W-830-1831	8/22/13	E601	0 of 18	-	-
W-830-1832	3/4/13	E601	0 of 18	-	-
W-830-1832	8/22/13	E601	0 of 18	-	-
W-830-2213	8/19/13	E601	1 of 18	6.1	-
W-830-2214	3/4/13	E601	0 of 18	-	-
W-830-2214	4/2/13	E601	0 of 18	-	-
W-830-2214	7/8/13	E601	0 of 18	-	-
W-830-2214	11/5/13	E601	1 of 18	1.4	-
W-830-2215	1/14/13	E601	0 of 18	-	-
W-830-2215	4/2/13	E601	0 of 18	-	-
W-830-2215	7/8/13	E601	0 of 18	-	-

Table B-7.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-830-2215	11/5/13	E601	0 of 18	-	-
W-830-2216	3/20/13	E601	0 of 18	-	-
W-830-2216	4/2/13	E601	0 of 18	-	-
W-830-2216	4/2/13 DUP	E601	0 of 18	-	-
W-830-2216	7/10/13	E601	0 of 18	-	-
W-830-2216	10/9/13	E601	0 of 18	-	-
W-830-2311	2/28/13	E601	0 of 18	-	-
W-830-2311	8/20/13	E601	0 of 18	-	-
W-830-2701	2/28/13	E601	0 of 18	-	-
W-830-2701	6/12/13	E601	1 of 18	1	-
W-830-2701	6/12/13 DUP	E601	1 of 18	1.1	-
W-830-2701	8/19/13	E601	1 of 18	1.1	-
W-830-2701	12/5/13	E601	1 of 18	1.2	-
W-830-2701	12/5/13 DUP	E601	1 of 18	1.1	-
W-830-2806	3/13/13	E601	0 of 18	-	-
W-830-2806	4/2/13	E624	0 of 30	-	-
W-830-2806	6/5/13	E601	0 of 18	-	-
W-830-2806	8/21/13	E601	0 of 18	-	-
W-830-2806	12/4/13	E601	0 of 18	-	-
W-831-01	2/19/13	E601	0 of 18	-	-
W-832-01	3/25/13	E601	1 of 18	3.3	-
W-832-01	4/3/13	E601	1 of 18	3	-
W-832-01	7/9/13	E601	1 of 18	4.4	-
W-832-01	11/5/13	E601	1 of 18	6.8	-
W-832-06	2/19/13	E601	0 of 18	-	-
W-832-06	8/12/13	E601	0 of 18	-	-
W-832-06	8/12/13 DUP	E601	0 of 18	-	-
W-832-09	2/20/13	E601	0 of 18	-	-
W-832-10	3/25/13	E601	1 of 18	2.9	-
W-832-10	6/3/13	E601	1 of 18	2.3	-
W-832-10	6/3/13 DUP	E601	1 of 18	2.2	-

Table B-7.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-832-10	7/9/13	E601	1 of 18	2	-
W-832-10	11/18/13	E601	0 of 18	-	-
W-832-11	3/25/13	E601	1 of 18	3.2	-
W-832-11	4/3/13	E601	1 of 18	2.2	-
W-832-11	8/27/13	E601	0 of 18	-	-
W-832-11	11/5/13	E601	1 of 18	2	-
W-832-12	2/25/13	E601	0 of 18	-	-
W-832-12	4/3/13	E601	0 of 18	-	-
W-832-12	7/9/13	E601	0 of 18	-	-
W-832-12	11/5/13	E601	0 of 18	-	-
W-832-13	2/19/13	E601	0 of 18	-	-
W-832-15	2/25/13	E601	0 of 18	-	-
W-832-15	4/3/13	E601	0 of 18	-	-
W-832-15	7/9/13	E601	0 of 18	-	-
W-832-15	11/5/13	E601	0 of 18	-	-
W-832-23	2/26/13	E601	0 of 18	-	-
W-832-23	2/26/13 DUP	E601	0 of 18	-	-
W-832-23	8/14/13	E601	0 of 18	-	-
W-832-23	8/14/13 DUP	E601	0 of 18	-	-
W-832-24	2/20/13	E601	0 of 18	-	-
W-832-24	8/14/13	E601	0 of 18	-	-
W-832-24	8/14/13 DUP	E601	0 of 18	-	-
W-832-25	3/25/13	E601	1 of 18	3.7	-
W-832-25	4/3/13	E601	1 of 18	1.2	-
W-832-25	7/9/13	E601	0 of 18	-	-
W-832-25	11/5/13	E601	0 of 18	-	-
W-832-1927	3/13/13	E601	0 of 18	-	-
W-832-1927	3/13/13 DUP	E601	0 of 18	-	-
W-832-1927	8/22/13	E601	0 of 18	-	-
W-832-2112	3/5/13	E601	0 of 18	-	-
W-832-2112	6/6/13	E601	0 of 18	-	-

Table B-7.01 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency	1,2-Dichloro-ethene (total) (µg/L)	Chloro-ethane (µg/L)
W-832-2112	8/22/13	E601	0 of 18	-	-
W-832-2112	12/4/13	E601	0 of 18	-	-
W-832-2906	12/17/13	E624	0 of 30	-	-
W-832-SC3	3/7/13	E601	0 of 18	-	-
W-870-02	3/13/13	E601	0 of 18	-	-
W-870-02	3/13/13 DUP	E601	0 of 18	-	-
W-870-02	8/27/13	E601	0 of 18	-	-
W-880-01	3/5/13	E601	0 of 18	-	-
W-880-01	6/11/13	E601	0 of 18	-	-
W-880-01	8/27/13	E601	0 of 18	-	-
W-880-01	12/5/13	E601	0 of 18	-	-
W-880-02	3/5/13	E601	0 of 18	-	-
W-880-02	6/11/13	E601	0 of 18	-	-
W-880-03	3/5/13	E601	0 of 18	-	-
W-880-03	6/11/13	E601	0 of 18	-	-
W-880-03	8/27/13	E601	1 of 18	-	0.63
W-880-03	12/5/13	E601	0 of 18	-	-

Table B-7.02. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
SPRING3	3/7/13	28 D	<4
SVI-830-031	2/21/13	110 D	4.3
SVI-830-032	2/21/13	82 D	<4
SVI-830-033	2/21/13	98 D	<4
SVI-830-035	2/21/13	110 D	<4
W-830-04A	2/28/13	75	<4
W-830-04A	2/28/13 DUP	75	<4
W-830-05	3/4/13	67 D	4.3
W-830-09	2/26/13	1.2 D	<4
W-830-10	2/27/13	73 D	4.8
W-830-11	2/28/13	9.4	<4
W-830-12	2/20/13	<0.5	<4
W-830-12	8/15/13	<0.5	<4
W-830-13	2/27/13	36 D	<4
W-830-15	2/27/13	1.8	<4
W-830-15	8/21/13	2.4	<4
W-830-16	3/13/13	<0.22	<4
W-830-17	3/4/13	82 D	5.1
W-830-19	3/4/13	130 D	4.5
W-830-19	7/8/13	-	<4
W-830-21	2/25/13	14 D	<4
W-830-21	2/25/13 DUP	15 D	<4
W-830-22	2/25/13	1.3 D	<4
W-830-25	3/6/13	140 D	9.4
W-830-27	3/6/13	95 D	7.1
W-830-28	3/6/13	6.4	<4
W-830-29	2/28/13	18	<4
W-830-30	2/21/13	68 D	<4
W-830-30	2/21/13 DUP	70 D	<4
W-830-34	2/21/13	120 D	<4
W-830-49	3/4/13	100 D	4.8
W-830-49	7/8/13	-	<4
W-830-50	2/28/13	<0.5	<4
W-830-51	1/9/13	70 D	<4
W-830-51	7/10/13	-	4.1
W-830-52	1/9/13	75 D	<4
W-830-53	1/9/13	38	<4
W-830-54	3/4/13	1.3	<4
W-830-55	3/4/13	18	-
W-830-56	3/4/13	33	<4
W-830-57	1/14/13	2.4 DO	<4
W-830-58	3/6/13	100 D	6.2
W-830-59	3/4/13	120 D	4.1
W-830-59	7/8/13	-	<4
W-830-60	1/14/13	1.3 DO	<4

Table B-7.02. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-830-1730	2/27/13	2.5	<4
W-830-1730	2/27/13 DUP	3.1	<4
W-830-1730	8/22/13	1.9	<4
W-830-1807	3/4/13	99 D	4.5
W-830-1807	7/8/13	-	5.1
W-830-1829	2/26/13	130 D	4.2
W-830-1830	2/25/13	110 D	5.4
W-830-1831	3/4/13	1.3	<4
W-830-1832	3/4/13	2.5	<4
W-830-2213	8/19/13	26 D	<4
W-830-2214	3/4/13	88 D	6.7
W-830-2214	7/8/13	-	5.8
W-830-2215	1/14/13	3.5 DO	<4
W-830-2216	3/20/13	53 D	<4
W-830-2216	7/10/13	-	<4
W-830-2311	2/28/13	75 D	4.4
W-830-2701	2/28/13	0.79	<4
W-830-2701	8/19/13	12 D	<4
W-830-2806	3/13/13	<0.22	<4
W-830-2806	4/2/13	-	<4
W-830-2806	8/21/13	<0.22	<4
W-831-01	2/19/13	<0.5	<4
W-832-01	3/25/13	100 D	5.6
W-832-01	7/9/13	-	6.1
W-832-06	2/19/13	7.3	<4
W-832-09	2/20/13	<0.5	<4
W-832-10	3/25/13	98 D	7
W-832-10	7/9/13	-	8.3
W-832-11	3/25/13	88 D	6
W-832-11	8/27/13	-	5.6
W-832-12	2/25/13	93 D	4.3
W-832-12	7/9/13	-	<4
W-832-13	2/19/13	160 D	13
W-832-15	2/25/13	120 D	7.2
W-832-15	7/9/13	120 D	7.7
W-832-23	2/26/13	30	<4
W-832-23	2/26/13 DUP	31 D	<4
W-832-24	2/20/13	40 D	<4
W-832-25	3/25/13	100 D	8.2
W-832-25	7/9/13	-	8
W-832-1927	3/13/13	40 D	<4
W-832-1927	3/13/13 DUP	44 D	<4
W-832-2112	3/5/13	<0.5	<4
W-832-2112	8/22/13	<0.5	<4
W-832-2906	12/17/13	-	<4

Table B-7.02. Building 832 Canyon Operable Unit nitrate and perchlorate in ground and surface water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-832-SC3	3/7/13	35 D	<4
W-870-02	3/13/13	1.1	-
W-870-02	3/13/13 DUP	0.64	-
W-880-01	3/5/13	<0.5	<4
W-880-01	8/27/13	<1 D	<4
W-880-02	3/5/13	<2.5 D	<4
W-880-03	3/5/13	<1 D	<4
W-880-03	8/27/13	<1 D	<4

Table B-7.03. Building 832 Canyon Operable Unit high explosive compounds in ground water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
W-830-2216	7/10/13	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR	IR
W-830-2806	4/2/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-832-2906	12/17/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-880-01	3/5/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-880-01	8/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-880-02	3/5/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-880-03	3/5/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
W-880-03	8/27/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-7.04. Building 832 Canyon Operable Unit general minerals in ground water.

Constituents of concern	W-830-12	W-830-2806	W-832-2906
	2/20/13	4/2/13	12/17/13
Total Alkalinity (as CaCO3) (mg/L)	162	190	150
Aluminum (mg/L)	<0.2	<0.2	<0.2
Bicarbonate Alk (as CaCO3) (mg/L)	162	190 D	150 D
Calcium (mg/L)	36	18	120
Carbonate Alk (as CaCO3) (mg/L)	<10	<8.2 D	<8.2 D
Chloride (mg/L)	-	280 D	350 D
Copper (mg/L)	<0.01	<0.05	<0.05
Fluoride (mg/L)	0.18	0.42 D	0.29 D
Hydroxide Alk (as CaCO3) (mg/L)	<10	<8.2 D	<8.2 D
Iron (mg/L)	<0.1	0.11	<0.1
Magnesium (mg/L)	16	3	63
Manganese (mg/L)	0.12	0.034	0.22
Nickel (mg/L)	<0.1	<0.1	<0.1
Nitrate (as N) (mg/L)	<0.1	<1 D	<1 D
Nitrate (as NO3) (mg/L)	<0.5	<0.44	4.1
Nitrite (as N) (mg/L)	<0.1	<0.5	<0.5
pH (Units)	8.2	8.04 H	7.87 H
Ortho-Phosphate (mg/L)	<0.1	<1 L	<1
Total Phosphorus (as PO4) (mg/L)	<0.1 H	0.86	<0.15 H
Potassium (mg/L)	11	13	21
Sodium (mg/L)	69	440 L	260
Total dissolved solids (TDS) (mg/L)	420 DH	1,300 D	1,600 DH
Specific Conductance (µmhos/cm)	670 H	2,020 H	2,220 H
Sulfate (mg/L)	-	380 D	500 D
Surfactants (mg/L)	<0.5	<0.5	<0.5
Total Hardness (as CaCO3) (mg/L)	160	57	560
Zinc (mg/L)	<0.05	<0.05	<0.05

Table B-7.05. Building 832 Canyon Operable Unit uranium isotopes in ground water.

Location	Date	Uranium 234 and Uranium 233 (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 238 (pCi/L)
W-830-12	2/20/13	<0.1	<0.1	<0.1

Table B-7.06. Building 832 Canyon Operable Unit metals and silica in ground water.

Location	Date	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silica (as SiO2) (mg/L)	Silver (mg/L)
W-830-2806	4/2/13	0.0057	<0.025	<0.001	0.0021	<0.005	<0.0002	<0.002	49	<0.001
W-832-2906	12/17/13	0.017	0.027	<0.001	<0.001	<0.005	<0.0002	0.019	55	<0.001

Table B-7.07. Building 832 Canyon Operable Unit gross alpha, gross beta and tritium in ground water.

Location	Date	Gross alpha (pCi/L)	Gross beta (pCi/L)	Tritium (pCi/L)
W-830-2806	4/2/13	<2	16.5 ± 6.76	<100
W-832-2906	12/17/13	<2	13.6 ± 3.33	<100

Table B-8.01. Building 851 Firing Table total uranium and uranium isotopes in ground water.

Location	Date	Uranium (pCi/L)	Uranium 234 and Uranium 233 (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 (pCi/L)	Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
W-851-05	6/10/13	<0.0627	-	<0.055	-	<0.0004	<0.000081	-	0.00760 ± 0.000240	<0.008122
W-851-05	12/2/13	-	<0.1	-	<0.1	-	-	<0.1	-	-
W-851-06	6/10/13	0.120 ± 0.00860	-	0.0880 ± 0.00860	-	<0.0015	<0.00019	-	0.0320 ± 0.000430	<0.006973
W-851-06	12/2/13	-	0.104 ± 0.0511	-	<0.1	-	-	<0.1	-	-
W-851-07	6/10/13	<0.0627	-	<0.14	-	0.00150 ± 0.000110	<0.000073	-	0.0320 ± 0.00180	0.00742 ± 0.000313
W-851-07	12/2/13	-	0.112 ± 0.0490	-	<0.1	-	-	<0.1	-	-
W-851-08	6/10/13	1.50 ± 0.0490	-	0.790 ± 0.0490	-	0.0290 ± 0.000490	<0.00016	-	0.630 ± 0.00700	0.00715 ± 0.0000910
W-851-08	12/2/13	-	0.340 ± 0.0883	-	<0.1	-	-	0.346 ± 0.0883	-	-

Table B-8.02. Building 851 Firing Table volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-851-05	6/10/13	E601	4.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 O

Table B-8.02 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency
W-851-05	6/10/13	E601	0 of 18

Table B-8.04. Building 845 Firing Table and Pit 9 Landfill tritium in ground water.

Location	Date	Tritium (pCi/L)
K9-01	5/30/13	<100
K9-02	5/30/13	<100
K9-03	5/30/13	<100

Table B-8.04. Building 845 Firing Table and Pit 9 Landfill metals in ground water.

Constituents of concern	K9-01	K9-02	K9-03
	5/30/13	5/30/13	5/30/13
Antimony (mg/L)	<0.0005	<0.0005	<0.0005
Arsenic (mg/L)	0.002	0.01	0.002
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 (mg/L)	0.07	0.07	0.08
Mercury (mg/L)	<0.0002	<0.0002	<0.0002
Molybdenum (mg/L)	0.03	0.05	0.03
Nickel (mg/L)	<0.0005	0.003	<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

Table B-8.05. Building 845 Firing Table and Pit 9 Landfill volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
K9-01	5/30/13	E601	<0.5	<0.5	<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	5/30/13	E601	<0.5	<0.5	<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	5/30/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-8.04 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency
K9-01	5/30/13	E601	0 of 18
K9-02	5/30/13	E601	0 of 18
K9-03	5/30/13	E601	0 of 18

Table B-8.06. Building 845 Firing Table and Pit 9 Landfill high explosive compounds in ground water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
K9-01	5/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2
K9-02	5/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1.2	<2	<1.2	<2
K9-03	5/30/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-8.07. Building 845 Firing Table and Pit 9 Landfill nitrate, perchlorate, and flouride in ground water.

Location	Date	Fluoride (mg/L)	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
K9-01	5/30/13	0.33	<0.5	<4
K9-02	5/30/13	0.39	<0.5	<4
K9-03	5/30/13	0.36	<0.5	<4

Table B-8.08. Building 845 Firing Table and Pit 9 Landfill total uranium and uranium isotopes 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	5/30/13	<0.06273	<0.059	<0.001	<0.000071	0.0190 ± 0.000790	<0.008181
K9-02	5/30/13	0.190 ± 0.0170	0.140 ± 0.0170	0.00210 ± 0.0000660	<0.000077	0.0440 ± 0.000970	0.00747 ± 0.000166
K9-03	5/30/13	0.360 ± 0.0230	0.260 ± 0.0220	0.00430 ± 0.000110	<0.00011	0.0930 ± 0.00200	0.00729 ± 0.000109

Table B-8.09. Building 833 volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
W-833-30	3/19/13	E601	<0.5	<0.5	<0.5	<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	3/19/13 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-833-30	9/23/13	E601	<0.5	<0.5	<0.5	<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	3/19/13	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	2/5/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-8.09 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency
W-833-30	3/19/13	E601	0 of 18
W-833-30	3/19/13 DUP	E601	0 of 18
W-833-30	9/23/13	E601	0 of 18
W-833-33	3/19/13	E601	0 of 18
W-840-01	2/5/13	E601	0 of 18

Table B-8.10. Building 833 nitrate and perchlorate in ground water.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
W-840-01	2/5/13	<0.5	<4

Table B-8.11. Building 801 Firing Table and Pit 8 Landfill tritium in ground water.

Location	Date	Tritium (pCi/L)
K8-01	5/22/13	<100
K8-01	5/22/13 DUP	104 ± 70.0
K8-01	11/6/13	121 ± 67.0
K8-01	11/6/13 DUP	176 ± 74.0
K8-02B	7/17/13	<100
K8-02B	11/6/13	<100
K8-03B	5/22/13	<100
K8-03B	11/6/13	<100
K8-04	5/22/13	<100
K8-04	5/22/13 DUP	<100
K8-04	11/6/13	<100

Table B-8.12. Building 801 Firing Table and Pit 8 Landfill metals in ground water.

Constituents of concern	K8-04	K8-04
	5/22/13	5/22/13 DUP
Antimony (mg/L)	<0.0005	<0.06
Arsenic (mg/L)	0.02	0.028
Barium (mg/L)	0.006 B	<0.01
Beryllium (mg/L)	<0.0001	<0.002
Cadmium (mg/L)	0.002	<0.005
Chromium (mg/L)	0.009	<0.01
Cobalt (mg/L)	<0.0005	<0.02
Copper (mg/L)	0.0006	<0.01
Lead (mg/L)	<0.0002	<0.003
Lithium (mg/L)	0.03	0.044
Mercury (mg/L)	<0.0005	<0.0002
Molybdenum (mg/L)	0.006	<0.02
Nickel (mg/L)	<0.0005	<0.02
Selenium (mg/L)	0.008	0.013
Silver (mg/L)	<0.0001	<0.005
Thallium (mg/L)	<0.0001	<0.005
Vanadium (mg/L)	0.09	0.084
Zinc (mg/L)	<0.01	<0.05

Table B-8.13. Building 801 Firing Table and Pit 8 Landfill volatile organic compounds (VOCs) in ground water.

Location	Date	Method	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloroform (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
K8-01	5/22/13	E601	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-01	5/22/13 DUP	E601	3.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-01	11/6/13	E601	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-01	11/6/13 DUP	E601	3.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5	<1	<2	<0.5
K8-03B	5/22/13	E601	<0.5	<0.5	<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	11/6/13	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-04	5/22/13	E601	1.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
K8-04	5/22/13 DUP	E601	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table B-8.13 (Con't). Analyte detected but not reported in main table.

Location	Date	Method	Detection frequency
K8-01	5/22/13	E601	0 of 18
K8-01	5/22/13 DUP	E601	0 of 18
K8-01	11/6/13	E601	0 of 18
K8-01	11/6/13 DUP	E601	0 of 18
K8-03B	5/22/13	E601	0 of 18
K8-03B	11/6/13	E601	0 of 18
K8-04	5/22/13	E601	0 of 18
K8-04	5/22/13 DUP	E601	0 of 18

Table B-8.14. Building 801 Firing Table and Pit 8 Landfill high explosive compounds in ground water.

Location	Date	1,3,5-Tri-nitro-benzene (µg/L)	1,3-Di-nitro-benzene (µg/L)	2,4-Di-nitro-toluene (µg/L)	2,6-Di-nitro-toluene (µg/L)	2-Amino-4,6- Di-nitro-toluene (µg/L)	2-Nitro-toluene (µg/L)	3-Nitro-toluene (µg/L)	4-Amino-2,6- Di-nitro-toluene (µg/L)	4-Nitro-toluene (µg/L)	HMX (µg/L)	Nitro-benzene (µg/L)	RDX (µg/L)	TNT (µg/L)
K8-04	5/22/13	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1.1	<2	<1.1	<2
K8-04	5/22/13 DUP	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<1	<2

Table B-8.15. Building 801 Firing Table and Pit 8 Landfill nitrate, perchlorate, and fluoride in ground water.

Location	Date	Fluoride (mg/L)	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
K8-01	5/22/13	-	43 D	<4
K8-01	5/22/13 DUP	-	47	<4
K8-01	11/6/13	-	-	<4
K8-01	11/6/13 DUP	-	-	<4
K8-02B	7/17/13	-	-	<4
K8-02B	11/6/13	-	35 D	<4
K8-03B	5/22/13	-	8.2	<4
K8-03B	11/6/13	-	-	<4
K8-04	5/22/13	0.28	63 D	<4
K8-04	5/22/13 DUP	0.48	67	<4
K8-04	11/6/13	-	-	<4

Table B-8.16. Building 801 Firing Table and Pit 8 Landfill total uranium and uranium isotopes in ground water.

Location	Date	Uranium (pCi/L)	Uranium 234 and Uranium 233 (pCi/L)	Uranium 234 by mass (pCi/L)	Uranium 235 and Uranium 236 (pCi/L)	Uranium 235 by mass (pCi/L)	Uranium 236 by mass (pCi/L)	Uranium 238 (pCi/L)	Uranium 238 by mass (pCi/L)	Uranium 235/238 (ratio)
K8-01	5/22/13	-	5.51 ± 1.24	-	0.160 ± 0.144	-	-	3.44 ± 0.844	-	-
K8-01	5/22/13 DUP	-	5.40 ± 0.910	-	0.270 ± 0.0790	-	-	3.35 ± 0.580	-	-
K8-02B	11/6/13	-	6.60 ± 0.996	-	0.247 ± 0.0950	-	-	4.32 ± 0.678	-	-
K8-03B	5/22/13	-	3.09 ± 0.595	-	0.111 ± 0.0845	-	-	1.80 ± 0.389	-	-
K8-04	5/22/13	13.0 ± 0.130	-	7.60 ± 0.130	-	0.230 ± 0.00160	<0.00096	-	5.00 ± 0.00910	0.00719 ± 0.0000500

Appendix C

Ground Water Elevations Measured During 2013

Appendix C

Ground Water Elevations Measured During 2013

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
CDF1	03/19/13	14.59	488.03	
CDF1	06/06/13	25.87	476.75	
CDF1	08/15/13	28.97	473.65	
CDF1	12/11/13	13.48	489.14	
CON1	03/19/13	10.58	490.50	
CON1	06/06/13	10.63	490.45	
CON1	08/15/13	11.36	489.72	
CON1	12/04/13	11.14	489.94	
CON2	03/19/13	16.85	488.44	
CON2	06/06/13	13.60	491.39	
CON2	08/15/13	14.85	490.14	
CON2	12/04/13	16.39	488.60	
W-24P-03	03/18/13	1.86	425.88	
W-24P-03	06/03/13	1.78	425.96	
W-24P-03	08/22/13	2.01	425.73	
W-24P-03	12/11/13	1.96	425.78	
W-25D-01	03/18/13	19.36	446.13	
W-25D-01	06/03/13	19.01	446.48	
W-25D-01	08/22/13	19.73	445.76	
W-25D-01	12/04/13	20.81	444.68	
W-25D-02	03/18/13	11.92	446.27	
W-25D-02	06/03/13	12.14	446.05	
W-25D-02	08/22/13	13.76	444.43	
W-25D-02	12/11/13	13.36	444.83	
W-25M-01	03/18/13	25.24	454.32	
W-25M-01	06/04/13	24.46	455.10	
W-25M-01	08/22/13	24.06	455.50	
W-25M-01	12/04/13	24.29	455.27	
W-25M-02	03/19/13	12.21	473.03	
W-25M-02	06/04/13	12.05	473.19	
W-25M-02	08/22/13	11.58	473.66	
W-25M-02	12/11/13	11.92	473.32	
W-25M-03	03/19/13	12.85	474.58	
W-25M-03	06/04/13	11.67	475.76	
W-25M-03	08/22/13	10.87	476.56	
W-25M-03	12/11/13	11.42	476.01	
W-25N-01	03/13/13	18.97	488.15	
W-25N-01	05/28/13	18.50	488.62	
W-25N-01	08/21/13	17.38	489.74	
W-25N-01	12/05/13	18.71	488.41	
W-25N-04	03/13/13	41.46	486.43	
W-25N-04	05/28/13	41.50	486.39	
W-25N-04	08/21/13	41.50	486.39	
W-25N-04	12/05/13	41.57	486.32	
W-25N-05	03/19/13	13.88	483.29	

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-25N-05	06/06/13	14.10	483.07	
W-25N-05	08/22/13	12.90	484.27	
W-25N-05	12/11/13	13.70	483.47	
W-25N-06	03/19/13	16.95	479.87	
W-25N-06	06/06/13	17.21	479.61	
W-25N-06	08/22/13	15.96	480.86	
W-25N-06	12/11/13	16.70	480.12	
W-25N-07	03/19/13	17.03	488.37	
W-25N-07	06/06/13	16.40	489.00	
W-25N-07	08/22/13	15.83	489.57	
W-25N-07	12/11/13	16.79	488.61	
W-25N-08	03/13/13	24.30	486.52	
W-25N-08	05/28/13	24.07	486.75	
W-25N-08	08/21/13	23.29	487.53	
W-25N-08	12/05/13	24.09	486.73	
W-25N-09	03/13/13	19.34	491.12	
W-25N-09	05/28/13	15.05	495.41	
W-25N-09	08/21/13	19.73	490.73	
W-25N-09	12/05/13	19.85	490.61	
W-25N-10	03/19/13	15.51	490.05	
W-25N-10	06/06/13	18.00	487.56	
W-25N-10	08/22/13	17.43	488.13	
W-25N-10	12/11/13	15.81	489.75	
W-25N-11	03/19/13	15.06	490.08	
W-25N-11	06/06/13	19.53	485.61	
W-25N-11	08/22/13	19.11	486.03	
W-25N-11	12/11/13	15.70	489.44	
W-25N-12	03/19/13	16.00	489.52	
W-25N-12	06/06/13	18.97	486.55	
W-25N-12	08/22/13	18.43	487.09	
W-25N-12	12/11/13	16.33	489.19	
W-25N-13	03/19/13	17.84	487.54	
W-25N-13	06/06/13	17.77	487.61	
W-25N-13	08/22/13	16.87	488.51	
W-25N-13	12/11/13	17.53	487.85	
W-25N-15	03/19/13	14.81	486.27	
W-25N-15	06/06/13	16.13	484.95	
W-25N-15	08/22/13	13.55	487.53	
W-25N-15	12/11/13	14.63	486.45	
W-25N-18	03/19/13	15.89	485.93	
W-25N-18	06/06/13	16.30	485.52	
W-25N-18	08/22/13	14.70	487.12	
W-25N-18	12/04/13	15.77	486.05	
W-25N-20	03/13/13	16.67	488.27	
W-25N-20	05/28/13	16.20	488.74	

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-25N-20	08/21/13	14.96	487.15	
W-25N-20	12/05/13	16.40	485.71	
W-25N-21	03/13/13	22.05	491.13	
W-25N-21	05/28/13	22.80	490.38	
W-25N-21	08/21/13	22.42	490.76	
W-25N-21	12/05/13	23.36	489.82	
W-25N-22	03/13/13	25.19	487.56	
W-25N-22	05/28/13	25.20	487.55	
W-25N-22	08/21/13	24.25	488.50	
W-25N-22	12/05/13	25.14	487.61	
W-25N-23	03/13/13	23.18	486.90	
W-25N-23	05/28/13	23.06	487.02	
W-25N-23	08/21/13	21.76	488.32	
W-25N-23	12/05/13	23.13	486.95	
W-25N-24	03/13/13	18.73	487.89	
W-25N-24	05/28/13	18.27	488.35	
W-25N-24	08/21/13	17.07	489.55	
W-25N-24	12/05/13	18.45	488.17	
W-25N-25	03/19/13	16.27	484.80	
W-25N-25	06/06/13	13.90	487.17	
W-25N-25	08/15/13	13.65	487.42	
W-25N-25	12/11/13	13.71	487.36	
W-25N-26	03/19/13	13.10	486.27	
W-25N-26	06/06/13	13.91	485.46	
W-25N-26	08/22/13	11.95	487.42	
W-25N-26	12/04/13	13.91	485.46	
W-25N-28	03/19/13	14.07	483.08	
W-25N-28	06/06/13	14.65	482.50	
W-25N-28	08/22/13	13.11	484.04	
W-25N-28	12/04/13	13.82	483.33	
W-26R-01	03/13/13	21.32	488.39	
W-26R-01	05/28/13	20.89	488.82	
W-26R-01	08/21/13	19.60	490.11	
W-26R-01	12/05/13	21.07	488.64	
W-26R-02	03/13/13	36.73	491.47	
W-26R-02	05/28/13	37.80	490.40	
W-26R-02	08/21/13	37.41	490.79	
W-26R-02	12/05/13	37.29	490.91	
W-26R-03	03/13/13	27.75	478.47	
W-26R-03	05/28/13	17.30	488.92	
W-26R-03	08/21/13	16.05	490.17	
W-26R-03	12/05/13	17.59	488.63	
W-26R-04	03/13/13	20.43	488.53	
W-26R-04	05/28/13	19.90	488.77	
W-26R-04	08/21/13	18.70	489.97	

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-26R-04	12/05/13	20.18	488.49	
W-26R-05	03/13/13	24.32	488.79	
W-26R-05	05/28/13	24.45	488.66	
W-26R-05	08/21/13	23.20	489.91	
W-26R-05	12/05/13	26.02	487.09	
W-26R-06	03/13/13	26.61	488.23	
W-26R-06	05/28/13	26.22	488.62	
W-26R-06	08/21/13	24.83	490.01	
W-26R-06	12/05/13	26.36	488.48	
W-26R-07	03/13/13	29.30	491.29	
W-26R-07	05/28/13	30.35	490.24	
W-26R-07	08/21/13	29.84	490.75	
W-26R-07	12/05/13	29.85	490.74	
W-26R-08	03/13/13	31.40	491.71	
W-26R-08	05/28/13	31.21	491.90	
W-26R-08	08/21/13	32.19	490.92	
W-26R-08	12/05/13	32.00	491.11	
W-26R-11	03/13/13	18.57	488.64	
W-26R-11	05/28/13	18.10	489.11	
W-26R-11	08/21/13	16.83	490.38	
W-26R-11	12/05/13	18.34	488.87	
W-35A-01	03/19/13	17.15	491.06	
W-35A-01	06/03/13	16.20	492.01	
W-35A-01	08/15/13	15.87	492.34	
W-35A-01	12/11/13	17.60	490.61	
W-35A-02	03/19/13	16.14	493.56	
W-35A-02	06/03/13	14.73	494.97	
W-35A-02	08/15/13	14.82	494.88	
W-35A-02	12/11/13	15.96	493.74	
W-35A-03	03/19/13	15.96	490.88	
W-35A-03	06/03/13	15.10	491.74	
W-35A-03	08/15/13	14.76	492.08	
W-35A-03	12/11/13	15.90	490.94	
W-35A-04	03/19/13	15.05	489.02	
W-35A-04	06/03/13	13.90	490.17	
W-35A-04	08/15/13	13.45	490.62	
W-35A-04	12/11/13	14.55	489.52	
W-35A-05	03/19/13	17.61	490.36	
W-35A-05	06/03/13	17.12	491.19	
W-35A-05	08/15/13	17.24	491.07	
W-35A-05	12/11/13	16.95	491.36	
W-35A-06	03/19/13	12.83	491.49	
W-35A-06	06/03/13	14.25	490.07	
W-35A-06	08/15/13	14.35	489.97	
W-35A-06	12/11/13	14.65	489.67	

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-35A-07	03/19/13	9.23	504.09	
W-35A-07	06/03/13	9.20	504.12	
W-35A-07	08/15/13	10.25	503.07	
W-35A-07	12/11/13	9.26	504.06	
W-35A-08	03/19/13	18.05	499.91	
W-35A-08	06/03/13	17.75	500.21	
W-35A-08	08/15/13	17.43	500.53	
W-35A-08	12/11/13	18.20	499.76	
W-35A-09	03/19/13	19.51	496.14	
W-35A-09	06/03/13	18.52	497.13	
W-35A-09	08/15/13	18.63	497.04	
W-35A-09	12/11/13	19.58	496.09	
W-35A-10	03/19/13	16.76	495.40	
W-35A-10	06/03/13	16.31	495.85	
W-35A-10	08/15/13	16.10	496.06	
W-35A-10	12/11/13	17.33	494.83	
W-35A-11	03/19/13	3.74	501.60	
W-35A-11	06/03/13	3.56	501.78	
W-35A-11	08/15/13	3.29	502.05	
W-35A-11	12/11/13	5.81	501.65	
W-35A-12	03/19/13	11.23	494.59	
W-35A-12	06/03/13	10.88	494.94	
W-35A-12	08/15/13	11.20	494.62	
W-35A-12	12/11/13	13.23	494.45	
W-35A-13	03/19/13	13.24	490.10	
W-35A-13	06/03/13	12.28	491.06	
W-35A-13	08/15/13	12.56	490.78	
W-35A-13	12/11/13	12.85	490.49	
W-35A-14	03/19/13	16.77	495.76	
W-35A-14	06/03/13	16.79	495.74	
W-35A-14	08/15/13	15.93	496.60	
W-35A-14	12/11/13	14.83	497.70	
W-7A	03/13/13	20.85	504.03	
W-7A	05/29/13	21.13	503.75	
W-7A	08/21/13	20.96	503.92	
W-7A	12/04/13	-	NA	NM/RA
W-7B	03/13/13	21.31	490.13	
W-7B	05/28/13	20.69	490.75	
W-7B	08/21/13	19.50	491.94	
W-7B	12/05/13	21.02	490.42	
W-7C	03/13/13	18.85	499.02	
W-7C	05/28/13	18.51	499.36	
W-7C	08/21/13	17.80	499.77	
W-7C	12/05/13	18.80	498.77	
W-7D	03/13/13	15.64	491.48	

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-7D	05/28/13	16.60	490.52	
W-7D	08/21/13	16.76	490.36	
W-7D	12/05/13	16.08	491.04	
W-7DS	03/13/13	17.84	488.76	
W-7DS	05/28/13	17.39	489.21	
W-7DS	08/21/13	16.13	490.47	
W-7DS	12/05/13	17.63	488.97	
W-7E	03/13/13	19.47	489.81	
W-7E	05/28/13	18.87	490.41	
W-7E	08/21/13	17.55	491.73	
W-7E	12/05/13	19.12	490.16	
W-7ES	03/13/13	19.52	490.19	
W-7ES	05/28/13	18.84	490.87	
W-7ES	08/21/13	17.56	492.15	
W-7ES	12/05/13	19.25	490.46	
W-7F	03/13/13	40.62	486.46	
W-7F	05/28/13	40.47	486.61	
W-7F	08/21/13	39.86	487.22	
W-7F	12/04/13	43.28	483.80	
W-7G	03/13/13	13.19	499.73	
W-7G	05/28/13	13.21	499.71	
W-7G	08/21/13	12.71	500.21	
W-7G	12/04/13	12.74	500.18	
W-7H	03/13/13	17.10	494.34	
W-7H	05/28/13	16.70	494.74	
W-7H	08/21/13	15.89	495.55	
W-7H	12/04/13	17.10	494.34	
W-7I	03/13/13	48.70	480.60	
W-7I	05/28/13	49.78	479.52	
W-7I	08/21/13	49.37	479.93	
W-7I	12/04/13	49.65	479.65	
W-7J	03/13/13	39.40	488.49	
W-7J	05/28/13	42.15	485.74	
W-7J	08/21/13	41.83	486.06	
W-7J	12/04/13	44.22	483.67	
W-7K	03/13/13	10.00	499.93	
W-7K	05/28/13	10.16	499.77	
W-7K	08/21/13	9.47	500.46	
W-7K	12/05/13	9.57	500.36	
W-7L	03/13/13	12.76	500.00	
W-7L	05/28/13	12.84	499.92	
W-7L	08/21/13	12.38	500.38	
W-7L	12/05/13	12.37	500.39	
W-7M	03/13/13	13.13	494.62	
W-7M	05/28/13	17.54	490.21	

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-7M	08/21/13	12.07	495.68	
W-7M	12/05/13	13.04	494.71	
W-7N	03/13/13	18.11	490.07	
W-7N	05/28/13	17.44	490.74	
W-7N	08/21/13	16.21	491.97	
W-7N	12/05/13	17.83	490.35	
W-7O	03/13/13	-	NA	NM/BLOC
W-7O	05/28/13	25.35	490.44	
W-7O	08/21/13	24.49	491.30	
W-7O	12/04/13	26.05	489.74	
W-7P	03/13/13	20.14	489.78	
W-7P	05/28/13	20.16	489.76	
W-7P	08/21/13	18.85	491.07	
W-7P	12/05/13	19.25	490.67	
W-7PS	03/13/13	-	NA	DRY
W-7PS	05/28/13	-	NA	DRY
W-7PS	08/21/13	17.17	491.61	
W-7PS	12/05/13	-	NA	DRY
W-7Q	03/13/13	26.14	491.48	
W-7Q	05/28/13	25.91	491.71	
W-7Q	08/21/13	25.13	492.49	
W-7Q	12/04/13	26.42	491.20	
W-7R	03/13/13	20.24	490.16	
W-7R	05/28/13	19.60	490.80	
W-7R	08/21/13	18.33	492.07	
W-7R	12/05/13	19.90	490.50	
W-7S	03/13/13	19.94	489.94	
W-7S	05/28/13	18.91	490.97	
W-7S	08/21/13	17.70	492.18	
W-7S	12/05/13	19.35	490.53	
W-7T	03/13/13	19.55	490.22	
W-7T	05/28/13	18.87	490.90	
W-7T	08/21/13	17.58	492.19	
W-7T	12/05/13	19.26	490.51	
W-843-01	03/18/13	112.66	511.10	
W-843-01	05/29/13	113.11	510.65	
W-843-01	08/21/13	112.66	511.10	
W-843-01	12/04/13	111.86	511.90	
W-843-02	03/18/13	107.95	514.45	
W-843-02	05/29/13	107.76	514.64	
W-843-02	08/21/13	107.31	515.09	
W-843-02	12/04/13	107.46	514.94	
W-872-01	03/20/13	-	NA	DRY
W-872-01	05/29/13	-	NA	DRY
W-872-01	08/21/13	-	NA	DRY

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-872-01	12/04/13	-	NA	DRY
W-872-02	03/20/13	-	NA	DRY
W-872-02	05/29/13	44.47	488.52	
W-872-02	08/21/13	44.56	488.43	
W-872-02	12/05/13	39.86	493.13	
W-873-01	03/20/13	18.95	514.98	
W-873-01	05/29/13	19.90	514.03	
W-873-01	09/03/13	19.96	513.97	
W-873-01	12/05/13	18.36	515.57	
W-873-02	03/20/13	34.76	498.09	
W-873-02	05/29/13	35.34	497.51	
W-873-02	09/03/13	36.14	496.71	
W-873-02	12/05/13	36.52	496.33	
W-873-03	03/20/13	30.65	502.84	
W-873-03	05/29/13	31.35	502.14	
W-873-03	09/03/13	32.01	501.48	
W-873-03	12/05/13	32.20	501.29	
W-873-04	03/20/13	19.73	511.68	
W-873-04	05/29/13	20.16	511.25	
W-873-04	09/03/13	21.17	510.24	
W-873-04	12/05/13	20.72	510.69	
W-873-06	03/20/13	33.82	499.24	
W-873-06	05/29/13	34.58	498.48	
W-873-06	09/03/13	35.32	497.74	
W-873-06	12/05/13	35.81	497.25	
W-873-07	03/20/13	-	NA	DRY
W-873-07	05/29/13	44.84	488.06	
W-873-07	09/03/13	44.94	487.96	
W-873-07	12/05/13	38.31	494.59	
W-875-01	03/20/13	21.07	511.33	
W-875-01	05/29/13	21.28	511.12	
W-875-01	09/03/13	22.15	510.25	
W-875-01	12/05/13	21.51	510.89	
W-875-02	03/20/13	22.17	509.19	
W-875-02	05/29/13	22.15	509.21	
W-875-02	09/03/13	22.96	508.40	
W-875-02	12/05/13	22.85	508.51	
W-875-03	03/20/13	32.83	495.81	
W-875-03	05/29/13	32.80	495.84	
W-875-03	09/03/13	33.21	495.43	
W-875-03	12/05/13	33.42	495.22	
W-875-04	03/20/13	21.15	511.08	
W-875-04	05/29/13	21.50	510.73	
W-875-04	09/03/13	22.12	510.11	
W-875-04	12/05/13	22.97	509.26	

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-875-05	03/20/13	23.20	513.20	
W-875-05	05/29/13	23.30	513.10	
W-875-05	09/03/13	23.87	512.53	
W-875-05	12/05/13	23.73	512.67	
W-875-06	03/18/13	-	NA	DRY
W-875-06	05/29/13	27.47	501.95	
W-875-06	09/03/13	27.59	501.83	
W-875-06	12/05/13	25.90	503.52	
W-875-07	03/18/13	36.28	492.16	
W-875-07	05/29/13	35.50	492.94	
W-875-07	09/03/13	36.17	492.27	
W-875-07	12/04/13	35.75	493.79	
W-875-08	03/18/13	-	NA	DRY
W-875-08	05/29/13	-	NA	DRY
W-875-08	08/12/13	51.45	478.31	
W-875-08	12/04/13	51.48	478.28	
W-875-09	03/18/13	-	NA	DRY
W-875-09	05/29/13	42.40	487.31	
W-875-09	08/22/13	-	NA	DRY
W-875-09	12/04/13	-	NA	DRY
W-875-10	03/18/13	-	NA	DRY
W-875-10	05/29/13	-	NA	DRY
W-875-10	08/22/13	-	NA	DRY
W-875-10	12/04/13	-	NA	DRY
W-875-11	03/18/13	42.12	487.61	
W-875-11	05/29/13	41.83	487.90	
W-875-11	08/22/13	41.89	487.84	
W-875-11	12/04/13	41.85	487.88	
W-875-15	03/18/13	-	NA	DRY
W-875-15	05/29/13	-	NA	DRY
W-875-15	08/22/13	41.50	488.41	
W-875-15	12/04/13	41.45	488.46	
W-876-01	03/18/13	23.20	514.78	
W-876-01	05/29/13	23.71	514.27	
W-876-01	08/21/13	23.68	514.30	
W-876-01	12/04/13	25.00	512.98	
W-879-01	03/18/13	46.37	505.49	
W-879-01	05/29/13	46.23	505.63	
W-879-01	08/21/13	45.88	505.98	
W-879-01	12/04/13	46.19	505.67	
W-889-01	03/18/13	31.13	522.50	
W-889-01	05/29/13	39.15	514.48	
W-889-01	08/21/13	39.27	514.36	
W-889-01	12/04/13	39.26	514.37	
W-CGSA-1732	03/13/13	11.39	511.46	

Table C-1. General Services Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-CGSA-1732	05/29/13	22.15	500.70	
W-CGSA-1732	08/21/13	19.13	503.72	
W-CGSA-1732	12/04/13	17.10	505.75	
W-CGSA-1733	03/13/13	-	NA	DRY
W-CGSA-1733	05/28/13	-	NA	DRY
W-CGSA-1733	08/21/13	19.64	492.35	
W-CGSA-1733	12/05/13	-	NA	DRY
W-CGSA-1735	03/13/13	-	NA	DRY
W-CGSA-1735	05/28/13	-	NA	DRY
W-CGSA-1735	08/21/13	-	NA	DRY
W-CGSA-1735	12/05/13	-	NA	DRY
W-CGSA-1736	03/13/13	20.49	488.88	
W-CGSA-1736	05/28/13	20.14	489.23	
W-CGSA-1736	08/21/13	18.73	490.64	
W-CGSA-1736	12/05/13	20.27	489.10	
W-CGSA-1737	03/13/13	17.72	489.89	
W-CGSA-1737	05/28/13	17.11	490.50	
W-CGSA-1737	08/21/13	15.82	491.79	
W-CGSA-1737	12/05/13	17.45	490.16	
W-CGSA-1739	03/13/13	18.90	493.57	
W-CGSA-1739	05/28/13	19.10	493.37	
W-CGSA-1739	08/21/13	19.08	493.39	
W-CGSA-1739	12/05/13	19.39	493.08	
W-CGSA-2708	03/13/13	38.51	516.23	
W-CGSA-2708	05/29/13	39.48	515.26	
W-CGSA-2708	08/21/13	39.30	515.44	
W-CGSA-2708	12/04/13	39.09	515.65	
W-CGSA-2907	12/04/13	28.20	NA	Well not surveyed. Data in review.
W-CGSA-2908	12/04/13	27.54	NA	Well not surveyed. Data in review.

Table C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-1709	03/05/13	-	NA	NM/RA
W-834-1709	05/20/13	-	NA	NM/RA
W-834-1709	08/27/13	-	NA	NM/RA
W-834-1709	12/03/13	-	NA	NM/RA
W-834-1711	03/05/13	-	NA	NM/RA
W-834-1711	05/20/13	-	NA	NM/RA
W-834-1711	08/27/13	-	NA	NM/RA
W-834-1711	12/03/13	-	NA	NM/RA
W-834-1712	03/05/13	-	NA	NM/RA
W-834-1712	05/20/13	-	NA	NM/RA
W-834-1712	08/27/13	-	NA	NM/RA
W-834-1712	12/02/13	-	NA	NM/RA
W-834-1824	03/05/13	39.20	921.58	
W-834-1824	05/20/13	39.40	921.38	
W-834-1824	08/27/13	40.13	920.65	
W-834-1824	12/03/13	40.00	920.78	
W-834-1825	03/05/13	40.09	917.58	
W-834-1825	05/20/13	40.00	917.67	
W-834-1825	08/27/13	40.35	917.32	
W-834-1825	12/03/13	40.05	917.62	
W-834-1833	03/05/13	39.81	916.30	
W-834-1833	05/20/13	40.32	915.79	
W-834-1833	08/27/13	40.57	915.54	
W-834-1833	12/03/13	40.60	915.51	
W-834-2001	03/05/13	-	NA	NM REQUIRES DEDICATED PROBE
W-834-2001	05/20/13	-	NA	NM REQUIRES DEDICATED PROBE
W-834-2001	08/29/13	-	NA	NM REQUIRES DEDICATED PROBE
W-834-2001	12/03/13	-	NA	NM REQUIRES DEDICATED PROBE
W-834-2113	03/05/13	39.00	960.01	
W-834-2113	05/20/13	39.47	959.54	
W-834-2113	08/29/13	40.01	959.00	
W-834-2113	12/03/13	40.00	959.01	
W-834-2117	03/05/13	40.75	933.14	
W-834-2117	05/20/13	41.44	932.45	
W-834-2117	08/27/13	41.80	932.09	
W-834-2117	12/03/13	42.47	931.42	
W-834-2118	03/05/13	29.55	909.74	
W-834-2118	05/20/13	30.20	909.09	
W-834-2118	08/27/13	30.33	908.96	
W-834-2118	12/03/13	31.11	908.18	
W-834-2119	03/05/13	54.99	900.22	
W-834-2119	05/20/13	55.09	900.12	
W-834-2119	08/27/13	55.33	899.88	
W-834-2119	12/03/13	55.80	899.41	
W-834-A1	03/05/13	29.60	985.49	

Table C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-A1	05/20/13	28.91	986.18	
W-834-A1	08/29/13	29.07	986.02	
W-834-A1	12/03/13	31.80	983.29	
W-834-A2	03/05/13	18.30	997.18	
W-834-A2	05/20/13	-	NA	DRY
W-834-A2	08/29/13	-	NA	DRY
W-834-A2	12/03/13	-	NA	DRY
W-834-B2	03/05/13	-	NA	DRY
W-834-B2	05/20/13	-	NA	DRY
W-834-B2	08/29/13	-	NA	DRY
W-834-B2	12/03/13	-	NA	DRY
W-834-B3	03/05/13	10.90	1006.98	
W-834-B3	05/20/13	-	NA	NM/UC WASP NEST
W-834-B3	08/29/13	11.10	1006.78	
W-834-B3	12/03/13	11.70	1006.18	
W-834-B4	03/05/13	13.37	1002.20	
W-834-B4	05/20/13	14.60	1000.97	
W-834-B4	08/29/13	-	NA	DRY
W-834-B4	12/03/13	-	NA	DRY
W-834-C2	03/05/13	18.55	1001.25	
W-834-C2	05/20/13	-	NA	DRY
W-834-C2	08/29/13	-	NA	DRY
W-834-C2	12/03/13	-	NA	DRY
W-834-C4	03/05/13	8.10	1011.16	
W-834-C4	05/20/13	10.09	1009.17	
W-834-C4	08/29/13	11.49	1007.77	
W-834-C4	12/03/13	10.89	1008.37	
W-834-C5	03/05/13	11.20	1004.47	
W-834-C5	05/20/13	12.30	1003.37	
W-834-C5	08/29/13	-	NA	DRY
W-834-C5	12/03/13	-	NA	DRY
W-834-D2	03/05/13	-	NA	DRY
W-834-D2	05/20/13	-	NA	DRY
W-834-D2	08/29/13	-	NA	DRY
W-834-D2	12/03/13	-	NA	DRY
W-834-D3	03/05/13	27.25	991.30	
W-834-D3	05/20/13	28.65	989.90	
W-834-D3	08/29/13	29.50	989.05	
W-834-D3	12/03/13	31.20	987.35	
W-834-D4	03/05/13	-	NA	DRY
W-834-D4	05/20/13	36.00	982.36	
W-834-D4	08/29/13	36.15	982.21	
W-834-D4	12/03/13	-	NA	DRY
W-834-D5	03/05/13	29.40	989.07	
W-834-D5	05/20/13	31.38	987.09	

Table C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-D5	08/29/13	-	NA	DRY
W-834-D5	12/03/13	-	NA	DRY
W-834-D6	03/05/13	34.26	984.02	
W-834-D6	05/20/13	34.40	983.88	
W-834-D6	08/29/13	34.10	984.18	
W-834-D6	12/03/13	34.36	983.92	
W-834-D7	03/05/13	32.70	981.22	
W-834-D7	05/20/13	32.70	981.22	
W-834-D7	08/29/13	32.70	981.22	
W-834-D7	12/03/13	32.40	981.52	
W-834-D10	03/05/13	-	NA	DRY
W-834-D10	05/20/13	34.20	982.21	
W-834-D10	08/29/13	-	NA	DRY
W-834-D10	12/02/13	-	NA	DRY
W-834-D11	03/05/13	24.16	993.38	
W-834-D11	05/20/13	24.30	993.24	
W-834-D11	08/29/13	24.30	993.24	
W-834-D11	12/03/13	-	NA	DRY
W-834-D12	03/05/13	29.45	986.84	
W-834-D12	05/20/13	29.50	986.79	
W-834-D12	08/29/13	29.44	986.85	
W-834-D12	12/03/13	29.83	986.46	
W-834-D13	03/05/13	29.89	988.10	
W-834-D13	05/20/13	30.11	987.88	
W-834-D13	08/29/13	30.13	987.86	
W-834-D13	12/03/13	29.65	988.34	
W-834-D14	03/05/13	30.60	987.77	
W-834-D14	05/20/13	31.00	987.37	
W-834-D14	08/29/13	31.00	987.37	
W-834-D14	12/03/13	-	NA	DRY
W-834-D15	03/05/13	23.15	995.01	
W-834-D15	05/20/13	25.20	992.96	
W-834-D15	08/29/13	-	NA	DRY
W-834-D15	12/03/13	-	NA	DRY
W-834-D16	03/05/13	-	NA	DRY
W-834-D16	05/20/13	-	NA	DRY
W-834-D16	08/29/13	-	NA	DRY
W-834-D16	12/03/13	-	NA	DRY
W-834-D17	03/05/13	-	NA	DRY
W-834-D17	05/20/13	-	NA	DRY
W-834-D17	08/29/13	-	NA	DRY
W-834-D17	12/03/13	-	NA	DRY
W-834-D18	03/05/13	27.30	991.16	
W-834-D18	05/20/13	28.15	990.31	
W-834-D18	08/29/13	28.20	990.26	

Table C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-D18	12/03/13	27.59	990.87	
W-834-G3	03/05/13	-	NA	DRY
W-834-G3	05/20/13	-	NA	DRY
W-834-G3	08/29/13	-	NA	DRY
W-834-G3	12/03/13	-	NA	DRY
W-834-H2	03/05/13	-	NA	DRY
W-834-H2	05/20/13	-	NA	DRY
W-834-H2	08/29/13	-	NA	DRY
W-834-H2	12/03/13	-	NA	DRY
W-834-J1	03/05/13	30.70	989.13	
W-834-J1	05/20/13	30.80	989.03	
W-834-J1	08/29/13	30.80	989.03	
W-834-J1	12/03/13	32.10	987.73	
W-834-J2	03/05/13	33.35	986.60	
W-834-J2	05/20/13	34.28	985.67	
W-834-J2	08/29/13	34.30	985.65	
W-834-J2	12/03/13	34.50	985.45	
W-834-J3	03/05/13	-	NA	DRY
W-834-J3	05/20/13	-	NA	DRY
W-834-J3	08/29/13	-	NA	DRY
W-834-J3	12/03/13	-	NA	DRY
W-834-K1A	03/05/13	-	NA	DRY
W-834-M1	03/05/13	61.30	963.21	
W-834-M1	05/20/13	62.10	962.41	
W-834-M1	08/29/13	-	NA	NM/UC RATTLESNAKE
W-834-M1	12/03/13	61.84	962.37	
W-834-M2	03/05/13	-	NA	DRY
W-834-M2	05/20/13	-	NA	DRY
W-834-M2	08/27/13	-	NA	DRY
W-834-M2	12/03/13	-	NA	DRY
W-834-S1	03/05/13	35.20	966.88	
W-834-S1	05/20/13	35.20	966.88	
W-834-S1	08/29/13	35.50	966.58	
W-834-S1	12/03/13	35.43	966.65	
W-834-S10	03/05/13	-	NA	DRY
W-834-S10	05/20/13	-	NA	DRY
W-834-S10	08/29/13	-	NA	DRY
W-834-S10	12/03/13	-	NA	DRY
W-834-S12A	03/05/13	50.90	953.83	
W-834-S12A	05/20/13	51.27	953.46	
W-834-S12A	08/29/13	51.30	953.43	
W-834-S12A	12/03/13	51.63	953.10	
W-834-S13	03/05/13	46.32	957.42	
W-834-S13	05/20/13	46.40	957.34	
W-834-S13	08/29/13	46.48	957.26	

Table C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-S13	12/03/13	47.20	956.54	
W-834-S4	03/05/13	78.39	948.28	
W-834-S4	05/20/13	78.66	948.01	
W-834-S4	08/29/13	79.40	947.27	
W-834-S4	12/03/13	78.80	947.87	
W-834-S5	03/05/13	-	NA	DRY
W-834-S5	05/20/13	-	NA	DRY
W-834-S5	08/27/13	-	NA	DRY
W-834-S5	12/03/13	-	NA	DRY
W-834-S6	03/05/13	38.62	890.80	
W-834-S6	05/20/13	38.62	890.80	
W-834-S6	08/27/13	38.62	890.80	
W-834-S6	12/03/13	-	NA	DRY
W-834-S7	03/05/13	-	NA	DRY
W-834-S7	05/20/13	-	NA	DRY
W-834-S7	08/27/13	-	NA	DRY
W-834-S7	12/03/13	-	NA	DRY
W-834-S8	03/05/13	63.00	939.72	
W-834-S8	05/20/13	64.30	938.42	
W-834-S8	08/29/13	64.38	938.34	
W-834-S8	12/03/13	-	NA	DRY
W-834-S9	03/05/13	58.05	941.96	
W-834-S9	05/20/13	57.50	942.51	
W-834-S9	08/29/13	60.00	940.01	
W-834-S9	12/03/13	58.70	941.31	
W-834-T1	03/05/13	315.86	643.06	
W-834-T1	05/20/13	316.20	642.72	
W-834-T1	08/27/13	316.40	642.52	
W-834-T1	12/03/13	317.20	641.72	
W-834-T11	03/05/13	-	NA	DRY
W-834-T11	05/20/13	-	NA	DRY
W-834-T11	08/27/13	-	NA	DRY
W-834-T11	12/03/13	-	NA	DRY
W-834-T2	03/05/13	40.72	919.04	
W-834-T2	05/20/13	41.26	918.50	
W-834-T2	08/27/13	41.40	918.36	
W-834-T2	12/03/13	41.73	918.03	
W-834-T2A	03/05/13	38.14	920.80	
W-834-T2A	05/20/13	39.72	919.22	
W-834-T2A	08/27/13	40.01	918.93	
W-834-T2A	12/03/13	40.11	918.83	
W-834-T2B	03/05/13	-	NA	DRY
W-834-T2B	05/20/13	-	NA	DRY
W-834-T2B	08/27/13	-	NA	DRY
W-834-T2B	12/03/13	-	NA	DRY

Table C-2. Building 834 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-834-T2C	03/05/13	-	NA	DRY
W-834-T2C	05/20/13	-	NA	DRY
W-834-T2C	08/27/13	-	NA	DRY
W-834-T2C	12/03/13	-	NA	DRY
W-834-T2D	03/05/13	36.69	917.70	
W-834-T2D	05/20/13	37.22	917.17	
W-834-T2D	08/27/13	37.52	916.87	
W-834-T2D	12/03/13	37.80	916.59	
W-834-T3	03/05/13	323.87	608.67	
W-834-T3	05/20/13	323.73	608.81	
W-834-T3	08/27/13	323.23	609.31	
W-834-T3	12/03/13	323.32	609.22	
W-834-T5	03/05/13	77.50	853.47	
W-834-T5	05/20/13	77.45	853.52	
W-834-T5	08/27/13	77.50	853.47	
W-834-T5	12/03/13	77.53	853.44	
W-834-T7A	03/05/13	-	NA	DRY
W-834-T7A	05/20/13	-	NA	DRY
W-834-T7A	08/27/13	-	NA	DRY
W-834-T7A	12/03/13	-	NA	DRY
W-834-T8A	03/05/13	-	NA	DRY
W-834-T8A	05/20/13	-	NA	DRY
W-834-T8A	08/27/13	-	NA	DRY
W-834-T8A	12/03/13	-	NA	DRY
W-834-T9	03/05/13	-	NA	DRY
W-834-T9	05/20/13	-	NA	DRY
W-834-T9	08/27/13	-	NA	DRY
W-834-T9	12/03/13	-	NA	DRY
W-834-U1	03/05/13	-	NA	NM REQUIRES DEDICATED PROBE
W-834-U1	05/20/13	-	NA	NM REQUIRES DEDICATED PROBE
W-834-U1	08/29/13	-	NA	NM REQUIRES DEDICATED PROBE
W-834-U1	12/03/13	-	NA	NM REQUIRES DEDICATED PROBE

Table C-3. Pit 6 Landfill Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
BC6-10	03/18/13	31.32	656.23	
BC6-10	06/04/13	31.00	656.55	
BC6-10	09/12/13	31.54	656.01	
BC6-10	12/16/13	32.00	655.55	
BC6-13	03/18/13	-	NA	DRY
BC6-13	06/04/13	-	NA	DRY
BC6-13	09/12/13	-	NA	DRY
BC6-13	12/16/13	-	NA	DRY
CARNRW1	03/18/13	106.71	571.72	PUMP ON
CARNRW1	06/03/13	106.85	571.58	PUMP ON
CARNRW1	09/12/13	60.22	618.21	PUMP NOT RUNNING
CARNRW1	12/12/13	59.64	618.79	PUMP NOT RUNNING
CARNRW3	03/18/13	55.00	648.00	
CARNRW3	06/03/13	55.31	647.69	
CARNRW3	09/12/13	53.08	649.92	
CARNRW3	12/12/13	51.76	651.24	
CARNRW4	03/18/13	7.92	643.83	
CARNRW4	06/03/13	10.45	641.30	
CARNRW4	09/12/13	14.82	636.93	
CARNRW4	12/12/13	15.06	636.69	
EP6-06	03/18/13	25.44	662.67	
EP6-06	06/04/13	27.05	661.06	
EP6-06	09/12/13	27.46	660.65	
EP6-06	12/16/13	27.40	660.71	
EP6-07	03/18/13	77.20	630.35	
EP6-07	06/04/13	78.50	629.05	
EP6-07	09/12/13	75.77	631.78	
EP6-07	12/16/13	73.30	633.95	
EP6-08	03/18/13	-	NA	DRY
EP6-08	06/04/13	-	NA	DRY
EP6-08	09/12/13	60.43	647.98	
EP6-08	12/16/13	60.48	647.93	
EP6-09	03/18/13	30.65	663.63	
EP6-09	06/04/13	30.85	663.43	
EP6-09	09/12/13	30.96	663.32	
EP6-09	12/16/13	30.98	663.30	
K6-01	03/18/13	28.00	663.46	
K6-01	06/04/13	28.04	663.42	
K6-01	09/12/13	28.15	663.31	
K6-01	12/16/13	28.20	663.26	
K6-01S	03/18/13	29.01	663.51	
K6-01S	06/04/13	29.13	663.39	
K6-01S	09/12/13	29.27	663.25	
K6-01S	12/16/13	29.26	663.26	
K6-03	03/18/13	-	NA	DRY

Table C-3. Pit 6 Landfill Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K6-03	06/04/13	-	NA	DRY
K6-03	09/12/13	-	NA	DRY
K6-03	12/16/13	92.72	633.73	
K6-04	03/18/13	-	NA	DRY
K6-04	06/04/13	-	NA	DRY
K6-04	09/12/13	-	NA	DRY
K6-04	12/16/13	68.59	639.58	
K6-14	03/18/13	21.22	659.65	
K6-14	06/04/13	21.80	659.07	
K6-14	09/12/13	23.00	657.87	
K6-14	12/16/13	21.57	659.30	
K6-15	03/18/13	-	NA	DRY
K6-15	06/04/13	-	NA	DRY
K6-15	09/12/13	-	NA	DRY
K6-15	12/16/13	-	NA	DRY
K6-16	03/18/13	18.32	661.13	
K6-16	06/04/13	18.78	660.67	
K6-16	09/12/13	18.95	660.50	
K6-16	12/16/13	17.35	662.10	
K6-17	03/18/13	20.40	658.31	
K6-17	06/04/13	21.14	657.57	
K6-17	09/12/13	24.54	654.17	
K6-17	12/16/13	23.94	654.77	
K6-18	03/18/13	25.45	659.84	
K6-18	06/04/13	25.75	659.54	
K6-18	09/12/13	26.00	659.29	
K6-18	12/16/13	26.11	659.18	
K6-19	03/18/13	29.85	663.22	
K6-19	06/04/13	29.95	663.12	
K6-19	09/12/13	30.11	662.96	
K6-19	12/16/13	30.15	662.92	
K6-21	03/18/13	-	NA	DRY
K6-21	06/04/13	-	NA	DRY
K6-21	09/12/13	-	NA	DRY
K6-21	12/16/13	-	NA	DRY
K6-22	03/18/13	39.85	641.68	
K6-22	06/04/13	36.86	644.67	
K6-22	09/12/13	36.92	644.61	
K6-22	12/16/13	37.05	644.48	
K6-23	03/18/13	23.74	657.24	
K6-23	06/04/13	23.95	657.03	
K6-23	09/12/13	23.87	657.11	
K6-23	12/16/13	24.44	656.54	
K6-24	03/18/13	-	NA	DRY
K6-24	06/04/13	-	NA	DRY

Table C-3. Pit 6 Landfill Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K6-24	09/12/13	-	NA	DRY
K6-24	12/16/13	-	NA	DRY
K6-25	03/18/13	18.76	660.99	
K6-25	06/04/13	18.93	660.82	
K6-25	09/12/13	19.21	660.54	
K6-25	12/16/13	22.13	657.62	
K6-26	03/18/13	56.98	630.35	
K6-26	06/04/13	58.11	629.22	
K6-26	09/12/13	55.55	631.78	
K6-26	12/16/13	52.98	634.35	
K6-27	03/18/13	36.90	650.29	
K6-27	06/04/13	60.76	626.43	
K6-27	09/12/13	59.25	627.94	
K6-27	12/16/13	58.76	628.43	
K6-32	03/18/13	-	NA	DRY
K6-32	06/04/13	-	NA	DRY
K6-32	09/12/13	-	NA	DRY
K6-32	12/16/13	-	NA	DRY
K6-33	03/18/13	52.14	630.10	
K6-33	06/04/13	52.00	630.24	
K6-33	09/12/13	51.79	630.45	
K6-33	12/16/13	49.87	632.37	
K6-34	03/18/13	91.06	612.22	
K6-34	06/04/13	84.00	619.28	
K6-34	09/12/13	85.06	618.22	
K6-34	12/16/13	78.09	625.19	
K6-35	03/18/13	63.00	629.96	
K6-35	06/04/13	64.28	628.68	
K6-35	09/12/13	61.57	631.39	
K6-35	12/16/13	59.10	633.86	
K6-36	03/18/13	38.80	651.58	
K6-36	06/04/13	39.40	650.98	
K6-36	09/12/13	39.73	650.65	
K6-36	12/16/13	-	NA	DRY
W-33C-01	03/18/13	11.36	641.15	
W-33C-01	06/04/13	12.30	640.21	
W-33C-01	09/12/13	20.61	631.90	
W-33C-01	12/12/13	22.87	629.64	
W-34-01	03/18/13	-	NA	NM/UC UNSAFE ROAD
W-34-01	06/04/13	-	NA	NM/UC UNSAFE ROAD
W-34-01	09/12/13	-	NA	NM/UC UNSAFE ROAD
W-34-01	12/16/13	-	NA	NM/UC UNSAFE ROAD
W-34-02	03/18/13	-	NA	NM/UC UNSAFE ROAD
W-34-02	06/04/13	-	NA	NM/UC UNSAFE ROAD
W-34-02	09/12/13	-	NA	NM/UC UNSAFE ROAD

Table C-3. Pit 6 Landfill Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-34-02	12/16/13	-	NA	NM/UC UNSAFE ROAD
W-PIT6-1819	03/18/13	102.37	613.50	
W-PIT6-1819	06/04/13	98.25	617.62	
W-PIT6-1819	09/12/13	97.27	618.60	
W-PIT6-1819	12/16/13	92.22	623.65	
W-PIT6-2816	03/18/13	75.44	NA	Well not surveyed. Data in review.
W-PIT6-2816	06/04/13	77.67	NA	Well not surveyed. Data in review.
W-PIT6-2816	09/12/13	74.66	NA	Well not surveyed. Data in review.
W-PIT6-2816	12/16/13	72.42	NA	Well not surveyed. Data in review.
W-PIT6-2817	01/29/13	58.54	NA	Well not surveyed. Data in review.
W-PIT6-2817	06/04/13	60.57	NA	Well not surveyed. Data in review.
W-PIT6-2817	09/12/13	57.88	NA	Well not surveyed. Data in review.
W-PIT6-2817	12/16/13	55.18	NA	Well not surveyed. Data in review.

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-35B-01	03/19/13	19.25	503.77	
W-35B-01	06/06/13	19.10	503.92	
W-35B-01	08/15/13	19.50	503.52	
W-35B-01	12/11/13	19.44	503.58	
W-35B-02	03/19/13	18.36	504.67	
W-35B-02	06/06/13	18.15	504.88	
W-35B-02	08/15/13	18.49	504.54	
W-35B-02	12/11/13	19.08	503.95	
W-35B-03	03/19/13	17.30	505.80	
W-35B-03	06/06/13	17.50	505.60	
W-35B-03	08/15/13	17.68	505.42	
W-35B-03	12/11/13	18.05	505.05	
W-35B-04	03/19/13	8.72	520.24	
W-35B-04	06/06/13	9.63	519.33	
W-35B-04	08/15/13	8.97	519.99	
W-35B-04	12/11/13	9.24	519.72	
W-35B-05	03/19/13	8.52	520.21	
W-35B-05	06/06/13	9.35	519.38	
W-35B-05	08/15/13	8.92	519.81	
W-35B-05	12/11/13	9.01	519.72	
W-35C-01	03/12/13	1.91	539.81	
W-35C-01	06/06/13	2.65	539.07	
W-35C-01	08/15/13	2.98	538.74	
W-35C-01	12/18/13	3.42	538.30	
W-35C-02	03/11/13	20.41	552.39	
W-35C-02	06/06/13	27.05	545.75	
W-35C-02	08/15/13	31.63	541.17	
W-35C-02	12/18/13	18.56	554.24	
W-35C-04	03/12/13	92.20	439.98	
W-35C-04	06/03/13	92.74	439.44	
W-35C-04	08/19/13	92.95	439.23	
W-35C-04	12/04/13	92.20	439.98	
W-35C-05	03/12/13	26.61	504.52	
W-35C-05	06/03/13	25.44	505.69	
W-35C-05	08/19/13	24.92	506.21	
W-35C-05	12/04/13	24.51	506.62	
W-35C-06	03/12/13	26.66	505.07	
W-35C-06	06/03/13	23.97	507.66	
W-35C-06	08/19/13	24.47	507.16	
W-35C-06	12/04/13	26.05	505.58	
W-35C-07	03/12/13	-	NA	NM/NON-FLOWING ARTESIAN
W-35C-07	06/03/13	-	NA	NM/NON-FLOWING ARTESIAN
W-35C-07	08/19/13	-	NA	NM/NON-FLOWING ARTESIAN
W-35C-07	12/04/13	-	NA	NM/NON-FLOWING ARTESIAN
W-35C-08	03/12/13	25.66	506.63	

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-35C-08	06/03/13	23.77	508.52	
W-35C-08	08/19/13	23.96	508.33	
W-35C-08	12/04/13	25.42	506.87	
W-4A	03/12/13	6.11	525.16	
W-4A	06/03/13	5.21	526.06	
W-4A	08/19/13	5.37	525.90	
W-4A	12/04/13	5.83	525.44	
W-4AS	03/12/13	8.00	523.65	
W-4AS	06/03/13	8.41	523.24	
W-4AS	08/19/13	9.14	522.51	
W-4AS	12/04/13	9.27	522.38	
W-4B	03/12/13	-	NA	NM/NON-FLOWING ARTESIAN
W-4B	06/03/13	-	NA	NM/NON-FLOWING ARTESIAN
W-4B	08/19/13	-	NA	NM/NON-FLOWING ARTESIAN
W-4B	12/04/13	-	NA	NM/NON-FLOWING ARTESIAN
W-4C	03/12/13	-	NA	NM/FA
W-4C	06/03/13	1.13	528.65	
W-4C	08/19/13	2.48	527.30	
W-4C	12/04/13	1.16	528.62	
W-6BD	03/12/13	25.20	508.07	
W-6BD	06/03/13	24.98	508.29	
W-6BD	08/19/13	25.32	507.95	
W-6BD	12/04/13	-	NA	BLOC
W-6BS	03/12/13	24.86	508.37	
W-6BS	06/03/13	25.09	508.14	
W-6BS	08/19/13	25.27	507.96	
W-6BS	12/04/13	-	NA	BLOC
W-6CD	03/11/13	31.72	548.32	
W-6CD	06/06/13	33.64	546.40	
W-6CD	09/10/13	34.09	545.95	
W-6CD	12/16/13	34.17	545.87	
W-6CI	03/11/13	33.90	546.61	
W-6CI	06/06/13	36.24	544.27	
W-6CI	09/10/13	36.68	543.83	
W-6CI	12/16/13	35.87	544.64	
W-6CS	03/11/13	29.61	550.07	
W-6CS	06/06/13	30.48	549.20	
W-6CS	09/10/13	30.93	548.75	
W-6CS	12/16/13	30.83	548.85	
W-6EI	03/12/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6EI	06/03/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6EI	08/19/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6EI	12/04/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6ER	03/12/13	82.28	449.63	
W-6ER	06/03/13	81.26	450.65	

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-6ER	08/19/13	82.26	449.65	
W-6ER	12/04/13	82.19	449.72	
W-6ES	03/12/13	26.09	505.40	
W-6ES	06/03/13	23.90	507.29	
W-6ES	08/19/13	24.41	506.78	
W-6ES	12/04/13	25.96	505.23	
W-6F	03/11/13	61.31	557.55	
W-6F	06/06/13	62.77	556.09	
W-6F	09/10/13	63.78	555.08	
W-6F	12/16/13	63.56	555.30	
W-6G	03/11/13	61.57	558.35	
W-6G	06/06/13	63.00	556.92	
W-6G	09/10/13	64.11	555.81	
W-6G	12/16/13	64.27	555.65	
W-6H	03/12/13	11.75	549.59	
W-6H	06/06/13	14.01	547.33	
W-6H	09/10/13	15.12	546.22	
W-6H	12/16/13	15.29	546.05	
W-6I	03/12/13	20.48	540.81	
W-6I	06/06/13	28.97	532.32	
W-6I	09/10/13	30.39	530.90	
W-6I	12/16/13	30.42	530.87	
W-6J	03/12/13	12.52	548.84	
W-6J	06/06/13	14.76	546.60	
W-6J	09/10/13	17.07	544.29	
W-6J	12/16/13	16.95	544.41	
W-6K	03/12/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6K	06/03/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6K	08/19/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6K	12/04/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6L	03/12/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6L	06/03/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6L	08/19/13	-	NA	NM/NON-FLOWING ARTESIAN
W-6L	12/04/13	-	NA	NM/NON-FLOWING ARTESIAN
W-806-06A	03/04/13	126.32	694.99	
W-806-06A	05/20/13	-	NA	NM/UC
W-806-06A	08/29/13	-	NA	NM/UC
W-806-06A	12/03/13	126.03	695.28	
W-806-07	03/04/13	-	NA	DRY
W-806-07	05/20/13	-	NA	NM/UC
W-806-07	08/29/13	-	NA	NM/UC
W-806-07	12/03/13	-	NA	DRY
W-808-01	03/04/13	48.85	853.16	
W-808-01	05/20/13	49.20	852.81	
W-808-01	08/29/13	49.90	852.11	

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-808-01	12/03/13	50.20	851.81	
W-808-02	03/04/13	-	NA	DRY
W-808-02	05/20/13	-	NA	DRY
W-808-02	08/29/13	-	NA	DRY
W-808-02	12/03/13	-	NA	DRY
W-808-03	03/04/13	298.48	604.41	
W-808-03	05/20/13	298.75	604.14	
W-808-03	08/29/13	298.82	604.07	
W-808-03	12/03/13	298.73	604.16	
W-809-01	03/04/13	68.40	721.83	
W-809-01	05/20/13	68.38	721.85	
W-809-01	08/29/13	68.40	721.83	
W-809-01	12/03/13	68.35	721.88	
W-809-02	03/04/13	141.00	650.53	
W-809-02	05/20/13	141.20	650.33	
W-809-02	08/29/13	141.30	650.23	
W-809-02	12/03/13	141.13	650.40	
W-809-03	03/04/13	99.80	646.27	
W-809-03	05/20/13	99.50	646.57	
W-809-03	08/29/13	99.83	646.24	
W-809-03	12/03/13	100.63	645.44	
W-809-04	03/04/13	79.65	697.10	
W-809-04	05/20/13	74.80	701.95	
W-809-04	08/29/13	75.01	701.74	
W-809-04	12/03/13	74.90	701.85	
W-810-01	03/04/13	-	NA	NM/UC
W-810-01	05/20/13	-	NA	NM/UC
W-810-01	08/29/13	-	NA	NM/RA
W-810-01	12/03/13	-	NA	NM/RA
W-814-01	03/11/13	110.30	698.53	
W-814-01	05/13/13	110.39	698.44	
W-814-01	08/13/13	110.51	698.32	
W-814-01	12/12/13	110.45	698.38	
W-814-02	03/11/13	157.55	635.83	
W-814-02	05/13/13	155.61	637.77	
W-814-02	08/13/13	155.92	637.46	
W-814-02	12/12/13	155.86	637.52	
W-814-03	03/11/13	-	NA	DRY
W-814-03	05/13/13	-	NA	DRY
W-814-03	08/13/13	-	NA	DRY
W-814-03	12/12/13	-	NA	DRY
W-814-04	03/11/13	234.86	579.56	
W-814-04	05/13/13	234.84	579.58	
W-814-04	08/13/13	235.56	578.86	
W-814-04	12/12/13	237.73	576.69	

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-814-2134	03/11/13	-	NA	NM/NO PORT
W-814-2134	05/13/13	-	NA	NM/NO PORT
W-814-2134	08/13/13	75.30	719.59	
W-814-2134	12/12/13	75.38	719.51	
W-814-2138	03/11/13	97.11	697.80	
W-814-2138	05/13/13	97.35	697.56	
W-814-2138	08/13/13	97.66	697.25	
W-814-2138	12/12/13	97.82	697.09	
W-815-01	03/04/13	-	NA	DRY
W-815-01	05/20/13	105.57	616.54	
W-815-01	08/29/13	-	NA	DRY
W-815-01	12/03/13	-	NA	DRY
W-815-02	03/04/13	96.00	625.58	
W-815-02	05/20/13	97.55	624.03	
W-815-02	08/29/13	99.40	622.18	
W-815-02	12/03/13	99.70	621.88	
W-815-03	03/04/13	-	NA	DRY
W-815-03	05/20/13	-	NA	DRY
W-815-03	08/29/13	-	NA	DRY
W-815-03	12/03/13	-	NA	DRY
W-815-04	03/04/13	88.45	633.90	
W-815-04	05/20/13	98.58	623.77	
W-815-04	08/29/13	97.00	625.35	
W-815-04	12/03/13	96.80	625.55	
W-815-05	03/04/13	-	NA	NM/UC WELL UNDERCUT
W-815-05	05/20/13	-	NA	NM/UC WELL UNDERCUT
W-815-05	08/29/13	-	NA	NM/UC WELL UNDERCUT
W-815-05	12/03/13	-	NA	NM/UC WELL UNDERCUT
W-815-06	03/11/13	128.72	627.06	
W-815-06	05/13/13	127.80	627.98	
W-815-06	08/13/13	127.81	627.97	
W-815-06	12/12/13	127.87	627.91	
W-815-07	03/11/13	137.00	625.49	
W-815-07	05/13/13	136.15	626.34	
W-815-07	08/13/13	136.08	626.41	
W-815-07	12/12/13	136.29	626.20	
W-815-08	03/04/13	133.23	590.56	
W-815-08	05/20/13	133.45	590.34	
W-815-08	08/29/13	134.00	589.79	
W-815-08	12/03/13	132.12	591.67	
W-815-1918	03/04/13	88.96	656.65	
W-815-1918	05/20/13	89.80	655.81	
W-815-1918	08/29/13	90.00	655.61	
W-815-1918	12/03/13	85.03	660.58	
W-815-1928	03/04/13	26.80	719.25	

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-815-1928	05/20/13	27.30	718.75	
W-815-1928	08/29/13	27.22	718.83	
W-815-1928	12/03/13	27.72	718.33	
W-815-2110	03/12/13	8.25	538.24	
W-815-2110	06/06/13	9.64	536.85	
W-815-2110	09/10/13	10.28	536.21	
W-815-2110	12/18/13	9.72	536.77	
W-815-2111	03/12/13	9.40	536.59	
W-815-2111	06/06/13	10.90	535.09	
W-815-2111	09/10/13	11.55	534.44	
W-815-2111	12/18/13	10.92	535.07	
W-815-2217	03/11/13	32.45	547.47	
W-815-2217	06/06/13	33.43	546.49	
W-815-2217	09/10/13	33.95	545.97	
W-815-2217	12/18/13	33.48	546.44	
W-815-2608	03/12/13	-	NA	NM SEALED CAP
W-815-2608	06/06/13	-	NA	NM SEALED CAP
W-815-2608	09/10/13	59.74	478.49	
W-815-2608	12/18/13	59.55	478.68	
W-815-2621	03/12/13	-	NA	NM WELL NOT COMPLETED SEALED
W-815-2621	06/03/13	3.40	530.95	
W-815-2621	08/19/13	4.51	529.84	
W-815-2621	12/04/13	3.85	530.50	
W-815-2803	03/04/13	107.20	NA	Well not surveyed. Data in review.
W-815-2803	05/20/13	103.65	NA	Well not surveyed. Data in review.
W-815-2803	08/29/13	102.34	NA	Well not surveyed. Data in review.
W-815-2803	12/03/13	102.90	NA	Well not surveyed. Data in review.
W-817-01	03/04/13	137.97	635.84	
W-817-01	05/20/13	138.65	635.16	
W-817-01	08/29/13	138.89	634.92	
W-817-01	12/03/13	137.40	636.41	
W-817-02	03/04/13	112.93	587.86	
W-817-02	05/20/13	109.10	591.69	
W-817-02	08/29/13	104.30	596.49	
W-817-02	12/03/13	79.50	621.29	
W-817-03	03/04/13	103.95	570.65	
W-817-03	05/20/13	102.79	571.81	
W-817-03	08/29/13	106.79	567.81	
W-817-03	12/03/13	107.13	567.47	
W-817-03A	03/04/13	8.30	669.70	
W-817-03A	05/20/13	8.30	669.70	
W-817-03A	08/29/13	12.76	665.24	
W-817-03A	12/03/13	11.20	666.80	
W-817-04	03/04/13	74.25	608.79	
W-817-04	05/20/13	-	NA	NM/UC SNAKE NEAR WELL

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-817-04	08/29/13	74.26	608.78	
W-817-04	12/03/13	74.05	608.99	
W-817-05	03/04/13	129.80	634.53	
W-817-05	05/20/13	129.80	634.53	
W-817-05	08/29/13	-	NA	NM/UC
W-817-05	12/03/13	121.90	642.43	
W-817-06A	03/04/13	58.92	709.24	
W-817-06A	05/20/13	55.11	713.05	
W-817-06A	08/29/13	-	NA	NM/RA ROAD CLOSED
W-817-06A	12/03/13	95.14	673.02	
W-817-07	03/04/13	97.00	570.95	
W-817-07	05/20/13	-	NA	NM/UC WASP NEST IN CASING
W-817-07	12/03/13	98.00	569.95	
W-817-2109	03/04/13	-	NA	NM/RA
W-817-2109	05/20/13	111.10	591.95	
W-817-2109	08/29/13	-	NA	NM/RA
W-817-2109	12/03/13	72.00	631.05	
W-817-2318	03/04/13	6.42	669.60	
W-817-2318	05/20/13	5.25	670.77	
W-817-2318	08/29/13	9.78	666.24	
W-817-2318	12/03/13	7.50	668.52	
W-817-2609	03/04/13	92.44	570.06	
W-817-2609	05/20/13	92.20	570.30	
W-817-2609	08/29/13	94.19	568.31	
W-817-2609	12/03/13	95.00	567.50	
W-818-01	03/11/13	94.08	586.49	
W-818-01	05/13/13	94.59	585.98	
W-818-01	08/13/13	94.61	585.96	
W-818-01	12/12/13	94.57	586.00	
W-818-03	03/11/13	57.67	541.20	
W-818-03	05/13/13	58.38	540.49	
W-818-03	08/13/13	59.46	539.41	
W-818-03	12/12/13	59.72	539.15	
W-818-04	03/11/13	69.96	544.10	
W-818-04	05/13/13	67.44	546.62	
W-818-04	08/13/13	68.64	545.42	
W-818-04	12/12/13	69.91	544.15	
W-818-06	03/11/13	71.86	541.66	
W-818-06	05/13/13	72.82	540.70	
W-818-06	08/13/13	74.57	538.95	
W-818-06	12/12/13	73.79	539.73	
W-818-07	03/11/13	71.87	542.34	
W-818-07	05/13/13	72.81	541.40	
W-818-07	08/13/13	74.54	539.67	
W-818-07	12/12/13	73.84	540.37	

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-818-08	03/11/13	114.45	534.61	
W-818-08	05/13/13	114.47	534.59	
W-818-08	08/13/13	114.39	534.67	
W-818-08	12/12/13	92.86	556.20	
W-818-09	03/11/13	118.10	523.80	
W-818-09	05/13/13	118.22	523.68	
W-818-09	08/13/13	118.20	523.70	
W-818-09	12/12/13	88.20	553.70	
W-818-11	03/11/13	148.34	601.33	
W-818-11	05/13/13	148.08	601.59	
W-818-11	08/13/13	148.09	601.58	
W-818-11	12/12/13	148.16	601.51	
W-819-02	03/11/13	236.54	585.28	
W-819-02	05/13/13	232.80	589.02	
W-819-02	08/13/13	237.01	584.81	
W-819-02	12/12/13	237.73	584.09	
W-823-01	03/12/13	17.80	573.45	
W-823-01	06/06/13	-	NA	NM/UC HORNETS NEST
W-823-01	09/10/13	21.89	569.36	
W-823-01	12/18/13	19.46	571.79	
W-823-02	03/12/13	16.96	573.42	
W-823-02	06/06/13	19.23	571.15	
W-823-02	09/10/13	21.05	569.33	
W-823-02	12/18/13	18.64	571.74	
W-823-03	03/12/13	16.86	573.16	
W-823-03	06/06/13	17.98	572.04	
W-823-03	09/10/13	19.70	570.32	
W-823-03	12/18/13	18.44	571.58	
W-823-13	03/12/13	50.26	571.98	
W-823-13	06/06/13	51.29	570.95	
W-823-13	09/10/13	52.49	569.75	
W-823-13	12/18/13	52.13	570.11	
W-827-01	02/26/13	-	NA	DRY
W-827-01	06/05/13	-	NA	DRY
W-827-01	09/12/13	-	NA	DRY
W-827-01	11/25/13	-	NA	DRY
W-827-02	02/26/13	56.90	865.95	
W-827-02	06/05/13	56.25	866.60	
W-827-02	09/12/13	56.14	866.71	
W-827-02	11/25/13	56.37	866.48	
W-827-03	02/26/13	198.06	726.34	
W-827-03	06/05/13	198.22	726.18	
W-827-03	09/12/13	198.00	726.10	
W-827-03	11/25/13	198.23	725.87	
W-827-04	02/26/13	-	NA	DRY

Table C-4. High Explosives Process Area Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-827-04	06/05/13	-	NA	DRY
W-827-04	09/12/13	-	NA	DRY
W-827-04	11/25/13	-	NA	DRY
W-827-05	02/26/13	382.64	650.94	
W-827-05	06/05/13	383.06	650.52	
W-827-05	09/12/13	382.30	651.28	
W-827-05	11/25/13	382.67	650.91	
W-829-06	02/26/13	-	NA	BLOC
W-829-06	06/05/13	-	NA	BLOC
W-829-06	09/12/13	-	NA	BLOC
W-829-06	11/25/13	99.30	972.69	
W-829-08	02/26/13	99.35	975.10	
W-829-08	06/05/13	98.76	975.69	
W-829-08	09/12/13	100.18	974.27	
W-829-08	11/25/13	100.32	974.13	
W-829-15	02/26/13	337.78	696.22	
W-829-15	06/05/13	337.63	696.37	
W-829-15	09/12/13	337.57	696.43	
W-829-15	11/25/13	338.87	695.13	
W-829-1938	02/26/13	373.56	706.44	
W-829-1938	06/05/13	373.80	706.20	
W-829-1938	09/12/13	373.44	706.56	
W-829-1938	11/25/13	373.69	706.31	
W-829-1940	02/26/13	108.80	975.37	
W-829-1940	06/05/13	108.95	975.22	
W-829-1940	09/12/13	108.76	975.41	
W-829-1940	11/25/13	108.75	975.42	
W-829-22	02/26/13	399.42	653.65	
W-829-22	06/05/13	399.25	653.82	
W-829-22	09/12/13	399.49	653.58	
W-829-22	11/25/13	399.34	653.73	
WELL20	03/12/13	-	NA	NM/RA NO PORT
WELL20	06/03/13	-	NA	NM/RA NO PORT
WELL20	09/10/13	-	NA	NM/RA NO PORT
WELL20	12/16/13	-	NA	NM/RA NO PORT

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K1-01C	01/29/13	109.33	972.61	
K1-01C	04/29/13	109.36	972.58	
K1-01C	07/18/13	109.65	972.29	
K1-01C	10/08/13	110.25	971.69	
K1-02B	01/29/13	137.49	969.74	
K1-02B	04/29/13	137.56	969.67	
K1-02B	07/18/13	137.86	969.37	
K1-02B	10/08/13	138.15	969.08	
K1-04	01/29/13	158.36	964.31	
K1-04	04/29/13	158.47	964.20	
K1-04	07/18/13	158.80	963.87	
K1-04	10/08/13	158.90	963.77	
K1-05	01/29/13	172.98	957.88	
K1-05	04/29/13	173.09	957.77	
K1-05	07/18/13	173.27	957.59	
K1-05	10/08/13	173.29	957.57	
K1-06	01/29/13	-	NA	DRY
K1-06	04/29/13	-	NA	DRY
K1-06	07/18/13	-	NA	DRY
K1-06	10/08/13	-	NA	DRY
K1-07	01/29/13	143.17	966.46	
K1-07	04/29/13	143.27	966.36	
K1-07	07/18/13	143.53	966.10	
K1-07	10/08/13	143.86	965.77	
K1-08	01/29/13	157.46	965.28	
K1-08	04/29/13	157.65	965.09	
K1-08	07/18/13	157.53	965.21	
K1-08	10/08/13	157.72	965.02	
K1-09	01/29/13	163.86	962.82	
K1-09	04/29/13	163.90	962.78	
K1-09	07/18/13	164.15	962.53	
K1-09	10/08/13	164.45	962.23	
K2-03	02/06/13	54.15	1012.49	
K2-03	04/10/13	54.17	1012.47	
K2-03	08/05/13	54.54	1012.10	
K2-03	10/08/13	54.63	1012.01	
K2-04D	02/06/13	26.88	1065.64	
K2-04D	04/29/13	27.70	1064.82	
K2-04D	08/05/13	30.09	1062.43	
K2-04D	10/09/13	30.15	1062.37	
K2-04S	02/06/13	25.98	1065.97	
K2-04S	04/29/13	26.84	1065.11	
K2-04S	08/05/13	29.21	1062.74	
K2-04S	10/09/13	29.83	1062.12	
NC2-05	02/13/13	55.68	979.23	

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC2-05	05/08/13	55.93	978.98	
NC2-05	08/12/13	56.11	978.80	
NC2-05	11/20/13	56.75	978.16	
NC2-05A	02/13/13	55.82	979.61	
NC2-05A	05/08/13	56.11	979.32	
NC2-05A	08/12/13	56.29	979.14	
NC2-05A	11/20/13	56.90	978.53	
NC2-06	02/14/13	53.19	980.35	
NC2-06	05/08/13	53.43	980.11	
NC2-06	08/12/13	53.60	979.94	
NC2-06	11/20/13	53.75	979.79	
NC2-06A	02/14/13	54.06	980.17	
NC2-06A	05/08/13	54.21	980.02	
NC2-06A	08/12/13	54.43	979.80	
NC2-06A	11/20/13	54.69	979.54	
NC2-09	02/14/13	54.37	981.10	
NC2-09	05/08/13	55.51	979.96	
NC2-09	08/12/13	55.79	979.68	
NC2-09	11/20/13	55.87	979.60	
NC2-10	02/14/13	66.98	973.11	
NC2-10	05/08/13	67.11	972.98	
NC2-10	08/12/13	67.25	972.84	
NC2-10	11/20/13	67.36	972.73	
NC2-11D	02/14/13	54.14	974.48	
NC2-11D	05/08/13	54.45	974.17	
NC2-11D	08/12/13	54.73	973.89	
NC2-11D	11/20/13	54.86	973.76	
NC2-11I	02/14/13	54.30	974.20	
NC2-11I	05/08/13	54.57	973.93	
NC2-11I	08/12/13	54.95	973.55	
NC2-11I	11/20/13	54.97	973.53	
NC2-11S	02/14/13	54.06	974.46	
NC2-11S	05/08/13	54.33	974.19	
NC2-11S	08/12/13	54.74	973.78	
NC2-11S	11/20/13	54.92	973.60	
NC2-12D	02/14/13	53.29	975.15	
NC2-12D	05/07/13	53.31	975.13	
NC2-12D	08/12/13	53.62	974.82	
NC2-12D	11/20/13	53.81	974.63	
NC2-12I	02/14/13	53.07	975.33	
NC2-12I	05/07/13	53.76	974.64	
NC2-12I	08/12/13	54.00	974.40	
NC2-12I	11/20/13	54.16	974.24	
NC2-12S	02/14/13	53.30	975.22	
NC2-12S	05/07/13	53.33	975.19	

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC2-12S	08/12/13	53.62	974.90	
NC2-12S	11/20/13	53.81	974.71	
NC2-13	02/25/13	46.54	974.96	
NC2-13	05/08/13	46.68	974.82	
NC2-13	08/12/13	46.95	974.55	
NC2-13	11/20/13	47.18	974.32	
NC2-14S	02/06/13	16.68	1057.22	
NC2-14S	04/29/13	16.80	1057.10	
NC2-14S	08/05/13	16.92	1056.98	
NC2-14S	11/18/13	17.14	1056.76	
NC2-15	02/06/13	82.79	990.67	
NC2-15	05/08/13	82.82	990.64	
NC2-15	07/15/13	82.82	990.64	
NC2-15	11/18/13	82.97	990.49	
NC2-16	02/06/13	24.98	1057.48	
NC2-16	04/29/13	25.06	1057.40	
NC2-16	07/15/13	24.97	1057.49	
NC2-16	11/18/13	24.99	1057.47	
NC2-17	02/14/13	108.63	980.86	
NC2-17	05/08/13	108.76	980.73	
NC2-17	08/15/13	108.84	980.65	
NC2-17	11/20/13	109.85	979.34	
NC2-18	02/06/13	74.88	1056.29	
NC2-18	04/29/13	74.68	1056.49	
NC2-18	07/15/13	75.12	1056.05	
NC2-18	11/20/13	75.28	1055.89	
NC2-19	02/25/13	113.38	978.71	
NC2-19	05/08/13	113.48	978.61	
NC2-19	08/12/13	113.62	978.47	
NC2-19	11/20/13	114.18	977.91	
NC2-20	02/25/13	36.71	965.56	
NC2-20	05/08/13	36.95	965.32	
NC2-20	08/12/13	37.12	965.15	
NC2-20	11/20/13	37.19	965.08	
NC2-21	02/25/13	36.44	965.70	
NC2-21	05/08/13	36.69	965.45	
NC2-21	08/12/13	36.90	965.24	
NC2-21	11/20/13	37.24	964.90	
NC7-10	01/29/13	10.00	1216.30	
NC7-10	04/29/13	10.85	1215.45	
NC7-10	07/15/13	10.73	1215.57	
NC7-10	10/30/13	12.05	1214.25	
NC7-11	01/29/13	20.43	1223.96	
NC7-11	04/29/13	24.45	1219.94	
NC7-11	07/15/13	24.46	1219.93	

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-11	10/30/13	20.67	1223.72	
NC7-14	01/29/13	-	NA	DRY
NC7-14	04/18/13	-	NA	DRY
NC7-14	07/15/13	-	NA	DRY
NC7-14	10/30/13	-	NA	DRY
NC7-15	02/25/13	21.97	1247.44	
NC7-15	04/18/13	22.35	1247.06	
NC7-15	07/15/13	22.63	1246.78	
NC7-15	10/30/13	22.24	1247.17	
NC7-19	01/29/13	21.80	1238.88	
NC7-19	04/18/13	22.37	1238.31	
NC7-19	07/15/13	22.52	1238.16	
NC7-19	10/30/13	22.64	1238.04	
NC7-27	01/29/13	86.06	1196.34	
NC7-27	04/18/13	86.17	1196.23	
NC7-27	07/15/13	86.57	1195.83	
NC7-27	10/29/13	86.63	1195.77	
NC7-28	01/29/13	54.40	1258.86	
NC7-28	04/10/13	-	NA	NM/RA TRACER TEST
NC7-28	07/15/13	-	NA	NM/RA TRACER TEST
NC7-28	11/04/13	-	NA	NM/RA TRACER TEST
NC7-29	01/29/13	52.95	1201.79	
NC7-29	04/29/13	53.10	1201.64	
NC7-29	07/15/13	53.36	1201.38	
NC7-29	10/29/13	53.51	1201.23	
NC7-43	01/28/13	46.73	1240.48	
NC7-43	04/24/13	46.85	1240.36	
NC7-43	07/15/13	47.20	1240.01	
NC7-43	10/30/13	46.95	1240.26	
NC7-44	01/28/13	32.47	1323.36	
NC7-44	04/10/13	-	NA	NM/RA TRACER TEST
NC7-44	07/15/13	-	NA	NM/RA TRACER TEST
NC7-44	11/04/13	-	NA	NM/RA TRACER TEST
NC7-45	01/29/13	33.79	1154.90	
NC7-45	04/29/13	35.83	1152.86	
NC7-45	07/15/13	35.91	1152.78	
NC7-45	10/29/13	36.30	1152.39	
NC7-46	02/06/13	24.87	1106.56	
NC7-46	04/29/13	25.09	1106.34	
NC7-46	07/15/13	25.15	1106.28	
NC7-46	10/29/13	25.65	1105.78	
NC7-54	01/29/13	10.04	1197.21	
NC7-54	04/29/13	10.07	1197.18	
NC7-54	07/15/13	10.00	1197.25	
NC7-54	10/09/13	9.86	1197.39	

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-55	02/06/13	-	NA	DRY
NC7-55	04/29/13	-	NA	DRY
NC7-55	07/15/13	-	NA	DRY
NC7-56	02/06/13	18.91	1113.26	
NC7-56	04/29/13	20.08	1112.09	
NC7-56	07/15/13	20.00	1112.17	
NC7-56	10/09/13	20.10	1112.07	
NC7-57	02/06/13	-	NA	DRY
NC7-57	04/29/13	-	NA	DRY
NC7-57	07/15/13	-	NA	DRY
NC7-57	10/09/13	-	NA	DRY
NC7-58	02/06/13	22.21	1084.52	
NC7-58	04/29/13	24.15	1082.58	
NC7-58	07/15/13	24.28	1082.45	
NC7-58	10/09/13	24.32	1082.41	
NC7-59	02/06/13	12.54	1102.77	
NC7-59	04/29/13	13.32	1101.99	
NC7-59	07/15/13	13.73	1101.58	
NC7-59	10/09/13	13.77	1101.54	
NC7-60	01/29/13	159.40	1167.92	
NC7-60	04/18/13	159.67	1167.65	
NC7-60	07/17/13	159.10	1168.22	
NC7-60	10/09/13	159.63	1167.69	
NC7-61	01/29/13	46.30	1233.07	
NC7-61	04/10/13	-	NA	NM/RA TRACER TEST
NC7-61	07/15/13	-	NA	NM/RA TRACER TEST
NC7-61	11/04/13	-	NA	NM/RA TRACER TEST
NC7-62	02/06/13	21.46	1103.65	
NC7-62	04/29/13	22.45	1102.66	
NC7-62	07/15/13	22.39	1102.72	
NC7-62	10/09/13	22.76	1102.35	
NC7-69	01/29/13	3.01	1249.45	
NC7-69	04/18/13	3.62	1248.84	
NC7-69	07/15/13	3.58	1248.88	
NC7-69	10/29/13	3.78	1248.68	
NC7-70	01/28/13	39.30	1268.12	
NC7-70	04/10/13	-	NA	NM/RA TRACER TEST
NC7-70	07/17/13	-	NA	NM/RA TRACER TEST
NC7-70	10/30/13	-	NA	NM/RA TRACER TEST
NC7-71	01/29/13	64.63	1235.62	
NC7-71	04/10/13	-	NA	NM/RA TRACER TEST
NC7-71	07/17/13	-	NA	NM/RA TRACER TEST
NC7-71	10/30/13	-	NA	NM/RA TRACER TEST
NC7-72	02/06/13	31.49	1124.86	
NC7-72	04/29/13	32.76	1123.59	

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-72	07/15/13	32.84	1123.51	
NC7-72	10/09/13	32.93	1123.42	
NC7-73	02/06/13	27.09	1139.18	
NC7-73	04/29/13	27.98	1138.29	
NC7-73	07/15/13	30.27	1136.00	
NC7-73	10/09/13	30.87	1135.40	
W-850-05	01/29/13	29.90	1273.49	
W-850-05	04/10/13	-	NA	NM/RA TRACER TEST
W-850-05	07/15/13	-	NA	NM/RA TRACER TEST
W-850-05	11/04/13	-	NA	NM/RA TRACER TEST
W-850-2145	01/29/13	177.17	1029.80	
W-850-2145	05/07/13	176.97	1030.00	
W-850-2145	07/16/13	176.83	1030.14	
W-850-2145	11/20/13	176.87	1030.10	
W-850-2312	02/06/13	70.18	1061.78	
W-850-2312	04/29/13	70.25	1061.71	
W-850-2312	07/15/13	70.38	1061.58	
W-850-2312	11/20/13	70.46	1061.50	
W-850-2313	01/29/13	22.20	1160.53	
W-850-2313	04/29/13	24.58	1158.15	
W-850-2313	07/15/13	24.64	1158.09	
W-850-2313	11/29/13	25.34	1157.39	
W-850-2314	01/29/13	156.30	1179.47	
W-850-2314	04/18/13	156.49	1179.28	
W-850-2314	07/15/13	156.20	1179.57	
W-850-2314	10/30/13	156.31	1179.46	
W-850-2315	01/29/13	53.35	1201.98	
W-850-2315	04/29/13	53.46	1201.87	
W-850-2315	07/15/13	53.66	1201.67	
W-850-2315	10/30/13	53.84	1201.49	
W-850-2316	01/29/13	177.23	1029.89	
W-850-2316	05/07/13	177.14	1029.98	
W-850-2316	07/16/13	176.98	1030.14	
W-850-2316	11/20/13	177.10	1030.02	
W-850-2416	01/29/13	61.42	1240.48	
W-850-2416	04/10/13	-	NA	NM/RA TRACER TEST
W-850-2416	07/17/13	-	NA	NM/RA TRACER TEST
W-850-2416	10/30/13	-	NA	NM/RA TRACER TEST
W-850-2417	01/29/13	52.08	1261.69	
W-850-2417	04/10/13	-	NA	NM/RA TRACER TEST
W-850-2417	07/17/13	-	NA	NM/RA TRACER TEST
W-850-2417	10/30/13	-	NA	NM/RA TRACER TEST
W-850-2805	02/06/13	12.00	NA	Well not surveyed. Data in review.
W-850-2805	04/29/13	13.00	NA	Well not surveyed. Data in review.
W-850-2805	07/15/13	16.75	NA	Well not surveyed. Data in review.

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-850-2805	10/30/13	14.33	NA	Well not surveyed. Data in review.
W-865-02	01/29/13	129.14	983.24	
W-865-02	04/10/13	129.36	983.02	
W-865-02	07/24/13	125.13	987.25	
W-865-02	10/08/13	125.07	987.31	
W-865-05	01/29/13	-	NA	DRY
W-865-05	04/10/13	-	NA	DRY
W-865-05	07/24/13	-	NA	DRY
W-865-05	10/09/13	-	NA	DRY
W-865-1802	02/06/13	51.22	1017.83	
W-865-1802	04/10/13	51.23	1017.82	
W-865-1802	07/24/13	51.61	1017.44	
W-865-1802	10/08/13	51.73	1017.32	
W-865-1803	02/06/13	105.45	1074.54	
W-865-1803	04/10/13	105.50	1074.49	
W-865-1803	07/24/13	105.68	1074.31	
W-865-1803	10/08/13	105.81	1074.18	
W-865-2005	01/29/13	327.46	947.41	
W-865-2005	04/10/13	327.52	947.35	
W-865-2005	07/24/13	327.65	947.22	
W-865-2005	10/09/13	327.45	947.42	
W-865-2121	01/29/13	345.70	942.91	
W-865-2121	04/10/13	346.20	942.41	
W-865-2121	07/25/13	346.27	942.34	
W-865-2121	10/09/13	346.22	942.39	
W-865-2133	01/29/13	80.27	928.23	
W-865-2133	04/29/13	80.40	928.10	
W-865-2133	07/25/13	80.62	927.88	
W-865-2133	10/09/13	80.30	928.20	
W-865-2224	01/29/13	80.54	928.01	
W-865-2224	04/29/13	80.75	927.80	
W-865-2224	07/25/13	80.86	927.69	
W-865-2224	10/09/13	80.56	927.99	
W-PIT1-01	01/29/13	-	NA	DRY
W-PIT1-01	04/10/13	-	NA	DRY
W-PIT1-01	07/25/13	-	NA	DRY
W-PIT1-01	10/09/13	-	NA	DRY
W-PIT1-02	01/29/13	233.45	947.85	
W-PIT1-02	04/10/13	233.80	947.50	
W-PIT1-02	07/25/13	233.36	947.94	
W-PIT1-02	10/09/13	233.66	947.64	
W-PIT1-2204	01/29/13	41.11	1032.05	
W-PIT1-2204	04/10/13	41.73	1031.43	
W-PIT1-2204	07/18/13	41.88	1031.28	
W-PIT1-2204	10/08/13	42.12	1031.04	

Table C-5. Building 850 area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-PIT1-2209	01/29/13	216.14	949.91	
W-PIT1-2209	04/29/13	216.45	949.60	
W-PIT1-2209	07/18/13	216.36	949.69	
W-PIT1-2209	10/09/13	216.42	949.63	
W-PIT1-2225	01/29/13	226.53	966.61	
W-PIT1-2225	05/08/13	227.75	965.39	
W-PIT1-2225	07/18/13	227.80	965.34	
W-PIT1-2225	10/10/13	227.86	965.28	
W-PIT1-2326	01/29/13	181.17	966.62	
W-PIT1-2326	04/10/13	181.20	966.59	
W-PIT1-2326	07/18/13	182.15	965.64	
W-PIT1-2326	10/09/13	181.52	966.27	
W-PIT1-2620	01/29/13	231.86	948.01	
W-PIT1-2620	04/10/13	232.20	947.67	
W-PIT1-2620	07/18/13	232.65	947.22	
W-PIT1-2620	10/09/13	232.02	947.85	
W-PIT7-16	01/28/13	21.96	1249.04	
W-PIT7-16	04/17/13	22.15	1248.85	
W-PIT7-16	07/15/13	22.35	1248.65	
W-PIT7-16	10/29/13	22.36	1248.64	

Table C-6. Pit 2 Landfill ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K2-01C	02/13/13	67.18	983.72	
K2-01C	04/29/13	67.85	983.05	
K2-01C	08/05/13	67.98	982.92	
K2-01C	10/08/13	68.15	982.75	
NC2-08	02/13/13	62.30	987.07	
NC2-08	04/29/13	62.37	987.00	
NC2-08	08/05/13	62.43	986.94	
NC2-08	11/20/13	62.50	986.87	
W-PIT2-1934	02/13/13	56.47	1004.64	
W-PIT2-1934	04/29/13	56.52	1004.59	
W-PIT2-1934	07/18/13	56.61	1004.50	
W-PIT2-1934	10/08/13	56.68	1004.43	
W-PIT2-1935	02/13/13	75.37	980.49	
W-PIT2-1935	04/29/13	75.42	980.44	
W-PIT2-1935	07/18/13	75.36	980.50	
W-PIT2-1935	10/08/13	75.47	980.39	
W-PIT2-2226	02/13/13	328.29	965.83	
W-PIT2-2226	05/08/13	328.30	965.82	
W-PIT2-2226	08/12/13	328.47	965.65	
W-PIT2-2226	12/09/13	328.52	965.60	
W-PIT2-2301	02/13/13	18.40	1024.73	
W-PIT2-2301	05/08/13	30.81	1012.32	
W-PIT2-2301	08/12/13	32.08	1011.05	
W-PIT2-2301	11/20/13	32.10	1011.03	
W-PIT2-2302	02/13/13	14.32	1028.18	
W-PIT2-2302	05/08/13	16.56	1025.94	
W-PIT2-2302	08/12/13	16.52	1025.98	
W-PIT2-2302	11/20/13	16.58	1025.92	
W-PIT2-2303	02/14/13	-	NA	DRY
W-PIT2-2303	05/08/13	-	NA	DRY
W-PIT2-2303	08/12/13	-	NA	DRY
W-PIT2-2303	11/20/13	-	NA	DRY
W-PIT2-2304	02/14/13	-	NA	DRY
W-PIT2-2304	05/08/13	-	NA	DRY
W-PIT2-2304	08/12/13	-	NA	DRY
W-PIT2-2304	11/20/13	-	NA	DRY

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K7-01	01/28/13	27.95	1290.78	
K7-01	04/24/13	28.06	1290.67	
K7-01	07/17/13	28.17	1290.56	
K7-01	10/28/13	28.65	1290.08	
K7-03	01/22/13	26.21	1312.88	
K7-03	04/24/13	27.95	1311.14	
K7-03	07/17/13	29.19	1309.90	
K7-03	10/28/13	30.20	1308.89	
K7-06	01/22/13	25.70	1387.95	
K7-06	04/17/13	27.55	1386.10	
K7-06	07/17/13	29.09	1384.56	
K7-06	10/28/13	28.58	1385.07	
K7-07	01/29/13	-	NA	DRY
K7-07	04/17/13	50.26	1247.76	
K7-07	07/17/13	50.48	1247.54	
K7-07	10/29/13	-	NA	DRY
K7-09	01/22/13	50.09	1295.21	
K7-09	04/24/13	50.15	1295.15	
K7-09	07/17/13	49.96	1295.34	
K7-09	10/29/13	51.16	1294.14	
K7-10	01/22/13	34.45	1308.86	
K7-10	04/24/13	34.76	1308.55	
K7-10	07/17/13	34.83	1308.48	
K7-10	10/29/13	37.62	1305.69	
NC7-12	01/29/13	21.06	1264.63	
NC7-12	04/18/13	21.16	1264.53	
NC7-12	07/15/13	21.22	1264.47	
NC7-12	10/29/13	23.17	1262.52	
NC7-16	01/29/13	26.86	1283.88	
NC7-16	04/18/13	28.35	1282.39	
NC7-16	07/16/13	28.75	1281.99	
NC7-16	10/29/13	28.68	1282.06	
NC7-17	01/14/13	28.96	1360.24	
NC7-17	04/17/13	29.64	1359.56	
NC7-17	07/16/13	29.83	1359.37	
NC7-17	10/28/13	31.10	1358.10	
NC7-18	01/22/13	19.92	1312.04	
NC7-18	04/18/13	20.12	1311.84	
NC7-18	07/16/13	20.52	1311.44	
NC7-18	10/02/13	25.39	1306.57	
NC7-20	01/29/13	37.11	1258.28	
NC7-20	04/18/13	37.83	1257.56	
NC7-20	07/15/13	37.86	1257.53	
NC7-20	10/29/13	38.42	1256.97	
NC7-21	01/29/13	27.95	1276.22	

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-21	04/18/13	29.18	1274.99	
NC7-21	07/16/13	29.28	1274.89	
NC7-21	10/29/13	29.38	1274.79	
NC7-22	01/29/13	-	NA	DRY
NC7-22	04/18/13	-	NA	DRY
NC7-22	07/16/13	-	NA	DRY
NC7-22	10/28/13	-	NA	DRY
NC7-24	01/22/13	-	NA	DRY
NC7-24	04/18/13	-	NA	DRY
NC7-24	07/16/13	-	NA	DRY
NC7-24	10/28/13	-	NA	DRY
NC7-25	01/22/13	69.06	1297.45	
NC7-25	04/18/13	69.91	1296.60	
NC7-25	07/17/13	69.95	1296.56	
NC7-25	10/28/13	69.83	1296.68	
NC7-26	01/29/13	72.15	1256.52	
NC7-26	04/18/13	72.87	1255.80	
NC7-26	07/16/13	72.91	1255.76	
NC7-26	10/28/13	73.13	1255.54	
NC7-34	01/22/13	35.82	1328.21	
NC7-34	04/18/13	29.91	1334.12	
NC7-34	07/17/13	30.45	1333.58	
NC7-34	10/29/13	30.52	1333.51	
NC7-36	01/22/13	27.33	1334.61	
NC7-36	04/18/13	23.38	1338.56	
NC7-36	07/17/13	24.17	1337.77	
NC7-36	10/28/13	24.23	1337.71	
NC7-37	01/22/13	-	NA	DRY
NC7-37	04/18/13	-	NA	DRY
NC7-37	07/17/13	27.59	1311.13	
NC7-37	10/28/13	-	NA	DRY
NC7-40	01/28/13	23.33	1296.45	
NC7-40	04/24/13	23.40	1296.38	
NC7-40	07/16/13	23.38	1296.40	
NC7-40	10/28/13	24.65	1295.13	
NC7-47	01/29/13	63.25	1205.26	
NC7-47	04/10/13	63.36	1205.15	
NC7-47	07/17/13	63.23	1205.28	
NC7-47	10/08/13	63.25	1205.26	
NC7-48	01/22/13	48.75	1344.07	
NC7-48	04/18/13	48.17	1344.65	
NC7-48	07/17/13	48.64	1344.18	
NC7-48	10/28/13	48.72	1344.10	
NC7-49A	01/22/13	35.47	1358.26	
NC7-49A	04/18/13	35.80	1357.93	

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-49A	07/17/13	35.89	1357.84	
NC7-49A	10/28/13	37.30	1356.43	
NC7-50	01/29/13	76.45	1123.27	
NC7-50	04/10/13	76.42	1123.30	
NC7-50	07/17/13	76.41	1123.31	
NC7-50	10/08/13	76.37	1123.35	
NC7-51	01/22/13	32.95	1314.88	
NC7-51	04/29/13	34.70	1313.13	
NC7-51	07/17/13	35.87	1311.96	
NC7-51	10/08/13	35.92	1311.91	
NC7-52	01/22/13	74.71	1293.64	
NC7-52	04/23/13	74.56	1293.79	
NC7-52	07/17/13	74.23	1294.12	
NC7-52	10/28/13	75.04	1293.31	
NC7-53	01/22/13	32.55	1390.49	
NC7-53	04/17/13	33.31	1389.73	
NC7-53	07/17/13	33.52	1389.52	
NC7-53	10/28/13	33.89	1389.15	
NC7-63	01/22/13	33.11	1315.96	
NC7-63	04/22/13	32.75	1316.32	
NC7-63	07/17/13	33.27	1315.80	
NC7-63	10/28/13	33.43	1315.64	
NC7-64	01/22/13	44.12	1304.46	
NC7-64	04/22/13	44.11	1304.47	
NC7-64	07/17/13	43.95	1304.63	
NC7-64	10/28/13	44.13	1304.45	
NC7-65	01/28/13	190.27	1261.01	
NC7-65	04/18/13	190.20	1261.08	
NC7-65	07/16/13	190.25	1261.03	
NC7-65	10/28/13	190.14	1261.14	
NC7-67	01/28/13	32.86	1290.06	
NC7-67	04/24/13	33.03	1289.89	
NC7-67	07/16/13	32.87	1290.05	
NC7-67	10/29/13	33.69	1289.23	
NC7-68	01/28/13	32.53	1290.37	
NC7-68	04/24/13	32.61	1290.29	
NC7-68	07/16/13	32.65	1290.25	
NC7-68	10/28/13	33.23	1289.67	
NC7-75	01/22/13	50.31	1301.91	
NC7-75	04/22/13	50.41	1301.81	
NC7-75	07/17/13	50.85	1301.37	
NC7-75	10/28/13	50.97	1301.25	
NC7-76	01/29/13	22.04	1254.84	
NC7-76	04/22/13	22.34	1254.54	
NC7-76	07/15/13	22.30	1254.58	

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
NC7-76	10/09/13	24.26	1252.62	
W-865-01	01/29/13	35.22	1152.44	
W-865-01	04/10/13	35.29	1152.37	
W-865-01	07/24/13	35.35	1152.31	
W-865-01	10/08/13	35.28	1152.38	
W-865-03	01/29/13	55.05	1180.93	
W-865-03	04/10/13	55.06	1180.92	
W-865-03	07/24/13	55.13	1180.85	
W-865-03	10/08/13	55.17	1180.81	
W-865-1804	02/06/13	103.01	1109.10	
W-865-1804	04/10/13	103.13	1108.98	
W-865-1804	07/24/13	103.30	1108.81	
W-865-1804	10/08/13	103.37	1108.74	
W-PIT3-02	01/22/13	-	NA	DRY
W-PIT3-02	04/22/13	-	NA	DRY
W-PIT3-02	07/17/13	-	NA	DRY
W-PIT3-02	10/29/13	-	NA	DRY
W-PIT5-02	01/22/13	-	NA	DRY
W-PIT5-02	04/22/13	-	NA	DRY
W-PIT5-02	07/17/13	-	NA	DRY
W-PIT5-02	11/29/13	-	NA	DRY
W-PIT7-02	01/22/13	23.10	1294.87	
W-PIT7-02	04/22/13	23.17	1294.80	
W-PIT7-02	07/17/13	23.20	1294.77	
W-PIT7-02	10/29/13	23.32	1294.65	
W-PIT7-03	01/22/13	28.16	1301.36	
W-PIT7-03	04/22/13	29.12	1300.40	
W-PIT7-03	07/17/13	29.88	1299.64	
W-PIT7-03	10/29/13	29.87	1299.65	
W-PIT7-10	01/29/13	27.44	1290.99	
W-PIT7-10	04/22/13	27.56	1290.87	
W-PIT7-10	07/17/13	27.63	1290.80	
W-PIT7-10	10/29/13	27.67	1290.76	
W-PIT7-11	01/28/13	-	NA	DRY
W-PIT7-11	04/18/13	-	NA	DRY
W-PIT7-11	07/17/13	-	NA	DRY
W-PIT7-11	10/28/13	-	NA	DRY
W-PIT7-12	01/28/13	213.86	1202.69	
W-PIT7-12	04/18/13	213.89	1202.66	
W-PIT7-12	07/17/13	214.26	1202.29	
W-PIT7-12	10/28/13	214.32	1202.23	
W-PIT7-13	01/29/13	231.39	1251.15	
W-PIT7-13	04/18/13	231.41	1251.13	
W-PIT7-13	07/17/13	231.84	1250.70	
W-PIT7-13	10/08/13	231.87	1250.67	

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-PIT7-14	01/29/13	304.27	1158.97	
W-PIT7-14	04/18/13	304.25	1158.99	
W-PIT7-14	07/17/13	304.48	1158.76	
W-PIT7-14	10/30/13	304.55	1158.69	
W-PIT7-15	01/29/13	105.34	1200.46	
W-PIT7-15	04/29/13	105.14	1200.66	
W-PIT7-15	07/24/13	105.46	1200.34	
W-PIT7-15	10/08/13	105.34	1200.46	
W-PIT7-1715	01/23/13	48.55	1423.43	
W-PIT7-1715	04/17/13	49.00	1422.98	
W-PIT7-1715	07/17/13	49.21	1422.77	
W-PIT7-1716	01/23/13	-	NA	DRY
W-PIT7-1716	04/17/13	-	NA	DRY
W-PIT7-1716	07/17/13	-	NA	DRY
W-PIT7-1716	10/28/13	-	NA	DRY
W-PIT7-1719	01/23/13	21.34	1451.18	
W-PIT7-1719	04/17/13	21.36	1451.16	
W-PIT7-1719	07/17/13	21.42	1451.10	
W-PIT7-1719	10/28/13	21.90	1450.62	
W-PIT7-1721	01/23/13	-	NA	DRY
W-PIT7-1721	04/17/13	-	NA	DRY
W-PIT7-1721	07/17/13	-	NA	DRY
W-PIT7-1721	10/28/13	-	NA	DRY
W-PIT7-1722	01/23/13	-	NA	DRY
W-PIT7-1722	04/17/13	-	NA	DRY
W-PIT7-1722	07/17/13	-	NA	DRY
W-PIT7-1722	10/28/13	-	NA	DRY
W-PIT7-1725	01/23/13	120.51	1299.54	
W-PIT7-1725	04/17/13	120.48	1299.57	
W-PIT7-1725	07/17/13	120.51	1299.54	
W-PIT7-1725	10/28/13	120.43	1299.62	
W-PIT7-1726	01/23/13	-	NA	DRY
W-PIT7-1726	04/17/13	-	NA	DRY
W-PIT7-1726	07/22/13	-	NA	DRY
W-PIT7-1726	10/28/13	-	NA	DRY
W-PIT7-1727	01/23/13	-	NA	DRY
W-PIT7-1727	04/17/13	-	NA	DRY
W-PIT7-1727	07/17/13	-	NA	DRY
W-PIT7-1727	10/28/13	-	NA	DRY
W-PIT7-1728	01/23/13	-	NA	DRY
W-PIT7-1728	04/17/13	-	NA	DRY
W-PIT7-1728	07/17/13	-	NA	DRY
W-PIT7-1728	10/28/13	-	NA	DRY
W-PIT7-1729	01/23/13	-	NA	DRY
W-PIT7-1729	04/17/13	-	NA	DRY

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-PIT7-1729	07/17/13	-	NA	DRY
W-PIT7-1729	10/28/13	-	NA	DRY
W-PIT7-1860	01/28/13	13.12	1433.66	
W-PIT7-1860	04/17/13	13.26	1433.52	
W-PIT7-1860	07/17/13	13.36	1433.42	
W-PIT7-1860	10/29/13	13.56	1433.22	
W-PIT7-1861	01/28/13	13.23	1433.60	
W-PIT7-1861	04/17/13	13.31	1433.52	
W-PIT7-1861	07/17/13	13.45	1433.38	
W-PIT7-1861	10/29/13	13.65	1433.18	
W-PIT7-1903	01/28/13	22.55	1295.73	
W-PIT7-1903	04/24/13	21.80	1296.48	
W-PIT7-1903	07/16/13	22.17	1296.11	
W-PIT7-1903	10/29/13	-	NA	DRY
W-PIT7-1904	01/28/13	23.28	1294.47	
W-PIT7-1904	04/24/13	23.22	1294.53	
W-PIT7-1904	07/16/13	24.21	1293.54	
W-PIT7-1904	10/29/13	24.48	1293.27	
W-PIT7-1905	01/28/13	22.60	1295.38	
W-PIT7-1905	04/24/13	22.43	1295.55	
W-PIT7-1905	07/16/13	22.76	1295.22	
W-PIT7-1905	10/29/13	-	NA	DRY
W-PIT7-1907	01/28/13	22.22	1296.01	
W-PIT7-1907	04/24/13	22.30	1295.93	
W-PIT7-1907	07/16/13	22.45	1295.78	
W-PIT7-1907	10/29/13	23.46	1294.77	
W-PIT7-1915	01/28/13	22.31	1295.59	
W-PIT7-1915	04/24/13	22.29	1295.61	
W-PIT7-1915	07/16/13	22.38	1295.52	
W-PIT7-1915	10/29/13	23.41	1294.49	
W-PIT7-1916	01/28/13	22.75	1295.37	
W-PIT7-1916	04/24/13	22.78	1295.34	
W-PIT7-1916	07/16/13	22.81	1295.31	
W-PIT7-1916	10/29/13	-	NA	DRY
W-PIT7-1917	01/28/13	23.54	1294.47	
W-PIT7-1917	04/24/13	-	NA	DRY
W-PIT7-1917	07/16/13	-	NA	DRY
W-PIT7-1917	10/29/13	-	NA	DRY
W-PIT7-1918	01/28/13	22.81	1295.23	
W-PIT7-1918	04/24/13	22.86	1295.18	
W-PIT7-1918	07/16/13	23.58	1294.46	
W-PIT7-1918	10/29/13	23.63	1294.41	
W-PIT7-1919	01/28/13	-	NA	DRY
W-PIT7-1919	04/24/13	22.69	1292.31	
W-PIT7-1919	07/16/13	22.58	1292.42	

Table C-7. Pit 7 Complex area in Operable Unit 5 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-PIT7-1919	10/29/13	-	NA	DRY
W-PIT7-2141	01/28/13	300.40	1163.99	
W-PIT7-2141	04/18/13	300.10	1164.29	
W-PIT7-2141	07/17/13	300.31	1164.08	
W-PIT7-2141	10/30/13	300.42	1163.97	
W-PIT7-2305	01/28/13	36.02	1283.73	
W-PIT7-2305	04/24/13	36.06	1283.69	
W-PIT7-2305	07/17/13	35.87	1283.88	
W-PIT7-2305	10/28/13	35.96	1283.79	
W-PIT7-2306	01/23/13	45.92	1306.10	
W-PIT7-2306	04/22/13	46.27	1305.75	
W-PIT7-2306	07/17/13	46.32	1305.70	
W-PIT7-2306	10/28/13	46.87	1305.15	
W-PIT7-2307	01/22/13	29.82	1307.73	
W-PIT7-2307	04/22/13	30.35	1307.20	
W-PIT7-2307	07/17/13	31.45	1306.10	
W-PIT7-2307	10/28/13	31.98	1305.57	
W-PIT7-2309	01/22/13	29.74	1309.24	
W-PIT7-2309	04/22/13	30.42	1308.56	
W-PIT7-2309	07/17/13	29.97	1309.01	
W-PIT7-2309	10/28/13	32.00	1306.98	
W-PIT7-2703	01/22/13	46.00	1304.12	
W-PIT7-2703	04/22/13	46.00	1304.12	
W-PIT7-2703	07/17/13	46.01	1304.11	
W-PIT7-2703	10/28/13	46.12	1304.00	
W-PIT7-2704	01/23/13	39.41	1311.51	
W-PIT7-2704	04/22/13	39.43	1311.49	
W-PIT7-2704	07/17/13	39.52	1311.40	
W-PIT7-2704	10/28/13	39.47	1311.45	
W-PIT7-2705	01/28/13	31.64	1286.38	
W-PIT7-2705	04/24/13	31.64	1286.38	
W-PIT7-2705	07/16/13	31.65	1286.37	
W-PIT7-2705	10/28/13	31.50	1286.52	

Table C-8. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-01	02/28/13	197.66	1138.49	
W-854-01	05/23/13	197.73	1138.42	
W-854-01	09/11/13	197.68	1138.47	
W-854-01	11/19/13	217.68	1118.47	
W-854-02	02/28/13	-	NA	NM/RA WELL HEAD BLOCKED
W-854-02	05/23/13	147.80	1186.17	
W-854-02	09/11/13	147.87	1186.10	
W-854-02	11/19/13	148.21	1185.76	
W-854-03	02/28/13	118.80	1121.73	
W-854-03	05/23/13	119.92	1120.61	
W-854-03	09/11/13	120.27	1120.26	
W-854-03	11/19/13	121.74	1118.79	
W-854-04	02/28/13	292.72	947.37	
W-854-04	05/23/13	291.90	948.19	
W-854-04	09/11/13	292.26	947.83	
W-854-04	11/19/13	291.75	948.34	
W-854-05	02/28/13	89.80	1242.24	
W-854-05	05/23/13	90.12	1241.92	
W-854-05	09/11/13	89.79	1242.25	
W-854-05	11/19/13	89.81	1242.23	
W-854-06	03/04/13	118.59	991.86	
W-854-06	05/23/13	118.73	991.72	
W-854-06	09/11/13	118.93	991.52	
W-854-06	11/19/13	120.11	990.34	
W-854-07	03/04/13	117.94	992.92	
W-854-07	05/23/13	118.24	992.62	
W-854-07	09/11/13	118.24	992.62	
W-854-07	11/19/13	118.32	992.54	
W-854-08	02/28/13	121.38	1154.82	
W-854-08	05/23/13	121.61	1154.59	
W-854-08	09/11/13	121.80	1154.40	
W-854-08	11/19/13	121.91	1154.29	
W-854-09	03/04/13	190.22	1170.99	
W-854-09	05/23/13	190.56	1170.65	
W-854-09	09/11/13	190.63	1170.58	
W-854-09	11/19/13	190.68	1170.53	
W-854-10	02/28/13	117.27	1209.11	
W-854-10	05/23/13	117.17	1209.21	
W-854-10	09/11/13	116.89	1209.49	
W-854-10	11/19/13	117.75	1208.63	
W-854-11	02/28/13	152.80	1189.38	
W-854-11	05/23/13	-	NA	DRY
W-854-11	09/11/13	-	NA	DRY
W-854-11	11/19/13	-	NA	DRY
W-854-12	02/28/13	-	NA	NM/RA

Table C-8. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-12	05/23/13	-	NA	NM/RA
W-854-12	09/11/13	-	NA	NM/RA
W-854-12	11/20/13	226.90	1029.89	
W-854-13	02/28/13	-	NA	NM/RA
W-854-13	05/23/13	-	NA	NM/RA
W-854-13	09/11/13	-	NA	NM/RA
W-854-13	11/20/13	106.26	1150.91	
W-854-14	02/28/13	48.95	954.75	
W-854-14	05/23/13	47.06	956.64	
W-854-14	09/11/13	47.26	956.44	
W-854-14	11/19/13	47.83	955.87	
W-854-15	02/28/13	76.85	1055.15	
W-854-15	05/23/13	76.81	1055.19	
W-854-15	09/11/13	76.76	1055.24	
W-854-15	11/19/13	76.93	1055.07	
W-854-17	02/28/13	143.81	1192.33	
W-854-17	05/23/13	143.85	1192.29	
W-854-17	09/11/13	144.00	1192.14	
W-854-17	11/19/13	146.31	1189.83	
W-854-18A	02/28/13	145.21	1190.69	
W-854-18A	05/23/13	145.45	1190.45	
W-854-18A	09/11/13	142.32	1193.58	
W-854-18A	11/19/13	142.22	1193.68	
W-854-19	03/04/13	-	NA	DRY
W-854-19	05/23/13	-	NA	DRY
W-854-19	09/11/13	-	NA	DRY
W-854-19	11/19/13	-	NA	DRY
W-854-45	02/28/13	85.43	912.46	
W-854-45	05/23/13	84.79	913.10	
W-854-45	09/11/13	84.91	912.98	
W-854-45	11/19/13	85.00	912.89	
W-854-1701	03/04/13	239.41	1010.91	
W-854-1701	05/23/13	239.87	1010.45	
W-854-1701	09/11/13	240.22	1010.10	
W-854-1701	11/19/13	239.22	1011.10	
W-854-1706	03/04/13	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-854-1706	05/23/13	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-854-1706	09/11/13	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-854-1706	11/20/13	-	NA	DRY
W-854-1707	03/04/13	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-854-1707	05/23/13	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-854-1707	09/11/13	-	NA	NM/UC UNSAFE ROAD CONDITIONS
W-854-1707	11/20/13	30.96	801.25	
W-854-1731	02/28/13	54.90	948.59	
W-854-1731	05/23/13	55.20	948.29	

Table C-8. Building 854 Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-854-1731	09/11/13	55.32	948.17	
W-854-1731	11/19/13	55.87	947.62	
W-854-1822	03/04/13	146.80	1040.66	
W-854-1822	05/23/13	146.91	1040.55	
W-854-1822	09/11/13	146.83	1040.63	
W-854-1822	11/19/13	147.11	1040.35	
W-854-1823	03/04/13	53.31	1100.95	
W-854-1823	05/23/13	53.47	1100.79	
W-854-1823	09/11/13	53.69	1100.57	
W-854-1823	11/19/13	53.46	1100.80	
W-854-1834	02/28/13	-	NA	DRY
W-854-1834	05/23/13	121.30	1212.09	
W-854-1834	09/11/13	121.43	1211.96	
W-854-1834	11/19/13	121.79	1211.60	
W-854-1835	02/28/13	122.66	1210.09	
W-854-1835	05/23/13	122.71	1210.04	
W-854-1835	09/11/13	122.66	1210.09	
W-854-1835	11/19/13	122.66	1210.09	
W-854-1902	03/04/13	148.84	1039.44	
W-854-1902	05/23/13	148.79	1039.49	
W-854-1902	09/11/13	148.89	1039.39	
W-854-1902	11/19/13	148.87	1039.41	
W-854-2115	03/04/13	118.50	993.20	
W-854-2115	05/23/13	118.56	993.14	
W-854-2115	09/11/13	118.75	992.95	
W-854-2115	11/19/13	118.81	992.89	
W-854-2139	03/04/13	121.57	990.11	
W-854-2139	05/23/13	121.63	990.05	
W-854-2139	09/11/13	120.33	991.35	
W-854-2139	11/19/13	118.74	992.94	
W-854-2218	02/28/13	146.85	1187.85	
W-854-2218	05/23/13	146.75	1187.95	
W-854-2218	09/11/13	148.94	1185.76	
W-854-2218	11/19/13	148.13	1186.57	
W-854-2611	02/28/13	159.70	NA	Well not surveyed. Data in review.
W-854-2611	05/23/13	159.46	NA	Well not surveyed. Data in review.
W-854-2611	09/11/13	160.70	NA	Well not surveyed. Data in review.
W-854-2611	11/19/13	160.68	NA	Well not surveyed. Data in review.

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
SVI-830-031	03/05/13	19.27	673.06	
SVI-830-031	05/20/13	20.12	672.21	
SVI-830-031	08/27/13	20.95	671.38	
SVI-830-031	12/03/13	24.32	668.01	
SVI-830-032	03/05/13	26.65	665.75	
SVI-830-032	05/20/13	30.65	661.75	
SVI-830-032	08/27/13	30.08	662.32	
SVI-830-032	12/03/13	32.78	659.62	
SVI-830-033	03/05/13	22.04	670.31	
SVI-830-033	05/20/13	24.00	668.35	
SVI-830-033	08/27/13	23.51	668.84	
SVI-830-033	12/03/13	24.10	668.25	
SVI-830-035	03/05/13	18.91	673.45	
SVI-830-035	05/20/13	20.47	671.89	
SVI-830-035	08/27/13	21.02	671.34	
SVI-830-035	12/03/13	23.03	669.33	
W-830-04A	03/07/13	46.47	577.63	
W-830-04A	05/08/13	46.66	577.44	
W-830-04A	08/13/13	49.02	575.08	
W-830-04A	11/24/13	50.45	573.65	
W-830-05	03/07/13	25.39	558.98	
W-830-05	05/08/13	26.12	558.25	
W-830-05	08/13/13	27.10	557.27	
W-830-05	12/02/13	26.62	557.75	
W-830-07	03/07/13	30.47	604.33	
W-830-07	05/20/13	31.27	603.53	
W-830-07	08/13/13	32.41	602.39	
W-830-07	12/02/13	32.58	602.22	
W-830-09	03/05/13	124.49	571.27	
W-830-09	05/20/13	125.22	570.54	
W-830-09	08/27/13	125.91	569.85	
W-830-09	12/03/13	124.38	571.38	
W-830-10	03/07/13	19.18	577.52	
W-830-10	05/08/13	19.43	577.27	
W-830-10	08/13/13	22.11	574.59	
W-830-10	12/02/13	23.11	573.59	
W-830-11	03/07/13	34.18	562.01	
W-830-11	05/08/13	35.50	560.69	
W-830-11	08/13/13	37.21	558.98	
W-830-11	12/02/13	36.26	559.93	
W-830-12	03/05/13	90.91	601.41	
W-830-12	05/20/13	91.40	600.92	
W-830-12	08/27/13	91.72	600.60	
W-830-12	12/03/13	92.90	599.42	
W-830-13	03/07/13	30.76	533.45	

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-13	05/08/13	28.95	535.26	
W-830-13	08/13/13	33.32	530.89	
W-830-13	12/02/13	33.50	530.71	
W-830-14	03/07/13	20.81	544.69	
W-830-14	05/08/13	20.82	544.68	
W-830-14	08/13/13	21.00	544.50	
W-830-14	12/02/13	21.18	544.32	
W-830-15	03/07/13	7.14	557.95	
W-830-15	05/08/13	8.38	556.71	
W-830-15	08/13/13	10.91	554.18	
W-830-15	12/02/13	8.58	556.21	
W-830-16	03/07/13	96.47	574.41	
W-830-16	05/09/13	97.00	573.88	
W-830-16	08/13/13	97.52	573.36	
W-830-16	12/02/13	100.40	570.48	
W-830-17	03/07/13	108.73	565.96	
W-830-17	05/09/13	108.90	565.79	
W-830-17	08/13/13	108.82	565.87	
W-830-17	12/02/13	108.76	565.93	
W-830-18	03/07/13	88.60	565.89	
W-830-18	05/08/13	89.82	564.67	
W-830-18	08/13/13	89.60	564.89	
W-830-18	11/25/13	87.44	567.05	
W-830-19	03/05/13	44.16	611.38	
W-830-19	05/20/13	44.00	611.54	
W-830-19	08/27/13	44.80	610.74	
W-830-19	12/03/13	44.50	611.04	
W-830-20	03/07/13	27.25	569.71	
W-830-20	05/08/13	28.04	568.92	
W-830-20	08/13/13	29.51	567.45	
W-830-20	12/02/13	29.27	567.69	
W-830-21	03/07/13	68.10	585.84	
W-830-21	05/08/13	68.45	585.49	
W-830-21	08/13/13	69.25	584.69	
W-830-21	11/25/13	68.95	584.99	
W-830-22	03/05/13	50.25	604.77	
W-830-22	05/20/13	50.68	604.34	
W-830-22	08/27/13	60.33	594.69	
W-830-22	12/03/13	51.30	603.72	
W-830-25	03/07/13	26.08	596.50	
W-830-25	05/09/13	-	NA	DRY
W-830-25	08/13/13	-	NA	DRY
W-830-25	12/02/13	-	NA	DRY
W-830-26	03/05/13	-	NA	DRY
W-830-26	05/20/13	-	NA	DRY

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-26	08/27/13	-	NA	DRY
W-830-26	12/03/13	-	NA	DRY
W-830-27	03/07/13	31.05	593.47	
W-830-27	05/09/13	33.74	590.78	
W-830-27	08/13/13	32.47	592.05	
W-830-27	12/02/13	32.83	591.69	
W-830-28	03/07/13	57.57	567.29	
W-830-28	05/09/13	58.52	566.34	
W-830-28	08/13/13	58.80	566.06	
W-830-28	12/02/13	58.91	565.95	
W-830-29	03/05/13	81.30	579.73	
W-830-29	05/20/13	82.99	578.04	
W-830-29	08/27/13	83.22	577.51	
W-830-29	12/03/13	82.20	578.53	
W-830-30	03/05/13	14.80	677.71	
W-830-30	05/20/13	16.40	676.11	
W-830-30	08/27/13	17.26	675.25	
W-830-30	12/02/13	19.70	672.81	
W-830-34	03/05/13	16.69	675.66	
W-830-34	05/20/13	17.50	674.85	
W-830-34	08/27/13	17.80	674.55	
W-830-34	12/02/13	19.30	673.05	
W-830-49	03/05/13	-	NA	NM/NO WATER LEVEL PORT
W-830-49	05/20/13	-	NA	NM/NO WATER LEVEL PORT
W-830-49	08/27/13	-	NA	NM/NO WATER LEVEL PORT
W-830-49	12/03/13	-	NA	NM/NO WATER LEVEL PORT
W-830-50	03/07/13	31.70	577.44	
W-830-50	05/08/13	31.91	577.23	
W-830-50	08/13/13	34.71	574.43	
W-830-50	12/02/13	34.82	574.32	
W-830-51	03/07/13	-3.52	574.30	
W-830-51	05/09/13	-8.00	578.78	
W-830-51	08/13/13	-3.62	574.40	
W-830-51	12/02/13	-2.23	573.01	
W-830-52	03/07/13	0.15	573.23	
W-830-52	05/09/13	0.10	573.28	
W-830-52	08/14/13	-	NA	NM/NON-FLOWING ARTESIAN
W-830-52	12/02/13	-	NA	NM/NON-FLOWING ARTESIAN
W-830-53	03/20/13	-1.65	577.72	
W-830-53	05/09/13	-0.64	576.71	
W-830-53	08/14/13	-	NA	NM/NON-FLOWING ARTESIAN
W-830-53	12/02/13	-	NA	NM/NON-FLOWING ARTESIAN
W-830-54	03/07/13	57.25	545.77	
W-830-54	05/09/13	56.95	546.07	
W-830-54	08/13/13	58.80	544.22	

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-54	12/02/13	58.73	544.29	
W-830-55	03/07/13	87.67	576.37	
W-830-55	05/20/13	87.73	576.31	
W-830-55	08/13/13	87.91	576.13	
W-830-55	12/02/13	91.58	572.46	
W-830-56	03/07/13	31.65	545.17	
W-830-56	05/08/13	31.70	545.12	
W-830-56	08/13/13	31.96	544.86	
W-830-56	12/02/13	32.13	544.69	
W-830-57	03/07/13	73.86	565.32	
W-830-57	05/09/13	75.73	563.45	
W-830-57	08/13/13	75.75	563.43	
W-830-57	12/02/13	75.92	563.26	
W-830-58	03/07/13	23.40	609.47	
W-830-58	05/09/13	24.31	608.56	
W-830-58	08/13/13	24.32	608.55	
W-830-58	12/02/13	24.73	608.14	
W-830-59	03/05/13	57.70	608.41	
W-830-59	05/20/13	-	NA	DRY
W-830-59	08/27/13	-	NA	DRY
W-830-59	12/03/13	57.10	609.01	
W-830-60	03/07/13	69.88	567.53	
W-830-60	05/08/13	71.12	566.29	
W-830-60	08/13/13	70.91	566.50	
W-830-60	11/25/13	68.17	569.24	
W-830-1730	03/07/13	24.75	523.35	
W-830-1730	05/20/13	24.85	523.25	
W-830-1730	08/14/13	25.01	523.09	
W-830-1730	12/02/13	25.37	522.73	
W-830-1807	03/05/13	-	NA	NM/RA
W-830-1807	05/20/13	-	NA	NM/RA
W-830-1807	08/27/13	-	NA	NM/RA
W-830-1807	12/03/13	-	NA	NM/RA
W-830-1829	03/05/13	52.28	608.23	
W-830-1829	05/20/13	54.03	606.48	
W-830-1829	08/27/13	54.16	606.35	
W-830-1829	12/03/13	54.23	606.28	
W-830-1830	03/05/13	54.30	606.70	
W-830-1830	05/20/13	55.00	606.00	
W-830-1830	08/27/13	55.15	605.85	
W-830-1830	12/03/13	55.25	605.75	
W-830-1831	03/07/13	166.80	577.91	
W-830-1831	05/09/13	167.46	577.25	
W-830-1831	08/14/13	169.91	574.80	
W-830-1831	12/02/13	170.85	573.86	

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-830-1832	03/07/13	180.30	569.57	
W-830-1832	05/09/13	181.73	568.14	
W-830-1832	08/14/13	182.93	566.94	
W-830-1832	12/02/13	179.06	570.81	
W-830-2213	03/07/13	76.90	578.99	
W-830-2213	05/08/13	76.89	579.00	
W-830-2213	08/13/13	72.80	583.09	
W-830-2213	11/25/13	76.86	579.03	
W-830-2214	03/07/13	83.36	572.29	
W-830-2214	05/08/13	83.92	571.73	
W-830-2214	08/13/13	72.40	583.25	
W-830-2214	11/25/13	79.08	576.57	
W-830-2215	03/07/13	88.53	567.28	
W-830-2215	05/08/13	91.39	564.42	
W-830-2215	08/13/13	91.40	564.41	
W-830-2215	11/25/13	86.63	569.18	
W-830-2216	03/07/13	19.84	532.82	
W-830-2216	05/20/13	19.90	532.76	
W-830-2216	08/13/13	20.16	532.50	
W-830-2216	12/02/13	21.87	530.79	
W-830-2311	03/07/13	20.98	577.31	
W-830-2311	05/08/13	21.24	577.05	
W-830-2311	08/13/13	23.90	574.39	
W-830-2311	12/02/13	24.95	573.34	
W-830-2701	03/07/13	58.41	577.81	
W-830-2701	05/08/13	58.82	577.40	
W-830-2701	08/13/13	61.52	574.70	
W-830-2701	11/25/13	62.57	573.65	
W-830-2806	03/07/13	176.27	NA	Well not surveyed. Data in review.
W-830-2806	05/09/13	176.90	NA	Well not surveyed. Data in review.
W-830-2806	08/14/13	179.45	NA	Well not surveyed. Data in review.
W-830-2806	12/02/13	180.43	NA	Well not surveyed. Data in review.
W-831-01	03/05/13	132.20	641.29	
W-831-01	05/20/13	132.85	640.64	
W-831-01	08/27/13	133.16	640.33	
W-831-01	12/03/13	133.25	640.24	
W-832-01	03/05/13	32.95	673.11	
W-832-01	05/20/13	33.15	672.91	
W-832-01	08/27/13	35.56	670.50	
W-832-01	12/03/13	34.10	671.96	
W-832-05	03/05/13	33.20	685.47	
W-832-05	05/20/13	-	NA	DRY
W-832-05	08/27/13	34.45	684.22	
W-832-05	12/03/13	-	NA	DRY
W-832-06	03/05/13	38.47	682.38	

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-832-06	05/09/13	38.52	682.33	
W-832-06	08/27/13	39.10	681.75	
W-832-06	12/03/13	39.15	681.70	
W-832-09	03/05/13	73.30	633.92	
W-832-09	05/20/13	73.55	633.67	
W-832-09	08/27/13	73.74	633.18	
W-832-09	12/03/13	73.63	633.29	
W-832-10	03/05/13	35.60	650.55	
W-832-10	05/09/13	35.65	650.50	
W-832-10	08/27/13	36.68	649.47	
W-832-10	12/03/13	-	NA	NM/PROBE ISSUES
W-832-11	03/05/13	33.97	664.68	
W-832-11	05/09/13	34.13	664.52	
W-832-11	08/27/13	34.81	663.84	
W-832-11	12/03/13	35.14	663.51	
W-832-12	03/05/13	-	NA	DRY
W-832-12	05/20/13	-	NA	DRY
W-832-12	08/27/13	-	NA	DRY
W-832-12	12/03/13	-	NA	DRY
W-832-13	03/05/13	20.42	702.24	
W-832-13	05/20/13	21.65	701.01	
W-832-13	08/27/13	22.27	700.39	
W-832-13	12/03/13	22.31	700.35	
W-832-14	03/05/13	-	NA	DRY
W-832-14	05/20/13	-	NA	DRY
W-832-14	08/27/13	-	NA	DRY
W-832-14	12/03/13	-	NA	DRY
W-832-15	03/05/13	-	NA	DRY
W-832-15	05/20/13	-	NA	DRY
W-832-15	08/27/13	-	NA	DRY
W-832-15	12/03/13	-	NA	DRY
W-832-16	03/05/13	-	NA	DRY
W-832-16	05/20/13	-	NA	DRY
W-832-16	08/27/13	-	NA	DRY
W-832-16	12/03/13	-	NA	DRY
W-832-17	03/05/13	-	NA	DRY
W-832-17	05/20/13	-	NA	DRY
W-832-17	08/27/13	-	NA	DRY
W-832-17	12/03/13	-	NA	DRY
W-832-18	03/05/13	-	NA	DRY
W-832-18	05/20/13	-	NA	DRY
W-832-18	08/27/13	-	NA	DRY
W-832-18	12/03/13	-	NA	DRY
W-832-19	03/05/13	-	NA	DRY
W-832-19	05/20/13	-	NA	DRY

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-832-19	08/27/13	-	NA	DRY
W-832-20	03/05/13	-	NA	DRY
W-832-20	05/20/13	-	NA	DRY
W-832-20	08/27/13	-	NA	DRY
W-832-20	12/03/13	-	NA	DRY
W-832-21	03/05/13	-	NA	DRY
W-832-21	05/20/13	-	NA	DRY
W-832-21	08/27/13	-	NA	DRY
W-832-21	12/03/13	-	NA	DRY
W-832-22	03/05/13	-	NA	DRY
W-832-22	05/20/13	-	NA	DRY
W-832-22	08/27/13	-	NA	DRY
W-832-22	12/03/13	-	NA	DRY
W-832-23	03/05/13	32.40	687.74	
W-832-23	05/20/13	33.15	686.99	
W-832-23	08/27/13	33.65	686.49	
W-832-23	12/03/13	33.72	686.42	
W-832-24	03/05/13	38.00	624.49	
W-832-24	05/20/13	38.40	624.09	
W-832-24	08/27/13	38.50	623.99	
W-832-24	12/03/13	38.40	624.09	
W-832-25	03/05/13	-	NA	NM/RA
W-832-25	05/20/13	-	NA	NM/RA
W-832-25	08/13/13	41.15	625.66	
W-832-25	12/03/13	41.36	625.45	
W-832-1927	03/11/13	234.31	591.69	
W-832-1927	05/13/13	234.30	591.70	
W-832-1927	08/13/13	234.30	591.70	
W-832-1927	12/02/13	234.76	591.24	
W-832-2112	03/11/13	73.78	580.31	
W-832-2112	05/13/13	74.20	579.89	
W-832-2112	08/13/13	75.40	578.69	
W-832-2112	12/02/13	75.47	578.62	
W-832-2906	12/03/13	105.26	NA	CHRISTY BOX
W-832-SC1	03/20/13	-	NA	DRY
W-832-SC1	05/09/13	-	NA	DRY
W-832-SC1	08/13/13	-	NA	DRY
W-832-SC1	12/02/13	-	NA	NM/UC HIGH BRUSH
W-832-SC2	03/07/13	-	NA	DRY
W-832-SC2	05/09/13	-	NA	DRY
W-832-SC2	08/13/13	-	NA	DRY
W-832-SC2	12/02/13	-	NA	NM/UC HIGH BRUSH
W-832-SC3	03/07/13	-	NA	DRY
W-832-SC3	05/09/13	-	NA	DRY
W-832-SC3	08/13/13	-	NA	DRY

Table C-9. Building 832 Canyon Operable Unit ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-832-SC3	12/02/13	-	NA	NM/UC HIGH BRUSH
W-832-SC4	03/20/13	-	NA	DRY
W-832-SC4	05/09/13	-	NA	DRY
W-832-SC4	08/13/13	-	NA	DRY
W-832-SC4	12/02/13	-	NA	NM/UC HIGH BRUSH
W-870-01	03/20/13	-	NA	DRY
W-870-01	05/29/13	-	NA	DRY
W-870-01	08/20/13	-	NA	DRY
W-870-01	12/04/13	-	NA	DRY
W-870-02	03/20/13	18.40	505.42	
W-870-02	05/29/13	18.12	505.70	
W-870-02	08/20/13	18.45	505.37	
W-870-02	12/04/13	18.45	505.37	
W-880-01	03/12/13	21.15	507.65	
W-880-01	06/03/13	22.12	506.68	
W-880-01	08/20/13	21.80	507.00	
W-880-01	12/04/13	21.70	507.10	
W-880-02	03/12/13	22.34	506.41	
W-880-02	06/03/13	22.36	506.39	
W-880-02	08/20/13	22.84	505.91	
W-880-03	03/07/13	-	NA	NM/FA
W-880-03	06/03/13	-	NA	NM/FA
W-880-03	08/20/13	2.30	526.75	
W-880-03	12/04/13	-	NA	NM/FA

Table C-10. Building 851 Firing Table ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-851-05	02/06/13	-	NA	NM/RA
W-851-05	06/06/13	137.75	1134.04	
W-851-05	09/19/13	137.60	1134.19	
W-851-05	12/02/13	137.90	1133.89	
W-851-06	02/06/13	-	NA	NM/RA
W-851-06	06/06/13	131.58	1133.92	
W-851-06	09/19/13	131.01	1134.49	
W-851-06	12/02/13	131.54	1133.96	
W-851-07	02/06/13	-	NA	NM/RA
W-851-07	05/05/13	-	NA	NM/RA
W-851-07	09/18/13	137.38	1134.21	
W-851-07	12/02/13	137.61	1133.98	
W-851-08	02/06/13	-	NA	NM/RA
W-851-08	05/05/13	-	NA	NM/RA
W-851-08	09/18/13	180.28	1091.74	
W-851-08	12/02/13	180.64	1091.38	

Table C-11. Building 845 Firing Table and Pit 9 Landfill ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K9-01	02/26/13	78.86	996.65	
K9-01	05/08/13	78.80	996.71	
K9-01	09/03/13	78.94	996.57	
K9-01	10/10/13	79.18	996.33	
K9-02	02/26/13	129.35	1006.04	
K9-02	05/08/13	129.38	1006.01	
K9-02	09/03/13	129.09	1006.30	
K9-02	10/10/13	129.31	1006.08	
K9-03	02/26/13	119.76	997.32	
K9-03	05/08/13	120.13	996.95	
K9-03	09/03/13	120.25	996.83	
K9-03	10/10/13	120.42	996.66	
K9-04	02/26/13	89.91	994.41	
K9-04	05/08/13	89.90	994.42	
K9-04	09/03/13	90.79	993.53	
K9-04	10/10/13	91.15	993.17	

Table C-12. Building 833 ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
W-833-03	03/11/13	-	NA	DRY
W-833-03	05/20/13	-	NA	DRY
W-833-03	08/27/13	-	NA	DRY
W-833-03	12/03/13	-	NA	DRY
W-833-12	03/11/13	20.30	826.92	
W-833-12	05/20/13	20.38	826.84	
W-833-12	08/27/13	20.39	826.83	
W-833-12	12/03/13	20.46	826.76	
W-833-18	03/05/13	-	NA	DRY
W-833-18	05/20/13	-	NA	DRY
W-833-18	08/27/13	-	NA	DRY
W-833-18	12/03/13	-	NA	DRY
W-833-22	03/11/13	-	NA	DRY
W-833-22	05/20/13	-	NA	DRY
W-833-22	08/27/13	-	NA	DRY
W-833-28	03/11/13	41.67	814.25	
W-833-28	05/20/13	41.70	814.22	
W-833-28	08/27/13	41.89	814.03	
W-833-28	12/03/13	41.75	814.17	
W-833-30	03/11/13	272.01	579.65	
W-833-30	05/20/13	272.22	579.44	
W-833-30	08/27/13	273.00	578.66	
W-833-30	12/03/13	273.26	578.40	
W-833-33	03/11/13	24.05	824.75	
W-833-33	05/20/13	25.21	823.59	
W-833-33	08/27/13	26.20	822.60	
W-833-33	12/03/13	25.60	823.20	
W-833-34	03/11/13	33.68	815.24	
W-833-34	05/20/13	33.67	815.25	
W-833-34	08/27/13	-	NA	DRY
W-833-34	12/03/13	-	NA	DRY
W-833-43	03/05/13	-	NA	DRY
W-833-43	05/20/13	-	NA	DRY
W-833-43	08/27/13	-	NA	DRY
W-840-01	03/18/13	120.15	576.93	
W-840-01	05/20/13	117.21	579.87	
W-840-01	08/27/13	117.29	579.79	
W-840-01	12/02/13	117.67	579.41	
W-841-01	03/18/13	-	NA	DRY
W-841-01	05/20/13	-	NA	DRY
W-841-01	08/27/13	-	NA	DRY
W-841-01	12/02/13	-	NA	DRY

Table C-13. Building 801 Firing Table and Pit 8 Landfill ground water elevations.

Well	Date	Depth to water (ft)	Water elevation (ft MSL)	Notes
K8-01	02/26/13	-	NA	NM/RA
K8-01	05/08/13	133.52	966.92	
K8-01	08/07/13	133.92	966.52	
K8-01	10/10/13	133.94	966.50	
K8-02B	02/26/13	-	NA	NM/RA
K8-02B	05/08/13	162.81	965.31	
K8-02B	08/07/13	162.94	965.18	
K8-02B	10/10/13	163.20	964.92	
K8-04	02/26/13	-	NA	NM/RA
K8-04	05/08/13	167.70	965.15	
K8-04	08/07/13	167.85	965.00	
K8-04	10/10/13	168.12	964.73	
K8-05	02/26/13	-	NA	NM/RA
K8-05	05/08/13	-	NA	DRY
K8-05	08/07/13	-	NA	DRY
K8-05	10/10/13	-	NA	DRY

Appendix D

Institutional Controls Monitoring Checklist

Appendix D

Institutional Controls Monitoring Checklist

Table B-2. Completed 2013 Institutional Controls Monitoring Checklist.

Table B-2. Institutional Controls Monitoring Checklist

This checklist will be used to conduct monitoring of institutional and engineered controls that are used to prevent exposure to contamination. The checklist will be completed at least annually and the results will be reported in the annual Compliance Monitoring Reports. Corrective action implementation is discussed in Section 6.1.6.

Institutional Control	Status[a]	Explanation/Observation of Corrective Action
Verify that the occupancy warning signs are visible at Building 834D.	YES	IMF [redacted] POSTED SIGNS IN PLACE
Verify that the Pit 6 Landfill was inspected within the last year and deficiencies were corrected.[b]	YES	REMOVED WEEDS, FILLED BURROWS AS NEEDED. WORK ORDER 6/26/13
Verify that signage is in place at the Pit 6 Landfill prohibiting unauthorized access and excavation.	YES	
Verify that the fences and warning signs at the site boundary and control entry are in proper condition.[c]	YES	OK PER PFD.
Verify that the Building 850 Soil Solidification Corrective Action Management Unit was inspected within the last year and deficiencies were corrected.[d]	YES	
Verify that the Pit 7 Complex Drainage Diversion System was inspected within the last year and deficiencies were corrected.[e]	YES	EAST SIDE DRAINAGE WORK COMPLETED 10/13 FOR WATER BARS, CURBING.
Verify that the Pit 7 Complex landfills were inspected within the last year and deficiencies were corrected.[b]	YES	REPAIRED ANIMAL BURROWS AS NEEDED. 7/13
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	ATTACHED TO DOOR LEADING TO ROOM 102.
Verify that the occupancy warning signs are visible at Building 830.	YES	SIGN IS IN PLACE ON WEST ACCESS DOOR.
Verify that the occupancy warning signs are visible at Building 833.	YES	SIGNAGE IS BEING UPDATED FOR TECH/UTILITY ROOM
Check that the engineered controls (heating, ventilating, and air-conditioning system for Building 833) are functioning properly.	YES	PM SUBMITTED FOR FILTER CHANGE-OUTS. WORK IS BEING SCHEDULED
Verify that the Pit 2 Landfill was inspected within the last year and deficiencies were corrected.[b]	YES	INSPECTED IN Oct. 2013 NO DIFICIENCIES REPORDED

Table B-2. Institutional Controls Monitoring Checklist (continued).

Institutional Control	Status[a]	Explanation/Observation of Corrective Action
Verify that the Pit 8 Landfill was inspected within the last year and deficiencies were corrected.[b]	YES	INSPECTED IN OCT. 2013 NO DIFICIENCIES RECORDED
Verify that the Pit 9 Landfill was inspected within the last year and deficiencies were corrected.[b]	YES	INSPECTED IN OCT. 2013 NO DIFICIENCIES RECORDED

Notes:

[a] Satisfactory status indicated by "Yes". Unsatisfactory status indicated by "No". Unsatisfactory status requires explanation. The Inspector shall immediately notify the Environmental Restoration Project Leader of any unsatisfactory status.

[b] The landfills are inspected and maintained by LLNL Maintenance and Utility Services. Inspections are documented and the results are provided to the Environmental Restoration Project and reported in the annual Compliance Monitoring Reports.

[c] Perimeter fences are inspected by LLNL Security annually.

[d] The Building 850 Soil Solidification mound is inspected and maintained by LLNL Maintenance and Utility Services. Inspections are documented and the results are provided to the Environmental Restoration Project and reported in the annual Compliance Monitoring Reports.

[e] The Pit 7 Drainage Diversion System is inspected and maintained by LLNL Maintenance and Utility Services. Inspections are documented and the results are provided to the Environmental Restoration Project and reported in the annual Compliance Monitoring Reports.

Inspected by:

STEPHEN P. ORLOFF [signature] 12/4/13 ALL OTHER INSPECTIONS

Shari Brigdon [signature] Date: 12/4/13 Pit-Cap Inspections

(Print Name) (Signature)

Appendix E

Site 300 Surface Soil Samples Collected During 2013

Appendix E

Site 300 Surface Soil Samples Collected During 2013

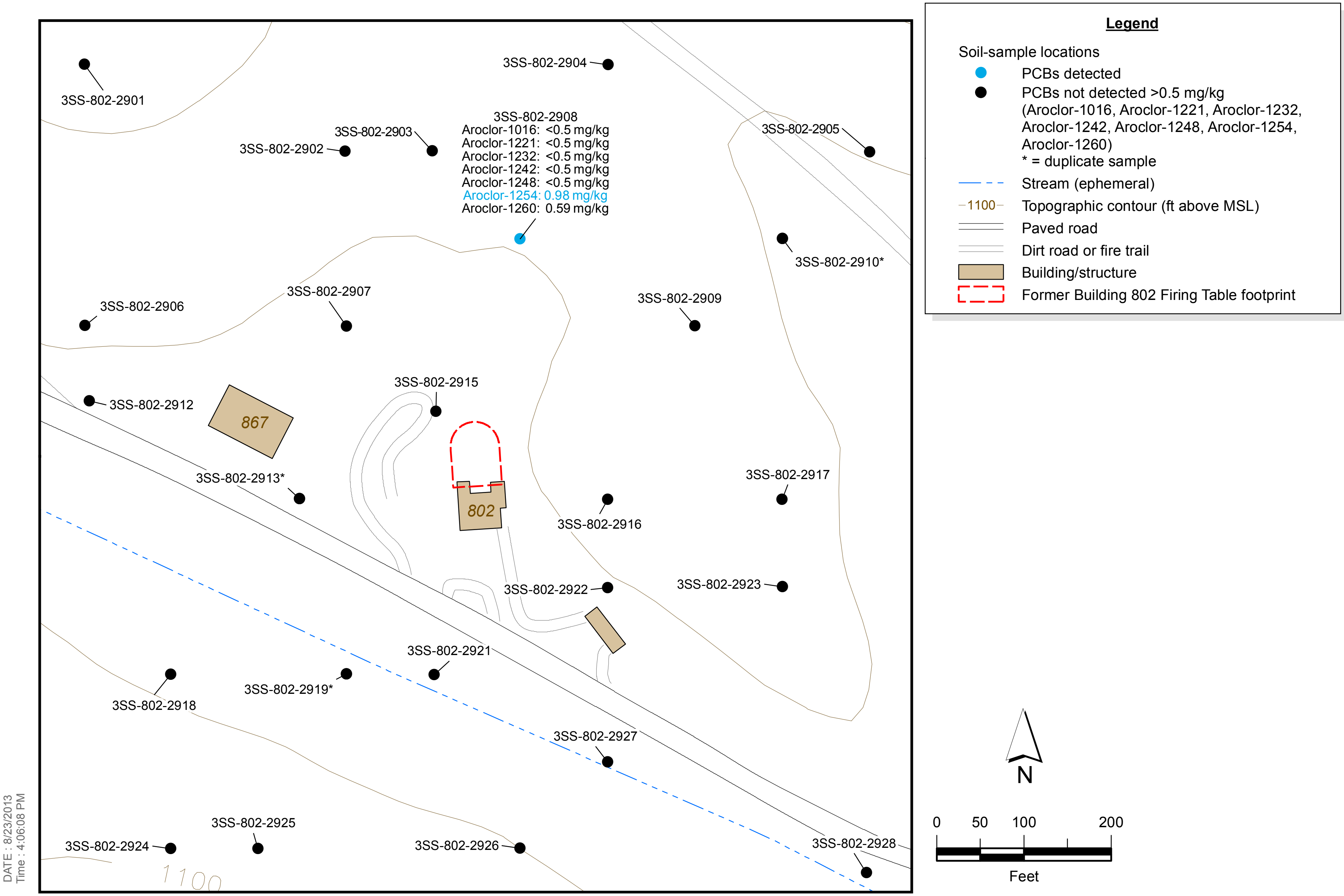

Figure E-1. Building 802 Firing Table Polychlorinated biphenyl surface soil sampling locations.

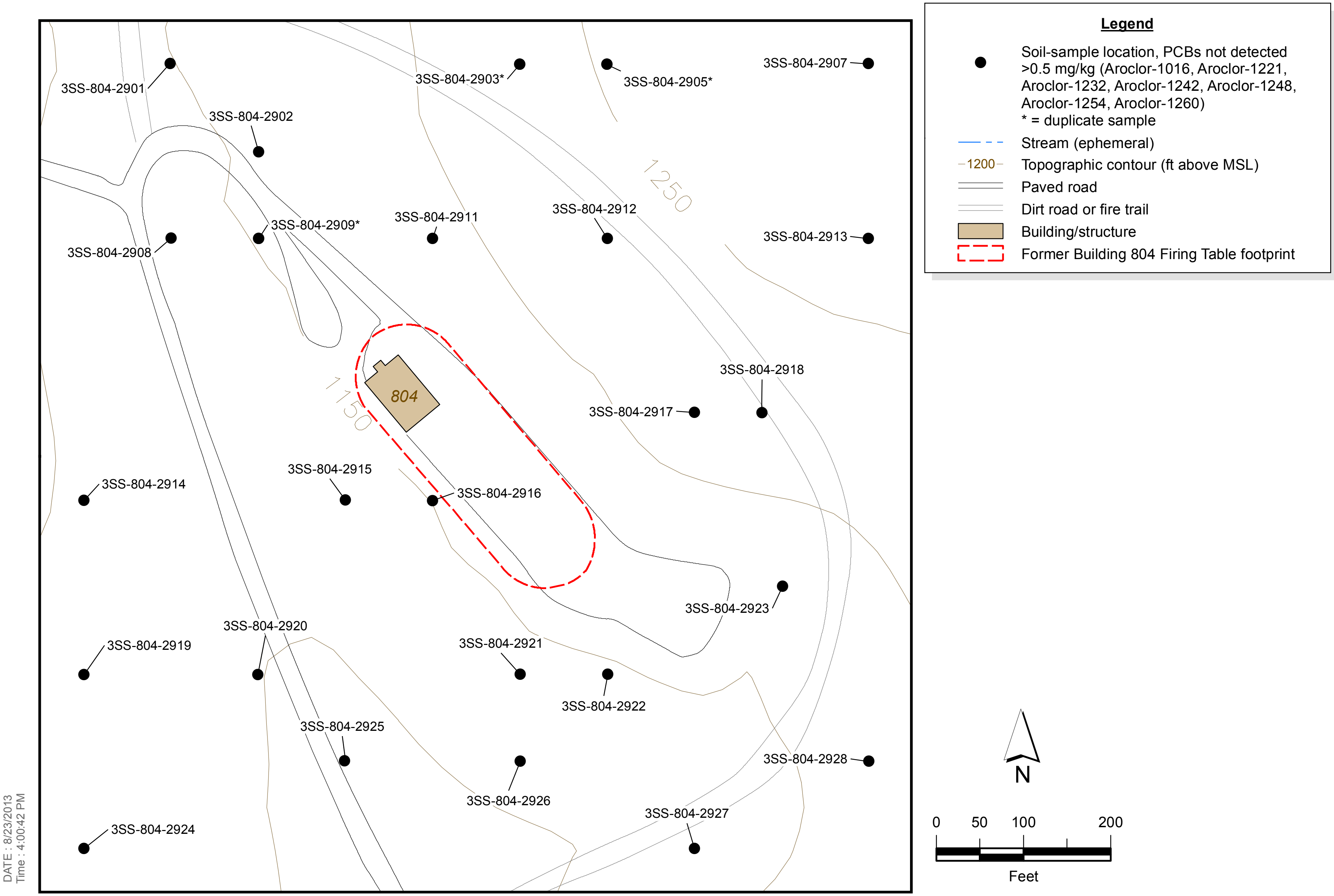

Figure E-2. Building 804 Firing Table Polychlorinated biphenyl surface soil sampling locations.

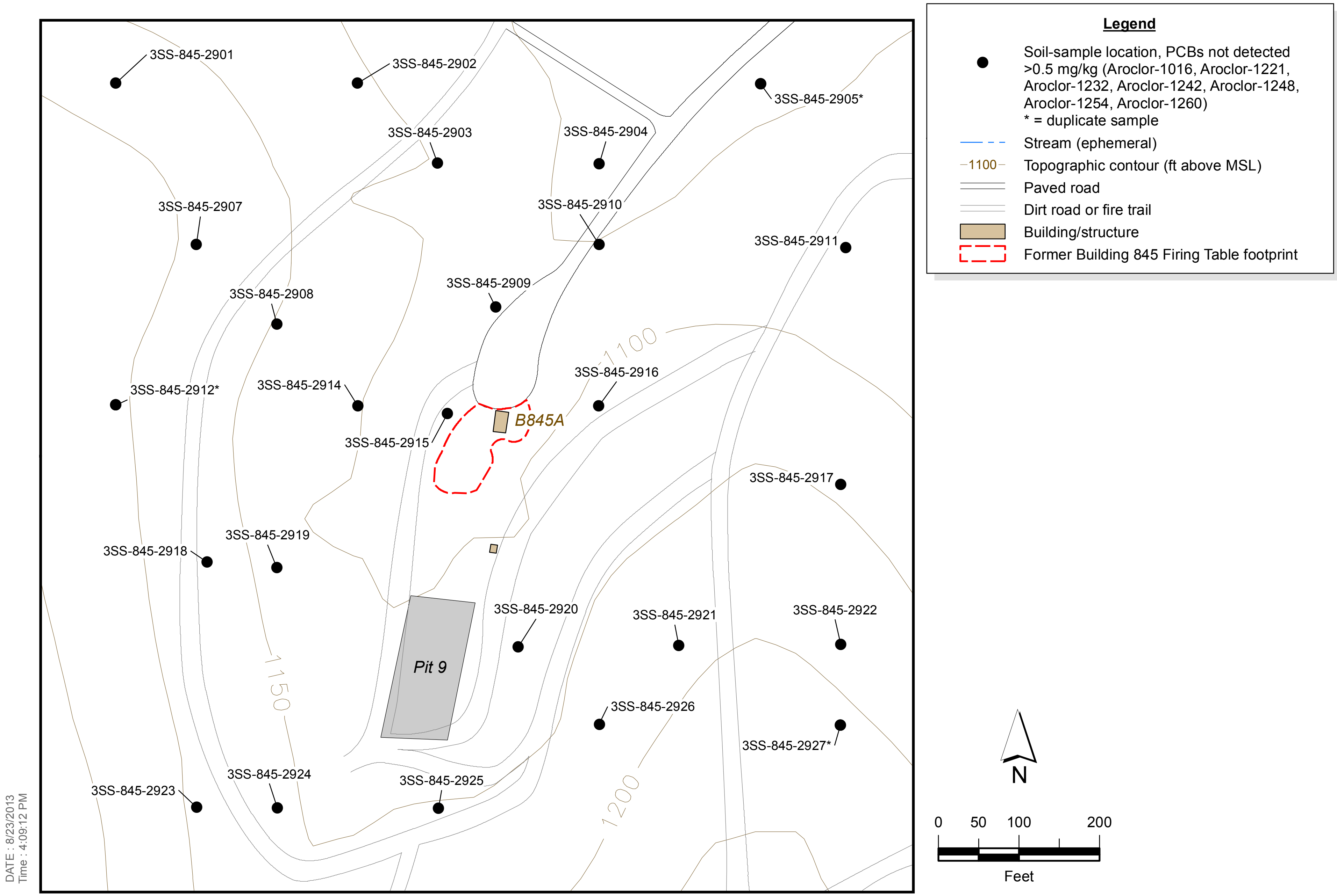

Figure E-3. Building 845 Firing Table Polychlorinated biphenyl surface soil sampling locations.

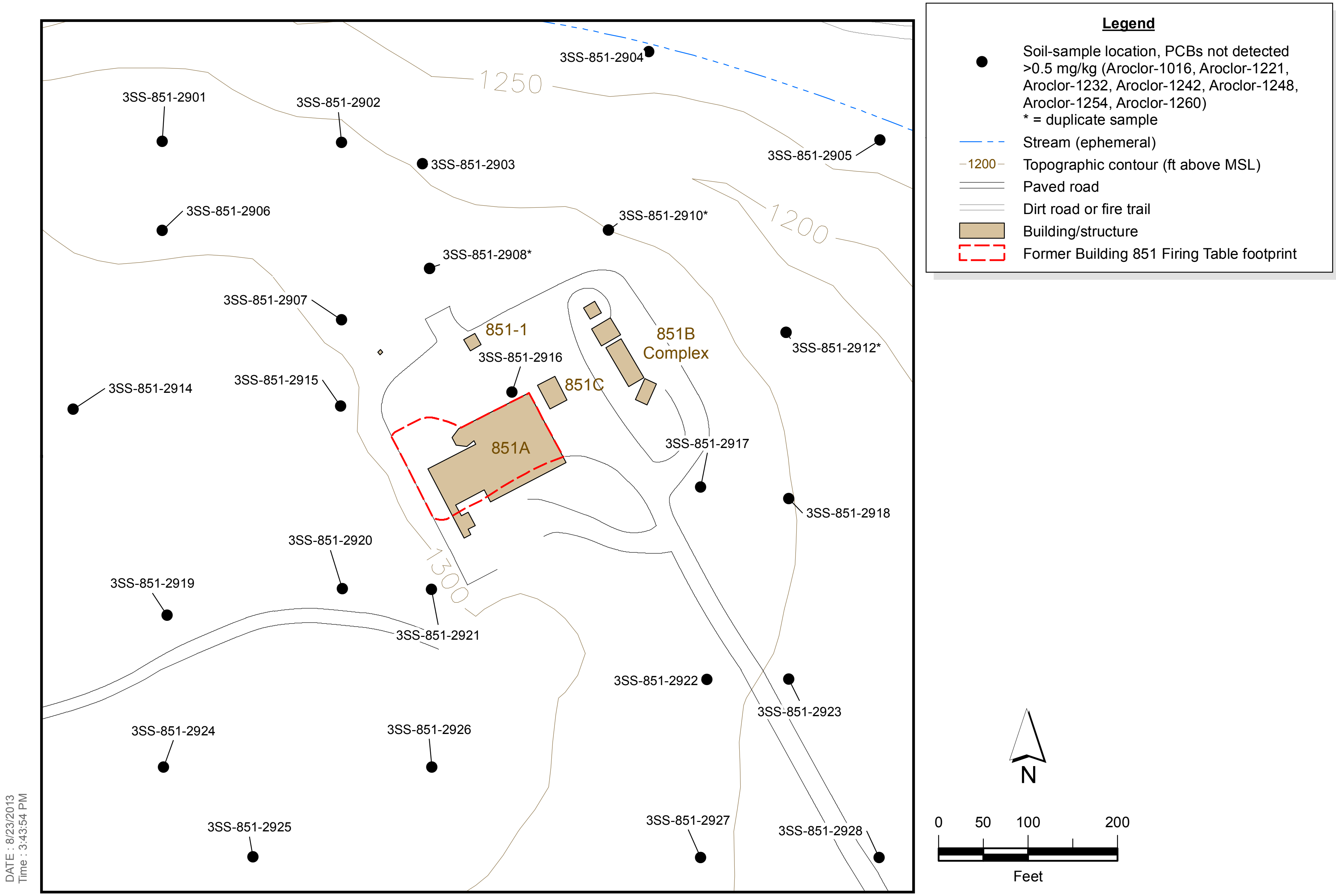

Figure E-4. Building 851 Firing Table Polychlorinated biphenyl surface soil sampling locations.

Table E-1. Polychlorinated biphenyl (PCB) compounds in surface soil.

Location	Date	Depth (ft)	PCB 1016 (mg/kg)	PCB 1221 (mg/kg)	PCB 1232 (mg/kg)	PCB 1242 (mg/kg)	PCB 1248 (mg/kg)	PCB 1254 (mg/kg)	PCB 1260 (mg/kg)
3SS-802-2901	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2902	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2903	6/11/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-802-2904	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2905	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2906	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2907	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2908	6/11/13	0	<0.49 D	<0.49 D	<0.49 D	<0.49 D	<0.49 D	0.98 D	0.59 D
3SS-802-2908	6/11/13	0	<0.5 D	<0.5 D	<0.5 D	<0.5 D	<0.5 D	0.92 D	0.57 D
3SS-802-2909	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2910	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2910	6/12/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.067
3SS-802-2912	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2913	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2913	6/12/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
3SS-802-2915	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2916	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2917	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2918	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2919	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2919	6/12/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.038
3SS-802-2921	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2922	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2923	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2924	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2925	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2926	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2927	6/11/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-802-2928	6/12/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2901	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2902	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2903	6/18/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49

Table E-1. Polychlorinated biphenyl (PCB) compounds in surface soil.

Location	Date	Depth (ft)	PCB 1016 (mg/kg)	PCB 1221 (mg/kg)	PCB 1232 (mg/kg)	PCB 1242 (mg/kg)	PCB 1248 (mg/kg)	PCB 1254 (mg/kg)	PCB 1260 (mg/kg)
3SS-804-2903	6/18/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
3SS-804-2905	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2905	6/18/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
3SS-804-2907	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2908	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2909	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2909	6/18/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
3SS-804-2911	6/18/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-804-2912	6/18/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-804-2913	6/18/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-804-2914	6/19/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2915	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2916	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2917	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2918	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2919	6/19/13	0	<0.4 LO	<0.4 LO	<0.4 LO	<0.4 LO	<0.4 LO	<0.4 LO	<0.4 LO
3SS-804-2920	6/19/13	0	<0.4 LO	<0.4 LO	<0.4 LO	<0.4 LO	<0.4 LO	<0.4 LO	<0.4 LO
3SS-804-2921	6/19/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2922	6/19/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-804-2923	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2924	6/19/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2925	6/19/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2926	6/19/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2927	6/19/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-804-2928	6/18/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2901	7/22/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2902	7/22/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2903	7/22/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2904	7/22/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-845-2905	7/22/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2905	7/22/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
3SS-845-2907	7/22/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table E-1. Polychlorinated biphenyl (PCB) compounds in surface soil.

Location	Date	Depth (ft)	PCB 1016 (mg/kg)	PCB 1221 (mg/kg)	PCB 1232 (mg/kg)	PCB 1242 (mg/kg)	PCB 1248 (mg/kg)	PCB 1254 (mg/kg)	PCB 1260 (mg/kg)
3SS-845-2908	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2909	7/22/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2910	7/22/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2911	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2912	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2912	6/20/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
3SS-845-2914	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2915	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2916	7/22/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2917	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2918	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2919	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2920	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2921	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2922	6/20/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-845-2923	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2924	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2925	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2926	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2927	6/20/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-845-2927	6/20/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
3SS-851-2901	7/24/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2902	7/24/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2903	7/24/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2904	7/24/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2905	7/24/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2906	7/24/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-851-2907	7/24/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-851-2908	7/24/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2908	7/24/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	0.16 D	<0.04 D
3SS-851-2910	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2910	7/23/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	0.19 D	<0.04 D

Table E-1. Polychlorinated biphenyl (PCB) compounds in surface soil.

Location	Date	Depth (ft)	PCB 1016 (mg/kg)	PCB 1221 (mg/kg)	PCB 1232 (mg/kg)	PCB 1242 (mg/kg)	PCB 1248 (mg/kg)	PCB 1254 (mg/kg)	PCB 1260 (mg/kg)
3SS-851-2912	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2912	7/23/13 DUP	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
3SS-851-2914	7/24/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2915	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2916	7/23/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-851-2917	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2918	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2919	7/24/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2920	7/24/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-851-2921	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2922	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2923	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2924	7/24/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2925	7/24/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-851-2926	7/24/13	0	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
3SS-851-2927	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3SS-851-2928	7/23/13	0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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