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First Semester 2004 Compliance Monitoring Report Lawrence Livermore National Laboratory Site 300

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September 30, 2004

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1. Introduction

This report 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 June 2004. The report is submitted in compliance with the Compliance Monitoring Plan (CMP)/Contingency Plan for Interim Remedies at Lawrence Livermore National Laboratory Site 300 (Ferry et al., 2002). As agreed to with the Regional Water Quality Control Board (RWQCB), the Central General Services Area (GSA) monitoring data, which were collected in compliance with the GSA CMP (Rueth, 1998), are also included in this report. This report does not cover the Eastern GSA, which is governed by the RWQCB National Pollutant Discharge Elimination System (NPDES) Order No. 97-242 and reported separately.

During the reporting period of January through June 2004, 2,306,017 gallons of ground water and 40,785 cubic feet of soil vapor were treated at Site 300, removing approximately 1 kilogram (kg) of volatile organic compounds (VOCs), 357 kg nitrate, 43.9 grams (g) RDX, and 28.4 g perchlorate (Table Summ-1).

Since remediation began in 1992, approximately 22,993,829 gallons of ground water and over 139,791 cubic feet of soil vapor have been treated, removing approximately 226 kg of VOCs, 2,387 kg nitrate, 0.431 kg RDX, 9.6 kg tetrabutyl ortho silicate (TBOS), and 0.267 kg perchlorate (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 OU as follows:

2.1. General Services Area OU 1

2.2. Building 834 OU 2

2.3. Pit 6 Landfill (Pit 6) OU 3

2.4. High Explosive Process Area OU 4

2.5. Building 850 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, Building 845, Building 851)

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

2.1. General Services Area (GSA) OU1

The GSA OU consists of the Eastern GSA and Central GSA areas. This report does not cover the Eastern GSA, which is governed by the RWQCB NPDES Order No. 97-242 and reported separately. At the Central GSA, chlorinated solvents, mainly trichloroethylene (TCE), were used as degreasing agents in craft shops, such as Building 875. Rinse water from these degreasing operations was disposed of in dry wells. Typically, dry wells were gravel-filled holes about 3 to 4 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.

A ground water extraction and treatment system has been operating in the Central GSA since 1992. Contaminated ground water is extracted from six wells (W-7I, W-875-07, W-875-08, W-873-07, W-872-02, and W-7O). The current treatment configuration includes particulate filtration, air stripping to remove VOCs from extracted water, granular activated carbon (GAC) to treat vapor effluent from the air stripper, and discharge to the surrounding natural vegetation using misting towers.

A soil vapor extraction and treatment system began operating in the GSA adjacent to the Building 875 dry well contaminant source area in 1994. Seven wells (W-7I, W-875-07, W-875-08, W-875-09, W-875-10, W-875-11 and W-875-15) are used as vapor extraction or passive air inlet wells. Simultaneous ground water extraction in the vicinity lowers the elevation of the ground water surface and maximizes the volume of unsaturated soil influenced by vapor extraction. The current treatment 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 permit from the San Joaquin Valley Unified Air Pollution Control District. A map of the Central GSA, showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.1-1.

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

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

2.1.1.1. Central GSA Facility Performance Assessment

The Central GSA ground water treatment facility discharge is regulated by the RWQCB Substantive Requirements for Wastewater Discharge.

The monthly ground water and soil vapor discharge volumes and rates and operational hours are summarized in Table 2.1-1. The total volume of ground water and vapor extracted and treated and mass removed during the reporting period is presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and mass removed is summarized in Table Summ-2. Analytical results for influent and effluent samples are shown in Table 2.1-2 through 3. The pH measurement results are presented in Appendix A.

2.1.1.2. Central GSA Operations and Maintenance Issues

The Central GSA groundwater extraction and treatment facility operated continuously throughout the first semester of 2004 with the following exceptions:

- System was off from January 1, 2004 until January 26th due to a scheduled upgrade to computer hardware and software.
- Failed level transducer in major extraction well caused the facility to be shut down from February 1, 2004 until February 24th.
- Grass fire on May 14th damaged the soil vapor and groundwater conveyance piping and signal conduit, as well as several of the extraction wells and caused the system to alarm and shut itself off.

The central GSA ground water extraction and treatment facility began operating and extracting from W-7O on May 20, 2004. The remaining extraction wells remained off awaiting repairs for the remainder of the reporting period.

The Central GSA soil vapor extraction and treatment system remains off for rebound testing.

2.1.1.3. Central GSA Receiving Water Monitoring

During the reporting period, no surface water was present at the Central GSA discharge location. Therefore, receiving water monitoring was not conducted.

2.1.1.4. Central GSA Compliance Summary

The Central GSA ground water and soil vapor extraction and treatment systems operated in compliance with the Substantive Requirements for Wastewater Discharge. No Environmental Protection Agency (EPA) Method 601 compounds were detected above the detection limit of 0.5 μg/L in any of the ground water treatment system effluent samples collected during the reporting period. Measurements of pH (Appendix A) were within permit limitations.

2.1.1.5. Central GSA Facility Sampling Plan Evaluation and Modifications

The Central GSA treatment facility sampling plan complies with Substantive Requirements and the GSA CMP (1998) monitoring requirements. The treatment facility sampling plan is presented in Table 2.1-4. There were no modifications made to the plan during the reporting period.

2.1.2. Central GSA Surface Water and Ground Water Monitoring

During the reporting period, ground water monitoring was conducted in accordance with the GSA CMP sampling schedule with the following exceptions; six samples were not collected due to insufficient water. The sampling plan and schedule by quarter for ground water and surface water is presented in Table 2.1-5. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP. Analytical results will be presented in the annual report.

A ground water potentiometric surface map is presented in Figure 2.1-2. Ground water elevation data collected from wells within the OU are similar to those collected during past quarters. Ground water elevations will be presented in the annual report.

2.1.3. Central GSA Remediation Progress Analysis

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

2.1.3.1. Central GSA Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Table 2.1-6. The cumulative mass estimates are summarized in Table SUMM-2.

2.1.3.2. Central GSA Contaminant Concentrations and Distribution

At the Central GSA, VOCs are the primary contaminants of concern (COC) in ground water and soil vapor. VOCs are present in three hydrostratigraphic units (HSU). In the western portion of the Central GSA, a VOC plume exists within a shallow HSU (Qt-$Tnsc_1$) contained within the Quaternary terrace deposits (Qt) and portions of the $Tnbs_2$ and $Tnsc_1$ bedrock units that subcrop beneath the Qt. Underlying the Qt-$Tnsc_1$ HSU, very low and intermittent VOC concentrations exist within a deeper HSU ($Tnbs_1$) consisting of the $Tnbs_1$ bedrock units where they are hydraulically separate from the shallow Qt deposits. A total VOC isoconcentration contour map for the Qt-$Tnsc_1$HSU is presented in Figure 2.1-3. In the eastern portion of the Central GSA area (near the sewage treatment pond), the Qt deposits and the $Tnbs_2$ and $Tnsc_1$ bedrock units are not present. Quaternary alluvial deposits (Qal) directly overlie the shallow $Tnbs_1$ bedrock that comprise the (Qal- $Tnbs_1$) HSU in this area.

The current extent of detectable total VOCs in the shallow Qt-$Tnsc_1$ HSU is similar to that shown in the 2003 Annual Compliance Monitoring Report (CMR). The current maximum total VOC concentration in the Qt-$Tnsc_1$ HSU (1,158 μg/L) occurs in well W-875-07, located in the Building 875 dry well pad area where the historical maximum total VOC concentrations have been detected. VOCs are not detected in ground water samples from wells in the deeper $Tnbs_1$ HSU that underlies the Qt-$Tnsc_1$ HSU.

Toward the sewage treatment ponds, lower concentrations of VOCs are present in the shallow alluvium (Qal) and shallow $Tnbs_1$ bedrock (Qal-$Tnbs_1$ HSU). As the $Tnsc_1$ confining layer is absent in this area, VOCs have migrated from the Qal into the unconfined $Tnbs_1$ bedrock. VOCs have been detected at low concentrations in only one shallow $Tnbs_1$ well, W-7N at a concentration of 1.1 μg/L. In light of the relatively low concentrations and small plume size, maps depicting VOCs in the $Tnbs_1$ HSU are not included in this report.

2.1.3.3. Central GSA Remediation Optimization Evaluation

During the first semester of 2004, extraction well W-7O removed the majority of ground water while the dry pad extraction wells W-7I, W-875-07, and W-875-08 removed lesser amounts of ground water. Based on the ground water elevation map shown in Figure 2.1-2, pumping at W-7O, W-7I, W-875-07, and W-875-08 appear to adequately capture the highest concentrations in ground water emanating from the Building 875 dry wells source area. The Central GSA soil vapor

extraction system was turned off near the end of second semester 2003 to evaluate soil vapor rebound in the source area. This rebound test will be continuing throughout most of the second semester of 2004 and results will be discussed in the 2004 annual CMR report. To date, two rounds of soil vapor samples have been taken from the "rebound" wells. The analytical data shows that a majority of the concentrations have increased two to three orders of magnitude since the start of the test. Although one additional round of sampling remains to be completed, it is apparent from the significant rebound that continued soil vapor extraction will be required.

2.1.3.4. Central GSA OU Performance Issues

There were no performance issues during this reporting period.

2.2. Building 834 (B834) OU2

The Building 834 Complex has been used to test the stability of weapons and weapon components under various environmental conditions since the 1950s. A map of Building 834 OU showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.2-1. Past spills, piping leaks, and septic-system effluent at the Building 834 Complex have resulted in soil and ground water contamination with VOCs, TBOS, and nitrate. In addition, a former underground diesel storage tank released diesel to the subsurface.

Ground water and soil vapor extraction and treatment systems have been operating in the Building 834 OU since 1995 and 1998, respectively. These systems are located in the main part of the Building 834 Complex, referred to as the Building 834 core area. The area to the south of the core area is referred to as the distal area. Due to the very low ground water yield from individual extraction wells (< 0.1 gallons per minute), the ground water and soil vapor extraction and treatment systems have been operated simultaneously in batch mode. The treatment process utilized an oil-water separator to remove the floating silicon oil, TBOS, followed by air sparging to remove VOCs from ground water. The VOC laden vapors were removed using vapor phase GAC. Treated ground water was then discharged via a misting system. The soil vapor extraction system utilized vapor phase GAC for VOC removal. Treated vapors are discharged to the atmosphere under an air permit from the San Joaquin Valley Unified Air Pollution Control District. Until recently, the extraction well field consisted of 15 extraction wells, of which 13 were used for both ground water and soil vapor extraction, and two were solely used for vapor extraction. The treatment system and extraction well field are currently being modified. These modifications include:

- Replacement of the oil-water separator with floating hydrocarbon adsorption devices (pigs) that will be placed in the influent ground water storage tank to remove any floating product that is extracted.
- Conversion from air sparging with vapor-phase GAC treatment to the use of aqueous-phase GAC to remove VOCs from ground water.
- Installation of a new electronic treatment facility control system.
- Installation of individual monitoring equipment to measure volumes of ground water and soil vapor extracted from each well independently.

The proposed core area extraction well field will consist of nine wells for both ground water and soil vapor extraction. The remaining core area wells will be used to more accurately monitor remediation system performance.

In addition to the core area modifications, three additional ground water and soil vapor extraction wells will be added to the extraction wellfield in the Building 834 distal area. The average ground water extraction rate for the expanded extraction wellfield is estimated at 4,000 gallons per month.

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

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

2.2.1.1. Building 834 OU Facility Performance Assessment

The Building 834 treatment facility remained off-line during the first semester of 2004 for system modification and build-out as described above. The treatment system is planned for restart by October of 2004. The milestone completion date for start-up of the upgraded system is December 31, 2004. Therefore, no first semester 2004 data related to facility activities are presented in this report. The cumulative volume of ground water and soil vapor treated and discharged and mass removed are summarized in Table Summ-2.

2.2.1.2. Building 834 OU Operations and Maintenance Issues

There are no operational or maintenance issues to report, as this facility did not operate during the reporting period.

2.2.1.3. Building 834 OU Compliance Summary

The Building 834 ground water treatment facility discharge is regulated by the RWQCB Substantive Requirements for Wastewater Discharge. There are no waste discharge compliance issues to report since the Building 834 treatment facility was not operated during the entire semester.

2.2.1.4. Building 834 OU Facility Sampling Plan Evaluation and Modifications

The Building 834 sampling plan complied with all CMP monitoring requirements. The sampling plan is presented in Table 2.2-1.

2.2.2. Building 834 OU Ground Water Monitoring

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; 17 wells were not sampled due to being dry and 16 samples were not collected due to insufficient water in the monitor wells. The monitoring well sampling plan and schedule for ground water and surface water monitoring are presented by quarter in Table 2.2-2. This table also delineates and explains deviations from the

sampling plan and indicates any additions made to the CMP. Analytical results will be presented in the annual report.

A ground water potentiometric surface map is presented in Figure 2.2-2. Saturation remains extensive due to the continued shutdown of the treatment facility and significant rainfall in early 2004. Ground water elevations will be presented in the annual report.

2.2.3. Building 834 OU Remediation Progress Analysis

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

2.2.3.1. Building 834 OU Mass Removal

No monthly ground water and soil vapor mass removal estimates are reported since the facility was not operational during the entire reporting period. The cumulative mass removed is presented in Table SUMM-2.

2.2.3.2. Building 834 OU Contaminant Concentrations and Distribution

At the Building 834 OU, VOCs are the primary COCs detected in ground water; TBOS, diesel, and nitrate are the secondary COCs. The highest concentrations of these constituents have always been detected in the core area. These constituents have been identified in two shallow HSUs, the Tpsg perched water-bearing gravel zone and the underlying Tps-clay perching horizon. A total VOC isoconcentration contour map for the Tpsg perched water-bearing zone is presented in Figure 2.2-3. Isoconcentration contour maps for the secondary COCs will be presented in the next CMR report (2004 Annual).

The extent of total VOCs in the Tpsg HSU is similar to the last report. In the Building 834 core area, the current maximum total VOC concentration in the Tpsg HSU (35,000 μg/L) was detected in well W-834-D14. The highest total VOC ground water concentrations in the Building 834 OU occurred in the underlying Tps-clay perching horizon. A ground water sample collected from the Tps clay (core area well W-834-A1) contained 140,000μg/L of total VOCs during the first semester of 2004. VOCs have also been detected at high concentrations in the distal area Tpsg HSU. The maximum total VOCs outside the core area during the first semester 2004 was detected in Tpsg well W-834-T2 at a concentration of 28,000 μg/L. This well is located about 500 feet south of the core area. To date, VOCs have not been detected in the $Tnbs_1$ regional aquifer guard wells W-834-T1 and W-834-T3. These deep guard wells are screened about 300 feet below the shallow contaminated Tpsg and Tps HSUs in the distal portion of the Building 834 OU.

Due to the treatment facility being shut down for an extended period, TCE biodegradation has continued within the core area where significant amounts of TBOS are present to generate anaerobic conditions. The end product of this biodegradation has historically been cis-1, 2-dichlorothene (cis-1, 2-DCE). Twenty wells within the core area had measurable quantities of cis-1, 2-DCE during this reporting period, with several wells being composed almost entirely of cis-1, 2-DCE. Vinyl chloride has also continued to be detected in four of these wells (W-834-C5, -D3, -D4, and -D5) at concentrations ranging from 1 to 200 μg/L. Cis-1, 2-DCE has also been detected in several distal area wells, but it is unclear what is driving this production. No vinyl chloride has been detected in any of the distal area wells.

TBOS continues to be detected at high concentrations almost exclusively in the core area. The current maximum TBOS concentration (6,700 μg/L) was measured in well W-834-D4. TBOS was detected in only one well outside of the core area, W-834-S1, at a low concentration of 1.2 μg/L, and remains below detection limits in the deep $Tnbs_1$ guard wells W-834-T1 and W-834-T3.

Nitrate is detected in samples from wells located in both the core and distal areas of the Building 834 OU. The maximum nitrate concentration (138 milligrams per liter [mg/L], as NO_3) was detected in well W-834-D15, located in the core area. The maximum nitrate concentration in the distal area was detected in well W-834-S7 at 333 mg/L. Nitrate concentrations remain below detection limits in ground water samples from the deep $Tnbs_1$ guard wells W-834- T1 and W-834-T3.

As reported in the Annual 2003 CMR, n-Butyl-Benzenesulfonamide (BBSA) was leaching from the nylon tubing used with the ground water extraction pumps. This compound, which elutes within the diesel range, was erroneously being identified as diesel fuel. A soak test was performed on polyethylene tubing to determine if any compounds would elute within the diesel range. No compounds in the soak water were detected within the diesel range above the detection limit of 50 μg/L. Therefore, during the first semester of 2004, all nylon tubing was replaced with polyethylene tubing in the Building 834, Central GSA, and Building 832 Canyon OUs. Several of the Building 834 wells were sampled during the first quarter using the extraction pumps with the nylon tubing still in place. Although six wells were identified as having diesel range organic compounds, only two of these, W-834-2001 and W-834-U1, actually contained diesel fuel. All other detections of diesel were related to the leaching BBSA and/or the presence of TBOS. Since the extent of diesel contamination is believed to be limited to a very small area, a small subset of wells (W-834-2001, -A1, -A2, -D10, -D11, -D12, -D16, -D17, -D7, -U1, -K1A, -S1, -S8, and -S9) is being used to track the potential migration of diesel.

As reported in the 2003 Annual CMR, chromium monitoring continues in wells that were affected by improperly wired pressure transducers that produced electrical short circuits. Chromium samples were collected from three wells during the first semester of 2004. Although all chromium concentrations remain below the maximum contaminant level (MCL) of 0.05 mg/L, the chromium concentration in well W-834-M1 (0.018 mg/L) continues to persist above background concentrations prior to the transducer incident. Additional organic compounds related to galvanic reactions associated with the shorting transducers were detected in W-34-M1 during the first semester sampling. These additional compounds include, 1,3-dichlorobenzene bromodichloromethane, chloroform, and dibromochloromethane.

2.2.3.3. Building 834 OU Remediation Optimization Evaluation

The ground water and soil vapor extraction systems were non-operational for the entire reporting period due to treatment facility modification and construction activities. No remediation optimization activities were conducted during this reporting period.

2.2.3.4. Building 834 OU Performance Issues

There were no performance issues because the Building 834 ground water and soil vapor extraction and treatment systems did not operate during this time period.

2.3. Pit 6 Landfill (Pit 6) OU3

The Pit 6 Landfill is a 14-acre area near the southern boundary of Site 300 that was used from 1964 to 1973 to bury waste in nine unlined debris trenches and animal pits. The buried waste, which includes laboratory equipment, craft shop debris, and biomedical waste is located on or adjacent to the Corral Hollow-Carnegie fault. Further to the 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 volatile organic compound 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 OU showing the locations of monitoring and water-supply wells is presented in Figure 2.3-1

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

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring and post-closure requirements with the following exceptions; 20 samples were not collected due to insufficient water. The sampling plan and schedule by quarter for ground water and surface water is presented in Table 2.3-1. Analytical tables will be reported in the 2004 Annual CMR.

In addition to satisfying the CMP and post-closure sampling requirements, ground water is also monitored at Pit 6 to verify that the COCs continue to decline as a result of natural attenuation processes. The selected remedy for tritium and VOCs in ground water at Pit 6 in the Site 300 Interim Record of Decision (ROD) is Monitored Natural Attenuation, which requires monitoring to verify that tritium and VOC ground water contamination is decreasing in magnitude and extent.

A ground water potentiometric surface map is presented in Figure 2.3-2. Ground water elevation data collected from wells within the OU are similar to those collected during past quarters. Ground water generally occurred at about 55 feet below the buried waste trenches. Ground water elevations will be presented in the annual report.

2.3.2. Pit 6 Landfill OU Remediation Progress Analysis

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

2.3.2.1. Pit 6 Landfill OU Analysis of Contaminant Distribution and Concentration Trends

At the Pit 6 Landfill OU, VOCs and tritium are the primary COCs detected in ground water. Perchlorate and nitrate are secondary COCs. Ground water contaminant isoconcentration contour

maps for the primary COCs are presented in Figures 2.3-3 and 4. Isoconcentration contour maps for the secondary COCs will be presented in the next CMR report (2004 Annual).

No significant changes were observed in ground water TCE concentrations compared to the previous report. The maximum TCE concentration (5.2 μg/L, EP6-09) in the OU continues to be detected near or below the 5 μg/L drinking water maximum contaminant level (MCL) for TCE indicating that the monitored natural attenuation remedy is effective. Other VOCs detected in ground water include cis-1, 2-DCE and tetrachloroethylene (PCE). Cis-1, 2-DCE was most recently detected below the MCL of 6 μg/L in ground water from well K6-01S at a concentration of 2.6 μg/L. PCE was detected below the MCL of 5 μg/L in well EP6-08 at a concentration of 0.9 μg/L.

Ground water tritium activities measured during this reporting period remained far below the 20,000 picocuries per liter (pCi/L) MCL. However, tritium continues to be detected above background (> 100 pCi/L) in ground water from wells located north and south of the fault. Along a transect north and sub-parallel to the fault, ground water tritium activities decrease from the current OU maximum of 1660 pCi/L (March 2004) at well K6-36, located immediately east of Pit 6, to 240 pCi/L (April 2004) at well W-PIT6-1819, located immediately west of the CARNRW1 and CARNRW2 water-supply wells. The ground water tritium activity continues to decline from the historical maximum activity of 3,420 pCi/L (BC6-13, May 2000), indicating that tritium activity is decreasing with time. Wells K6-26, K6-27, K6-34, K6-35, and EP6-07 are screened in a deeper water-bearing zone than the wells along the transect discussed above. During the first semester of 2004, tritium was detected at 258 pCi/L in a ground water sample from well K6-35. Tritium activities in this well continue to exhibit a decreasing trend from a maximum value of 644 pCi/L in July 2001.

There were no significant changes in perchlorate ground water concentrations during the first semester of 2004 compared to previous data. Perchlorate was detected above the new State Public Health Goal of 6 μg/L in ground water from well, K6-18 at 13 μg/L. In general, perchlorate ground water concentrations have been steadily decreasing from their historical maximum concentration of 65 μg/L in well K6-19 in 1998.

Nitrate was detected above the 45 mg/L MCL in only one ground water sample from one well, K6–23 (165 mg/L as NO_3). Nitrate was not detected in ground water samples from water-supply wells CARNRW1 and CARNRW2.

Tritium, VOCs, nitrate, and perchlorate concentrations in ground water in the water-supply wells (CARNRW1 and CARNRW2) remain below detection limits.

2.3.2.2. Pit 6 Landfill OU Remediation Optimization Evaluation

In the Pit 6 Landfill OU, ground water elevations and contaminants are monitored on a regular basis to: (1) evaluate the effectiveness of the natural attenuation remedy in reducing contaminant concentrations and (2) detect any new chemical releases from the landfill. In general, all primary and secondary ground water COCs at the Pit 6 OU exhibit stable to decreasing trends and ground water elevations beneath the landfill remain well below the buried waste. Several ground water monitoring wells have been installed during the past two years to monitor tritium between the landfill and the CARNRW1 and CARNRW2 water-supply wells. Each of these new monitoring wells was carefully evaluated and screened in a fractured bedrock unit that responds to pumping

from the water-supply wells. Tritium activities in ground water continue to decrease and remain far below the 20,000 pCi/L MCL.

2.3.2.3. Pit 6 Landfill OU Performance Issues

The Pit 6 landfill cap performed according to expectations during the reporting period.

2.4. High Explosives Process Area (HEPA) OU4

The HEPA has been used since the 1950s for the chemical formulation, mechanical pressing, and machining of 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 to former unlined rinse-water lagoons.

Four ground water extraction and treatment systems operate in the HEPA: Building 815-Source (B815-SRC), Building 815-Proximal (B815-PRX), Building 815-Distal Site Boundary (B815-DSB), and Building 817-Source (B817-SRC). A map of the HEPA OU showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.4-1.

The B815-SRC facility treats ground water extracted from well W-815-02 for TCE, RDX, perchlorate, and nitrate at a rate of about 1.0 gpm. This facility has been in operation since September 2000. It consists of aqueous phase GAC connected in series for TCE and RDX removal and ion exchange columns containing SR-7 resin that are connected in series for perchlorate removal; the treated effluent is discharged to a nearby misting system.

The B815-PRX facility treats ground water extracted from wells W-818-08 and W-818-09 for TCE, perchlorate, and nitrate. Wells W-818-08 and W-818-09 extract ground water at approximately 1 and 1.5 gpm, respectively. This facility has been in operation since October 2002 and consists of aqueous phase GAC connected in series for TCE removal and ion exchange columns with SR-7 resin that are connected in series for perchlorate removal; treated effluent is discharged to a misting system located on a nearby ridge.

The B815-DSB facility treats low concentrations (< 10 μg/L) of TCE contained in ground water extracted from wells W-35C-04 and W-6ER located near the Site 300 boundary. Wells W-35C-04 and W-6ER extract ground water at 2 and 1.5 gpm, respectively. This treatment facility has been in operation since September 1999 and consists of solar-powered aqueous phase GAC connected in series for TCE removal. The facility is designed to treat up to 5 gpm of ground water at the expected influent concentrations; treated effluent is discharged to the Corral Hollow alluvial aquifer in a nearby infiltration trench.

The B817-SRC facility treats ground water extracted from well W-817-01 for RDX and perchlorate. Well W-817-01 extracts ground water from a very low yield portion of the $Tnbs_2$ aquifer. It pumps ground water intermittently at flow rates ranging from 200 to 600 gallons per month. This facility has been in operation since September 2003 and consists of solar powered ion exchange columns containing SR-7 resin connected in series for perchlorate removal and aqueous phase GAC canisters connected in series for RDX removal. Treated effluent is injected into upgradient injection well W-817-06A.

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

This section is organized into four sections: 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 HEPA ground water treatment facility discharge is regulated by the RWQCB Substantive Requirements for Wastewater Discharge.

The monthly ground water discharge volumes, extraction flow rates, and operational hours are summarized in Tables 2.4-1 through 4. The total volume of ground water extracted and treated and the total contaminant mass removed during this reporting period is presented in Table Summ-1. The total volume of ground water treated and discharged and the total contaminant mass removed are summarized in Table Summ-2. Analytical results for influent and effluent samples are presented in Table 2.4-5 through 7. The pH measurement results are presented in Appendix A.

2.4.1.2. HEPA OU Operations and Maintenance Issues

During the first semester of 2004, the B815-SRC ground water treatment system was shut down from the beginning of the reporting period through March 3, 2004 due to a discharge tank pump failure.

The B815-PRX ground water treatment system operated continually throughout this reporting period.

The pump on extraction well W-6ER at the B815-DSB facility failed in mid-August 2003 and was off-line through March 30, 2004. Despite the loss of extraction at well W-6ER, B815-DSB operated continually throughout this reporting period.

The B817-SRC ground water treatment system operated nearly continuously during this reporting period. This facility was shut down for the first five days in January due to a leak in one of the GAC canisters. The canister was replaced on January 5, 2004.

2.4.1.3. HEPA OU Compliance Summary

The B815-SRC, B815-PRX, B815-DSB, and B817-SRC ground water treatment systems operated in compliance with the Substantive Requirements for Wastewater Discharge.

Trace concentrations of TCE were detected in one site boundary guard well, W-35B-04, during the first semester of 2004 at concentrations ranging from 0.9 to 1.5 μg/L. These detections are discussed further under Section 2.4.3.2.

2.4.1.4. HEPA OU Facility Sampling Plan Evaluation and Modifications

The HEPA facility sampling plans comply with CMP monitoring requirements. The sampling plans are presented in Table 2.4-8. There were no additional modifications made to the plans.

2.4.2. HEPA OU Ground Water and Surface Water Monitoring

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; 2 samples were not collected due to access restrictions, 4 samples were not collected due to pump failure, 4 samples were not collected due to a well being converted to an injection well, 22 samples were not collected due to insufficient water, and 2 samples were inadvertently left off the sampling plan. The ground water and surface water sampling plans and schedule are presented in Table 2.4-9. This table also explains deviations from the sampling plan and indicates any additions made to the CMP. Analytical tables will be reported in the 2004 Annual CMR.

A ground water potentiometric surface map is presented in Figure 2.4-2 showing a mean flow direction to the southeast. Ground water elevation data collected from wells within the OU are similar to those collected during past quarters. Ground water elevations will be presented in the annual report.

2.4.3. HEPA OU Remediation Progress Analysis

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

2.4.3.1. HEPA OU Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Tables 2.4-10 through 14. Cumulative mass estimates are summarized in Table SUMM-2.

2.4.3.2. HEPA OU Contaminant Concentrations and Distribution

At the HEPA OU, VOCs (primarily TCE) are the primary COCs detected in ground water; RDX, perchlorate, and nitrate are secondary COCs. These constituents have been identified in the $Tnbs_2$ aquifer. A total VOC isoconcentration contour map based on data collected during the reporting period is presented in Figure 2.4-3. Isoconcentration contour maps for the secondary COCs will be presented in the next CMR report (2004 Annual).

The current maximum TCE concentrations (51 and 53.5 μg/L) occur in wells W-818-08 and W-818-11, respectively. These wells have historically contained the highest TCE concentrations. During the first semester of 2004, TCE was detected at 0.9 μg/L and 1.5 μg/L in the offsite guard well W-35B-04. TCE was not detected in any ground water samples from offsite guard wells W-35B-01, W-35B-02, W-35B-03 and W-35B-05, during this reporting period. Historically, W-35B-04 located in the $Tnbs_2$ has had sporadic trace detections of TCE ranging from 0.6 to 1.5 μg/L. As shown in Figure 2.4-1, this offsite guard well is located just southeast of the HE Process Area. The detection of TCE at this offsite guard well is most likely related to the temporary suspension of pumping from B815-DSB extraction well W-6ER from mid-August 2003 to March 2004 due to a pump failure (Sec 2.4.1.2). This well is currently operational and TCE concentrations are expected to decrease back to non-detectable levels. TCE was not detected above the 0.5 μg/L detection limit in ground water samples collected from the three onsite guard wells. TCE was detected in offsite water-supply well Gallo-1 at concentrations ranging from 0.2 to 0.54 μg/L. This well has a long screen that extends from the shallow Corral Hollow alluvial aquifer (Qal HSU) to a depth of nearly

200 feet at the base of the $Tnbs_2$ aquifer. Although Gallo-1 has had sporadic detections of TCE ranging from 0.2 to 1.5 μg/L, TCE has never been detected above the 0.5 μg/L detection limit in ground water samples collected from upgradient water-supply guard wells W-6H and W-6J. The leading edge of the TCE plume at the 0.5 μg/L detection limit remains in the vicinity of the site boundary. TCE was not detected in ground water samples from site-boundary guard wells W-880-01, W-880-02, and W-880-03.

During 2004, secondary COCs RDX and perchlorate were not detected in any of the HEPA site boundary or water-supply guard wells. The extent of RDX and perchlorate in the $Tnbs_2$ HSU is more limited than TCE and the shape of these plumes remained essentially the same as shown in previous quarterly reports. The historical maximum RDX concentration occurs in well W-815-04. No ground water samples were taken from this well in the first semester of 2004 due to pump problems at the well. The last ground water sample taken from this well in March 2003 had an RDX concentration of 83 μg/L. The maximum RDX concentration observed in samples collected during this reporting period occurred in extraction well W-817-01 at concentrations ranging from 48.8 to 50.1 μg/L. RDX decreases rapidly downgradient to below the 0.6 μg/L Preliminary Remediation Goal (PRG) just north of well W-818-08. The current maximum perchlorate concentration (21 μg/L) occurs in well W-817-01. Well W-817-01 is the extraction well for the B817-SRC facility that was started in September 2003. Perchlorate decreases rapidly downgradient of W-817-01 to the 6 μg/L detection limit north of guard wells W-6H and W-6J.

During 2004, nitrate was not detected above the 45 mg/L MCL in any of the HEPA guard wells. The current maximum nitrate concentration (91.9 mg/L) occurs in well W-817-02. Nitrate concentrations decrease significantly due to microbial denitrification near the Site 300 boundary where the $Tnbs_2$ aquifer is under confined conditions. Nitrate concentrations near the Site 300 boundary are significantly lower than the MCL of 45 mg/L.

2.4.3.3. HEPA OU Remediation Optimization Evaluation

The key to remediation optimization at the HEPA OU is to manage extraction well field flow rates to balance the influence of site boundary pumping with source area pumping. A decrease in extraction flow rate during this reporting period occurred at the B815-PRX facility. Based on the ground water elevation and total VOC isoconcentration maps shown in Figures 2.4-2 and 2.4-3, the existing extraction well field captures the center-of-mass of this plume (Total VOC > 50 μg/L) upgradient of wells W-818-08 and W-818-09. The current total VOC concentrations in source area wells W-818-08 and W-818-11 have decreased by 20 to 40% since remediation began.

2.4.3.4. HEPA OU Performance Issues

Although sporadic, low concentrations of TCE were detected in one site boundary guard well during this reporting period, continued pumping at all the HEPA extraction wells should address this issue. If TCE continues to be detected in site boundary guard wells, modifications to the extraction wellfield will be considered, including increased pumping in existing upgradient extraction wells.

2.5. Building 850 (B850) OU5

High explosives experiments have been conducted at the Building 850 firing table. Until 1989, gravels on the firing table surface were disposed of in several disposal pits in the northern portion of the site. Presently, the firing table is used very rarely. Infiltrating ground water has mobilized chemicals from contaminated gravel and debris to underlying soil, bedrock, and ground water. A map of Building 850 OU showing the locations of monitoring wells is presented in Figure 2.5-1.

2.5.1. Building 850 OU Ground Water Monitoring

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; 17 samples were not collected due to insufficient water and 7 samples were inadvertently not collected. The sampling plan and schedule by quarter for ground water and surface water 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. Analytical tables will be reported in the 2004 Annual CMR.

A ground water potentiometric surface map for the OU is presented in Figure 2.5-2. Ground water elevation data collected from wells within the OU are similar to those collected during past quarters. Ground water elevations will be presented in the annual report.

2.5.2. Building 850 OU Remediation Progress Analysis

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

2.5.2.1. Building 850 OU Contaminant Concentrations and Distribution

At the Building 850 OU, tritium is the primary COC detected in ground water; nitrate and uranium are the secondary COCs. A tritium isoconcentration contour map based on data collected during the first semester of 2004 is presented in Figure 2.5-3. Isoconcentration contour maps for the secondary COCs will be presented in the next CMP report.

The current maximum detected tritium activity in ground water within the OU was 49,200 pCi/L in a sample collected from well NC7-70. The highest tritium activities in ground water in the OU continue to be located immediately downgradient of the tritium sources at the Building 850 firing table and continue to decline. The extent of the 20,000 pCi/L ground water tritium activity contour in alluvium and bedrock in Doall Ravine continues to diminish. Tritium activities in ground water north of Pit 2 and Pit 1 are generally below recent highs detected during the last few years. The maximum current ground water tritium activity detected in this area was 4,220 pCi/L from well K1-06. Immediately south and east of Pit 2, the maximum ground water tritium activity detected in samples from well K2-01C was 8,480 pCi/L. Ground water samples collected in recent years from wells further south in Elk Ravine show very gradual increases in tritium activities over time, as the distal, low activity portion of the tritium plume continues to migrate south beneath Elk Ravine. These increases have recently been leveling off. During this semester, the maximum activity in this area was 7,780 pCi/L in a ground water sample from well NC2-12I. During 2003, the maximum tritium activity detected in ground water in this area was 8,370 pCi/L in a sample collected from well NC2-12D.

The State MCL for uranium in drinking water is 20 pCi/L. Ground water uranium activities above the MCL have not been found in the Building 850 OU. Evidence of depleted uranium was identified in ground water samples collected from several wells in the OU analyzed by mass spectrometry. The natural atom ratio of $^{235}U/^{238}U$ is about 0.0072 +/- 0.001. Atom ratios below this range indicate some addition of depleted uranium to the naturally-occurring uranium activity in the water. Atom ratios indicative of depleted uranium were detected in ground water samples collected during the first semester from several wells and a spring in the OU. The wells which yielded ground water samples containing depleted uranium during the first semester (NC7-61 and NC7-70) are proximal and downgradient of the Building 850 firing table. The maximum total uranium activity in ground water samples collected from these wells during the first semester was 11.2 pCi/L in the sample from NC7-61. During the second semester of 2003, depleted uranium was detected in water samples collected from wells NC2-06A, NC7-28, and NC7-70. The maximum total uranium activity containing some depleted uranium was 11.5 pCi/L in the ground water sample from NC7-28. Alpha spectrometry was also used for analysis of uranium isotopes. Although this technique cannot be used to determine uranium provenance, it does provide uranium activity data.

A ground water sample from well NC2-10 had the current maximum concentration of nitrate in the OU (110 mg/L). Last semester, this well also yielded the ground water sample with highest nitrate concentration collected in the OU (140 mg/L). Nitrate was also detected above the 45 mg/L MCL in ground water samples from wells NC7-11, NC7-54, NC2-12S, and NC7-29 and Well 8 Spring, at concentrations of 68 mg/L, 55 mg/L, 89 mg/L, 48 mg/L, and 65.5 mg/L, respectively.

During the first semester of 2004, perchlorate was detected in ground water samples from 17 wells in the OU. The maximum perchlorate concentration was 54 μg/L in the sample from well NC7-70, which is immediately downgradient of Building 850. Samples from 13 wells exceeded the 6 μg/L State Public Health Goal for perchlorate in drinking water. These wells were located immediately downgradient of Building 850, in Doall Ravine, and in the portion of Elk Ravine immediately south of its juncture with Doall Ravine. During the second semester of 2003, perchlorate was detected at maximum concentrations of 6.7, 4.4, 10, 5.4, and 53 μg/L in ground water samples from wells K1-01B, K2-04D, K2-04S, NC2-11D, and NC7-61, respectively.

2.5.2.2. Building 850 OU Remediation Optimization Evaluation

Monitored Natural Attenuation (MNA) is the selected remedy for remediation of tritium in ground water emanating from the Building 850 area. MNA continues to be effective for reducing tritium activities in ground water. The highest tritium activities in ground water in the OU continue to be located immediately downgradient of the tritium sources at the Building 850 firing table and continue to decline. The extent of the 20,000 pCi/L tritium activity contour also continues to diminish. In general, ground water tritium activities continue to decline or are below historic highs in all areas except in southern Elk Ravine where there have been very gradual increases in tritium activities over time, as the distal, low activity portion of the tritium plume continues to migrate south beneath Elk Ravine. These increases have recently been leveling off and are well below the 20,000 pCi/L MCL for tritium in drinking water. The distribution of depleted uranium is similar to previous years and total uranium in ground water continues to be well below the 20 pCi/L MCL in all wells in the Building 850 area. The extent of nitrate and perchlorate in ground water is also similar to that observed in previous years.

2.5.2.3. Building 850 OU Performance Issues

Except for several ground water samples that were inadvertently not collected, there were no performance issues during the first semester of 2004. These samples will be collected during the second semester.

2.6. Building 854 (B854) OU6

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

Two ground water extraction and treatment systems currently operate in the Building 854 OU; Building 854-Source (B854-SRC) and Building 854-Proximal (B854-PRX).

The B854-SRC ground water extraction and treatment system began operation in December 1999 and treats ground water extracted at a rate of approximately 1 gpm from well W-854-02. Influent water passes from the filtration system into two ion-exchange columns containing SR-7 resin connected in series for perchlorate removal prior to entering the portable Solar-powered Treatment Unit outfitted with aqueous-phase GAC for VOC removal. The treated effluent water is discharged through nearby misting towers.

The B854-PRX ground water extraction and treatment system began operation in November 2000 and treats ground water extracted at a rate of 1 gpm from well W-854-03 located southeast of the Building 854 complex. This facility has been in operation since November 2000. It consists of aqueous-phase GAC for VOC removal, above ground containerized wetland bio-treatment for perchlorate and nitrate removal, and an ion-exchange resin treatment for polishing prior to being discharged into an infiltration trench.

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

This section is organized into five sections: 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 Building 854 ground water treatment facility discharge is regulated by the RWQCB Substantive Requirements for Wastewater Discharge.

The monthly ground water discharge volumes and rates and operational hours are summarized in Tables 2.6-1 and 2. The total volume of ground water treated and mass removed during the reporting period is presented in Table Summ-1. The cumulative volume of ground water treated and discharged and the mass removed are summarized in Table Summ-2.

Analytical results for influent and effluent samples are shown in Table 2.6-3 and 2.6-4. The pH measurement results are presented in Appendix A.

There were no performance issues at B854-SRC or B854-PRX during the reporting period.

2.6.1.2. Building 854 OU Operations and Maintenance Issues

The B854-SRC groundwater extraction and treatment facility operated continuously throughout the first semester of 2004 with the following exceptions:

- System temporarily shut-down while the carbon drums in the 1st and 2nd positions were replaced on February 2, 2004.
- Building 854 Complex power was interrupted on March 29, 2004.

The B854-PRX groundwater extraction and treatment facility operated continuously throughout the first semester of 2004 with the following exceptions:

- All three carbon drums were replaced in early February.
- Overcast days during February caused system to shut-down.
- Facility batteries were replaced in June.

2.6.1.3. Building 854 OU Compliance Summary

The B854-SRC and B854-PRX ground water treatment systems operated in compliance with the Substantive Requirements for Wastewater Discharge.

2.6.1.4. Building 854 OU Facility Sampling Plan Evaluation and Modifications

The Building 854 facility sampling plans comply with CMP monitoring requirements. The sampling plans are presented in Table 2.6-5. There were no additional modifications made to the plan.

2.6.2. Building 854 OU Ground Water Monitoring

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions: 18 samples were not collected due to insufficient water. The sampling plan and schedule by quarter for ground water and surface water are presented in Table 2.6-6. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP. Analytical results will be presented in the annual report.

A ground water potentiometric surface map is presented in Figure 2.6-2. Ground water elevations will be presented in the annual report. Ground water elevation data collected from wells within the OU are similar to those collected during past quarters.

2.6.3. Building 854 OU Remediation Progress Analysis

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

2.6.3.1. Building 854 OU Mass Removal

The monthly ground water mass removal estimates are summarized in Tables 2.6-7 and 8. The cumulative mass estimates are summarized in Table SUMM-2.

2.6.3.2. Building 854 OU Contaminant Concentrations and Distribution

At the Building 854 OU, VOCs (primarily TCE) are the primary COCs detected in ground water and perchlorate and nitrate are the secondary COCs. Although the lower Neroly $Tnbs_1$ and the $Tnsc_0$ are distinct stratigraphic units, the ground water contained in these units appears to be in hydraulic communication. These stratigraphic units comprise a single HSU, the $Tnbs_1/Tnsc_0$ HSU. A total VOC isoconcentration contour map for this HSU is presented in Figure 2.6.3. Isoconcentration contour maps for the secondary COCs will be presented in the next CMR report (2004 Annual).

During the first semester of 2004, the total VOC plume shape is similar to the total VOC plume shape shown in the previous CMR report (2003 Annual). The current maximum total VOC concentration of 180 μg/L continues to occur in well W-854-02. Total VOC concentrations decrease to below the 0.5 μg/L detection limit north of wells W-854-1701, W-854-1822, and W-854-1902. Localized VOC contamination occurs in wells W-854-06 (2 μg/L) and W-854-07 (34 μg/L) located in the vicinity of a former water-supply well (Well 13) and downgradient of the main VOC plume.

The current perchlorate plume shape is slightly different than the 2003 plume. The southernmost extent of the 2003 plume was located at well W-854-1902; whereas, during this reporting period, perchlorate concentrations in ground water decreased to below the detection limit in well W-854-1902. The northernmost (upgradient) detection of perchlorate occurs in well W-854-02 at 6.5 μg/L, which is consistent with the 2003 plume. During this reporting period, the maximum perchlorate concentration (19 μg/L) was detected in well W-854-1823.

The nitrate plume shape remains similar to the 2003 plume. The current maximum nitrate concentration (53.3 mg/L) continues to occur in well W-854-02. Nitrate decreased to below the drinking water standard of 45 mg/L just south of well W-854-03.

As agreed upon during the August 2002 Remedial Project Meeting, discretionary ground water samples from the Building 854 were analyzed for TBOS to determine if it exists as a co-contaminant with TCE similar to the Building 834 area. Thirty-six samples have been collected in the Building 854 OU since February 2003. Ground water samples collected during March 2003 from wells W-854-1923 and W-854-1902 contained 1.2 and 4.3 μg/L of TBOS, respectively. These results likely represent false positives because TBOS was not detected above the 1 μg/L detection limit in the ground water samples collected from these wells collected thereafter. TBOS does not appear to exist in ground water at the Building 854 OU, therefore the discretionary sampling will be discontinued.

2.6.3.3. Building 854 OU Remediation Optimization Evaluation

The B854-SRC treatment facility extraction well, W-854-02, consistently pumped at about 1.1 gpm during the second semester of 2004. Based on the ground water elevation map shown in Figure 2.6-2, pumping at W-854-02 appears to adequately capture the VOC contamination in

ground water with concentrations greater than 100 μg/L in the Building 854 source area. Additionally, as mentioned in the B854 Remedial Design Report, the water level response in monitoring well W-854-11 from pumping at W-854-02, suggests some preferential flow along fractures which has resulted in a decline in the water table below the bottom of the W-854-11 well screen.

The B854-PRX treatment facility extraction well, W-854-03, pumped intermittently at about 1.1 gpm during the first semester of 2004. As mentioned in the B854 Remedial Design Report, an additional extraction well is planned in this area to further optimize control of the VOC plume.

2.6.3.4. Building 854 OU Performance Issues

The main issue influencing mass removal performance at the Building 854 OU continues to be low permeability and well yield. Although fractures appear to be important ground water flow-controlling features in this area, the overall primary and secondary permeability in many wells is relatively low. At the B854-SRC facility, extraction well W-854-02 continues to be pumped at 1.1 gpm. This well has approximately 5 more feet of available drawdown under pumping conditions and is being considered for increased pumping to 1.5 to 2 gpm. Performance of the B854-PRX facility is limited by well yield and the constructed wetland treatment technology that is being used to treat perchlorate. An expansion of the constructed wetland would be necessary to increase the flow rate at this facility above the current rate of 1.1 gpm. The expansion is scheduled for fiscal year 2007.

2.7. *Building 832 Canyon (B832) OU7*

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.

Four ground water extraction and treatment systems operate in the Building 832 Canyon OU: Building 832-Source (B832-SRC), Building 830-Source (B830-SRC), Building 830-Proximal North (B830-PRXN), and Building 830-Distal South (B830-DISS). The B832-SRC and B830-SRC facilities extract and treat both ground water and soil vapor, while the B830-PRXN and B830-DISS facilities extract and treat ground water only. A map of Building 832 OU showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.7-1.

The B832-SRC facility treats ground water for VOCs, perchlorate, and nitrate and has been in operation since October 1999. Ground water is extracted from nine wells (W-832-12, W-832-13, W-832-14, W-832-15, W-832-16, W-832-17, W-832-18, W-832-20, and W-832-22) to remove source contamination and to mitigate plume migration. Ground water extraction rates at this facility are seasonally variable, ranging from 10 to 200 gallons per day. Ground water is treated using a Cuno filter for particulate filtration, three aqueous-phase GAC units connected in series to remove VOCs, and two ion exchange columns with SR-7 resin (also connected in series) to remove perchlorate. Treated ground water is discharged via a misting system. Soil vapor is extracted from the same nine wells used for ground water extraction. A positive displacement rotary lobe blower is used to create a vacuum at each wellhead through a system of manifolded piping. The contaminated

vapors are treated using three vapor-phase GAC units connected in series. Treated soil vapors are then discharged to the atmosphere under a permit from the San Joaquin Valley Unified Air Pollution Control District.

The B830-SRC facility treats ground water for VOCs, perchlorate, and nitrate and has been in operation since February 2003. Ground water is extracted from three wells (W-830-1807, W-830-19, and W-830-59) to remove source contamination and to mitigate plume migration. These wells exhibit very low sustainable yield and are operated by timers that pump the wells at low flow rates until dry and then shut off while the water levels recover. Ground water from these wells is treated using three aqueous-phase GAC units connected in series to remove VOCs followed by treatment using two ion exchange units also connected in series to remove perchlorate. Treated water is then discharged via a misting tower. The B830-SRC soil vapor extraction and treatment system is being tested to evaluate whether this is a viable remediation technology for this low permeability source area. Soil vapor is extracted from well W-830-1807 using a regenerative blower and the contaminated vapors are treated using three vapor-phase GAC units connected in series. Treated soil vapors are then discharged to the atmosphere under a permit from the San Joaquin Valley Unified Air Pollution Control District.

The B830-PRXN facility treats ground water for VOCs and nitrate and has been in operation since October 2000. For the first semester of 2004 approximately 1,200 gallons of ground water per day were extracted from extraction well W-830-57 using a solar-powered ground water treatment unit. The ground water is treated using three aqueous-phase GAC units connected in series to remove VOCs; the effluent is discharged to the ground via a French drain.

The B830-DISS facility treats ground water for VOCs, perchlorate, and nitrate and has been in operation since July 2000. For the first semester of 2004 approximately 1,800 gallons per day of ground water are extracted from three wells (W-830-51, W-830-52, and W-830-53) using natural artesian pressure. The ground water is treated using GAC units to remove VOCs. Nitrate and trace amounts of perchlorate are removed from the extracted ground water using bioreactor technology. The water flows through three open-container wetland bioreactors containing microorganisms that use nitrate during cellular respiration. Acetic acid is added to the process stream as a carbon source. Treatment system effluent is discharged via a storm drain that discharges to the Corral Hollow alluvium.

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 sub-sections: facility performance assessment; operations and maintenance issues; compliance summary; and sampling plan evaluation and modifications.

2.7.1.1. Building 832 Canyon OU Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes, rates, and operational hours are summarized in Tables 2.7-1 through 4. The total volume of ground water and vapor extracted and treated and mass removed during the reporting period are presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and mass removed are summarized in Table Summ-2.

Analytical results for influent and effluent samples are shown in Table 2.7-5 and 2.7-6. The pH measurement results are presented in Appendix A.

The main performance issue impacting mass removal from the Building 832 Canyon OU facilities is low ground water yield. The contaminated water-bearing zones have low hydraulic conductivity and low ground water yield therefore the extraction wells cannot be operated continuously. Instead these wells are operated intermittently using pumps that are turned on and off by timers.

2.7.1.2. Building 832 Canyon OU Operations and Maintenance Issues

The B832-SRC ground water treatment facility operated continually throughout this reporting period with the exception of five days in January and four days in May. In both cases, the cause of the facility shutdown was not determined.

The B832-SRC soil vapor extraction and treatment system was shut for the duration of this reporting period as part of a soil vapor rebound test.

The B830-SRC groundwater extraction and treatment facility operated continuously throughout the first semester of 2004 with the following exceptions:

- System was off for five days in January due to plugging of the ion exchange column with rust.
- SR-7 ion-exchange resin in both columns was replaced causing facility to be shut-down for seven days in February.
- Facility was off for thirteen additional days in February due to TCE breakthrough from the newly installed ion-exchange resin.
- Power failure in April caused facility to temporarily shut-down.

Operations at the B830-SRC soil vapor extraction and treatment system were routinely interrupted due to overheating during the hot days (about 80 days).

The B830-PRXN groundwater extraction and treatment facility operated continuously throughout the first semester of 2004 with the following exceptions:

- Overcast days caused facility to operate for12 hrs. per day.
- Facility down two days in June due to failure of the extraction well pump.

The B830-DISS groundwater extraction and treatment facility operated continuously throughout the first semester of 2004 with the following exceptions:

- GAC unit was replaced in April.
- Bioreactor overflowed in June and required removal of vegetation.

2.7.1.3. Building 832 Canyon OU Compliance Summary

Treated effluent from the Building 832 ground water treatment facility is regulated by the RWQCB Substantive Requirements for Wastewater Discharge. The B832-SRC, B830-SRC, B830-PRXN, and B830-DISS ground water treatment systems operated in compliance with these

requirements with the exception of two effluent perchlorate detections. Perchlorate was detected at 4.1 μg/L in the B830-SRC effluent and 4.3 μg/L in the B830-DISS effluent.

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

The Building 832 Canyon OU treatment facility sampling plans comply with CMP monitoring requirements. The sampling plan is presented in Table 2.7-7. There were no additional modifications made to the plan.

2.7.2. Building 832 Canyon OU Ground Water Monitoring

During this reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; 25 samples were not collected due to insufficient water. The sampling plan and schedule by quarter for ground water and surface water are presented in Table 2.7-8. This table explains deviations from the sampling plan and indicates any additions made to the CMP. Analytical results will be presented in the annual report.

Ground water potentiometric surface maps for the Qal/fill and $Tnsc_{1b}$ HSUs are presented in Figures 2.7-2 and 2.7-3, respectively. Ground water elevations will be presented in the annual report. Ground water elevation data collected from wells within the OU are similar to those collected during past quarters.

2.7.3. Building 832 Canyon OU Remediation Progress Analysis

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

2.7.3.1. Building 832 Canyon OU Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Tables 2.7-9 through 12. The cumulative mass estimates are summarized in Table SUMM-2.

2.7.3.2. Building 832 Canyon OU Contaminant Concentrations and Distribution

At the Building 832 Canyon OU, VOCs (primarily TCE) are the primary COCs detected in ground water. Perchlorate and nitrate are the secondary COCs. These constituents have been identified primarily in the $Tnsc_{1b}$ and Qal/fill HSUs. TCE has also been detected at low concentrations in the $Tnbs_2$ and $Tnbs_1$ aquifers. Trichlorethylene isoconcentration contour maps for the Qal/fill and Tnsc1b HSUs are presented in Figures 2.7-4 and 2.7-5, respectively. Isoconcentration contour maps for the secondary COCs will be presented in the next CMP report.

During the first semester of 2004, TCE was not detected above the 0.5 μg/L detection limit in any of the three site-boundary guard wells for the Building 832 OU. TCE was not detected above the 0.5 μg/L detection limit in ground water samples collected from the three upgradient water-supply guard wells. The current maximum TCE concentration (11,000 μg/L) in this OU was detected in the $Tnsc_{1b}$ HSU in well W-830-49. This well, which is located just south of the Building 830 source area, has historically contained the highest TCE concentrations. The leading edge of the plume at the 0.5 μg/L TCE detection limit remains in the vicinity of the site boundary.

Perchlorate, a secondary COC, was not detected in any of the Building 832 Canyon guard wells. The extent of perchlorate and nitrate is more limited than TCE. The current maximum nitrate concentration (156 mg/L) occurs in well W-830-19 and the current maximum perchlorate concentration (11 μg/L) occurs in well W-830-25.

2.7.3.3. Building 832 Canyon OU Remediation Optimization Evaluation

The B832-SRC soil vapor extraction (SVE) system was shut down in October 2003 and remains down to evaluate soil vapor rebound. TCE was not detected in preliminary vapor samples above 0.2 ppm_v. Subsequent soil vapor samples taken during the first semester of 2004 also did not contain detectable levels of TCE. Continuing rebound test results will be used to determine whether this facility meets SVE system shut off criteria.

Ground water yield is so low in the Building 832 Canyon source area extraction wells that capture is difficult to assess. Based on the map shown in Figure 2.7-5, the plumes emanating from Buildings 832 and 830 have much the same shape and extent as that shown in the 2003 annual report. Total VOC concentrations in the facility influent for B832-SRC, B830-SRC, B830-PRXN, and B830-DISS have remained relatively constant throughout this reporting period.

2.7.3.4. Building 832 Canyon OU Performance Issues

Overall well yields remain low due to a combination of dewatering and low hydraulic conductivity in the B832-SRC and B830-SRC facility areas. An evaluation will be conducted to determine how to increase well yield and mass removal at the OU treatment facilities.

COCs were not detected in the guard wells at the Site 300 boundary above their analytical detection limits during this reporting period. Low concentrations of TCE (two hits at 1.1 μg/L) have been detected in a recently installed well W-830-1832 located between the former leading edge of the $Tnbs_1$ TCE plume and Site 300 water-supply well 20. A new Upper $Tnbs_1$ guard well is proposed downgradient (southwest) of well W-830-1832, and upgradient of Well 20 for installation in Fiscal Year 2005. Expansion of the B830-SRC extraction wellfield, including $Tnbs_1$ extraction wells, will be considered to prevent further migration of contaminants toward Well 20.

2.8 Site 300 Site-Wide OU8

The Site 300 Site-Wide OU is comprised of release sites at which no significant ground water contamination and no unacceptable risk to human health or the environment is present. For this reason, a monitoring-only interim remedy was selected for the release sites in the Interim Site-Wide Record of Decision (U.S. DOE, 2001). The monitoring conducted during the reporting period for these release sites is discussed below.

2.8.1. Building 801 and Pit 8 Landfill

At Building 801, VOCs are the primary COCs detected in ground water. Perchlorate and nitrate are the secondary COCs. There are no COCs in ground water at the Pit 8 landfill.

Minor VOC contamination is present in the subsurface as a result of discharges of waste fluid to a dry well adjacent to Building 801D from the late 1950s to 1984. A map showing the locations

of monitoring wells is presented in Figure 2.8-1. During the first semester of 2004, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; 10 samples were not collected due to insufficient water. The sampling plan and schedule by quarter for ground water are presented in Table 2.8-1. This table delineates and explains deviations from the sampling plan and indicates any additions made to the CMP. Analytical results will be presented in the annual report.

During the first semester of 2004, the maximum VOC concentration detected in the Building 801 area was 5.2 μg/L of TCE in a ground water sample from well K8-01. Last semester, this well yielded the area maximum of 3.7 μg/L of TCE in ground water. Figure 2.8-2 shows the measured ground water concentrations of total VOCs (TVOC), in the $Tnbs_1$ aquifer for each well. For the last ten years TCE in ground water from wells K8-01 and K8-03B, located downgradient from the former Building 801D dry well, has ranged from below detection limits (<0.5) μg/L to a maximum of 5.2 μg/L.

A map showing ground water elevations and hydraulic gradient direction in the $Tnbs_1$ HSU for the Building 801/Pit 8 Landfill area is presented in Figure 2.8-3. Ground water elevation data for the Building 801/Pit 8 area are similar to those collected during 2003.

To date, no contaminant releases have been identified 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.

2.8.2. Building 833

VOCs are the primary COC in ground water at Building 833. Spills and rinsewater disposal at Building 833 resulted in minor VOC contamination of the shallow soil/bedrock and perched ground water in the Tpsg HSU. A map showing the locations of monitoring wells and ground water elevations is presented in Figure 2.8-4. The sampling plan and schedule by quarter for ground water are presented in Table 2.8-2. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP. Analytical results will be presented in the annual report.

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 2003 has shown little evidence of saturation. During the first semester of 2004, all the wells screened in the Tpsg HSU at Building 833 were dry or had insufficient water to collect a valid sample, so no VOC data were obtained from this HSU. Similar conditions have existed for several years at this site; the most recent sample that could be collected from the Tpsg HSU was from well W-833-03 in 2000, at which time all the other shallow wells were dry. Because there was no VOC data collected during the first semester of 2004, no isoconcentration map will be presented.

Only well W-833-30, which is screened in the deep regional aquifer ($Tnbs_1$ HSU), contained sufficient water to collect a sample during this reporting period. VOCs were not detected in the ground water sample from this well during this monitoring period, indicating that the VOC contamination continues to be confined to the shallow, Tpsg perched water-bearing zone.

A ground water elevation map was not generated because the area is largely unsaturated.

2.8.3. Building 845 Firing Table and Pit 9 Landfill

Leaching from Building 845 firing table debris resulted in minor contamination of subsurface soil with depleted uranium and HMX. There are no COCs in ground water at Building 845 and the Pit 9 landfill, as no ground water contamination has been detected. A map showing the locations of monitoring wells is presented in Figure 2.8-5. The sampling plan and schedule by quarter for ground water are presented in Table 2.8-3. All required CMP detection monitoring samples were collected. There continues to be no ground water contamination in the Building 845 and Pit 9 landfill area. Analytical results will be presented in the annual report.

The monitoring wells near Pit 9 are screened in the lower Neroly Formation ($Tnsc_0$ HSU). A map showing ground water elevations and hydraulic gradient direction in the $Tnsc_0$ HSU is presented in Figure 2.8-6. Ground water elevation data collected from wells within the OU are similar to those collected during 2003.

Detection monitoring of this landfill, which is discussed in Section 3.3, is conducted to determine any releases to ground water.

2.8.4. Building 851 Firing Table

At the Building 851 Firing Table, uranium and tritium are the primary and secondary COCs detected in ground water, respectively. High explosives experiments at the Building 851 firing table resulted in minor VOC and RDX contamination in soil and low activities of uranium with a measurable depleted uranium component in ground water. A map showing the locations of monitoring wells is presented in Figure 2.8-7. During the first semester of 2004, ground water monitoring was conducted in accordance with the CMP monitoring requirements. The sampling plan and schedule by quarter for ground water and surface water is presented in Table 2.8-4. All required samples were collected and analyzed. Analytical results will be presented in the annual report.

A map showing ground water elevations and hydraulic gradient direction in the Tmss HSU is presented in Figure 2.8-8. Ground water elevation data collected from wells within the OU are similar to those collected during 2003.

During the first semester of 2004, ground water samples were collected from the four Building 851 monitor wells and were analyzed for uranium isotopes by mass spectrometry. Unfortunately, total uranium concentrations were too low to quantify the 234U and 238U activities. These samples will be rerun and the data will be presented next semester.

During the semester, tritium was detected in a ground water sample from well W-851-08 at an activity of 164 +/- 57 pCi/L. This is a typical result compared to the previous year's maximum ground water activity in well W-851-08 ground water of 270 pCi/L and continues the trend of decreasing tritium activities in this well from the one-time high of 3,790 pCi/L in late 1998.

3. Detection Monitoring, Inspection, and Maintenance Program for the Pits 2, 8, and 9 Landfills

The Pit 2, 8, and 9 Landfills received firing table debris from the 1950s to the 1970s. At present, there is no evidence of contaminant releases to ground water from any of these three landfills, except for low activities of depleted uranium at Pit 2, and no unacceptable risk or hazard to human or ecological receptors has been identified. The Detection Monitoring Program is designed to detect any future releases of contaminants from these landfills. Section 3 presents the results for the Pit 2, 8, and 9 Landfills ground water detection monitoring network, and any landfill inspections or maintenance that was conducted during the first semester of 2004.

3.1 Pit 2 Landfill

3.1.1. Contaminant Detection Monitoring Results

During the first semester of 2004, ground water samples were collected from Pit 2 detection monitoring wells K2-01C and NC2-08 and analyzed for the CMP detection monitoring analytes. During the second semester of 2003, two new monitoring wells, W-PIT2-1934 and W-PIT2-1935, were installed at Pit 2 and were also sampled during the first semester of 2004 for CMP detection analytes (additional wells are scheduled for installation during 2007).

Evidence of depleted uranium was detected in ground water samples from wells K2-01C, W-PIT2-1934, and W-PIT2-1935 during the first semester. No other constituents that were monitored during the semester as part of the Detection Monitoring Program were detected in ground water. A map showing the locations of monitoring wells is presented in Figure 2.5-1.

A ground water potentiometric surface map is presented in Figure 2.5-2. Ground water elevations will be presented in the annual report. Depth to ground water was measured at 50–55 ft beneath the Pit 2 Landfill. These data are consistent with previous water elevations.

Tritium was detected in ground water samples from all four Pit 2 monitor wells, K2-01C, NC2-08, W-PIT2-1934, and W-PIT2-1935, at activities of 8,480, 9,560, 1,600, and 3,660 pCi/L, respectively. This distribution of ground water tritium activities is likely a result of transport of the Building 850 tritium plume into the Pit 2 area.

Last semester, depleted uranium was detected in a ground water sample from well K2-01C. The $^{235}U/^{238}U$ atom ratio in the sample was 0.0062 and contained 9.75 pCi/L of total uranium. A total uranium activity of 3.13 pCi/L was detected in the second semester ground water sample from well NC2-08, but the $^{235}U/^{238}U$ atom ratio indicated that this uranium was natural in origin. The uranium activities detected in ground water samples from these wells are well below the drinking water standard of 20 pCi/L. Depleted uranium was again detected in a ground water sample from well K2-01C during this reporting period. The $^{235}U/^{238}U$ atom ratio in the sample was 0.0062 and contained 6.97 pCi/L of total uranium. The ground water samples from new monitor wells W-PIT2-1934 and W-PIT2-1935 also indicated an addition of some depleted uranium,

yielding $^{235}U/^{238}U$ atom ratios of 0.0051 and 0.0063 and total uranium activities of 17.2 and 2.13 pCi/L, respectively. The ground water sample from well NC2-08 contained 2.85 pCi/L of total uranium, but the $^{235}U/^{238}U$ atom ratio indicated that this uranium was natural in origin. The detection of depleted uranium in the ground water samples from wells K2-01C, W-PIT2-1934, and W-PIT2-1935 suggests that low activities of depleted uranium have been added by Pit 2 to the naturally occurring uranium in the ground water. The release may have been hastened by the continued discharge of potable water that has been used to maintain a wetland habitat for red-legged frogs (a Federally-listed endangered species) within a drainage channel that extends along the northern and eastern margin of Pit 2.

3.1.2. Sampling and Analysis Plan Modifications

The sampling plan and schedule for the Pit 2 ground water Detection Monitoring Program are presented in Table 3.1-1. There were no deviations from the sampling plan. Analytical results will be presented in the annual report.

3.1.3. Landfill Inspection Results

The Pit 2 Landfill was inspected twice during the first semester of 2004. Shallow burrow holes were observed in the cover. No other problems were observed.

3.1.4. Annual Subsidence Monitoring Results

The annual subsidence monitoring was conducted during the second semester of 2003 and indicated no measurable subsidence. Subsidence monitoring will again be performed during the second semester of 2004.

3.1.5. Maintenance

Because of the proximity to red-legged frog habitat, repair of the shallow animal burrows was postponed, pending review by the Site 300 wildlife biologist. Once approved, these burrows will be filled with local soil and compacted with a shovel or backhoe bucket.

3.2. Pit 8 Landfill

3.2.1. Contaminant Detection Monitoring Results

During the first half of 2004, ground water samples were collected from the Pit 8 monitoring wells and analyzed for a suite of chemicals. Last semester, perchlorate and fluoride were detected in ground water samples from well K8-04 at concentrations of 5 μg/L and 10 mg/L, respectively. During this semester, perchlorate was not detected in the sample from well K8-04, or any of the other Pit 8 wells, at or above the detection limit of 4 mg/L. Fluoride was not detected in the first semester 2004 ground water sample from well K8-04 at or above the detection limit of 0.05 mg/L. Thus, perchlorate and fluoride do not appear to be contaminants in ground water at Pit 8.

First semester samples were also analyzed for VOCs, high explosives compounds RDX and HMX, nitrate, uranium and thorium isotopes, and Title 26 metals. Well K8-05 continued to be dry.

There were no new detections of constituents of concern from Pit 8 area wells as indicated by the Detection Monitoring Program ground water data collected during the first semester of 2004.

A ground water potentiometric surface map is presented in Figure 2.8-3. Ground water elevations will be presented in the annual report. Depth to ground water was approximately 60 ft beneath the Pit 8 Landfill. There was no significant change in ground water elevations during the first semester of 2004 compared to the previous year.

3.2.2. Sampling and Analysis Plan Modifications

The sampling plan and schedule for the Pit 8 ground water Detection Monitoring Program are presented in Table 2.8-1. As stated above, well K8-05 was dry during the semester and could not be sampled. Analytical results will be presented in the annual report.

3.2.3. Landfill Inspection Results

The Pit 8 Landfill was inspected twice during the first semester of 2004. Shallow burrow holes were observed in the cover. No other problems were observed.

3.2.4. Annual Subsidence Monitoring Results

The annual subsidence monitoring was conducted during the second semester of 2003 and did not indicate landfill subsidence. Subsidence monitoring will again be performed during the second semester of 2004.

3.2.5. Maintenance

During the semester, animal burrows were filled with local soil and compacted with a shovel or backhoe bucket.

3.3. Pit 9 Landfill

3.3.1. Contaminant Detection Monitoring Results

During the first semester of 2004, ground water samples were collected from the four Pit 9 monitoring wells and analyzed for a suite of chemicals including VOCs; nitrate; perchlorate; high explosives compounds; and Title 26 metals. During the semester, there were no new detections of constituents of concern in Pit 9 area wells as indicated by the Detection Monitoring Program ground water sample analytical results.

A ground water potentiometric surface map is presented in Figure 2.8-6. Ground water elevations will be presented in the annual report. Depth to ground water was approximately 110 ft beneath the Pit 9 Landfill. There were no significant changes in ground water elevations from previous semesters.

3.3.2. Sampling and Analysis Plan Modifications

The sampling plan and schedule for the Pit 9 ground water Detection Monitoring Program are presented in Table 2.8-3. There were no additional modifications made to the plan. Analytical results will be presented in the annual report.

3.3.3. Landfill Inspection Results

The Pit 9 Landfill was inspected twice during the first semester of 2004. Shallow burrow holes were observed in the cover. No other problems were observed.

3.3.4. Annual Subsidence Monitoring Results

The annual subsidence monitoring was conducted during the second semester of 2003 and did not indicate landfill subsidence. Subsidence monitoring will again be performed during the second semester of 2004.

3.3.5. Maintenance

During the semester, animal burrows were filled with local soil and compacted with a shovel or backhoe bucket.

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.

4.1 Human Health Risk and Hazard Management

The CMP (Ferry et al., 2002) requires that the risk and hazard associated with volatile contaminants in the subsurface migrating upward into indoor and outdoor ambient air and being inhaled by workers be re-evaluated annually using current data. The following risk evaluations were performed during the second semester of 2003 and will be repeated in the 2004 annual report:

- Outdoor Ambient Air Near Building 834D
- Indoor Ambient Air in Building 834D
- Outdoor Ambient Air Near Building 815
- Indoor Ambient Air in Building 854A
- Indoor Ambient Air in Building 854F
- Outdoor Ambient Air in Building 854F
- Indoor Ambient Air in Building 830

- Outdoor Ambient Air Near Building 830
- Indoor Ambient Air Near Building 832F
- Indoor Ambient Air in Building 833

Institutional controls, such as restricting access to or activities in areas of elevated risk, remained in place during 2004 to prevent unacceptable exposure to contaminants during remediation.

The CMP also requires annual sampling of outdoor air above contaminated surface water (when surface water is present) to determine VOC concentrations. The following locations were monitored for the presence of surface water during first semester 2004: Spring 7, Spring 5, and Spring 3.

4.1.1. Spring 7 Ambient Air Sampling

On March 2, 2004, Spring 7 was monitored for the presence of surface water or green hydrophilic vegetation indicating the presence of near surface water. No surface water or green hydrophilic vegetation was present. Therefore, ambient air sampling was not conducted at this spring. The spring will be monitored for the presence of surface water or green hydrophilic vegetation, and if either is observed, ambient air sampling will be conducted.

4.1.2. Spring 5 Ambient Air Sampling

On March 2, 2004, Spring 5 was monitored for the presence of surface water or green hydrophilic vegetation indicating the presence of near surface water. No surface water or green hydrophilic vegetation was present. Therefore, ambient air sampling was not conducted at this spring. The spring will be monitored for the presence of surface water or green hydrophilic vegetation, and if either is observed, ambient air sampling will be conducted.

4.1.3. Spring 3 Ambient Air Sampling

On March 2, 2004, Spring 3 was monitored for the presence of surface water or green hydrophilic vegetation indicating the presence of near surface water. No surface water or green hydrophilic vegetation was present. The surrounding cattails were dead. Therefore, ambient air sampling was not conducted at this spring. The spring will be monitored for the presence of surface water or green hydrophilic vegetation, and if either is observed, ambient air sampling will be conducted.

4.2. Ecological Risk and Hazard Management

During the spring of 2004, surveys for important burrowing species were conducted in the survey areas specified in the CMP. In addition, CMP required quarterly burrow air sampling for the presence of VOCs in the Pit 6 and Building 834 survey areas was completed. Surface soil sampling and analysis for the presence of cadmium conducted in the Building 834 survey area was reported in the 2003 Annual CMR (Dibley et al., 2004). As results indicated no potential for ecological hazard, cadmium in surface soil at Building 834 has been deleted from the list of ecological contaminants of concern and will no longer be reported on. Additional evaluation of the

ecological significance of the results of surface soil sampling for the presence of PCBs and dioxins/furans at Buildings 854 and 850 was also conducted.

4.2.1. Wildlife Surveys Spring 2004

Wildlife surveys were conducted in May 2004 to satisfy the requirements of the CMP. These requirements included semiannual surveys for important burrowing species in areas associated with hazard indices greater than 1. Three areas were identified as requiring semiannual monitoring: Building 834, Building 850 and Pit 6. Important species include special status species such as State of California or federally listed threatened or endangered species or State of California species of special concern.

4.2.1.1. Review of Historic Observations and Habitat Requirements

Historic observations of special status species at each survey location were reviewed to determine which species should be targeted during future field surveys. Based on this review the fossorial special status species most likely to be observed in the area are the San Joaquin coachwhip (*Masticophis flagellum ruddocki*), coast horned lizards *(Phrynosoma coronatum frontale)*, silvery legless lizard (*Anniella pulchra pulchra*), burrowing owls (*Athene cunicularia*), San Joaquin pocket mice *(Perognathus inornatus),* and American badgers *(Taxidea taxus).* The historic occurrences for the San Joaquin kit fox (*Vulpes macrotis mutica*) were also reviewed. The results of this review were reported in detail in the First Semester 2003 Compliance Monitoring Report.

4.2.1.2. Field Surveys

Field surveys consisted of walking the perimeter of each area and transects through the areas delineated around Building 834, Building 850 and Pit 6 in the CMP. At each area, easily identifiable features were chosen to delineate the survey areas in the field. Because of this, the survey areas are slightly larger then the actual areas of concern. The boundaries of the actual field survey areas are shown in Figures 4.2-1 through 3. Each site was surveyed once during the spring survey period.

The results of the surveys are shown in Table 4.2-1. A nesting burrowing owl pair and American badger dens were observed in the bowl to the west of B850. No other fossorial species of special concern were observed in the survey areas. Coast horned lizards, which were observed within 1/3 mile of the Building 834 and Building 850 survey areas in 2002 and 2003, were not seen within the survey areas. However, these species can be very cryptic and special trapping efforts may be required to accurately determine if they are present or absent.

4.2.1.3. Future Work

Wildlife surveys will again be conducted in the fall of 2004 (September–October), using similar methods as for the Spring 2004 surveys. The distribution of the San Joaquin pocket mouse, San Joaquin coachwhip, coast horned lizards, and silvery legless lizard, all fossorial species of concern at Site 300, is currently unknown. If funds become available, small mammal trapping using Sherman live traps and reptile trapping using pit fall traps could be conducted to determine if these special status species occur in any of the survey areas. Walking and driving surveys will continue to monitor for the presence of burrowing owls and American badgers. It is unlikely that California

red-legged frogs or California tiger salamanders occur in any of the survey areas. The distribution of these species at Site 300 will continue to be monitored as part of the Site's routine endangered species monitoring program.

Birds, reptiles and amphibians were not explicitly addressed in the original baseline ecological risk assessment (Webster-Scholten, 1994). Because burrowing owls have been repeatedly observed within one of the areas of concern (B850), a risk model for burrowing owls for cadmium and PCB is being developed. Preliminary results are reported on in Section 4.2.3.2. Future models and Toxicity Reference Values (TRVs) may be developed for reptiles and amphibians (such as coast horned lizards, and red-legged frogs) in the event these species are observed in the survey areas.

4.2.2. Burrow Air Sampling for VOCs

In the baseline ecological assessment (Webster-Scholten, 1994), hazard (defined as a hazard index greater than 1) to species important at the individual level (referred to as "important" species) was associated with the inhalation of TCE and PCE in burrow air in the Building 834 and Pit 6 landfill areas. In the baseline assessment, kit fox (a State and Federal endangered species) was used as a representative important fossorial (burrowing) vertebrate species. As part of the risk and hazard management measures developed and presented in the CMP, a burrow air-sampling program was initiated to determine current exposure concentrations at Building 834 and Pit 6.

Because there is little experience to draw upon when it comes to sampling subsurface burrow air, during the first year quarterly samples were collected from both locations. The results of the first year's quarterly monitoring are presented here.

4.2.2.1. Burrow Air Sampling Methods

Air from animal burrows in the Building 834 and Pit 6 ecological survey areas were sampled quarterly and analyzed for the presence of TCE, PCE, cis-1,2-DCE and trans-1,2-DCE. Burrow air samples were collected on September 3, 2003, December 19, 2003, March 17, 2004, and June 24, 2004. Locations are shown on Figures 4.2-4 and 4.2-5, respectively. Three burrows from each area were selected on each sampling date. Burrow selection criteria included the degree to which their distribution was representative of burrows in the survey area, characteristics such as diameter that were consistent with burrows that could be used by Site 300 special status species, and whether the burrow was in an area of high soil vapor concentrations as indicated from previous studies. Selected burrows were generally between four and eight inches in diameter. The location of each burrow was recorded with Trimble GPS CE Handheld units and TerraSync software (Trimble Navigation Limited 749 North Mary Avenue, Sunnyvale, CA 94086).

Burrow air was sampled using the method described in the Annual 2003 CMR. At least one air sample was taken from each burrow. In general, co-located samples were taken at one burrow in each area at each sampling date. Ambient air samples were also taken at the same time and location as the co-located samples. Table 4.2-2 lists the sampling parameters for each sample date. Canisters were sent to Air Toxics LTD of Folsom, California for modified TO-14S SIM analysis (low level analysis) for TCE, PCE, cis-1, 2-DCE and trans-1,2-DCE.

4.2.2.2. Burrow Air Sampling Results

Results of the burrow air sampling are presented in Tables 4.2-3 and 4.2-4. Of the four compounds, only TCE and PCE were detected in any of the samples. TCE and PCE concentrations appeared to be more uniform and consistent during the December 19, 2003 sampling compared to other sampling dates. The December sampling occurred after a period of rain. It is possible the wet soil prevented out-gassing of the VOCs to the surface, resulting in higher accumulation within the burrows. TCE concentrations tended to be higher at Building 834, where as PCE concentrations were higher at Pit 6.

However, all results were very low (less than 100 $\mu g/m^3$). Concentrations of PCE and TCE in burrows at Building 834 predicted in the Site-Wide Remedial Investigation (SWRI) Report (Webster-Scholten, 1994) were 8.83×10^2 mg/m^3 and 2.91×10^4 mg/m^3, respectively. At the Pit 6 area, predicted concentrations were 3.27×10^1 mg/m^3 and 9.30×10^1 mg/m^3, respectively. The concentrations detected during the past year are substantially below predicted concentrations and far below that necessary to result in a hazard quotient greater than 1 for either of the two compounds. The SWRI modeling was based on Henry's law constants, and did not account for air movement and dispersion within the burrows. Burrow air sampling results suggest this to be too conservative. However, it is also possible that VOC concentrations further into the burrows would be higher than those detected within the first several feet. As it is not possible to sample further back in native burrows, artificial burrows could be considered to more thoroughly evaluate VOC concentration in deeper burrows. However, the construction of such burrows would also introduce artifacts not found in native burrows.

4.2.2.3. Future Work

According to the decision protocol described in the CMP, if the hazard index is below one after four seasonal samples, then risk and hazard management for VOCs in burrow air is complete. The data suggests there is no hazard to burrowing species in either Pit 6 or Building 834 from the inhalation of VOCs in burrow air. However, as already discussed, it is extremely difficult to sample native, intact burrows. The construction of artificial burrows could be considered if further investigation into the hazard of VOCs in burrow air is desired.

4.2.3. Surface Soil Sampling for Cadmium, PCBs, Dioxins, and Furans in Surface Soil.

In the baseline ecological assessment, hazard (defined as a hazard index greater than 1 for important fossorial species) was associated with the combined oral ingestion and inhalation of cadmium in surface soil at Building 834 (Webster-Scholten, 1994). Additional surface soil sampling and analysis for the presence of cadmium conducted in the Building 834 survey area was reported on in the Annual 2003 CMR. As results indicated no potential for ecological hazard, cadmium in surface soil at Building 834 has been deleted from the list of ecological contaminants of concern and will no longer be reported on. PCBs, dioxins and furans in the Building 854 and 850 areas have not been fully evaluated for their potential ecological hazard. Additional evaluation of the ecological significance of the results of surface soil sampling for the presence of PCBs and dioxins/furans at Buildings 854 and 850 are described here.

4.2.3.1. Ecological Significance of PCBs at Building 854

As described in Annual 2003 CMR, the PCBs Aroclor-1242, Arochlor-1248 and Aroclor-1254 have been detected in a lagoon adjacent to Building 855 at concentrations up to 34, 52, and 0.16 mg/kg, respectively. Additional surface soil sampling conducted in January 2003 shows the PCBs to be primarily confined to the Building 855 lagoon. A sample from this lagoon was also analyzed for dioxin and furan compounds, and contained a maximum calculated tetrachloro-dibenzodioxin (TCDD) equivalent concentration of 2.6×10^{-5} mg/kg. In general, the very limited extent of the PCB, dioxin and furan contamination would preclude significant ecological impact due to the limited potential for exposure. However, the lagoon does act as a water catchment during the winter months, and at this time may contain standing water. Both California tiger salamanders and California red-legged frogs are known to occur in springs and pools in the general vicinity of Building 854. The lagoon could provide limited habitat for either species during the winter months. Therefore, the lagoon will be evaluated during the upcoming winter and spring months to determine whether it provides suitable habitat for either of these species. Should the lagoon provide suitable habitat, then exposure and hazard to these species from PCBs, dioxins and furans will be estimated.

4.2.3.2. Burrowing Owl Exposure to Cadmium and PCBs in Surface Soil at Building 850

As described in the Interim Remedial Design report for the Building 850 Subarea (Taffet et al., 2004), a total of 60 surface soil samples from the slopes above the Building 850 firing table were collected in 1994 and 2003 and analyzed for PCB compounds. PCBs were detected in surface soil samples at concentrations ranging from 0.09 to 180 mg/kg and were primarily confined to a 150 to 225 ft radius around the firing table. In addition, dioxin and furan compounds have been detected in samples from this area, with a maximum calculated TCDD equivalent concentration of 2.27×10^{-3} mg/kg.

Although the extent of PCB/dioxin/furan contamination is limited to the area adjacent to the firing table, wildlife surveys have revealed the presence of burrowing owl in this area (Section 4.2.1). Burrowing owls are Federal and State species of concern (California Department of Fish and Game, 2003), and therefore fit the description of important burrowing species as presented in the CMP. Cadmium is also present in the surface soils at Building 850 at concentrations that may pose a hazard to important burrowing species (Ferry et al., 1999). The exposure and hazard of burrowing owl to these compounds have not been estimated. Therefore, a preliminary exposure analysis for the burrowing owl has been completed to estimate hazard to this species from these compounds.

The basic exposure model developed in the SWRI (Webster-Scholten, 1994) was used to estimate hazard to burrowing owl from cadmium and PCBs in the soil at Building 850. Burrowing owls are gregarious and semi-colonial (Polite, 1983). They nest in burrows in the ground, and spend time there when not out hunting. They often use old ground squirrel burrows or badger dens, which they modify to suit their needs (Brown, 1996). Burrowing owl home range sizes are large (14 – 48 hectare). However, 95% of all movements occur within 600 m of the burrow (Haug and Oliphant, 1990). Therefore, it was assumed the burrowing owls spent 100% of their time in the area directly adjacent to Building 850. In addition, although burrowing owls eat large arthropods (such as beetles and grasshoppers), small mammals (such as mice, rats, gophers, young cottontail rabbits and ground squirrels), various reptiles and amphibians, scorpions, bats, and birds such as

sparrows and horned larks (Brown, 1996), for the purposes of the exposure modeling the diet was assumed to be 100% ground squirrel. This was done as exposure models and contaminant uptake estimates were available for ground squirrels, where as similar data is not readily available for other prey types. Estimates for the burrowing owl physiological and behavioral variables used in the exposure model are presented in Table 4.2-5.

Tables 4.2-6 and 4.2-7 present the contaminant concentrations and TRVs used for cadmium and PCB respectively. The relatively high concentrations of cadmium in the surface soil adjacent to Building 850 as reported in the SWRI have not been observed in more recent sampling events (Bench et al., 2001). As a comprehensive sampling of surface soil for cadmium has not been conducted, hazard was estimated using both sets of results., In addition, measurements of cadmium concentrations in ground squirrel tissue at Building 850 were conducted in 2000 (Bench et al., 2001). Concentrations of cadmium measured in ground squirrel muscle tissue were 44 times greater than that predicted using the model as presented in the SWRI. This suggested the biotransfer factor (BTF) used in the SWRI (based on the transfer of a radioisotope of cadmium) greatly underestimated the amount of cadmium accumulated in ground squirrel tissue. Therefore, the average of the empirical tissue data was used rather than the modeled estimate of cadmium in ground squirrel tissue. For PCBs, the exposure model was parameterized for Arochlor 1254, as this was the only congener with sufficient data with which to parameterize the model. The 95% upper confidence level (UCL) of the surface soil Arochlor 1254 concentrations was used in the model. Concentration of PCB in the prey (ground squirrel) was estimated using a BTF factor developed using the method of Travis and Arms (1988).

Exposure through inhalation and oral ingestion was estimated and combined to calculate the final hazard quotient. Table 4.2-8 presents the results of the hazard quotient analysis for cadmium, and Table 4.2-9 presents the hazard quotient analysis for PCB. As shown in Table 4.2-8, using the high soil cadmium concentrations as presented in the SWRI and the low mallard TRV, the HQ is just below 1. However, recent soil sampling suggest the more realistic HQ is that presented for the low mallard TRV and the soil concentrations as reported in Bench et al., 2001. This analysis suggests cadmium is unlikely to pose a hazard to burrowing owls nesting in the vicinity of Building 850.

As shown in Table 4.2-9, concentrations of Arochlor 1254 in the soil at Building 850 may pose a hazard to burrowing owls nesting in the area, as the HQ exceeds 1. Additional refinement of the model to more accurately reflect area utilization is planned. In addition, the impacts of removing soil from just the higher concentration areas on the estimated HQ will be analyzed.

In addition, in the upcoming winter and spring months, the firing table area will be further evaluated for the presence of standing water generated by runoff that could be used as breeding habitat for aquatic invertebrates or amphibians

If such surface water is present, sampling the water for the presence of PCB and dioxin/furans compounds will be explored.

5. Data Management Program

The management of data collected as part of the first semester 2004 compliance monitoring at Site 300 was subject to the standard Environmental Restoration Division (ERD) data management

process and standard operating procedures. This process tracks sample and analytical information from the initial sampling plan through data storage in a relational database. As part of the standard procedures for data quality, this process includes chain-of-custody tracking, electronic and hard copy analytical results receipt, strict data validation and verification, data quality control procedures, and data retrieval and presentation. The use of this system promotes and provides a consistent data set of known quality. Quality assurance and quality control are performed uniformly on all data.

5.1. Modifications to Existing Procedures

There were no modifications to existing procedures.

5.2. New Procedures

The Site 300 CMP sampling plan was developed based upon the negotiated sampling locations and frequencies. New web-generated scripts were developed to query the database for ground water data and for the analytical data at all CMP locations. The responsible task leaders performed an accuracy review of the locations and requested analyses to be reported for each area prior to table generation.

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 Manual, Site Safety Plan, and Quality Assurance Management Plan. Section 6 discusses any modifications to existing LLNL quality assurance/quality control (QA/QC) procedures or any new QA/QC procedures that were implemented during this reporting period, as well as self-assessments, quality issues and corrective actions, and analytical and field quality control.

6.1. Modifications to Existing Procedures

In September 2003, SOPs were reviewed, revised, controlled and released as Revision 11. Revision 11 included all of chapter 2 and portions of chapters 1 and 4 consisting mostly of ground water sampling related procedures.

6.2. New Procedures

There were no new procedures written during this reporting period.

6.3. Self-assessments

Self-assessments are performed by the ERD on an annual basis and by Safety and Environmental Protection Environmental Safety and Health (ES&H) teams on a triennial basis. These assessments are used to evaluate ongoing treatment facility activities to QA and ES&H requirements and procedures. During this reporting period, there were a total of seven assessments performed, mostly by agencies outside LLNL.

6.4. Quality Issues and Corrective Actions

Quality improvement, nonconformance, and corrective action reporting is documented using the Quality Improvement Form (QIF). A total of nine QIFs were processed during this reporting period. Suggested improvements were addressed and corrective measures employed to improve related processes. Some of the specific corrective actions implemented this reporting period included: assigning the appropriate parameter code for total phosphorous and reporting correct units of measurement for EPA 8021 and chromium analyses by outside contract analytical labs (CALs); labeling of sampling ports in the TF834, and proper storage of analytical data derived from the EM8015 analysis. The QIFs are successfully closed-out as suggested improvements are implemented.

6.5. Analytical Quality Control

Data review, validation, and verification are conducted on 100% of the incoming analytical data. CALs are contractually required to provide internal quality control checks in the form of method blanks, laboratory control samples, matrix spikes, and matrix spike or sample duplicate results with every analysis. These results are evaluated during the data review process and are used to determine data quality. Data flags are used to inform the end user of insufficiencies detected during the data review process. A data qualifier flag is being assigned to recently obtained EM8015 analytical results in response to the QIF generated regarding proper storage of said results. The CAL reports the EM8015 results as “diesel range organics” and as part of the corrective action to better manage these data a “G”flag stating that data are “quantified using fuel calibration, but do not match typical fuel fingerprint” is being applied to the analytical results. Corrective measures are still underway to improve the management of these data and successfully close out the QIF.

6.6. Field Quality Control

Quality control is implemented during the sample collection process in the field. Ten percent of samples are collocated (5% intralaboratory and 5% interlaboratory). Field blanks and trip blanks are used to identify contamination that occurs during sample collection, transportation, or handling of samples at the analytical laboratory. Equipment blanks are used to determine the effectiveness of decontamination processes of portable equipment used for purging and/or sample collection. There were no significant problems encountered during this reporting period.

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Figures

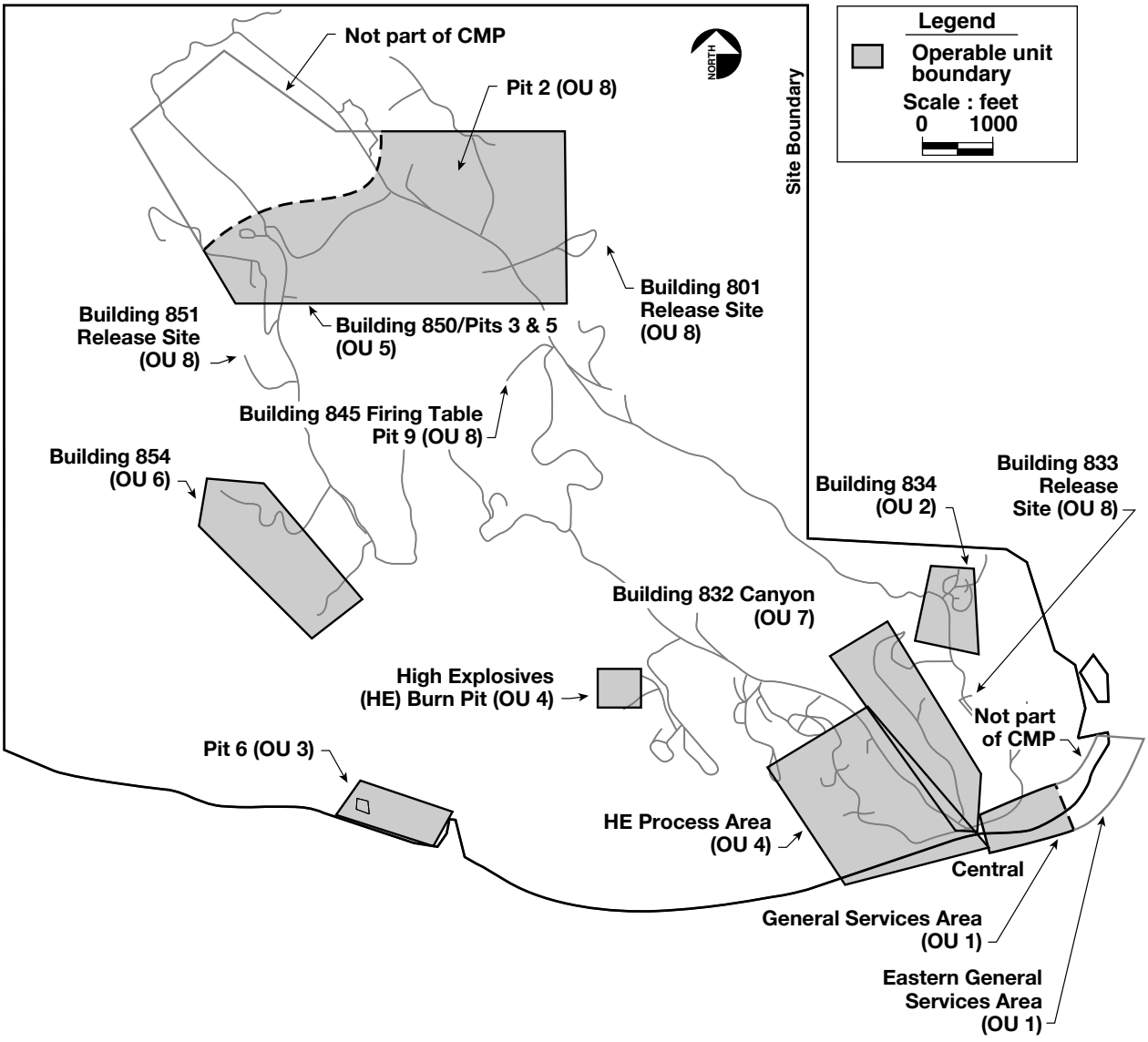

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Figure 2-1. Site 300 map showing OU locations.

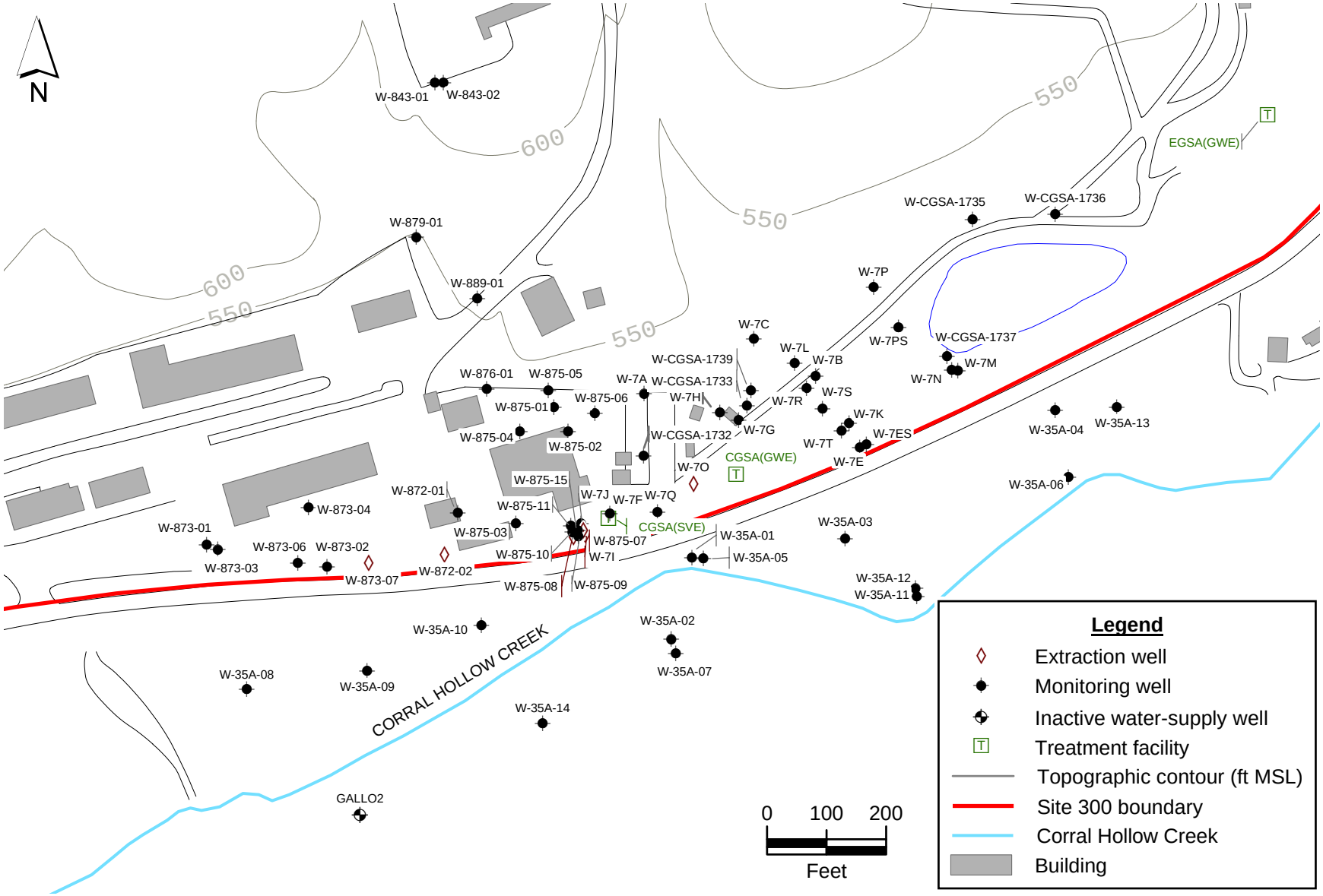


Figure 2.1-1. Central General Services Area OU site map showing monitoring, extraction and water-supply wells, and treatment facilities.

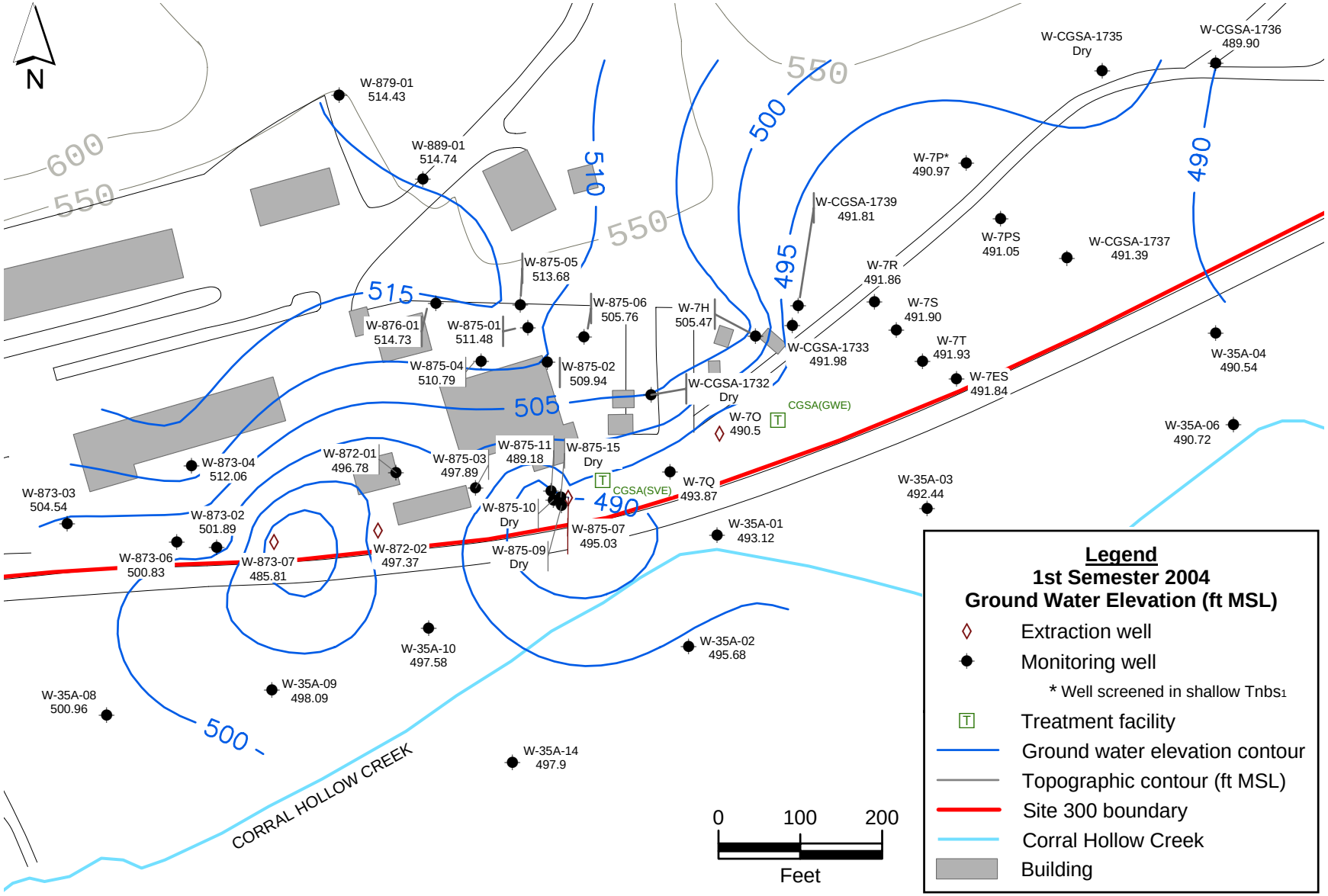


Figure 2.1-2. Central General Services Area OU ground water potentiometric surface map for the Qt-Tnsc$_1$ HSU.

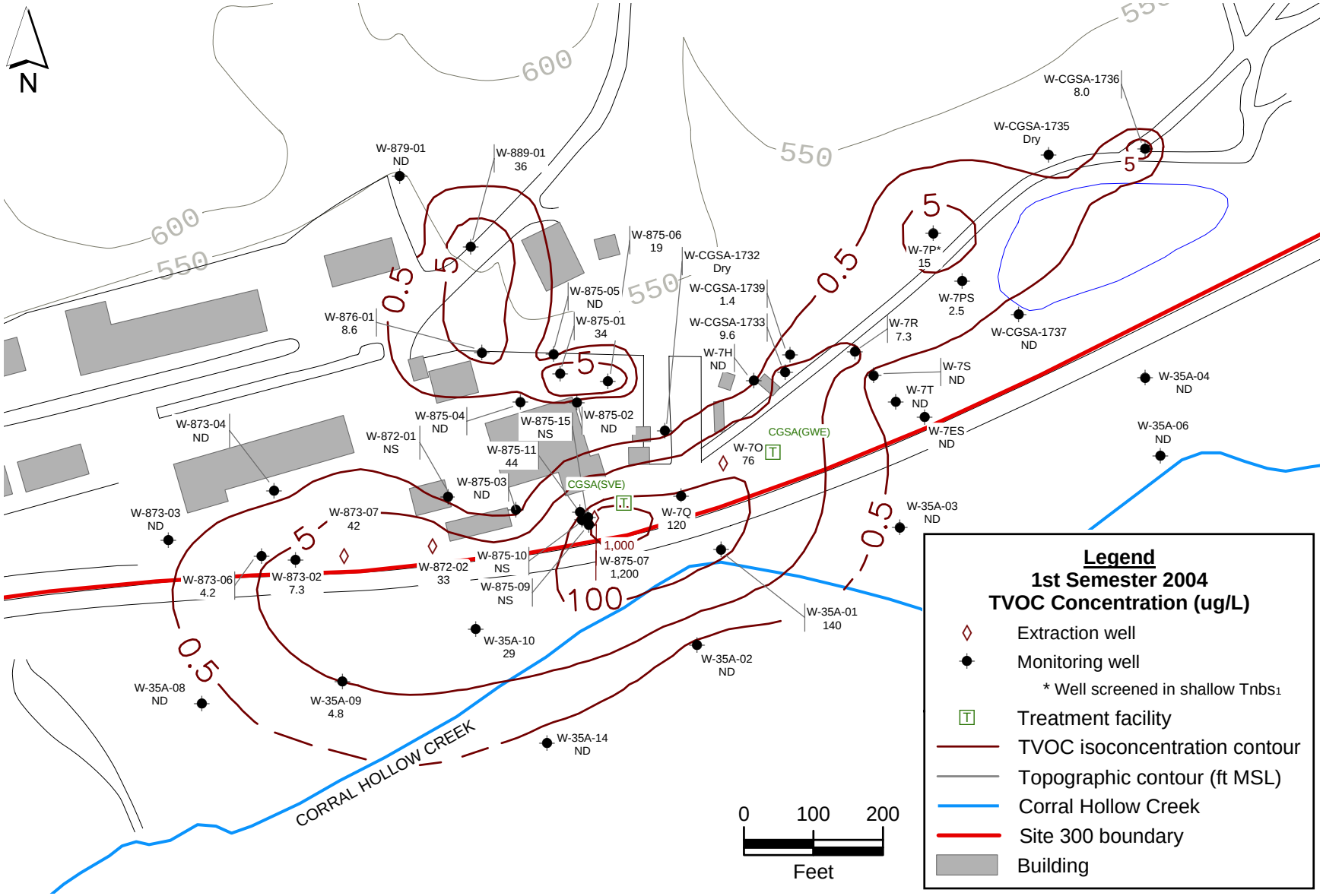


Figure 2.1-3. Central General Services Area OU TVOC isoconcentration contour map for the Qt-Tnsc$_1$ HSU.

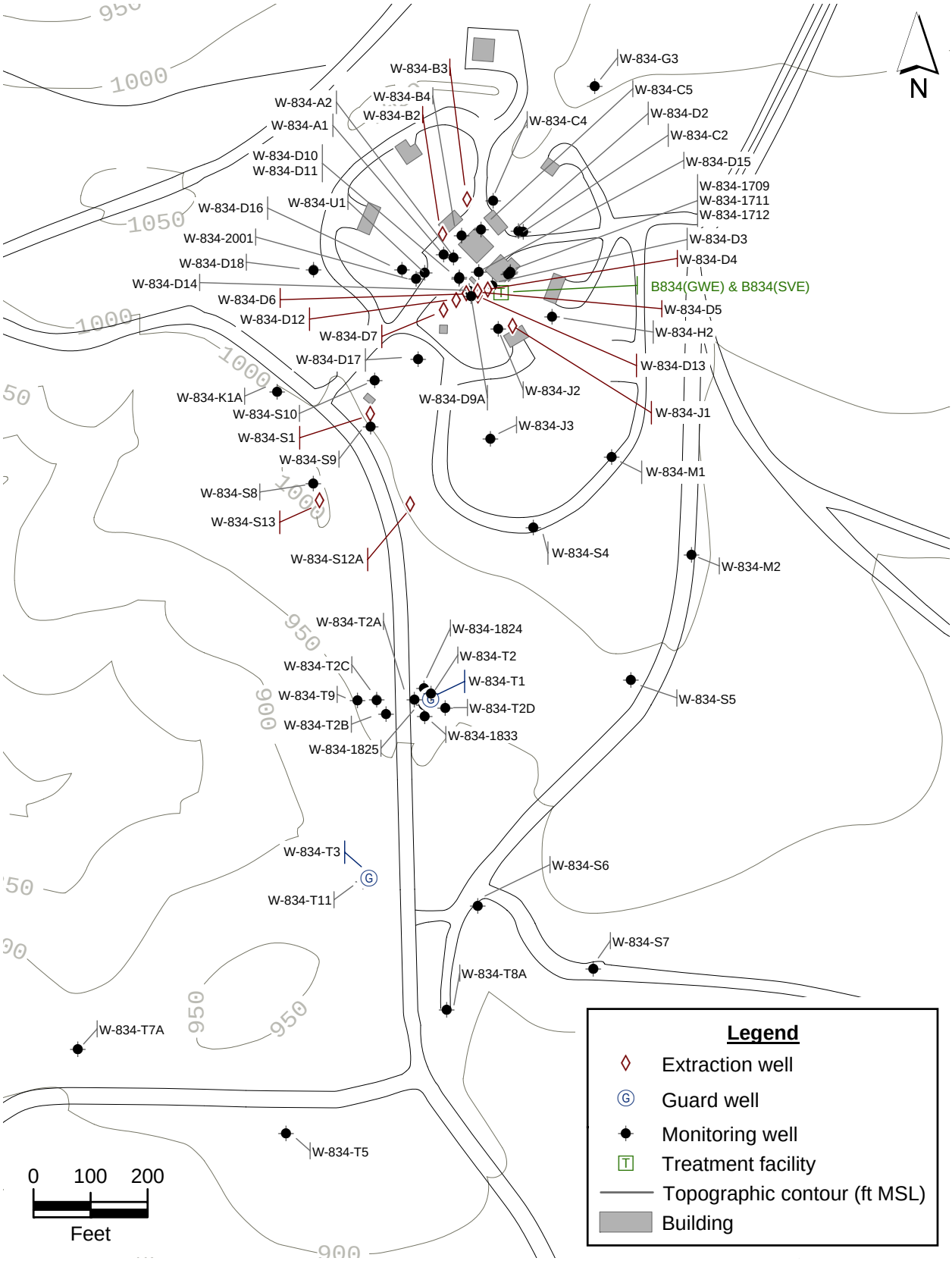


Figure 2.2-1. Building 834 OU site map showing monitoring, extraction, and guard wells.

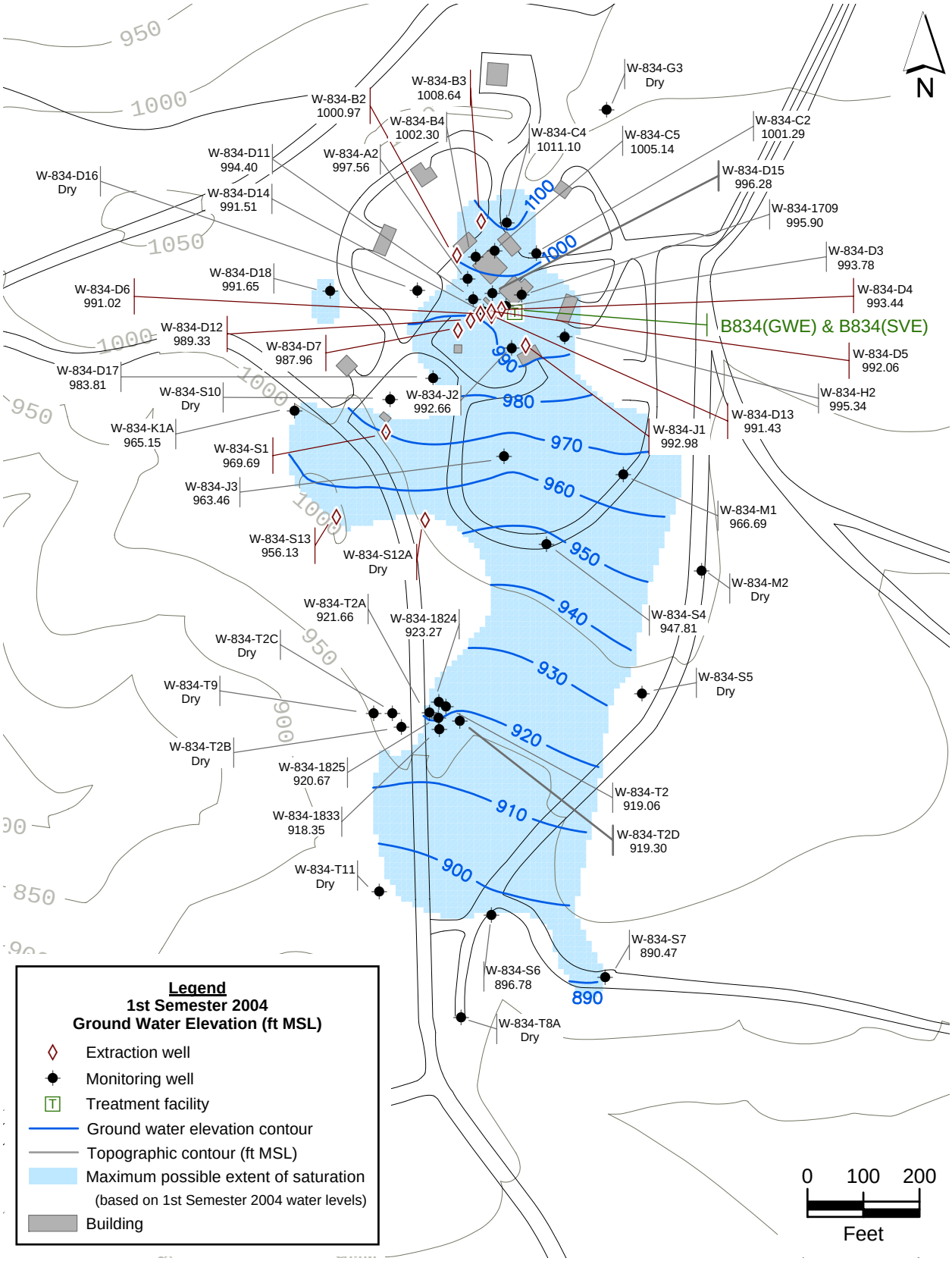


Figure 2.2-2. Building 834 OU ground water potentiometric surface map for the Tpsg perched water-bearing zone.

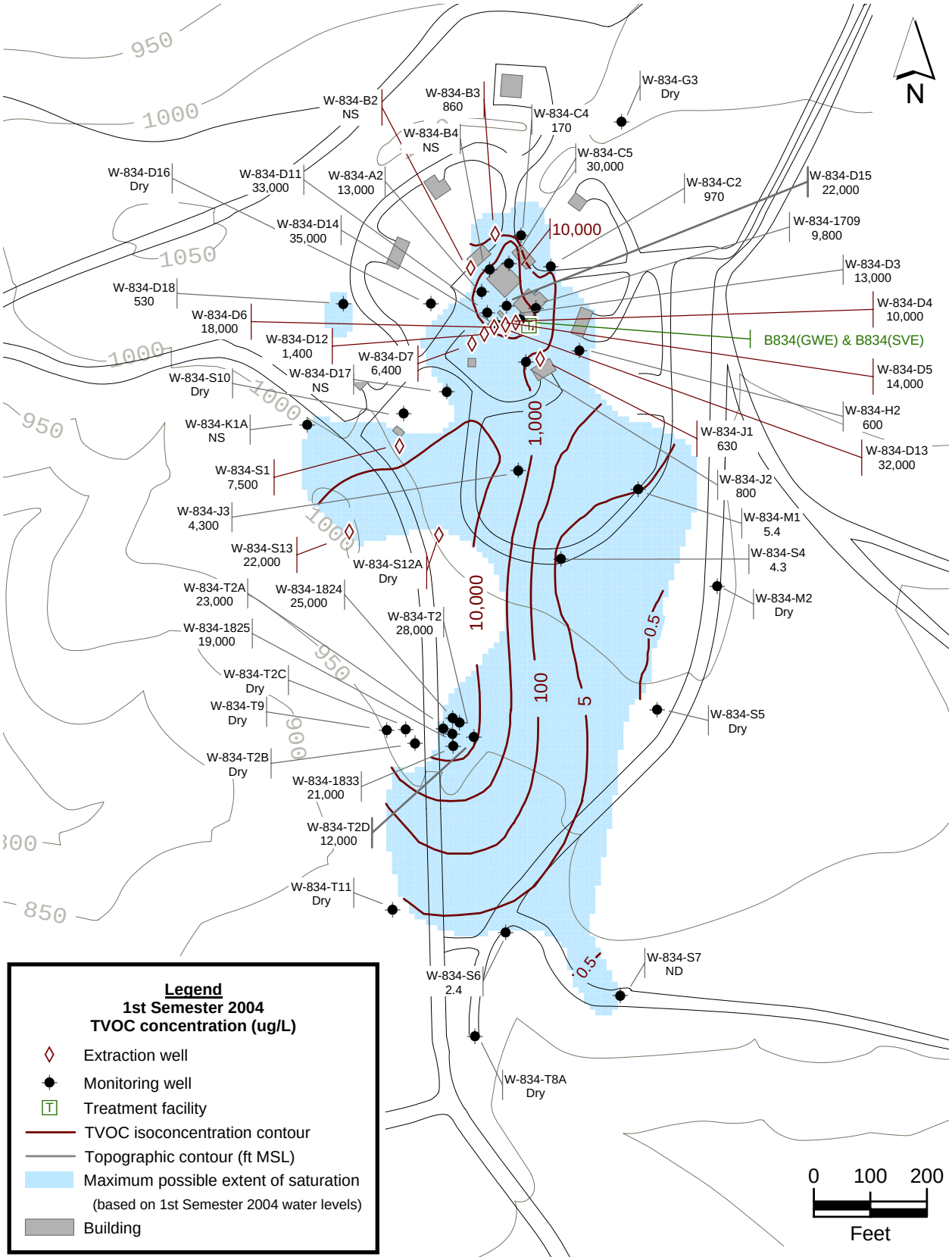


Figure 2.2-3. Building 834 OU TVOC isoconcentration contour map for the Tpsg perched water-bearing zone.

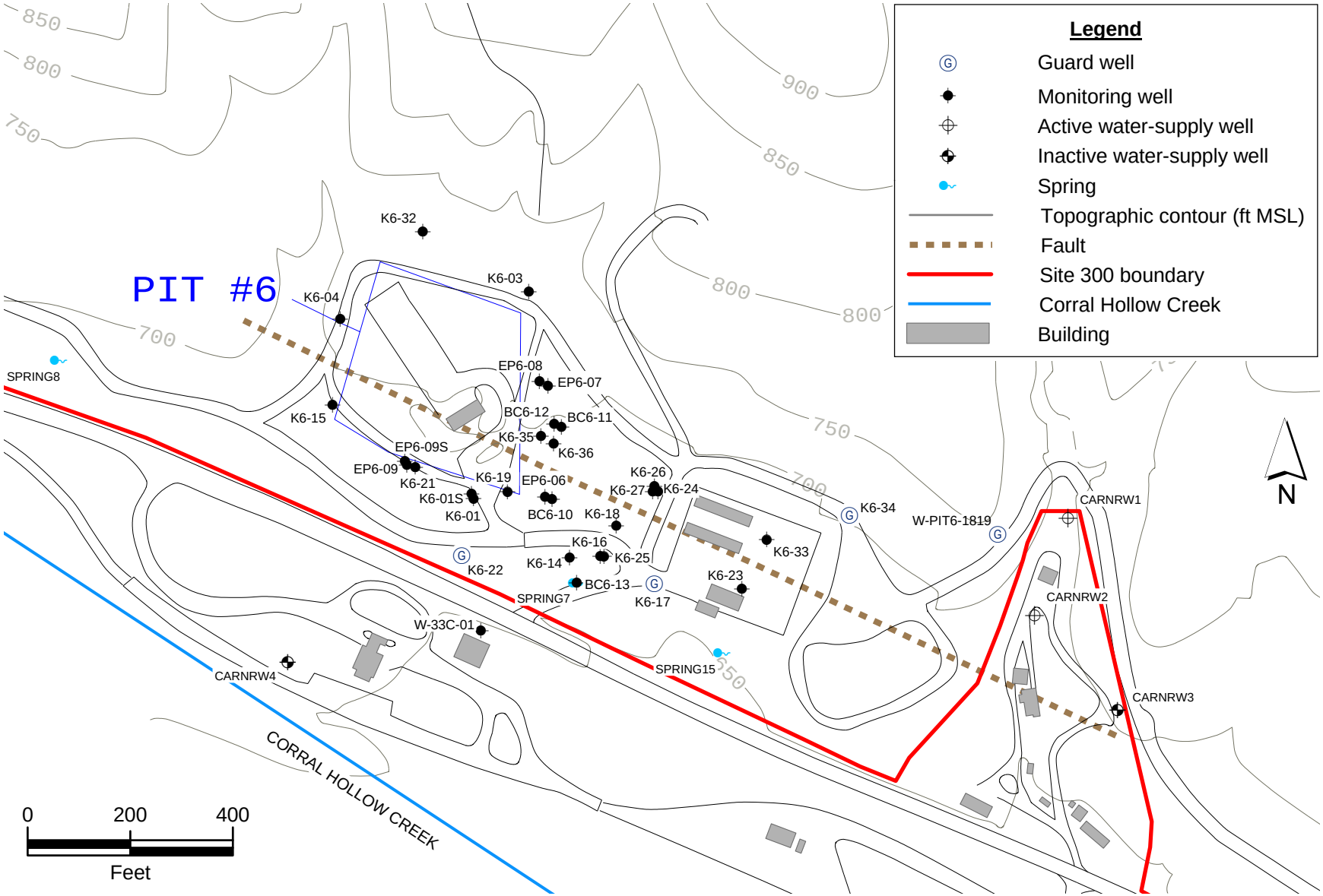


Figure 2.3-1. Pit 6 Landfill OU site map showing monitoring and water-supply wells.

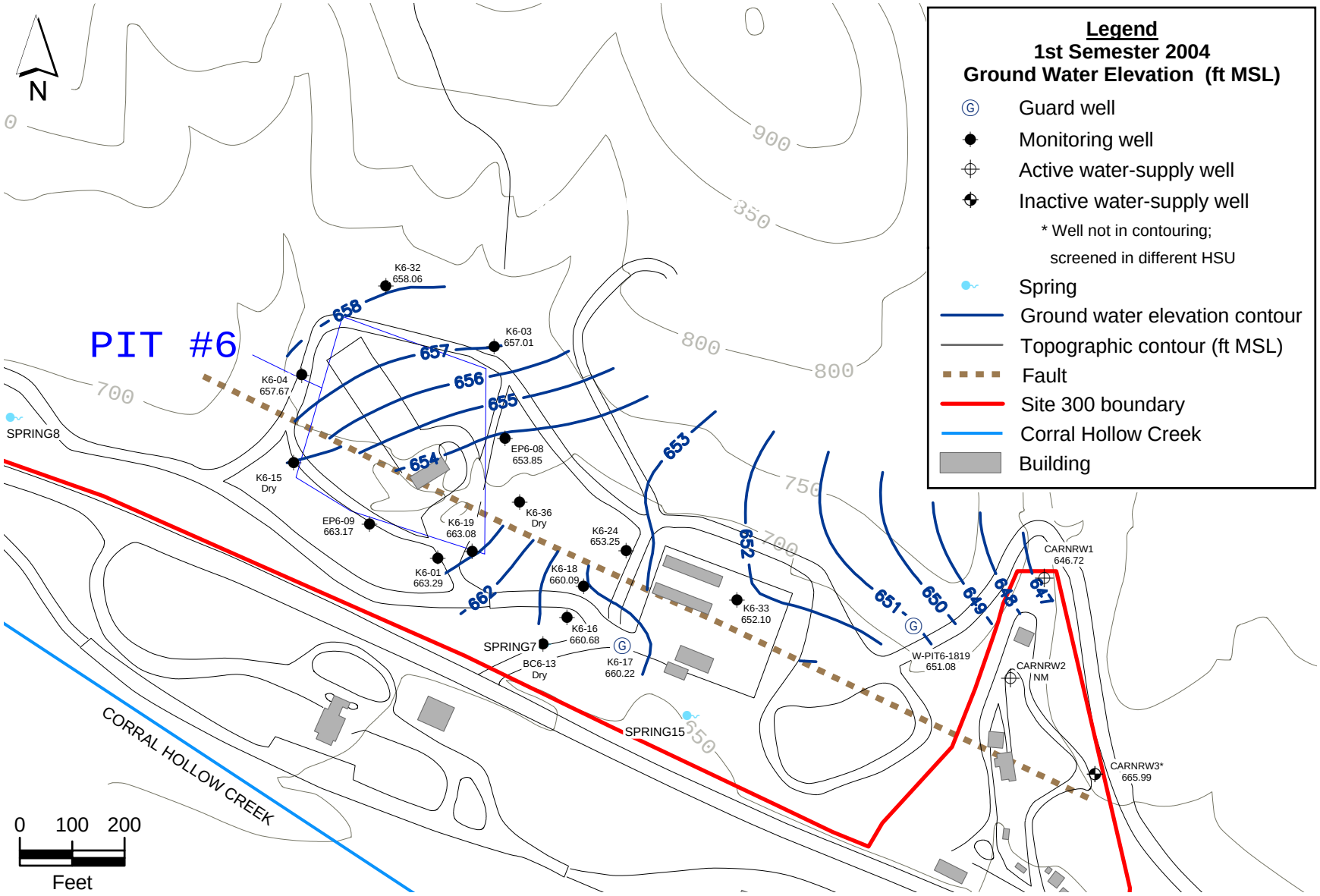


Figure 2.3-2. Pit 6 Landfill OU ground water potentiometric surface map for the first water-bearing zone.

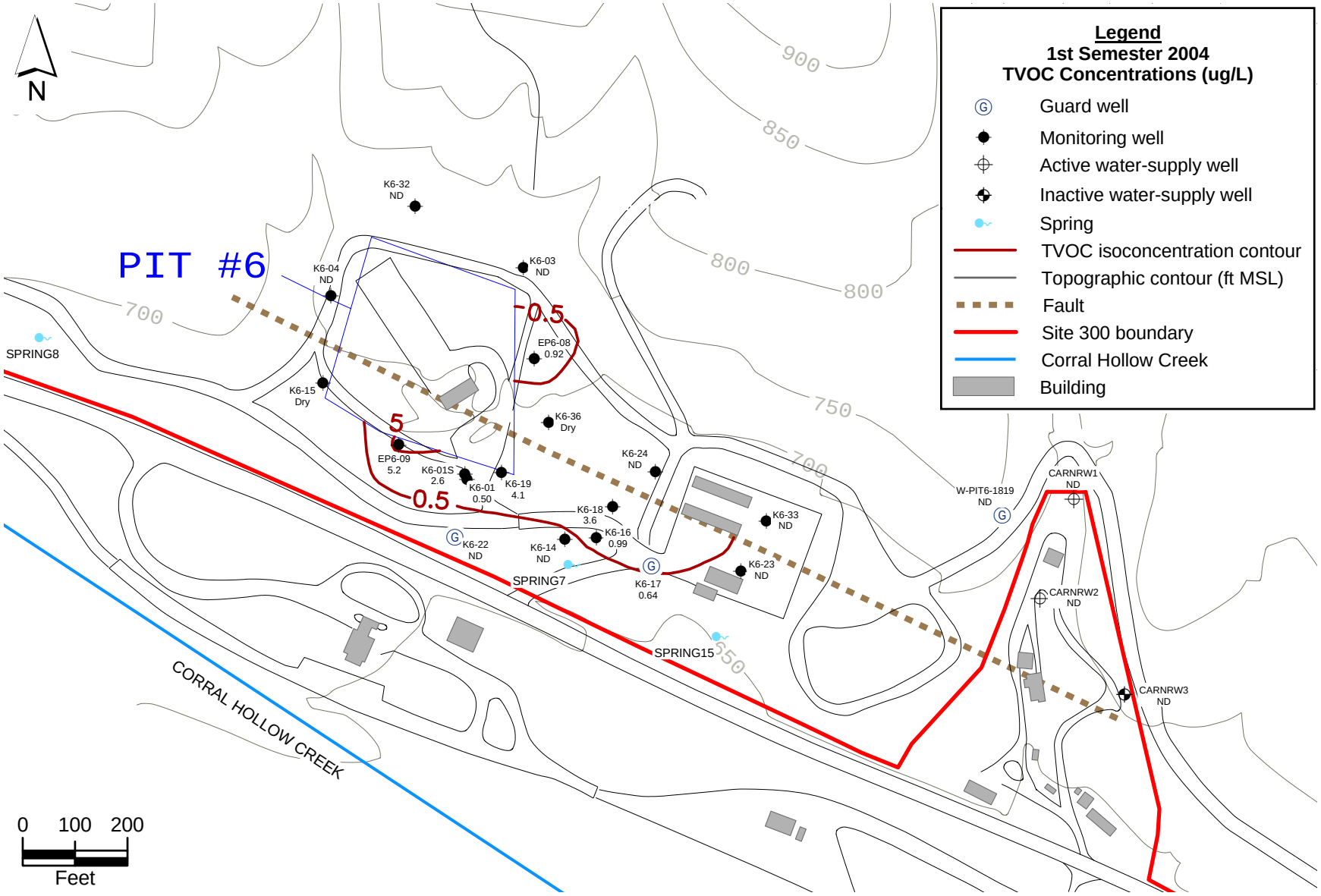


Figure 2.3-3. Pit 6 Landfill OU TVOC isoconcentration contour map for the first water-bearing zone.

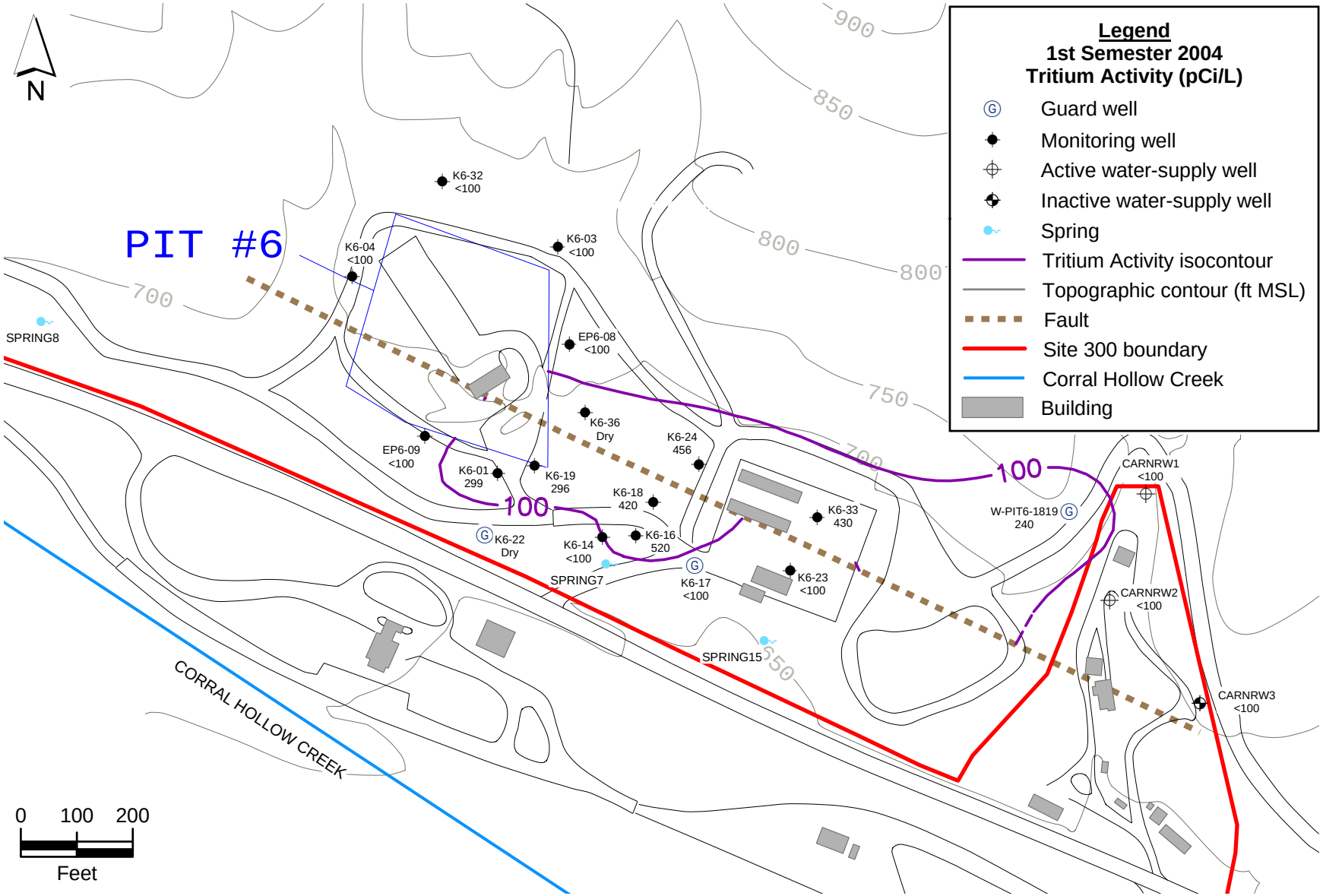


Figure 2.3-4. Pit 6 Landfill OU tritium isoconcentration contour map for the first water-bearing zone.

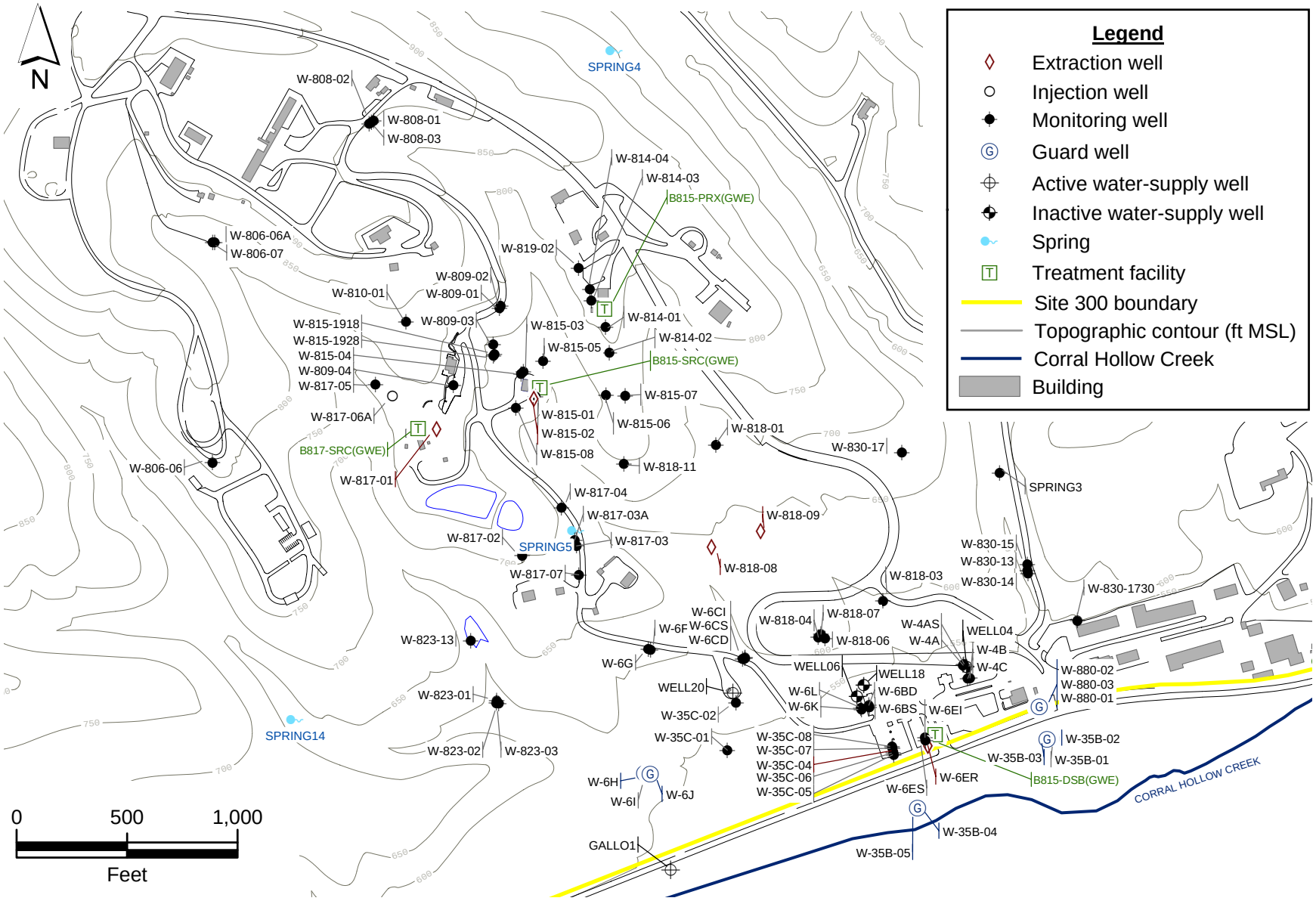


Figure 2.4-1. High Explosive Process Area OU site map showing monitoring, extraction and water-supply wells, and treatment facilities.

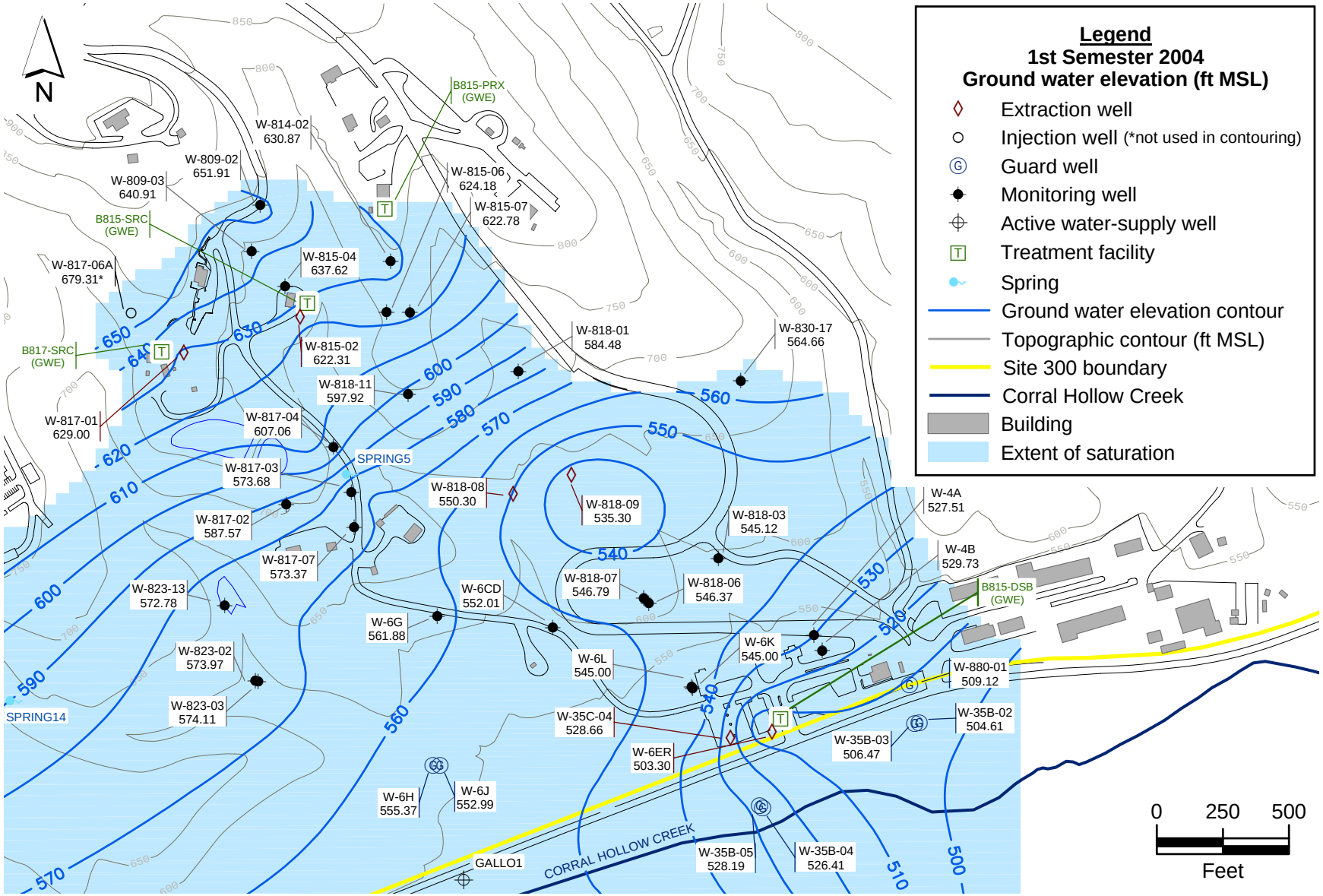


Figure 2.4-2. High Explosive Process Area OU ground water potentiometric surface map for the $Tnbs_2$ HSU.

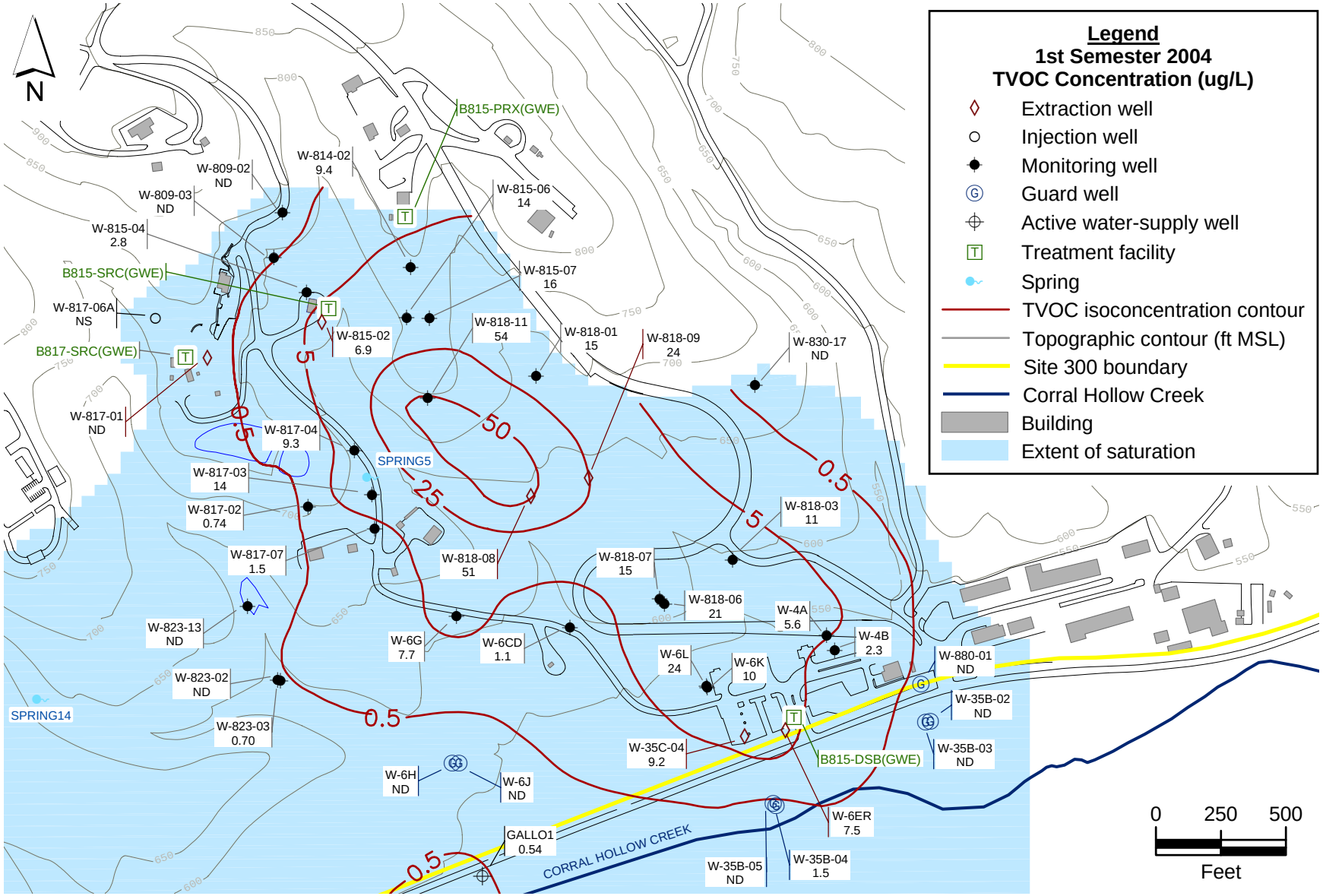


Figure 2.4-3. High Explosive Process Area TVOC isoconcentration contour map for the $Tnbs_2$ HSU.

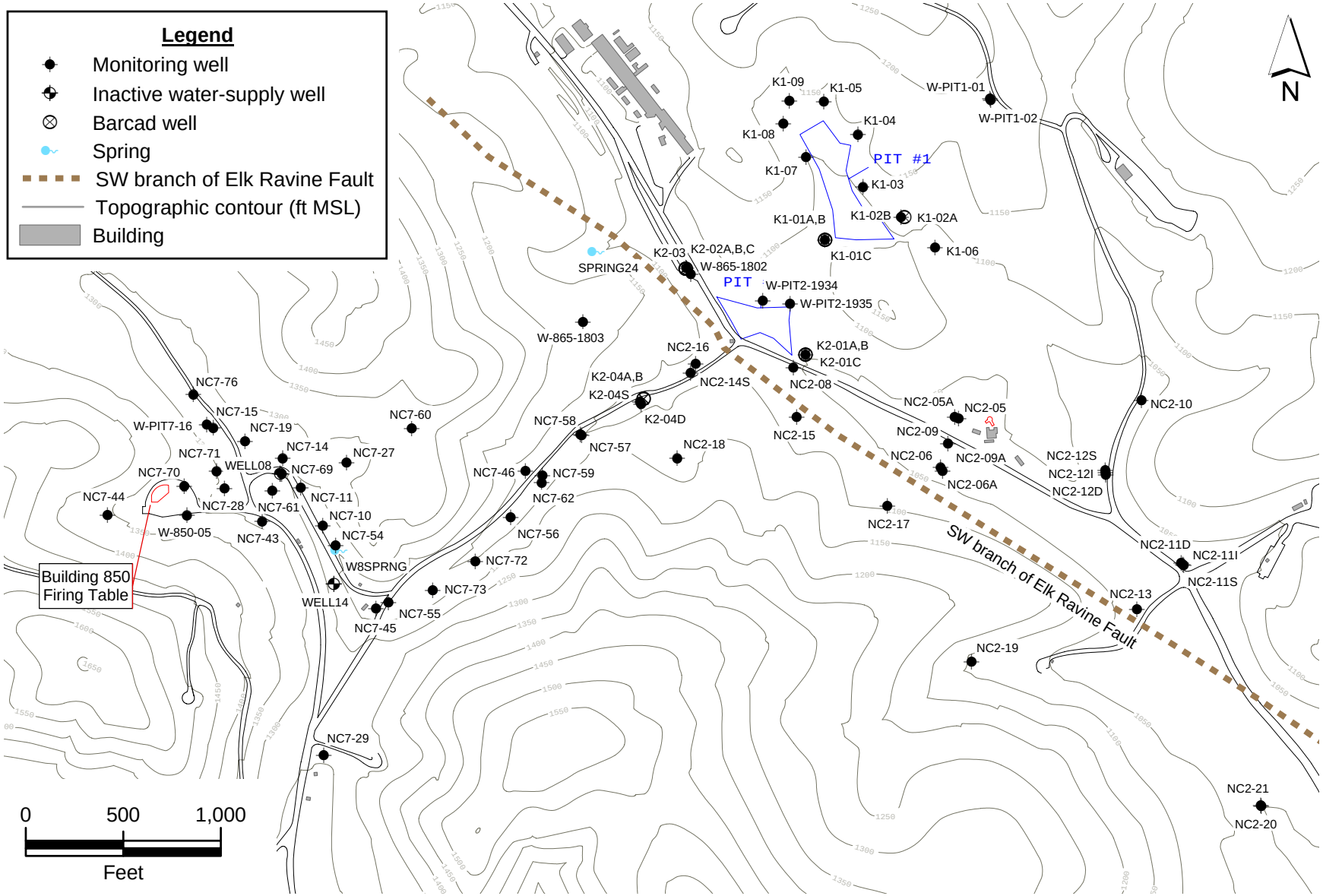


Figure 2.5-1. Building 850 OU site map showing monitoring wells and springs.

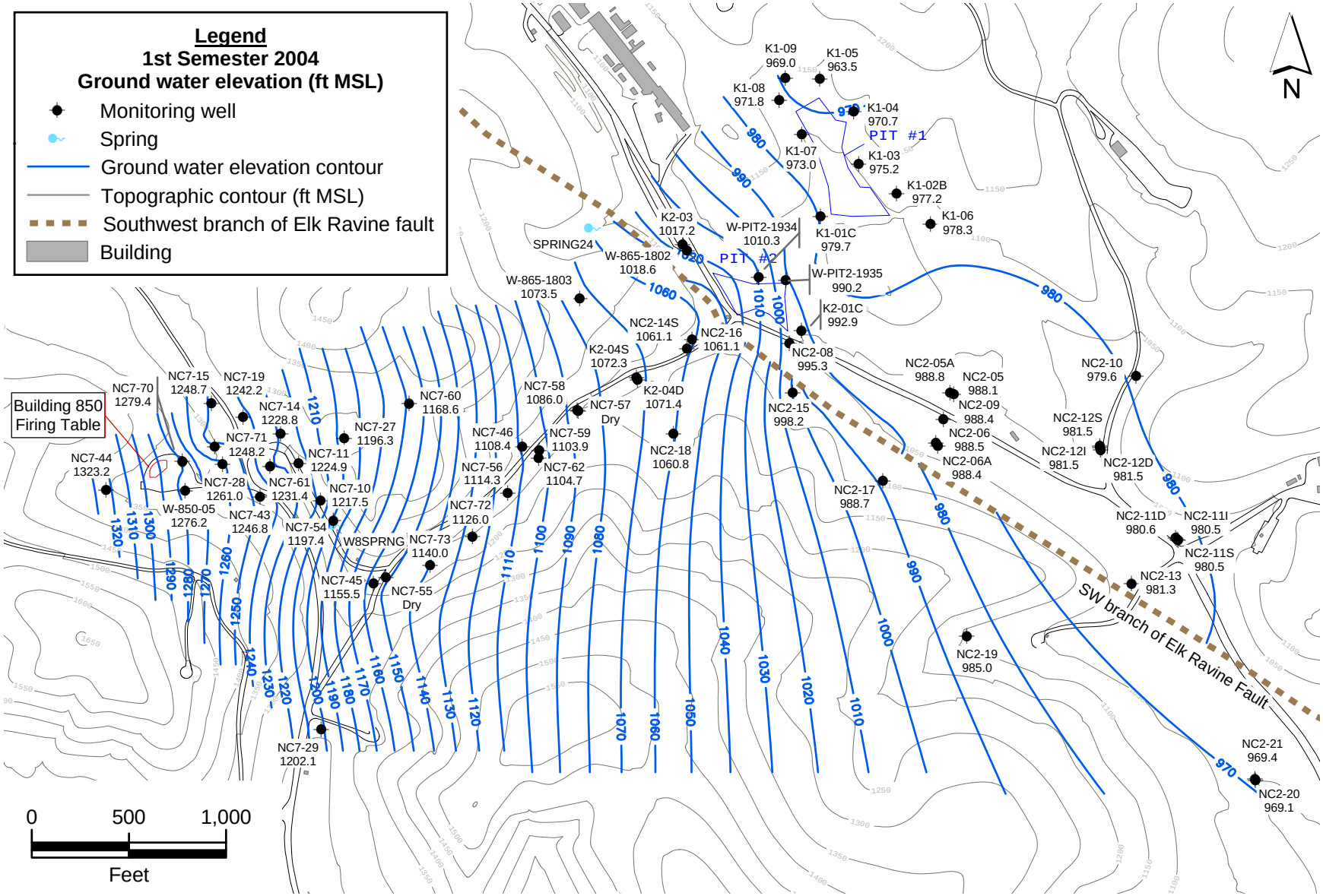


Figure 2.5-2. Building 850 OU ground water potentiometric surface map for the Qal-Tnbs$_1$ HSU.

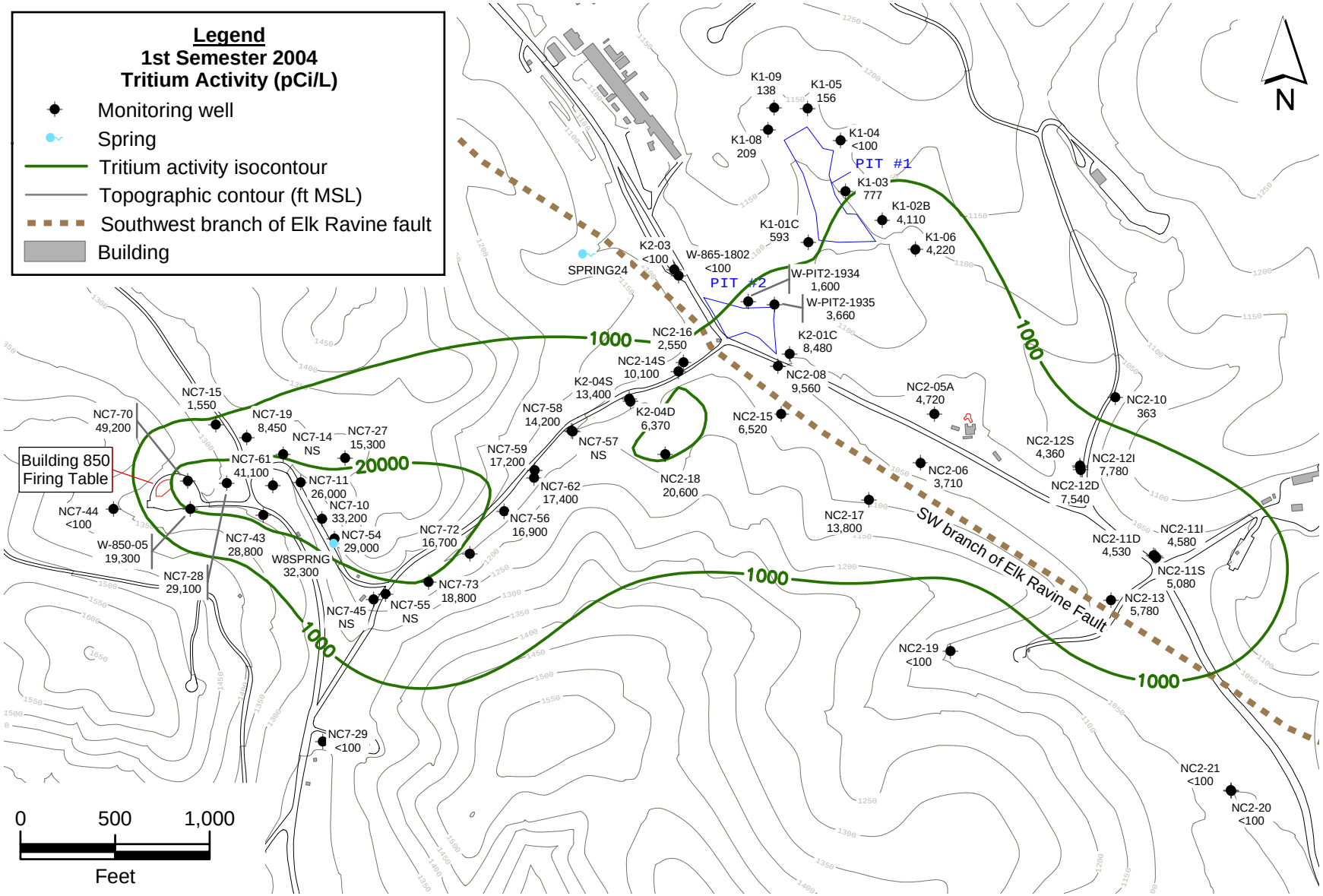


Figure 2.5-3. Building 850 OU tritium isoconcentration contour map for the Qal-Tnbs$_1$ HSU.

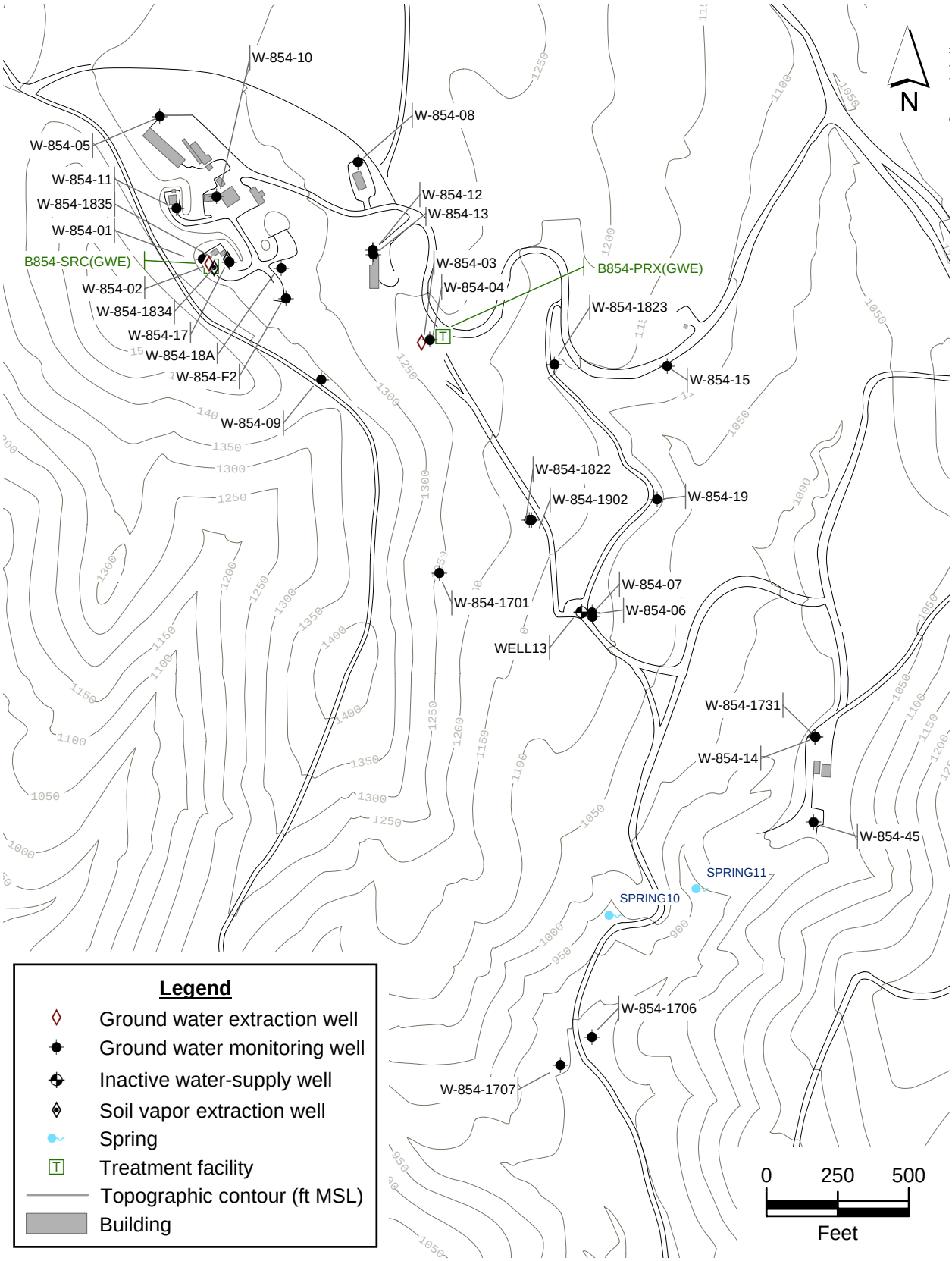


Figure 2.6-1. Building 854 OU site map showing monitoring and extraction wells, and treatment facilities.

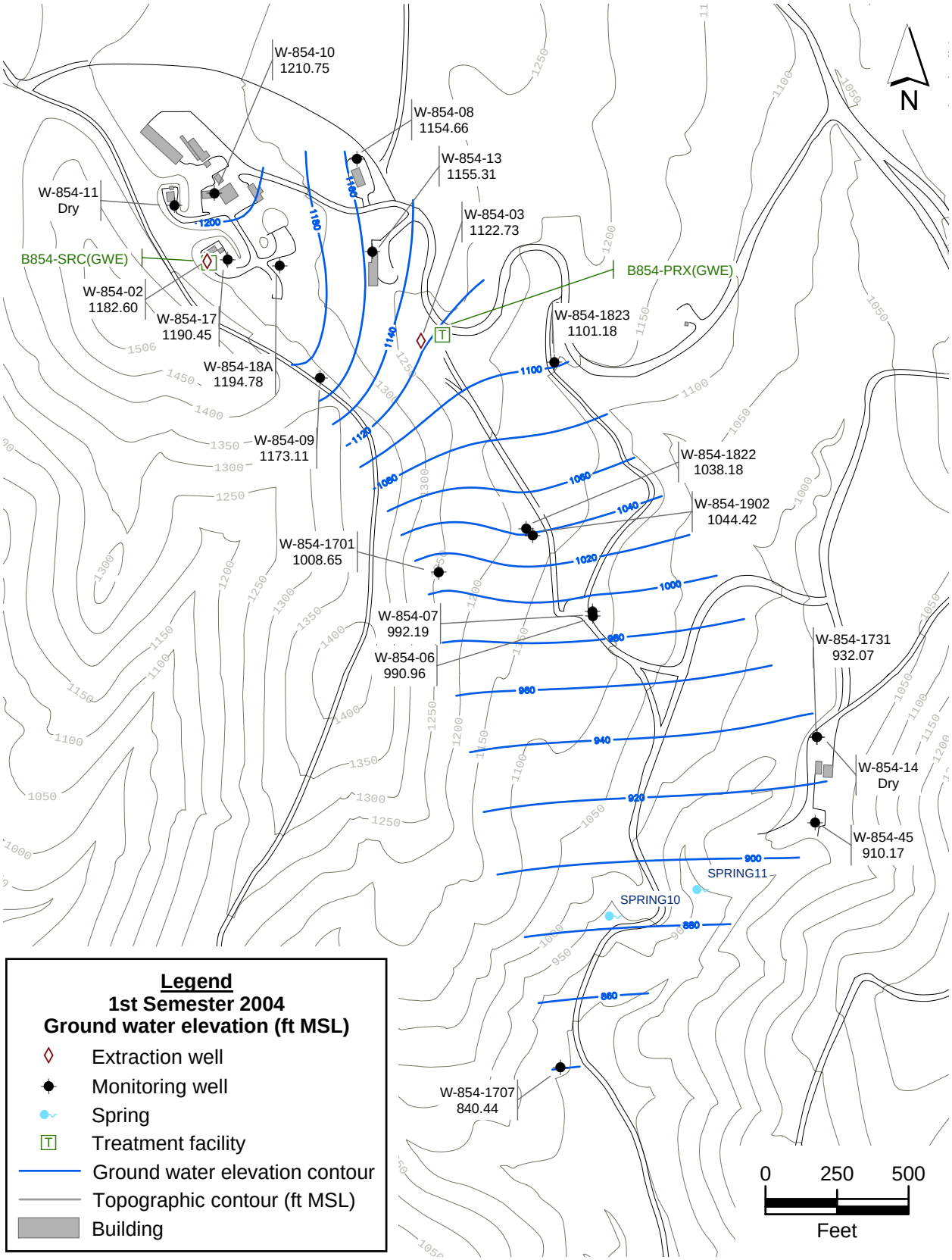


Figure 2.6-2. Building 854 OU ground water potentiometric surface map for the $Tnbs_0/Tnsc_1$ HSU.

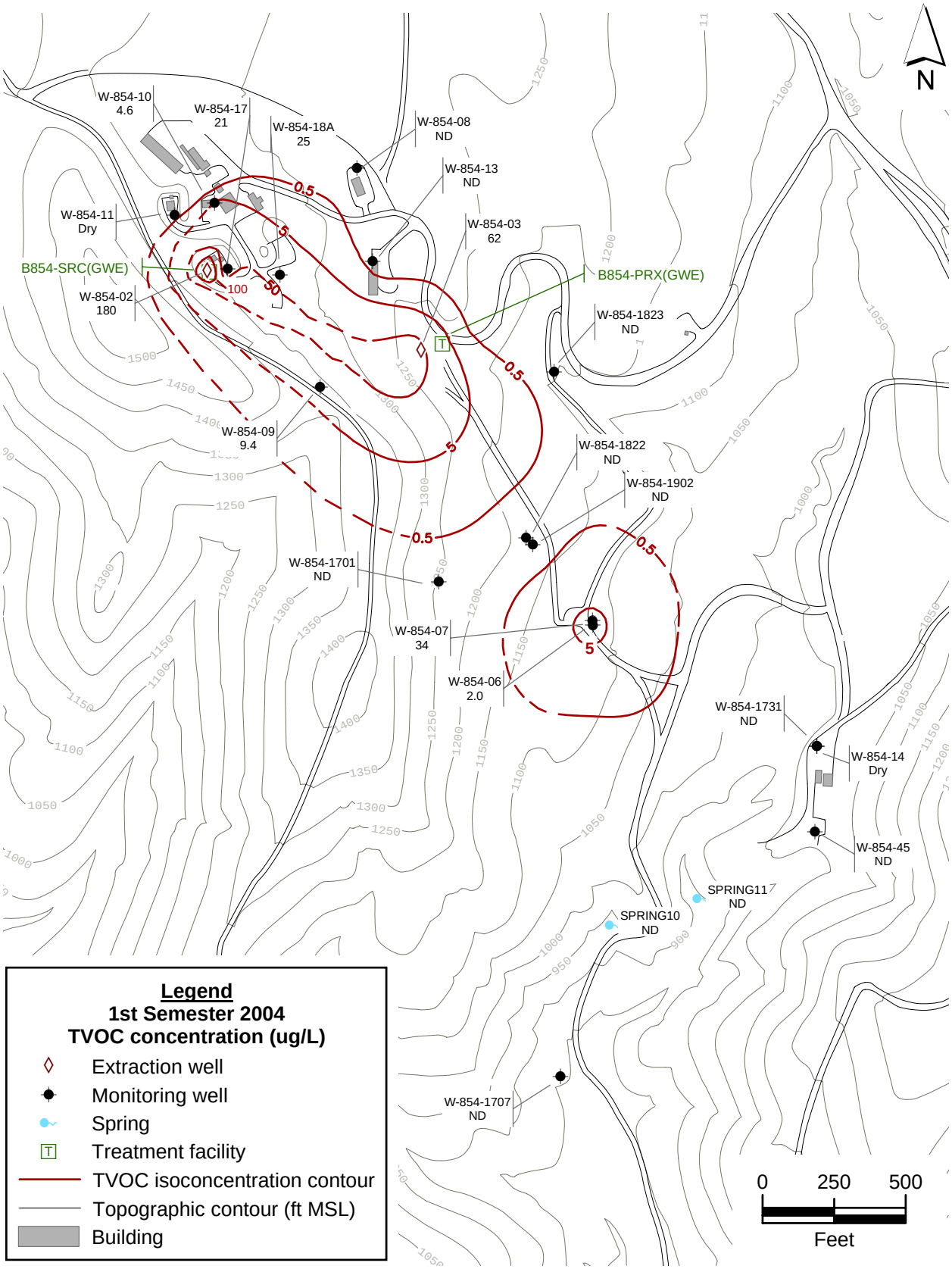


Figure 2.6-3. Building 854 OU TVOC isoconcentration contour map for the $Tnbs_0/Tnsc_1$ HSU.

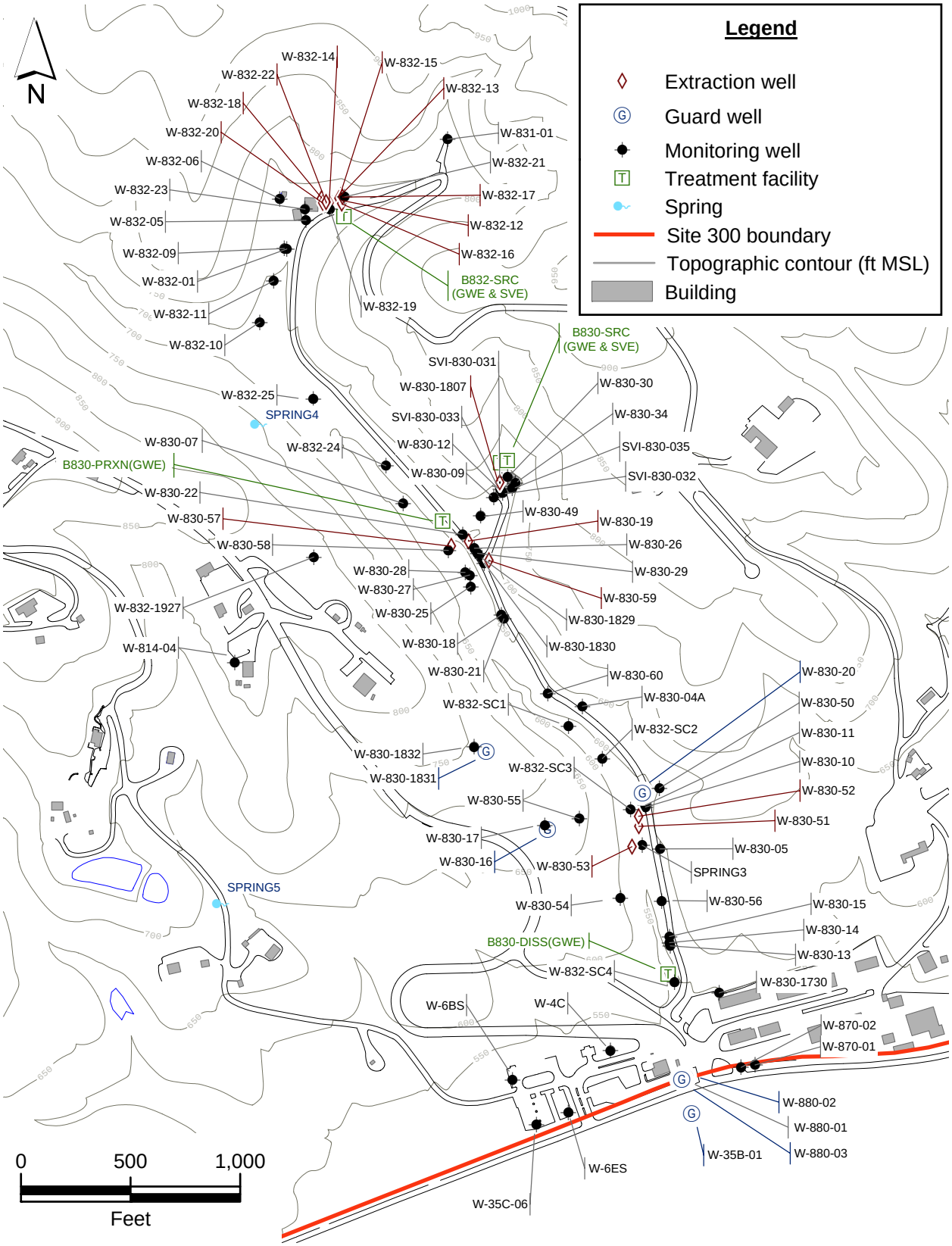


Figure 2.7-1. Building 832 Canyon OU site map showing monitoring, extraction and water-supply wells, and treatment facilities.

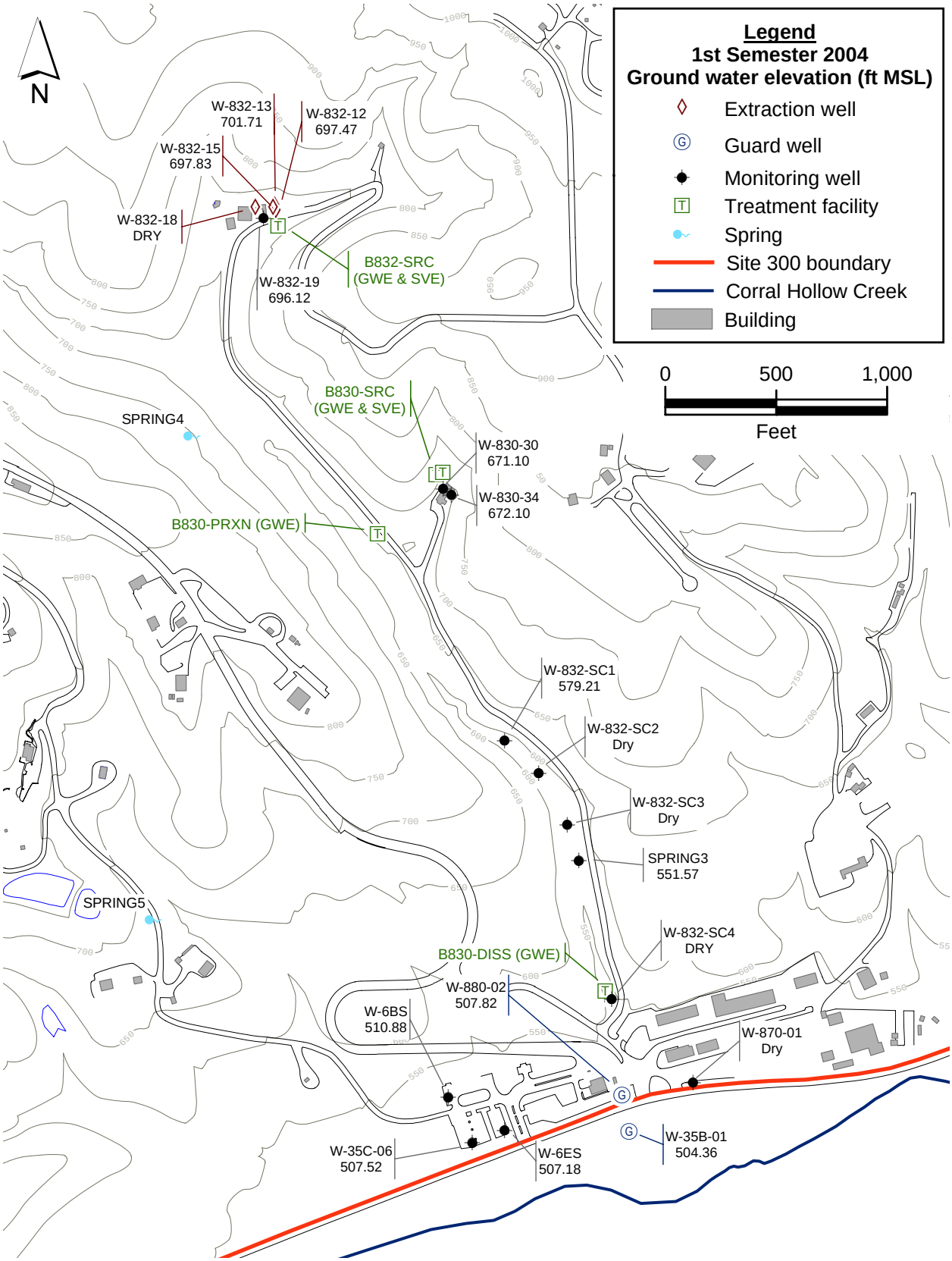


Figure 2.7-2. Building 832 Canyon OU map showing ground water elevations for the Qal /Fill.

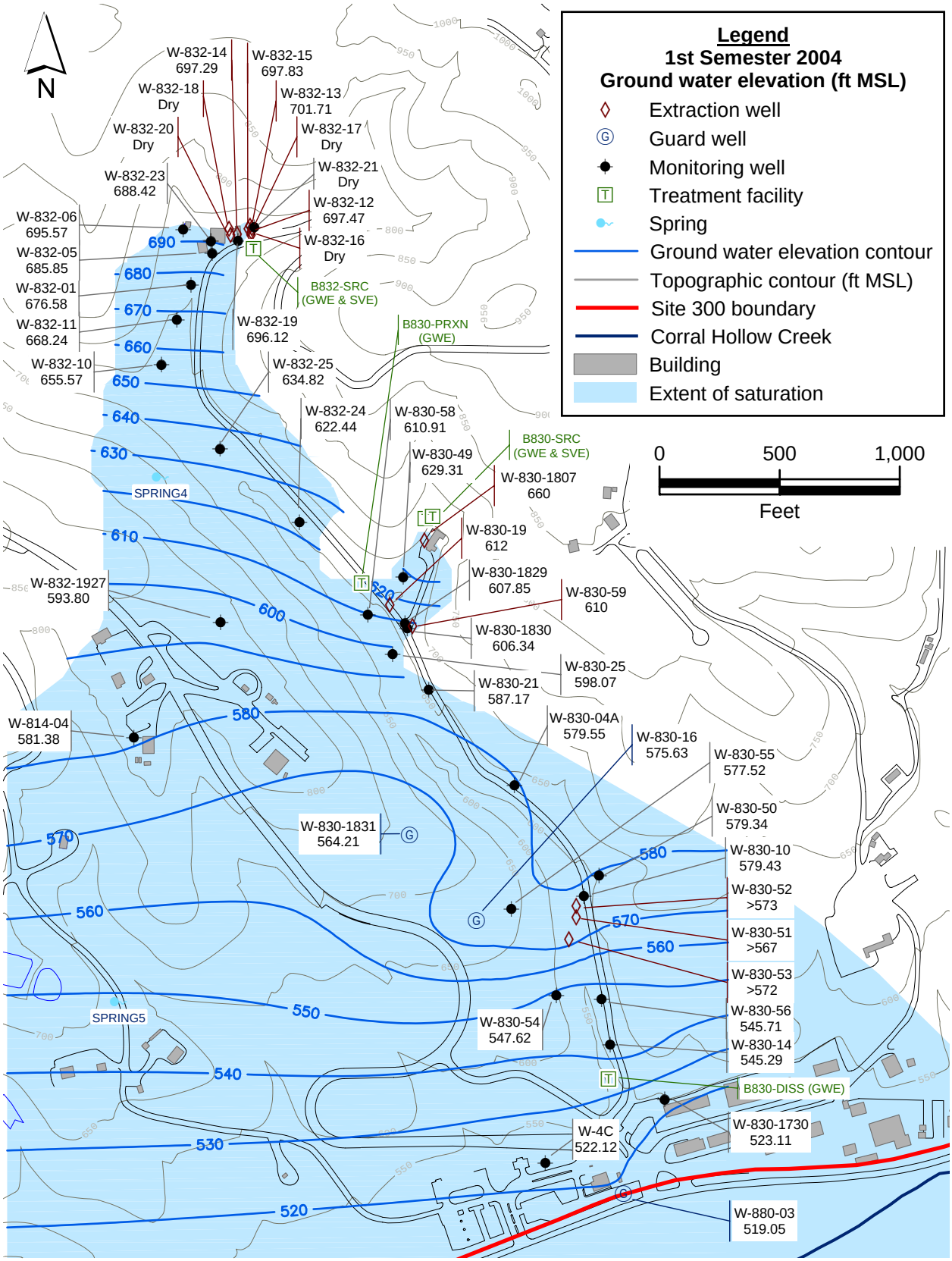


Figure 2.7-3. Building 832 Canyon OU ground water potentiometric surface map for the $Tnsc_{1b}$ HSU.

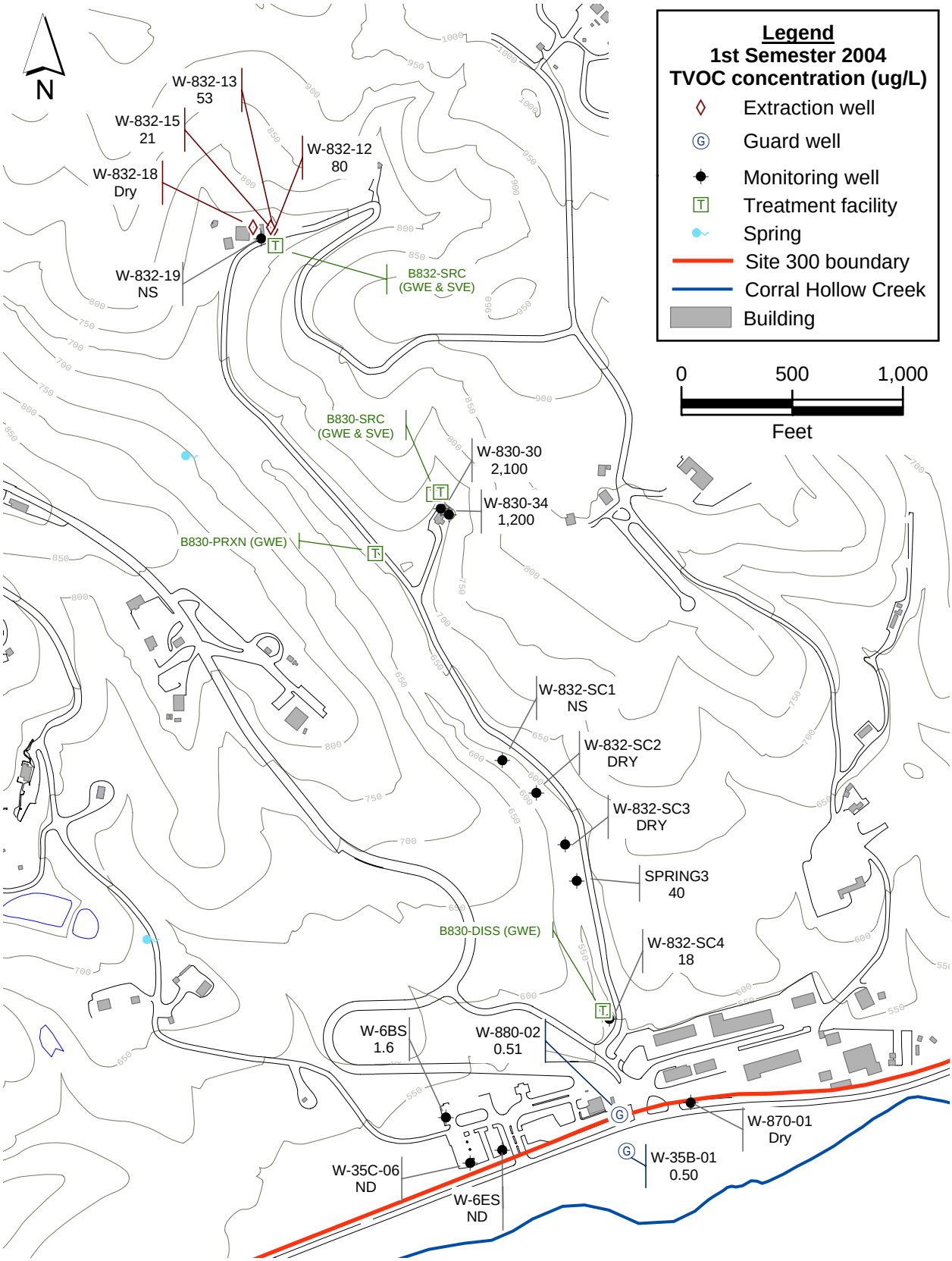


Figure 2.7-4. Building 832 Canyon OU map showing TVOC concentrations for the Qal /Fill.

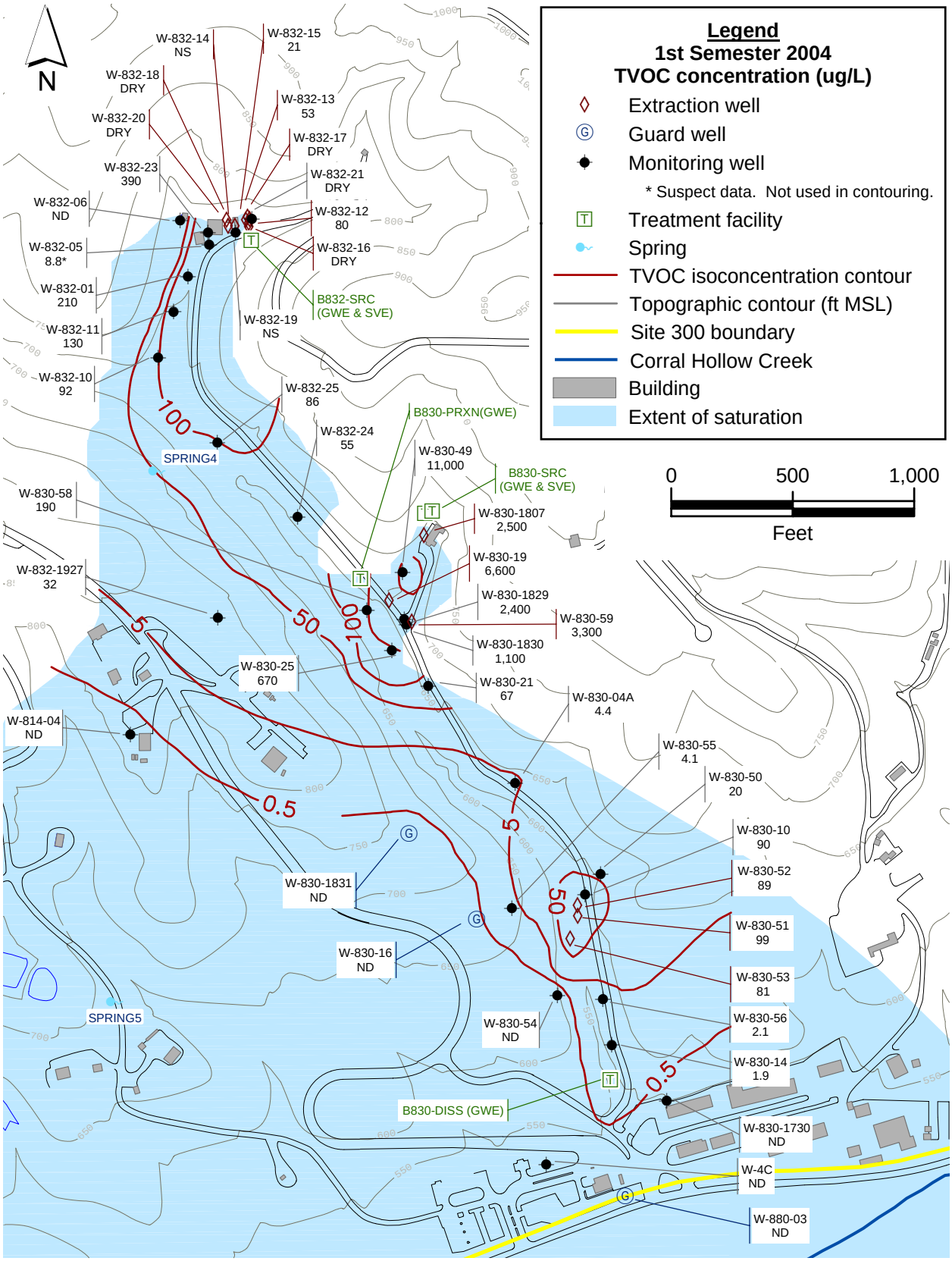


Figure 2.7-5. Building 832 Canyon OU TVOC isoconcentration contour map for the $Tnsc_{1b}$ HSU.

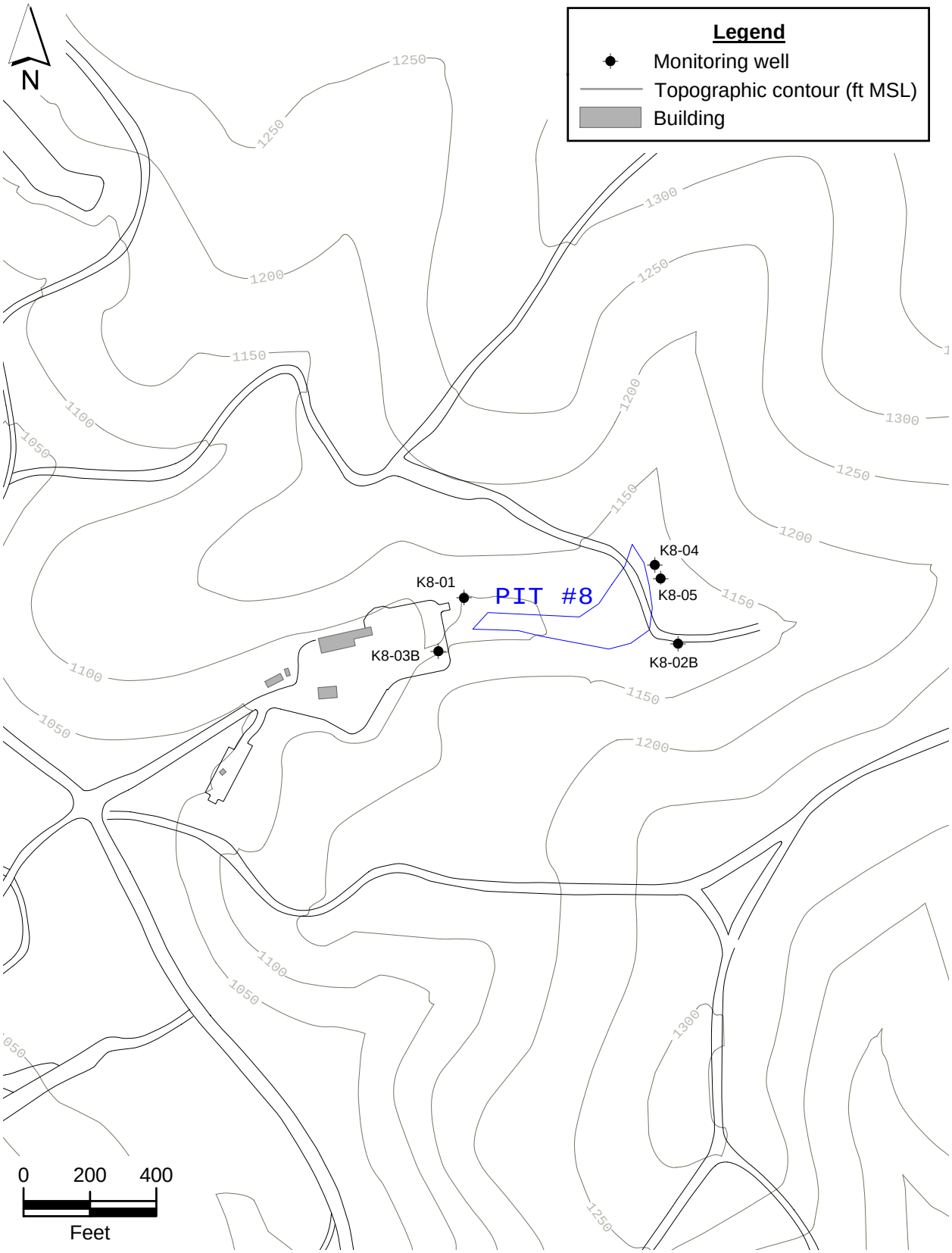


Figure 2.8-1. Building 801 Firing Table and Pit 8 Landfill site map showing monitoring wells.

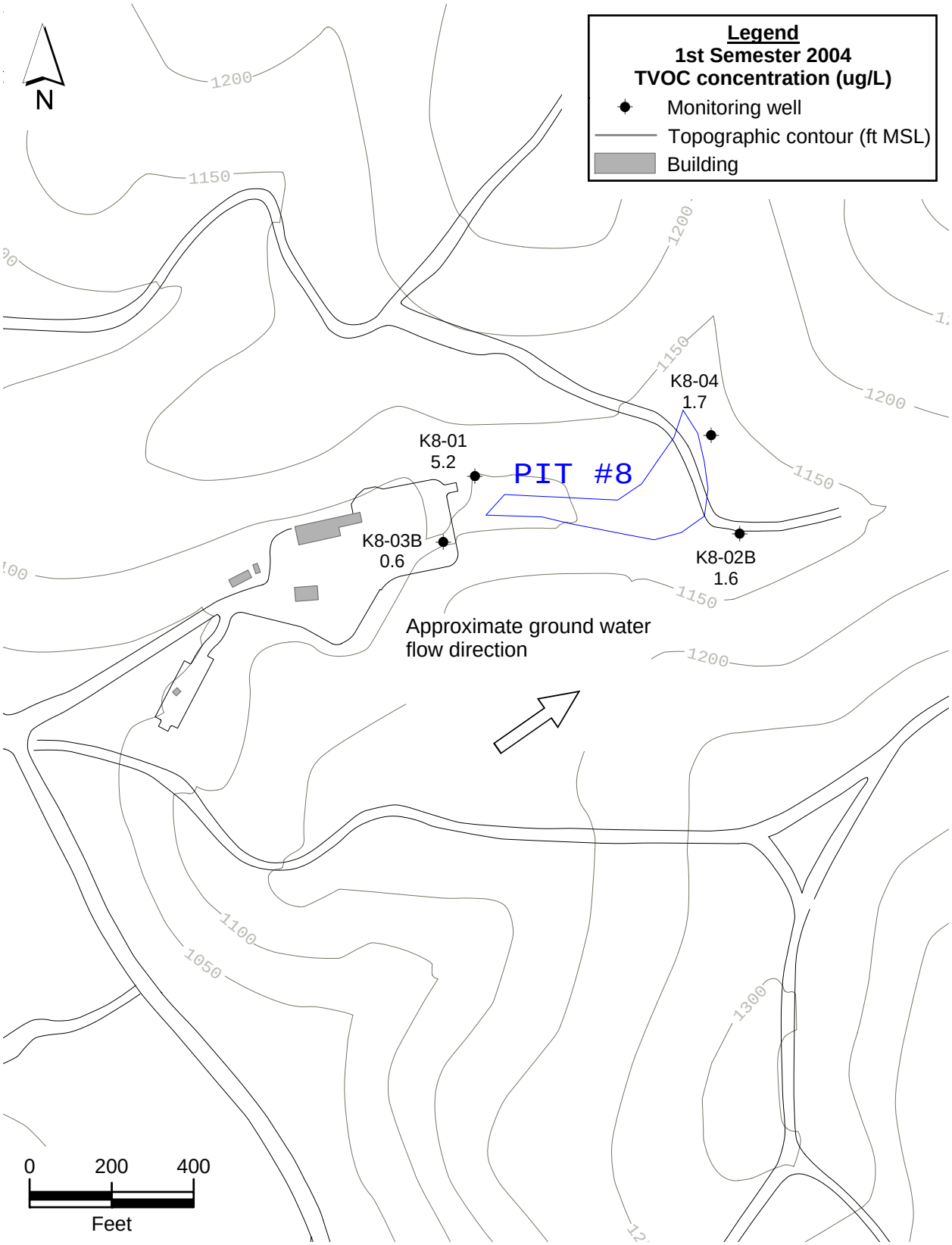


Figure 2.8-2. Building 801 Firing Table and Pit 8 Landfill site map showing TVOC concentrations in the $Tnbs_1$ HSU.

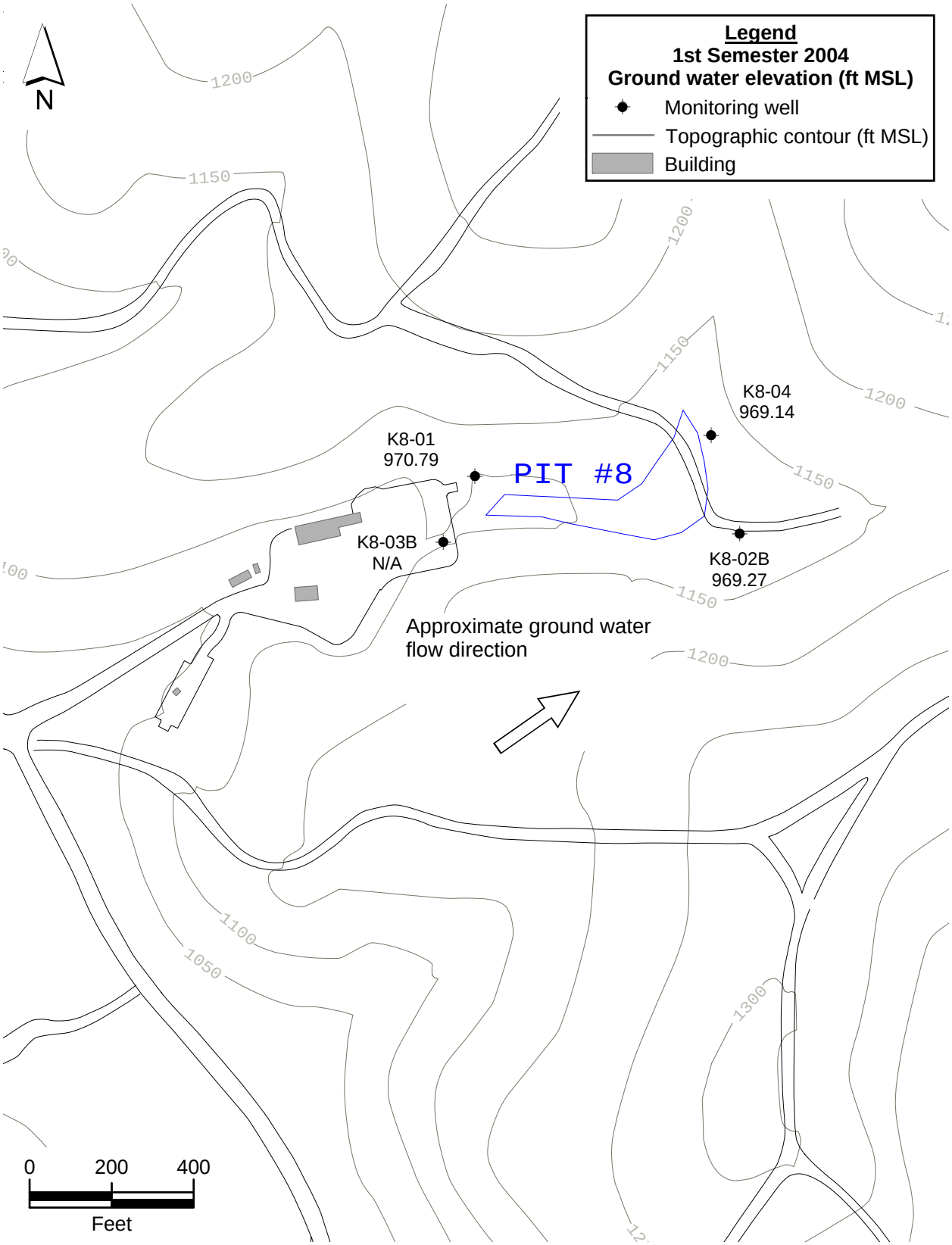


Figure 2.8-3. Building 801 Firing Table and Pit 8 Landfill site map showing ground water elevations and hydraulic gradient direction in the $Tnbs_1$ HSU.

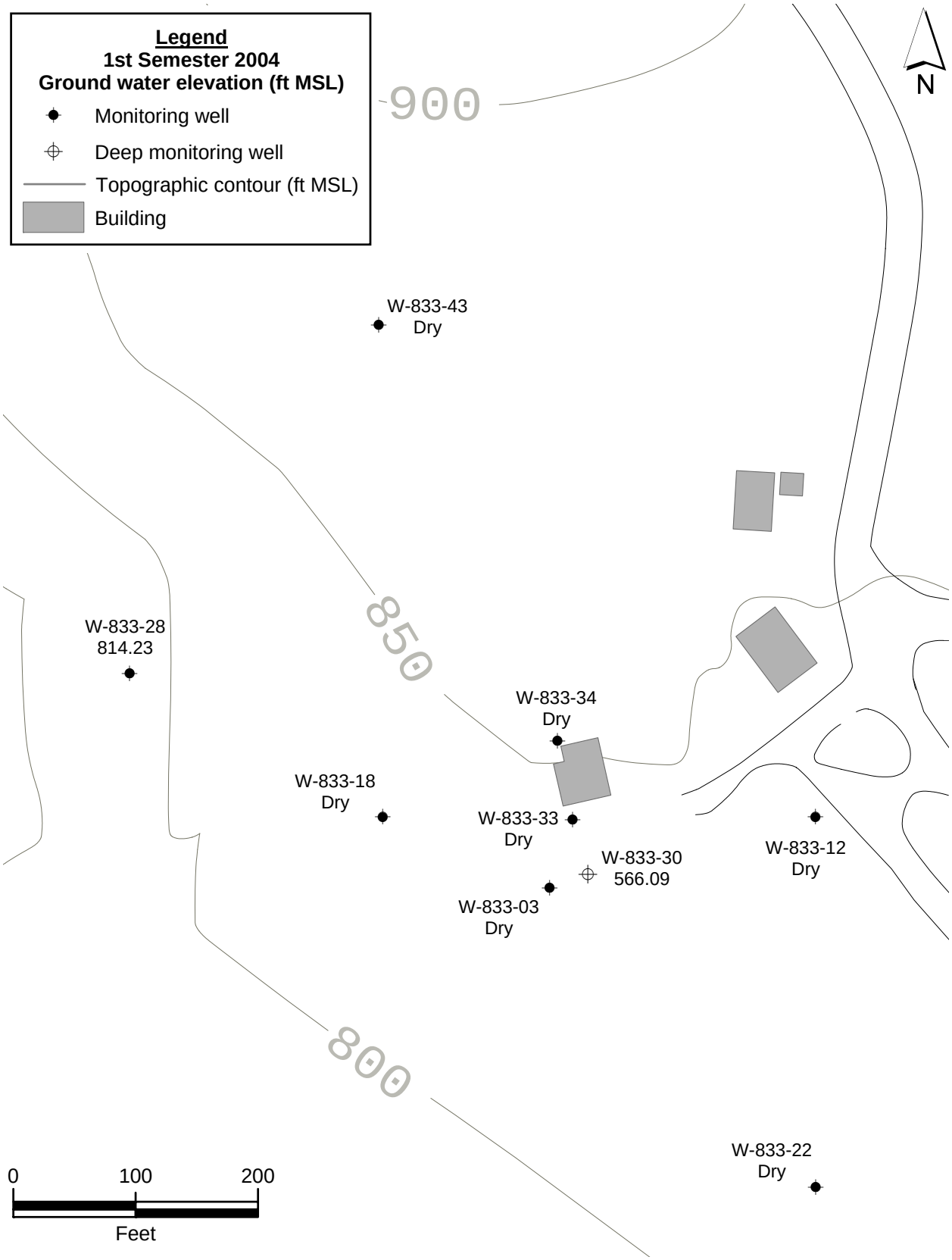


Figure 2.8-4. Building 833 site map showing monitoring wells and ground water elevations.

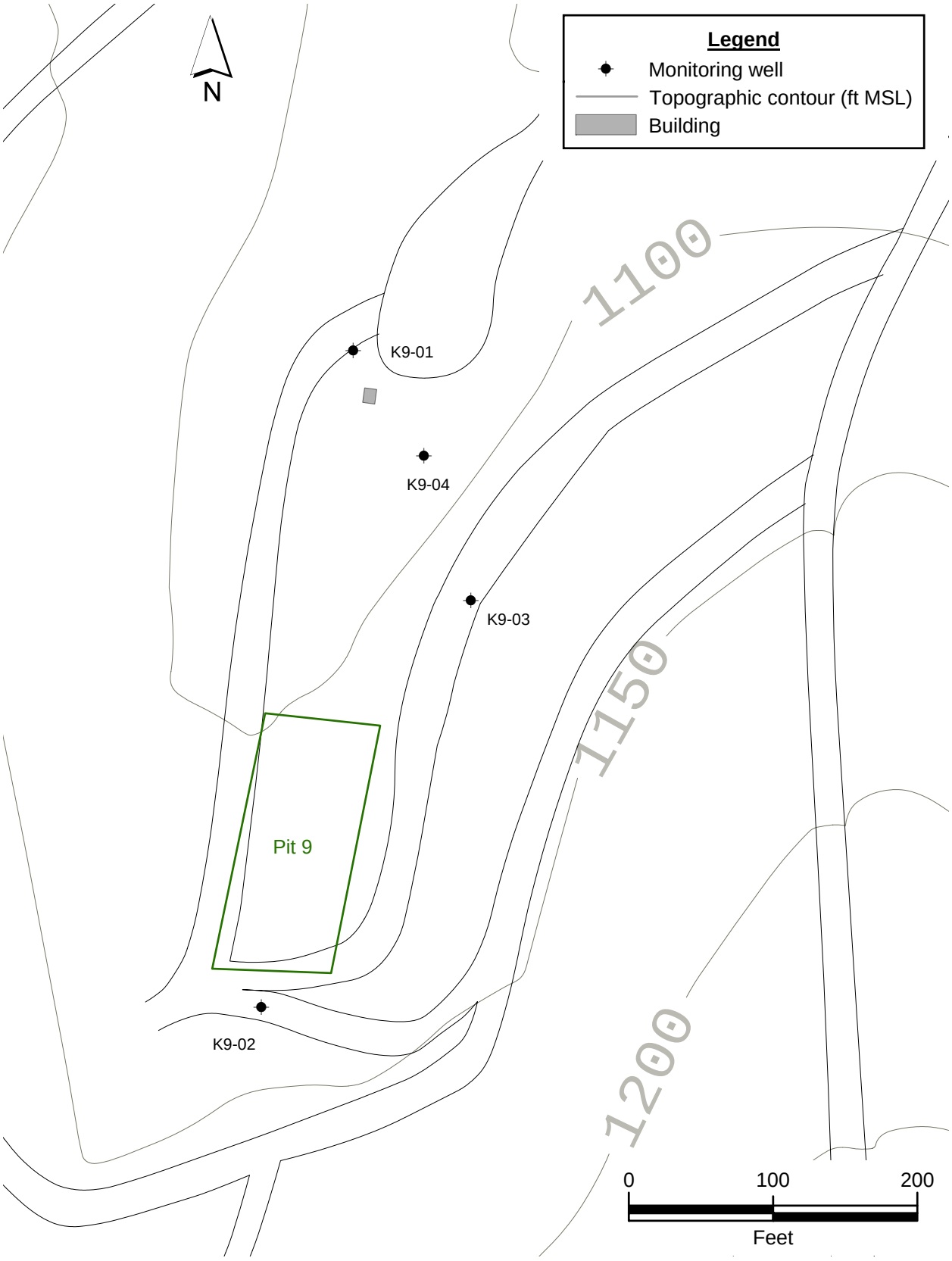


Figure 2.8-5. Building 845 Firing Table and Pit 9 Landfill site map showing monitoring wells.

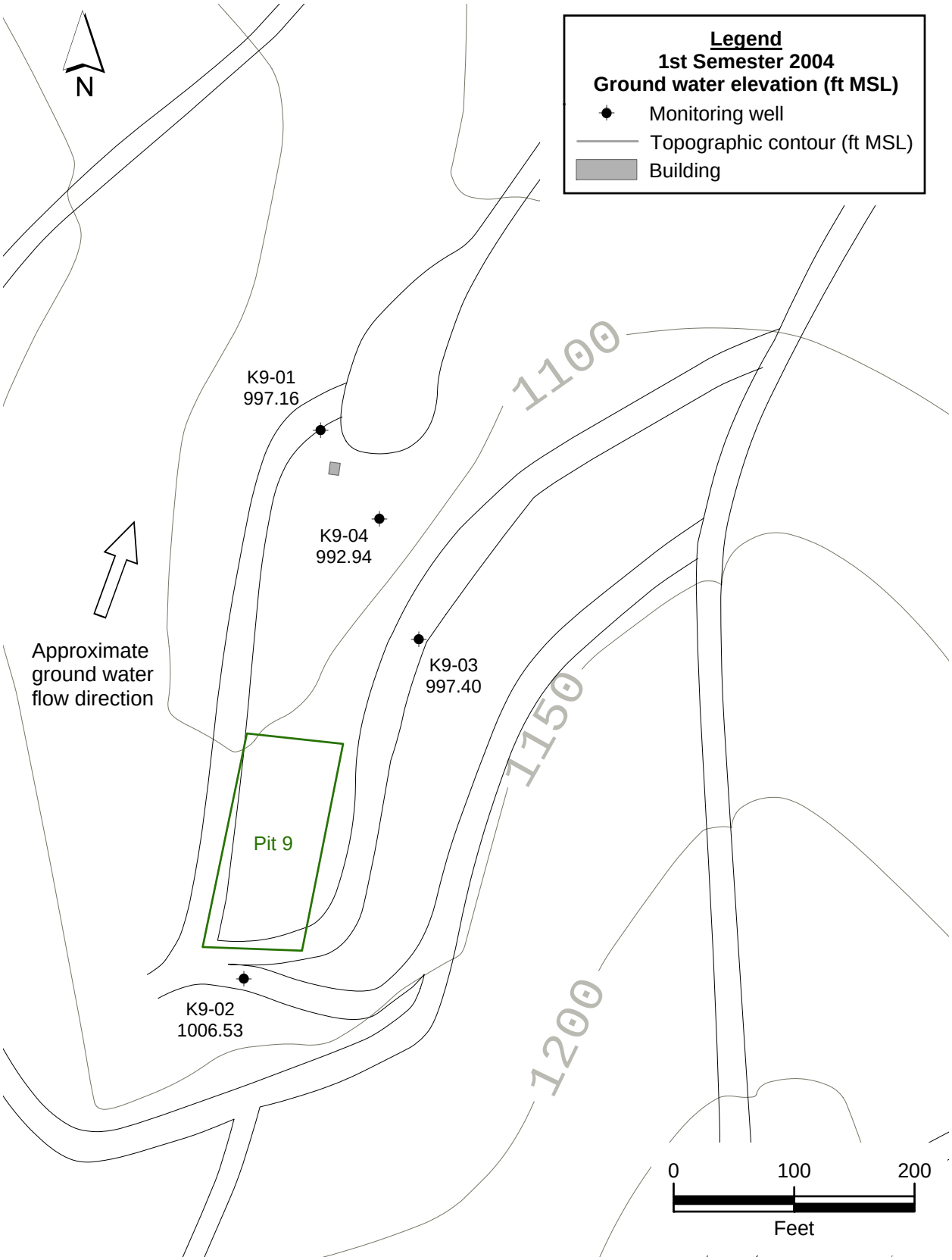


Figure 2.8-6. Building 845 Firing Table and Pit 9 Landfill site map showing ground water elevations and hydraulic gradient direction in the $Tnsc_0$ HSU.

Figure 2.8-7. Building 851 Firing Table site map showing monitoring wells.

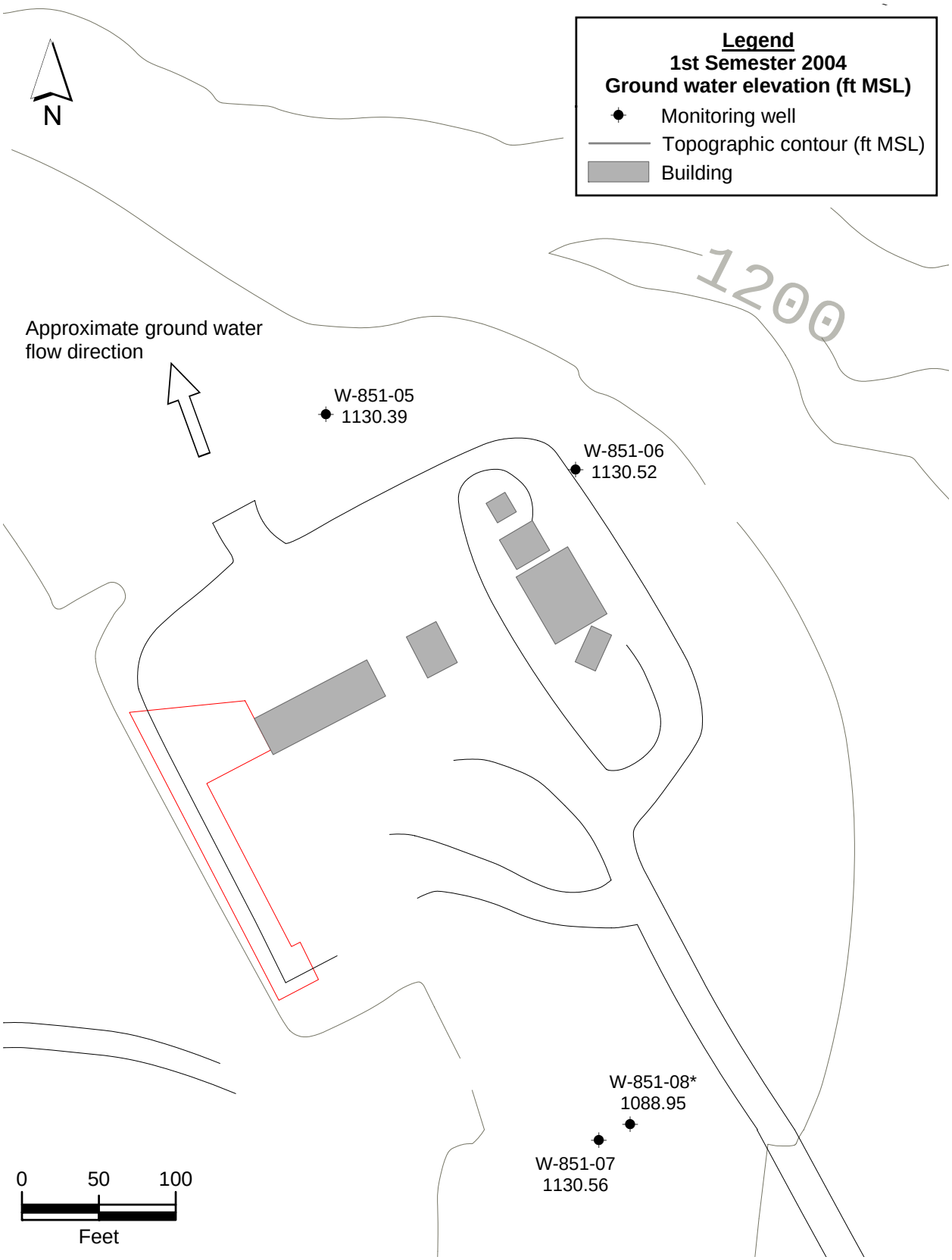
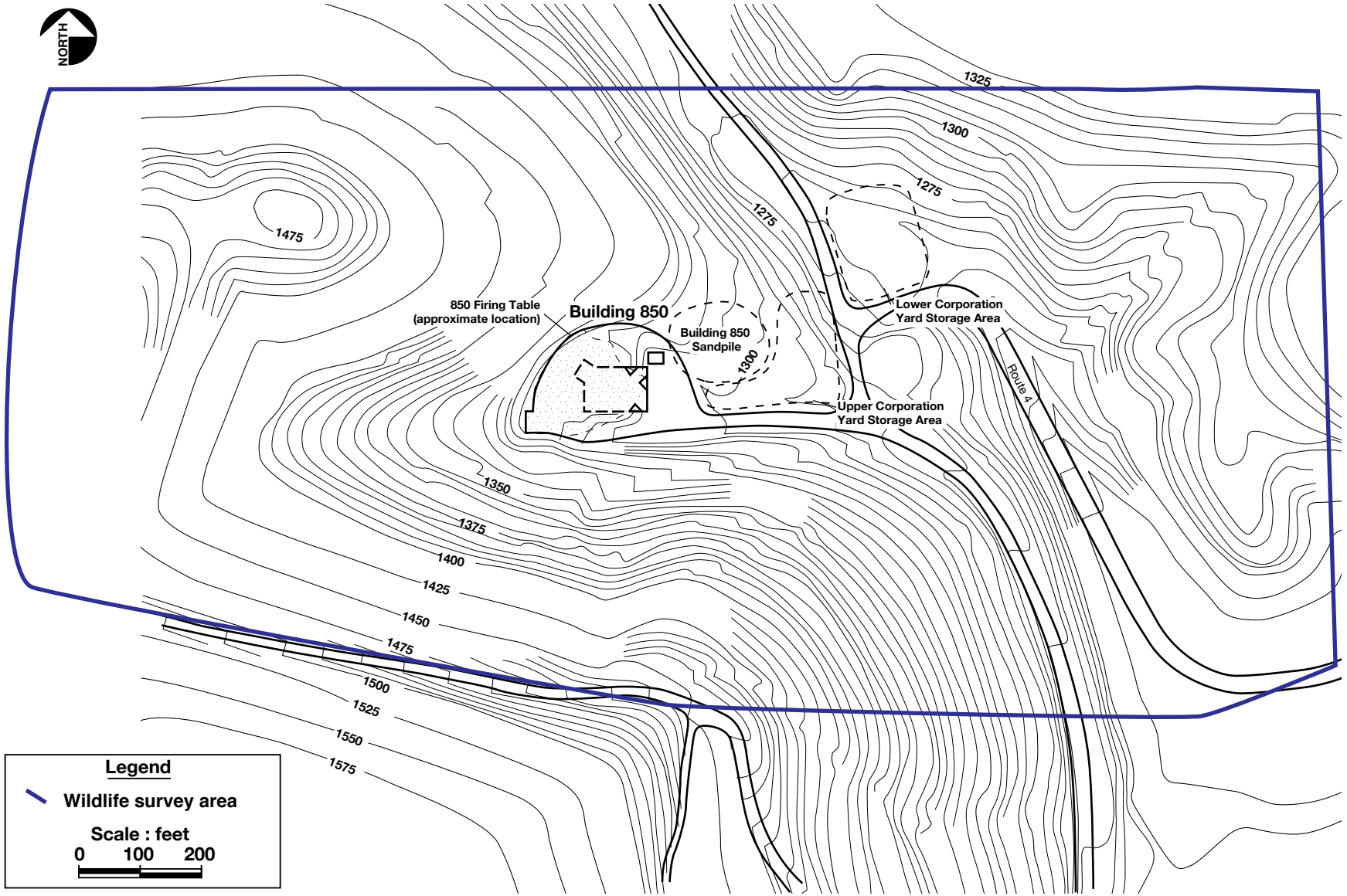


Figure 2.8-8. Building 851 Firing Table site map showing ground water elevations and hydraulic gradient direction in the Tmss HSU.

ERD-S3R-04-0103

Figure 4.2-1. Area surveyed for important burrowing species at Building 834.



ERD-S3R-04-0104

Figure 4.2-2. Area surveyed for important burrowing species at Building 850.

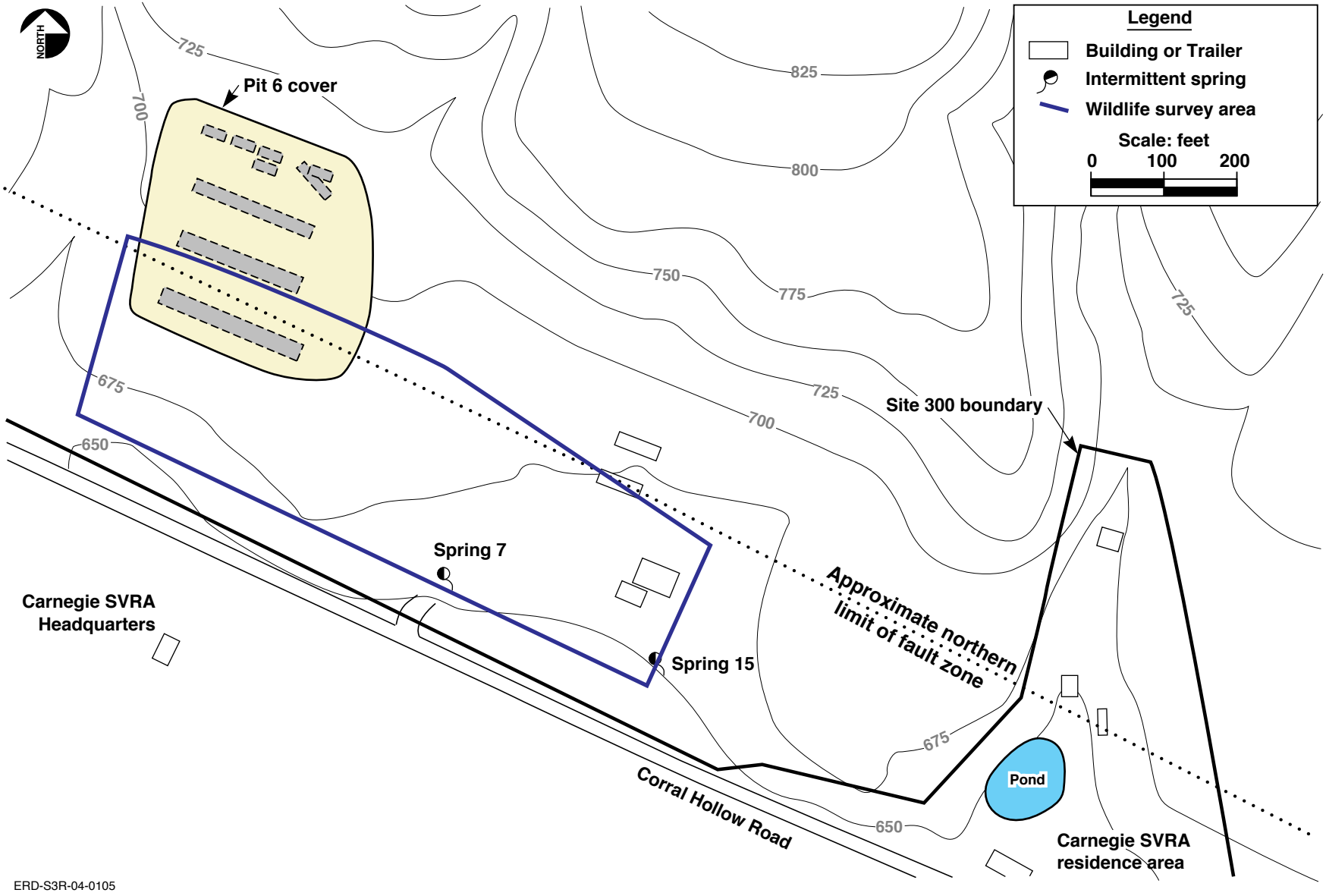


Figure 4.2-3. Area surveyed for important burrowing species at Pit 6.

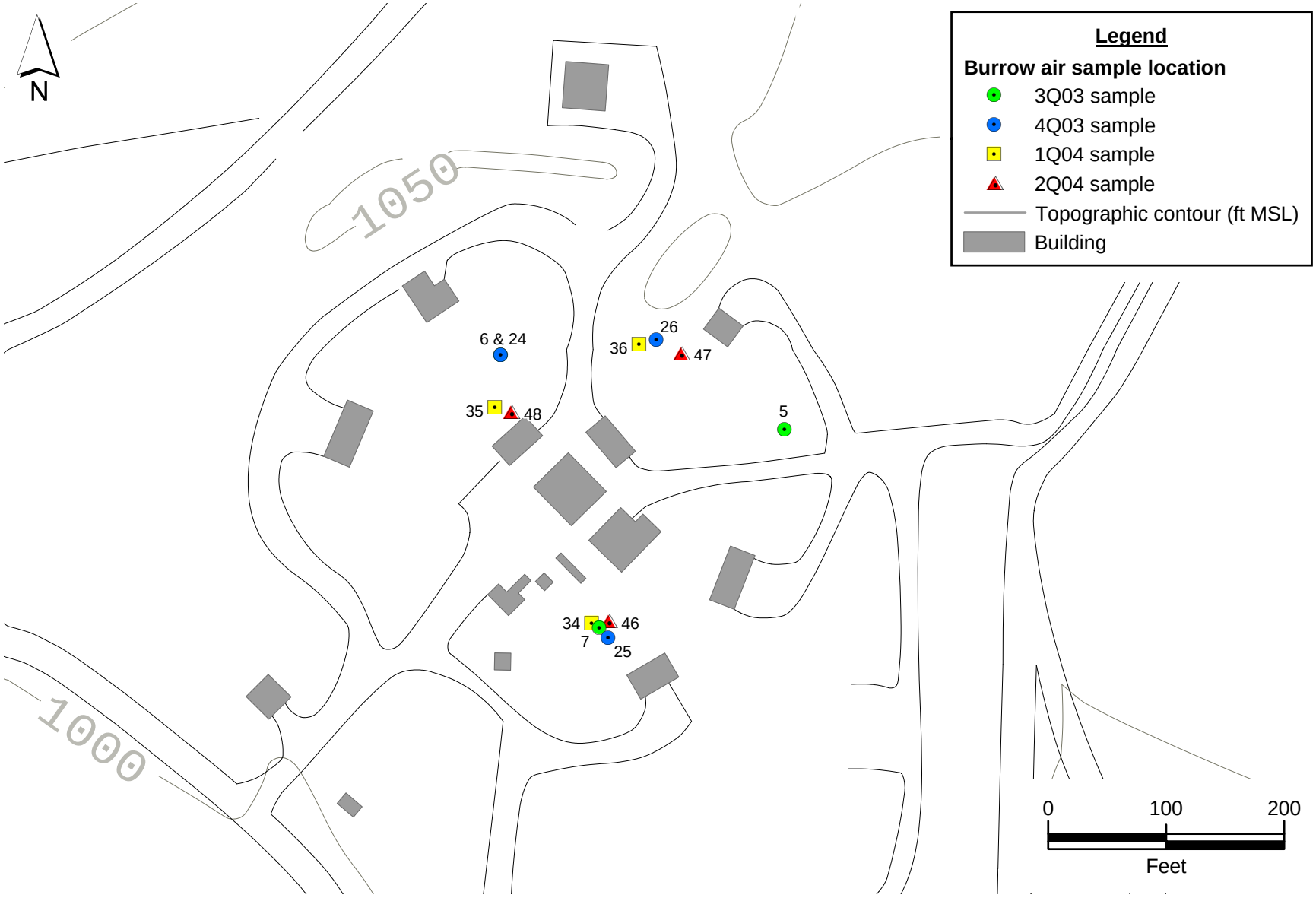


Figure 4.2-4. Burrow air sampling locations at Building 834.

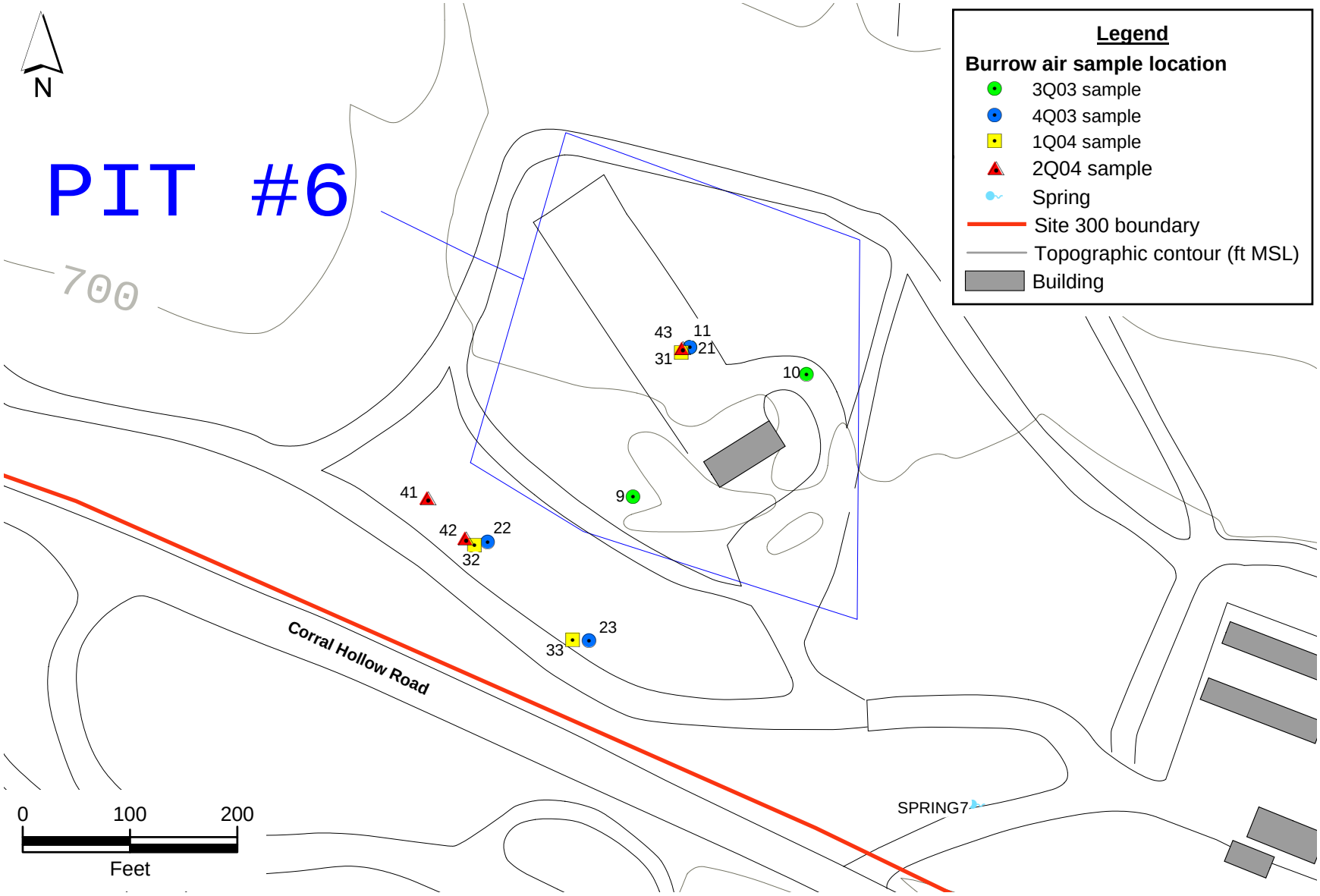


Figure 4.2-5. Burrow air sampling locations at Pit 6.

Tables

Table Acronyms and Abbreviations

1,1,1-TCA	1,1,1-trichloroethane
1,1-DCA	1,1-dichloroethane
1,2-DCA	1,2-dichloroethane
1,2-DCE	1,2-dichloroethylene
cis-1,2-DCE	1,2-dichloroethene
trans-1,2-DCE	1,2-dichloroethene
A	Annual
B	Biennial
Be	Beryllium
BFT	Biotransfer factor
BTU	Biotreatment Unit
C	Celcius
CMP	Compliance Monitoring Plan
COC	Contaminants of Concern
DIS	Discretionary sampling of non-required analyte
DISS	Distal south
DMW	Detection monitor well (non-CMP)
DSB	Distal Site Boundary
E	Effluent
EPA	Environmental Protection Agency
ERD	Environmental Restoration Division
Ew	Extraction well
F	Farenheit
ft^3	Cubic feet
g	Gram(s)
g/d	Grams per day
GAC	Granular activated carbon
gal	gallon(s)
GSA	General Services Area
GTU	GAC Treatment Unit
GW	Guard well
GWTS	Ground Water Treatment System
HE	High explosives
Hg	Mercury
HMX	High-Melting Explosive
HQ	Hazard quotient
μg/L	Micrograms per liter
ID	Identification
I	Influent
Inj well	Injection well
kft^3	Thousands of cubic feet

kg	Kilograms
L/d	Liters per day
Li	Lithium
M^3/d	Cubic meters per day
M	Monthly
mg/L	Milligrams per liter
mg/kg	Milligrams per kilogram
$\mu g/m^3$	Micrograms per cubic meter
mph	Miles per hour
m/s	Meters/second
MWPT	Monitor well used for plume tracking
N	No
NO_3	Nitrate
NA	Not applicable
NM	Not measured
OCDD	Octachlorodibenzo-p-dioxin
OCDF	Octachlorodibenzofuran
ORAD	Operations and Regulatory Affairs Division
OU	Operable unit
PCB	Polychlorinated biphenyl
PCE	Tetrachloroethylene
pH	A measure of the acidity or alkalinity of an aqueous solution
PRXN	Proximal north
PST	Pacific Standard Time
PTU	Portable treatment unit
Q	Quarterly
RD	Remedial Design
RDX	Research Department explosive
S	Semi-annual
scfm	Standard cubic feet per minute
SRC	Source
STU	Solor-powered Treatment Unit
SVE	Soil Vapor Extraction
SWRI	Site Wide Remedial Investigation
TBOS	Tetra-butyl-orthosilicate
TCE	Trichloroethylene
TF	Treatment facility
Th	Thorium
TKEBS	tetrakis (2-ethylbutoxy) silane
TRV	Toxicity Reference Values
UCL	Upper Confidence limit
U	Uranium
WS	Water-supply well
Y	Yes

Requested Analyses

AS:THISO = Uranium isotopes performed by mass spectrometry.
AS:UISO = Uranium isotopes performed by alpha spectrometry.
CMPTRIMET = Thorium, uranium, and lithium performed by EPA Method 200.7.
DWMETALS = Drinking water metals suite performed by various analytical methods.
E200.7:Ba = Barium performed by EPA Method 200.7.
E200.7:Cd = Cadmium performed by EPA Method 200.7.
E200.7:Cu = Copper performed by EPA Method 200.7.
E200.7:SiO2 = Silica performed by EPA Method 200.7.
E200.7:Zn = Zinc performed by EPA Method 200.7.
E220.2 = Copper performed by EPA Method 220.2.
E218.2 = Chromium performed by EPA Method 218.2.
E239.2 = Lead performed by EPA Method 239.2.
E300.0:NO3 = Nitrate performed by EPA Method 300.0.
E300.0:PERC = Perchlorate performed by EPA Method 300.0.
E340.2 = Fluoride performed by EPA method 340.2.
E350.2 = Ammonia nitrogen (as N) performed by EPA Method 350.2
E502.2 = Drinking water volatile organic compounds performed by EPA Method 502.2.
E601 = Halogenated volatile organic compounds performed by EPA Method 601.
E602 = Aromatic volatile organic compounds performed by EPA Method 602.
E624 = Volatile organic compounds performed by EPA Method 624.
E8330:R+H = High explosive compounds RDX and HMX performed by EPA Method 8330.
E900 = Gross alpha and beta performed by EPA Method 900.
E906 = Tritium performed by EPA Method 906.
EM8015:DIESEL = Diesel range organic compounds performed by modified EPA Method 8015.
GENMIN = General minerals suite performed by various analytical methods.
MS:THISO = Thorium isotopes performed by mass spectrometry.
MS:UISO = Uranium isotopes performed by mass spectrometry.
NUTRIENTS = Nutrients suite performed by various analytical methods.
T26METALS = Title 26 metals.
TBOS = Tetrabutylorthosilicate.
W8330:LOW = High explosive compounds RDX and HMX performed by EPA Method 8330.
WDRE624 = Volatile organic compounds performed by EPA Method 624.

Hydrogeologic Units

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

Data Qualifier Flag Definitions

D = Analysis performed at a secondary dilution or concentration (i.e., vapor samples).
H = Sample analyzed outside of holding time, sample results should be evaluated.
L = Spike accuracy not within control limits.

Table Summ-1. Mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Volume of ground water treated (gal)	Volume of soil vapor treated (ft^3)	Estimated total VOC mass removed (g)	Estimated total perchlorate mass removed (g)	Estimated total nitrate mass removed (g)	Estimated total RDX mass removed (g)	Estimated total TBOS mass removed (g)
CGSA GWTS	491,545	NA	191.9	NA	NA	NA	NA
CGSA SVE	NA	0[a]	0[a]	NA	NA	NA	NA
B834 GWTS	0[a]	NA	0[a]	NA	0[a]	NA	0[a]
B834 SVE	NA	0[a]	0[a]	NA	NA	NA	NA
B815-SRC GWTS	149,592	NA	3.9	11.1	53,577	42.6	NA
B815-PRX GWTS	428,394	NA	53.1	5.5	130,919	NA	NA
B815-DSB GWTS	317,935	NA	11.6	NA	NA	NA	NA
B817-SRC GWTS	2,914	NA	0	0.28	NA	1.27	NA
B854-SRC GWTS	238,697	NA	177	5.9	48,400	NA	NA
B854-PRX GWTS	100,252	NA	29	5.2	17,500	NA	NA
B832-SRC GWTS	8,257	NA	1.4	0.20	4,108	NA	NA
B832-SRC SVE	NA	0[a]	0[a]	NA	NA	NA	NA
B830-SRC GWTS	14,203	NA	233.2	0.26	7,244	NA	NA
B830-SRC SVE	NA	40,785	152.7	NA	NA	NA	NA
B830-PRXN GWTS	226,708	NA	28.4	NA	14,625	NA	NA
B830-DISS GWTS	327,520	NA	121.7	0	80,574	NA	NA
Total	2,306,017	40,785	1,004	28.4	356,947	43.9	0

Notes:

B815 = Building 815.
B830 = Building 830.
B832 = Building 832
B834 = Building 834.
CGSA = Central General Services Area.
DISS = Distal south.
DSB = Distal site boundary.
ft^3 = cubic feet.
g = Grams.
gal = Gallons.
GWTS = Ground water treatment system.
NA = Not applicable.
PRX = Proximal.
PRXN = Proximal north.
RDX= Research Department Explosive.
SRC = Source.
SVE = Soil vapor extraction.
TBOS = Tetra 2-ethylbutylorthosilicate.
VOC = Volatile organic compound.
B817 = Building 817.

[a] Facility was non-operational during the reporting period.

Table Summ-2. Summary of cumulative remediation.

Treatment facility	Volume of ground water treated (gal)	Volume of soil vapor treated (kft^3)	Estimated total VOC mass removed (kg)	Estimated total perchlorate mass removed (kg)	Estimated total nitrate mass removed (kg)	Estimated total RDX mass removed (kg)	Estimated total TBOS mass removed (kg)
CGSA GWTS	9,623,078	NA	13	NA	NA	NA	NA
CGSA SVE	NA	69,199	66.73	NA	NA	NA	NA
B834 GWTS	245,279	NA	31.8	NA	49.3	NA	9.6
B834 SVE	NA	58,536	108	NA	NA	NA	NA
B815-SRC GWTS	1,368,192	NA	0.033	0.1009	486.7	0.429	NA
B815-PRX GWTS	1,694,172	NA	0.218	0.0382	541.0	NA	NA
B815-DSB GWTS	2,968,439	NA	0.071	NA	NA	NA	NA
B817-SRC GWTS	4,236	NA	0	0.0004	NA	0.0015	NA
B854-SRC GWTS	3,533,167	NA	3.8	0.080	716	NA	NA
B854-PRX GWTS	824,759	NA	0.3	0.033	133	NA	NA
B832-SRC GWTS	130,655	NA	0.033	0.0045	65.8	NA	NA
B832-SRC SVE	NA	12,015	1.42	NA	NA	NA	NA
B830-SRC GWTS	20,084	NA	0.29	0.00033	9.87	NA	NA
B830-SRC SVE	NA	40.8	0.15	NA	NA	NA	NA
B830-PRXN GWTS	1,360,478	NA	0.186	NA	86.2	NA	NA
B830-DISS GWTS	1,221,290	NA	0.447	0.01	299.7	NA	NA
Total	22,993,829	139,791	226	0.267	2,387	0.431	9.6

Notes:

Errors present in previous reports have been resolved. Amended tables for 2003 are available upon request.

B815 = Building 815.
B830 = Building 830.
B832 = Building 832.
B834 = Building 834.
B854 = Building 854.
CGSA = Central General Services Area.
DISS = Distal south.
DSB = Distal site boundary.
gal = Gallons.
GWTS = Ground water treatment system.
kft^3 = Thousands of cubic feet.
Kg = Kilograms.
Mgal = Millions of gallons.
NA = Not applicable.
PRX = Proximal.
RDX = Research Department Explosive.
SRC = Source.
SVE = Soil vapor extraction.
TBOS = Tetra 2-ethylbutylorthosilicate.
VOC = Volatile organic compound.

Table 2.1-1. Central General Services Area volumes of ground water and soil vapor extracted and discharged, January 1, 2004 through June 30, 2004.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Volume of vapor extracted (thousands of ft^3)	Average weekly volume of water treated (gal)
CGSA	January	194	32,363	0[a]	28,026
	February	141	21,315	0	25,397
	March	816	123,883	0	25,505
	April	672	117,307	0	29,327
	May	525	84,105	0	26,914
	June	840	112,572	0	22,514
Total		3,188	491,545	0	–

[a] CGSA SVE was turned off near the end of 2003 to evaluate soil vapor rebound in the source area.

Table 2.1-2. Central General Services Area 2004 VOCs in ground water treatment system influent and effluent.

Location	Date	Method	TCE (μg/L)	PCE (μg/L)	Total 1,2-DCE (μg/L)	Carbon tetrachloride (μg/L)	Chloroform (μg/L)	1,1-DCA (μg/L)	1,2-DCA (μg/L)	1,1-DCE (μg/L)	1,1,1-TCA (μg/L)	Freon 11 (μg/L)	Freon 113 (μg/L)	Methylene chloride (μg/L)
CGSA-GWTS-E	01/05/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	03/03/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	05/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-I	01/05/04	E601	83	4.2	1.4	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	0.5	<0.5	<0.5
CGSA-GWTS-I	04/07/04	E601	94	5.1	1.9	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	5.9	<0.5	<0.5

Table 2.1-2. Central General Services Area 2004 VOCs in ground water treatment system influent and effluent (analytes not listed above).

Location	Date	Method	Detection frequency	cis-1,2-Dichloroethene (μg/L)
CGSA-GWTS-E	01/05/04	E601	0 of 21	-
CGSA-GWTS-E	03/03/04	E601	0 of 21	-
CGSA-GWTS-E	04/07/04	E601	0 of 21	-
CGSA-GWTS-E	05/12/04	E601	0 of 21	-
CGSA-GWTS-E	06/09/04	E601	0 of 21	-
CGSA-GWTS-I	01/05/04	E601	1 of 21	1.4
CGSA-GWTS-I	04/07/04	E601	1 of 21	1.9

Table 2.1-3. Central General Services Area treatment facility sampling plan.

Sample location	Sample identification	Parameter	Frequency
CGSA GWTS			
Influent Port	**PTU7-I**	**VOCs**	**Quarterly**
		pH	**Quarterly**
Effluent Port	**PTU7-E**	**VOCs**	**Monthly**
		pH	**Monthly**
Vapor Samples	**PTU7-CFI**	**VOCs**	**Weekly**
	PTU7-CFE	**VOCs**	**Weekly**
CGSA SVE System			
Influent Vapor	**TF-GSA2-IV**	**VOCs**	**Monthly**
Effluent Vapor	**TF-GSA2-EV**	**VOCs**	**Weekly**
Intermediate GAC	**TF-GSA2-CFV2**	**VOCs**	**Monthly**

Table 2.1-4. Central General Services Area (OU1) ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-35A-01	MWPT	Qal		Q	DIS	E601	1	Y	
W-35A-01	MWPT	Qal	S	Q	CGSA CMP	E601	2	Y	
W-35A-01	MWPT	Qal		Q	DIS	E601	3		
W-35A-01	MWPT	Qal	S	Q	CGSA CMP	E601	4		
W-35A-01	MWPT	Qal	B	B	CGSA CMP	E200.7:Cd	2	N	Next sample required 2ndQ 2005.
W-35A-01	MWPT	Qal	B	B	CGSA CMP	E239.2	2	N	Next sample required 2ndQ 2005.
W-35A-02	MWPT	Qal		Q	DIS	E601	1	Y	
W-35A-02	MWPT	Qal	S	Q	CGSA CMP	E601	2	Y	
W-35A-02	MWPT	Qal		Q	DIS	E601	3		
W-35A-02	MWPT	Qal	S	Q	CGSA CMP	E601	4		
W-35A-02	MWPT	Qal	B	B	CGSA CMP	E200.7:Zn	2	N	Next sample required 2ndQ 2005.
W-35A-03	MWPT	Qal	S	S	CGSA CMP	E601	2	Y	
W-35A-03	MWPT	Qal	S	S	CGSA CMP	E601	4		
W-35A-04	MWPT	Qal	S	S	CGSA CMP/WGMG	E601	2	Y	
W-35A-04	MWPT	Qal	S	S	CGSA CMP/WGMG	E601	4		
W-35A-04	MWPT	Qal	B	B	CGSA CMP/WGMG	E200.7:Cu	2	N	Next sample required 2ndQ 2005.
W-35A-05	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-35A-05	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-35A-05	MWPT	$Tnbs_2$	B	B	CGSA CMP	E239.2	2	N	Next sample required 2ndQ 2005.
W-35A-06	MWPT	Qal	S	S	CGSA CMP	E601	2	Y	
W-35A-06	MWPT	Qal	S	S	CGSA CMP	E601	4		
W-35A-07	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-35A-07	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-35A-08	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	

Table 2.1-4. Central General Services Area (OU1) ground water sampling and analysis plan. (Cont. Page 2 of 8)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-35A-08	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-35A-09	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-35A-09	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-35A-10	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-35A-10	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-35A-11	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-35A-11	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-35A-12	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-35A-12	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-35A-13	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-35A-13	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-35A-14	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-35A-14	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-7A	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-7A	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-7A	MWPT	$Tnbs_1$	B	B	CGSA CMP	E239.2	2	N	Next sample required 2ndQ 2005.
W-7B	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-7B	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-7C	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-7C	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-7E	MWPT	$Tnbs_1$	S	S	CGSA CMP/WGMG	E601	2	Y	
W-7E	MWPT	$Tnbs_1$	S	S	CGSA CMP/WGMG	E601	4		
W-7ES	MWPT	Qal	S	S	CGSA CMP/WGMG	E601	2	Y	

Table 2.1-4. Central General Services Area (OU1) ground water sampling and analysis plan. (Cont. Page 3 of 8)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-7ES	MWPT	Qal	S	S	CGSA CMP/WGMG	E601	4		
W-7F	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	2	Y	
W-7F	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	4		
W-7G	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-7G	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-7H	MWPT	Qal	S	S	CGSA CMP	E601	2	Y	
W-7H	MWPT	Qal	S	S	CGSA CMP	E601	4		
W-7I	EW	$Tnbs_2$	B		CGSA CMP	E245.2	4		
W-7I	EW	$Tnbs_2$		Q	DIS	E601	1	Y	
W-7I	EW	$Tnbs_2$	S	Q	CGSA CMP	E601	2	Y	
W-7I	EW	$Tnbs_2$		Q	DIS	E601	3		
W-7I	EW	$Tnbs_2$	S	Q	CGSA CMP	E601	4		
W-7J	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-7J	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-7K	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-7K	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-7L	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-7L	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-7L	MWPT	$Tnbs_1$	B	B	CGSA CMP	E200.7:Cu	2	N	Next sample required 2ndQ 2005.
W-7M	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-7M	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-7N	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-7N	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-7N	MWPT	$Tnbs_1$	B	B	CGSA CMP	E245.2	2	N	Next sample required 2ndQ 2005.
W-7O	EW	Qal		Q	DIS	E601	1	Y	

Table 2.1-4. Central General Services Area (OU1) ground water sampling and analysis plan. (Cont. Page 4 of 8)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-7O	EW	Qal	S	Q	CGSA CMP	E601	2	Y	
W-7O	EW	Qal		Q	DIS	E601	3		
W-7O	EW	Qal	S	Q	CGSA CMP	E601	4		
W-7O	EW	Qal	B	B	CGSA CMP	E200.7:Cu	2	N	Next sample required 2ndQ 2005.
W-7O	EW	Qal	B	B	CGSA CMP	E200.7:Zn	2	N	Next sample required 2ndQ 2005.
W-7P	MWPT	$Tnbs_1$	Q	Q	CGSA CMP	E601	1	Y	
W-7P	MWPT	$Tnbs_1$	Q	Q	CGSA CMP	E601	2	Y	
W-7P	MWPT	$Tnbs_1$	Q	Q	CGSA CMP	E601	3		
W-7P	MWPT	$Tnbs_1$	Q	Q	CGSA CMP	E601	4		
W-7PS	MWPT	Qal	Q	Q	CGSA CMP/WGMG	E601	1	Y	
W-7PS	MWPT	Qal	Q	Q	CGSA CMP/WGMG	E601	2	Y	
W-7PS	MWPT	Qal	Q	Q	CGSA CMP/WGMG	E601	3		
W-7PS	MWPT	Qal	Q	Q	CGSA CMP/WGMG	E601	4		
W-7Q	MWPT	$Tnbs_2$		Q	DIS	E601	1	Y	
W-7Q	MWPT	$Tnbs_2$		Q	DIS	E601	2	Y	
W-7Q	MWPT	$Tnbs_2$		Q	DIS	E601	3		
W-7Q	MWPT	$Tnbs_2$		Q	DIS	E601	4		
W-7R	MWPT	Qal		Q	DIS	E601	1	Y	
W-7R	MWPT	Qal		Q	DIS	E601	2	Y	
W-7R	MWPT	Qal		Q	DIS	E601	3		
W-7R	MWPT	Qal		Q	DIS	E601	4		
W-7S	MWPT	Qal		Q	DIS	E601	1	Y	
W-7S	MWPT	Qal		Q	DIS	E601	2	Y	

Table 2.1-4. Central General Services Area (OU1) ground water sampling and analysis plan. (Cont. Page 5 of 8)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-7S	MWPT	Qal		Q	DIS	E601	3		
W-7S	MWPT	Qal		Q	DIS	E601	4		
W-7T	MWPT	Qal		Q	DIS	E601	1	Y	
W-7T	MWPT	Qal		Q	DIS	E601	2	Y	
W-7T	MWPT	Qal		Q	DIS	E601	3		
W-7T	MWPT	Qal		Q	DIS	E601	4		
W-843-01	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-843-01	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-843-02	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-843-02	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-872-01	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	N	Insufficient water.
W-872-01	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-872-01	MWPT	$Tnbs_2$	B	B	CGSA CMP	E200.7:Cu	2	N	Next sample required 2ndQ 2005.
W-872-01	MWPT	$Tnbs_2$	B	B	CGSA CMP	E239.2	2	N	Next sample required 2ndQ 2005.
W-872-02	EW	$Tnbs_2$			DIS	E601	1	N	Insufficient water.
W-872-02	EW	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-872-02	EW	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-873-01	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	2	Y	
W-873-01	MWPT	$Tnbs_1$	S	S	CGSA CMP	E601	4		
W-873-02	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-873-02	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-873-03	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	2	Y	
W-873-03	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	4		
W-873-04	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	2	Y	
W-873-04	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	4		

Table 2.1-4. Central General Services Area (OU1) ground water sampling and analysis plan. (Cont. Page 6 of 8)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-873-04	MWPT	$Tnsc_1$	B	B	CGSA CMP	E239.2	2	N	Next sample required 2ndQ 2005.
W-873-06	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-873-06	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-873-06	MWPT	$Tnbs_2$	B	B	CGSA CMP	E200.7:Cd	2	N	Next sample required 2ndQ 2005.
W-873-07	EW	$Tnbs_2$			DIS	E601	1	N	Insufficient water.
W-873-07	EW	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-873-07	EW	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-875-01	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-875-01	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-875-01	MWPT	$Tnbs_2$	B	B	CGSA CMP	E200.7:Cd	2	N	Next sample required 2ndQ 2005.
W-875-01	MWPT	$Tnbs_2$	B	B	CGSA CMP	E200.7:Cu	2	N	Next sample required 2ndQ 2005.
W-875-01	MWPT	$Tnbs_2$	B	B	CGSA CMP	E200.7:Zn	2	N	Next sample required 2ndQ 2005.
W-875-01	MWPT	$Tnbs_2$	B	B	CGSA CMP	E239.2	2	N	Next sample required 2ndQ 2005.
W-875-02	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	2	Y	
W-875-02	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	4		
W-875-03	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-875-03	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-875-04	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-875-04	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-875-04	MWPT	$Tnbs_2$	B	B	CGSA CMP	E239.2	2	N	Next sample required 2ndQ 2005.
W-875-05	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	2	Y	
W-875-05	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	4		
W-875-06	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	2	Y	
W-875-06	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	4		
W-875-07	EW	$Tnbs_2$			DIS	E601	1	Y	

Table 2.1-4. Central General Services Area (OU1) ground water sampling and analysis plan. (Cont. Page 7 of 8)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-875-07	EW	$Tnbs_2$	B	B	CGSA CMP	E239.2	2		Next sample required 2ndQ 2005.
W-875-07	EW	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-875-07	EW	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-875-08	EW	$Tnbs_2$			DIS	E601	1	Y	
W-875-08	EW	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-875-08	EW	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-875-09	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	N	Insufficient water.
W-875-09	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-875-10	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	N	Insufficient water.
W-875-10	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-875-10	MWPT	$Tnbs_2$	B	B	CGSA CMP	E200.7:Ba	2	N	Next sample required 2ndQ 2005.
W-875-10	MWPT	$Tnbs_2$	B	B	CGSA CMP	E239.2	2	N	Next sample required 2ndQ 2005.
W-875-11	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-875-11	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-875-15	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	N	Insufficient water.
W-875-15	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-876-01	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	2	Y	
W-876-01	MWPT	$Tnbs_2$	S	S	CGSA CMP	E601	4		
W-879-01	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	2	Y	
W-879-01	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	4		
W-889-01	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	2	Y	
W-889-01	MWPT	$Tnsc_1$	S	S	CGSA CMP	E601	4		
W-CGSA-1732	MWPT	Qal		A	DIS	E601	1	N	Insufficient water.
W-CGSA-1733	MWPT	Qal		S	DIS	E601	2	Y	
W-CGSA-1733	MWPT	Qal		S	DIS	E601	4		

Table 2.1-4. Central General Services Area (OU1) ground water sampling and analysis plan. (Cont. Page 8 of 8)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-CGSA-1735	MWPT	Qal		A	DIS	E601	1	N	Insufficient water.
W-CGSA-1736	MWPT	Qal		S	DIS	E601	2	Y	
W-CGSA-1736	MWPT	Qal		S	DIS	E601	4		
W-CGSA-1737	MWPT	Qal		S	DIS	E601	2	Y	
W-CGSA-1737	MWPT	Qal		S	DIS	E601	4		
W-CGSA-1739	MWPT	Qal		S	DIS	E601	2	Y	
W-CGSA-1739	MWPT	Qal		S	DIS	E601	4		

[a] See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.

Table 2.1-5. Central General Services Area mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	GWTS VOC mass removed (g)	SVE VOC mass removed (g)
CGSA	**January**	**11.0**	**0[a]**
	February	**7.3**	**0**
	March	**44.6**	**0**
	April	**48.2**	**0**
	May	**34.5**	**0**
	June	**46.2**	**0**
Total		**191.9**	**0**

[a] **CGSA SVE was turned off near the end of 2003 to evaluate soil vapor rebound in the source area.**

Table 2.2-1. Building 834 OU treatment facility sampling plan.

Sample location	Sample identification	Parameter	Frequency
B834 GTWS			
Influent Port	**TF-834-I**	**VOCs**	**Quarterly**
		TBOS	**Quarterly**
		Diesel	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**TF-834-E**	**VOCs**	**Monthly**
		TBOS	**Monthly**
		Diesel	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
B834 SVTS			
Influent Port	**TF-834-VI**	**No CMP requirements**	**NA**
Effluent Port	**TF-834-VE**	**VOCs**	**Weekly**[a]

[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.**

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-1709	MWPT	Tpsg	A	A	CMP	E300.0:NO3	3		
W-834-1709	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-1709	MWPT	Tpsg			DIS	E601	2	Y	
W-834-1709	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-1709	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-1709	MWPT	Tpsg			DIS	TBOS	2	Y	
W-834-1711	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-834-1711	MWPT	Tps	S	S	CMP	E601	1	Y	
W-834-1711	MWPT	Tps			DIS	E601	2	Y	
W-834-1711	MWPT	Tps	S	S	CMP	E601	3		
W-834-1711	MWPT	Tps	A	A	CMP	TBOS	1	N	Insufficient water.
W-834-1824	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-1824	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-1824	MWPT	Tpsg			DIS	E601	2	Y	
W-834-1824	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-1824	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-1825	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-1825	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-1825	MWPT	Tpsg			DIS	E601	2	Y	
W-834-1825	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-1825	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-1833	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-1833	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-1833	MWPT	Tpsg			DIS	E601	2	Y	
W-834-1833	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-1833	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 2 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-2001	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-2001	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-2001	MWPT	Tpsg			DIS	E601	2	Y	
W-834-2001	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-2001	MWPT	Tpsg	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-2001	MWPT	Tpsg			DIS	EM8015:DIESEL	2	Y	
W-834-2001	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-A1	MWPT	Tps	A	A	CMP	E300.0:NO3	1	Y	
W-834-A1	MWPT	Tps	S	S	CMP	E601	1	Y	
W-834-A1	MWPT	Tps	S	S	CMP	E601	3		
W-834-A1	MWPT	Tps	A	A	CMP	EM8015:DIESEL	1	N	Insufficient water.
W-834-A1	MWPT	Tps	A	A	CMP	TBOS	1	Y	
W-834-A2	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-A2	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-A2	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-A2	MWPT	Tpsg	A	A	CMP	EM8015:DIESEL	1	N	Insufficient water.
W-834-A2	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Insufficient water.
W-834-B2	EW	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-B2	EW	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-B2	EW	Tpsg	S	S	CMP	E601	3		
W-834-B2	EW	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-B3	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-B3	EW	Tpsg	S	S	CMP	E601	1	N	Insufficient water.
W-834-B3	EW	Tpsg	S	S	CMP	E601	3		
W-834-B3	EW	Tpsg	A	A	CMP	TBOS	1	N	Insufficient water.
W-834-B4	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 3 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-B4	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-B4	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-B4	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-C2	EW	Tpsg	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-C2	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-C2	EW	Tpsg	S	S	CMP	E601	3		
W-834-C2	EW	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-C4	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-C4	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-C4	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-C4	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-C5	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-C5	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-C5	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-C5	MWPT	Tpsg		A	DIS	E8330:R+H	1	Y	
W-834-C5	MWPT	Tpsg	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-C5	MWPT	Tpsg		A	DIS	GENMIN	1	Y	
W-834-C5	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-D10	MWPT	Tps	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-D10	MWPT	Tps	S	S	CMP	E601	1	Y	
W-834-D10	MWPT	Tps	S	S	CMP	E601	3		
W-834-D10	MWPT	Tps	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-D10	MWPT	Tps	A	A	CMP	TBOS	1	N	Insufficient water.
W-834-D11	EW	Tpsg	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-D11	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-D11	EW	Tpsg	S	S	CMP	E601	3		

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 4 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-D11	EW	Tpsg	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-D11	EW	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-D12	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D12	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-D12	EW	Tpsg	S	S	CMP	E601	3		
W-834-D12	EW	Tpsg	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-D12	EW	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-D13	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D13	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-D13	EW	Tpsg	S	S	CMP	E601	3		
W-834-D13	EW	Tpsg	A	Q	CMP	TBOS	1	Y	
W-834-D14	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D14	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-D14	EW	Tpsg	S	S	CMP	E601	3		
W-834-D14	EW	Tpsg	A	Q	CMP	TBOS	1	Y	
W-834-D15	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D15	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-D15	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-D15	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-D16	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-D16	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-D16	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-D16	MWPT	Tpsg	A	A	CMP	EM8015:DIESEL	1	N	Dry
W-834-D16	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-D17	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-D17	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 5 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-D17	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-D17	MWPT	Tpsg	A	A	CMP	EM8015:DIESEL	1	N	Dry
W-834-D17	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-D18	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D18	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-D18	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-D18	MWPT	Tpsg	A	A	CMP	TBOS	3		
W-834-D2	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	3		Insufficient water. Changed to annual due to continued lack of water.
W-834-D2	MWPT	$Tnbs_1$	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-834-D2	MWPT	$Tnbs_1$	A	A	CMP	TBOS	3		Insufficient water. Changed to annual due to continued lack of water.
W-834-D3	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D3	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-D3	EW	Tpsg	S	S	CMP	E601	3		
W-834-D3	EW	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-D4	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D4	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-D4	EW	Tpsg	S	S	CMP	E601	3		
W-834-D4	EW	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-D5	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D5	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-D5	EW	Tpsg	S	S	CMP	E601	3		
W-834-D5	EW	Tpsg	A	A	CMP	TBOS	1	Y	

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 6 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-D6	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D6	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-D6	EW	Tpsg	S	S	CMP	E601	3		
W-834-D6	EW	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-D7	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-D7	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-D7	EW	Tpsg	S	S	CMP	E601	3		
W-834-D7	EW	Tpsg	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-D7	EW	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-D9A	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		Insufficient water. Changed to annual due to continued lack of water.
W-834-D9A	MWPT	$Tnbs_2$	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-834-D9A	MWPT	$Tnbs_2$	A	A	CMP	TBOS	3		Insufficient water. Changed to annual due to continued lack of water.
W-834-G3	MWPT	Tpsg	A	A	CMP	E300.0:NO3	3		Insufficient water. Changed to annual due to continued lack of water.
W-834-G3	MWPT	Tpsg	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-834-G3	MWPT	Tpsg	A	A	CMP	TBOS	3		Insufficient water. Changed to annual due to continued lack of water.
W-834-H2	EW	Tpsg	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-H2	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-H2	EW	Tpsg	S	S	CMP	E601	3		

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 7 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-H2	EW	Tpsg	A	A	CMP	TBOS	1	N	Insufficient water.
W-834-J1	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-J1	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-J1	EW	Tpsg	S	S	CMP	E601	3		
W-834-J1	EW	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-J2	EW	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-J2	EW	Tpsg	S	S	CMP	E601	1	Y	
W-834-J2	EW	Tpsg	S	S	CMP	E601	3		
W-834-J2	EW	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-J3	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-J3	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-J3	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-J3	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Insufficient water.
W-834-K1A	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-K1A	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-K1A	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-K1A	MWPT	Tpsg	A	A	CMP	EM8015:DIESEL	1	N	Dry
W-834-K1A	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-M1	MWPT	Tpsg		S	DIS	E218.2	1	Y	
W-834-M1	MWPT	Tpsg		S	DIS	E218.2	3		
W-834-M1	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-M1	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-M1	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-M1	MWPT	Tpsg		A	DIS	GENMIN	1	Y	
W-834-M1	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-M2	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 8 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-M2	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-M2	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-M2	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-S1	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-S1	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-S1	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-S1	MWPT	Tpsg	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-S1	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Insufficient water.
W-834-S10	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-S10	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-S10	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-S10	MWPT	Tpsg	A	A	CMP	EM8015:DIESEL	1	N	Dry
W-834-S10	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-S12A	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-S12A	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-S12A	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-S12A	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-S13	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-S13	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-S13	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-S13	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Insufficient water.
W-834-S4	MWPT	Tpsg		A	DIS	E218.2	1	Y	
W-834-S4	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-S4	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-S4	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-S4	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 9 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-S5	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-S5	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-S5	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-S5	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-S6	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-S6	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-S6	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-S6	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-S7	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-S7	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-S7	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-S7	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-S8	MWPT	$Tnsc_2$	A	A	CMP	E300.0:NO3	1	Y	
W-834-S8	MWPT	$Tnsc_2$	S	S	CMP	E601	1	Y	
W-834-S8	MWPT	$Tnsc_2$	S	S	CMP	E601	3		
W-834-S8	MWPT	$Tnsc_2$		S	DIS	E602	1	Y	
W-834-S8	MWPT	$Tnsc_2$	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-S8	MWPT	$Tnsc_2$	A	A	CMP	TBOS	1	Y	
W-834-S9	MWPT	$Tnsc_2$		S	DIS	E218.2	1	Y	
W-834-S9	MWPT	$Tnsc_2$		S	DIS	E218.2	3		
W-834-S9	MWPT	$Tnsc_2$	A	A	CMP	E300.0:NO3	1	Y	
W-834-S9	MWPT	$Tnsc_2$	S	S	CMP	E601	1	Y	
W-834-S9	MWPT	$Tnsc_2$	S	S	CMP	E601	3		
W-834-S9	MWPT	$Tnsc_2$	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-S9	MWPT	$Tnsc_2$	A	A	CMP	TBOS	1	Y	
W-834-T1	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	1	Y	

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 10 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-T1	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	3		
W-834-T1	GW	$Tnbs_1$	Q	Q	CMP	E601	1	Y	
W-834-T1	GW	$Tnbs_1$	Q	Q	CMP	E601	2	Y	
W-834-T1	GW	$Tnbs_1$	Q	Q	CMP	E601	3		
W-834-T1	GW	$Tnbs_1$	Q	Q	CMP	E601	4		
W-834-T1	GW	$Tnbs_1$	S	S	CMP	TBOS	1	Y	
W-834-T1	GW	$Tnbs_1$	S	S	CMP	TBOS	3		
W-834-T11	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-T11	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-T11	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T11	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-T2	MWPT	Tpsg		A	DIS	E218.2	1	Y	
W-834-T2	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-T2	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-T2	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T2	MWPT	Tpsg		A	DIS	GENMIN	1	Y	
W-834-T2	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-T2A	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-T2A	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-T2A	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T2A	MWPT	Tpsg		A	DIS	GENMIN	1	Y	
W-834-T2A	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-T2B	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-T2B	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-T2B	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T2B	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 11 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-T2C	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-T2C	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-T2C	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T2C	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-T2D	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-T2D	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-T2D	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T2D	MWPT	Tpsg		A	DIS	GENMIN	1	Y	
W-834-T2D	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-T3	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	1	Y	
W-834-T3	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	3		
W-834-T3	GW	$Tnbs_1$	Q	Q	CMP	E601	1	Y	
W-834-T3	GW	$Tnbs_1$	Q	Q	CMP	E601	2	Y	
W-834-T3	GW	$Tnbs_1$	Q	Q	CMP	E601	3		
W-834-T3	GW	$Tnbs_1$	Q	Q	CMP	E601	4		
W-834-T3	GW	$Tnbs_1$	S	S	CMP	TBOS	1	Y	
W-834-T3	GW	$Tnbs_1$	S	S	CMP	TBOS	3		
W-834-T5	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-T5	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-T5	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T5	MWPT	Tpsg	A	A	CMP	TBOS	1	Y	
W-834-T7A	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	Y	
W-834-T7A	MWPT	Tpsg	S	S	CMP	E601	1	Y	
W-834-T7A	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T7A	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Insufficient water.
W-834-T8A	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 12 of 13)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-834-T8A	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-T8A	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T8A	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-T9	MWPT	Tpsg	A	A	CMP	E300.0:NO3	1	N	Dry
W-834-T9	MWPT	Tpsg	S	S	CMP	E601	1	N	Dry
W-834-T9	MWPT	Tpsg	S	S	CMP	E601	3		
W-834-T9	MWPT	Tpsg	A	A	CMP	TBOS	1	N	Dry
W-834-U1	MWPT	Tps	A	A	CMP	E300.0:NO3	1	Y	
W-834-U1	MWPT	Tps	S	S	CMP	E601	1	Y	
W-834-U1	MWPT	Tps	S	S	CMP	E601	3		
W-834-U1	MWPT	Tps	A	A	CMP	EM8015:DIESEL	1	Y	
W-834-U1	MWPT	Tps	A	A	CMP	TBOS	1	Y	

Notes and footnote appear on following page.

Table 2.2-2. Building 834 (OU2) ground water sampling and analysis plan. (Cont. Page 13 of 13)

Notes:

Building 834 primary COC: VOCs (E601, 502.2, or E624).

Building 834 secondary COC: Nitrate (E300.0:NO3).

Building 834 secondary COC: TBOS/TKEBS.

Building 834 secondary COC: Diesel.

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
BC6-10	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
BC6-10	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
BC6-10	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
BC6-10	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
BC6-10	MWPT	$Tnbs_1$	S	S	CMP	E906	1	Y	
BC6-10	MWPT	$Tnbs_1$	S	S	CMP	E906	3		
BC6-13 (SPRING 7)	MWPT	$Qt/Tnbs_1$	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
BC6-13 (SPRING 7)	MWPT	$Qt/Tnbs_1$	A	A	CMP	E300.0:PERC	1	N	Insufficient water.
BC6-13 (SPRING 7)	MWPT	$Qt/Tnbs_1$	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
BC6-13 (SPRING 7)	MWPT	$Qt/Tnbs_1$	A	A	CMP	E906	1	N	Insufficient water. Changed to annual due to continued lack of water.
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	M	CMP	E300.0:NO3	4		

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 2 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	1	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	1	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	1	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	2	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	2	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	2	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	3		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	3		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	3		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	4		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	4		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	4		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	1	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	1	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	1	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	2	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	2	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	2	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	3		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	3		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	3		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	4		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	4		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	4		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	1	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	1	Y	

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 3 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	1	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	2	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	2	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	2	Y	
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	3		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	3		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	3		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	4		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	4		
CARNRW1	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:NO3	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	2	Y	

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 4 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E300.0:PERC	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E601	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	2	Y	

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 5 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	M	CMP/WGMG	E906	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:NO3	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	3		

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 6 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E300.0:PERC	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E601	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	4		

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 7 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	M	CMP	E906	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:NO3	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E300.0:PERC	4		

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 8 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E601	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	1	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	3		
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	4		
CARNRW4	WS	Qal/Tts	M	M	CMP	E906	4		
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 9 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
EP6-06[b]	DMW			Q	ERD/WGMG	E300.0:PERC	3		
EP6-06[b]	DMW			Q	ERD/WGMG	E300.0:PERC	4		
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E624	1	Y	
EP6-06[b]	DMW			Q	ERD/WGMG	E624	2	Y	
EP6-06[b]	DMW			Q	ERD/WGMG	E624	3		
EP6-06[b]	DMW			Q	ERD/WGMG	E624	4		
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	2	Y	
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	3		
EP6-06[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	4		
EP6-07	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
EP6-07	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
EP6-07	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
EP6-07	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
EP6-07	MWPT	$Tnbs_1$	S	S	CMP	E906	1	Y	
EP6-07	MWPT	$Tnbs_1$	S	S	CMP	E906	3		
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
EP6-08*	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 10 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	1	Y	
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	2	Y	
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	3		
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	4		
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	2	Y	
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	3		
EP6-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	4		
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	1	Y	
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	2	Y	
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	3		
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	4		
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	2	Y	
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	3		
EP6-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	4		

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 11 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
K6-01[c]	DMW	$Tnbs_1$		A	ERD/WGMG	E300.0:NO3	1	Y	
K6-01[c]	DMW	$Tnbs_1$		A	ERD/WGMG	E300.0:PERC	1	Y	
K6-01[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	1	Y	
K6-01[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	3		
K6-01[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E906	1	Y	
K6-01[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E906	3		
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
K6-01S*	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E624	1	Y	
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E624	2	Y	
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E624	3		
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E624	4		
K6-01S[b]	DMW	$Qt/Tnbs_1$		q	ERD/WGMG	E906	1	Y	
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	2	Y	
K6-01S[b]	DMW	$Qt/Tnbs_1$		q	ERD/WGMG	E906	3		
K6-01S[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	4		
K6-03	MWPT	$Tnbs_1$	A	A	CMP/WGMG	E300.0:NO3	1	Y	
K6-03	MWPT	$Tnbs_1$	A	A	CMP/WGMG	E300.0:PERC	1	Y	
K6-03	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E601	1	Y	
K6-03	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E601	3		

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 12 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
K6-03	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	1	Y	
K6-03	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	3		
K6-04	MWPT	$Tnbs_1$	A	Q	CMP	E300.0:NO3	1	Y	
K6-04	MWPT	$Tnbs_1$	A	Q	CMP	E300.0:PERC	1	Y	
K6-04	MWPT	$Tnbs_1$	S	Q	CMP	E601	1	Y	
K6-04	MWPT	$Tnbs_1$	S	Q	CMP	E601	3		
K6-04	MWPT	$Tnbs_1$	S	Q	CMP	E906	1	Y	
K6-04	MWPT	$Tnbs_1$	S	Q	CMP	E906	3		
K6-14	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
K6-14	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
K6-14	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
K6-14	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
K6-14	MWPT	$Tnbs_1$	S	S	CMP	E906	1	Y	
K6-14	MWPT	$Tnbs_1$	S	S	CMP	E906	3		
K6-15	MWPT	$Qt/Tnbs_1$	A	A	CMP/WGMG	E300.0:NO3	1	N	Insufficient water.
K6-15	MWPT	$Qt/Tnbs_1$	A	A	CMP/WGMG	E300.0:PERC	1	N	Insufficient water.
K6-15	MWPT	$Qt/Tnbs_1$	S	S	CMP/WGMG	E601	1	N	Insufficient water.
K6-15	MWPT	$Qt/Tnbs_1$	S	S	CMP/WGMG	E601	3		
K6-15	MWPT	$Qt/Tnbs_1$	S	S	CMP/WGMG	E906	1	N	Insufficient water.
K6-15	MWPT	$Qt/Tnbs_1$	S	S	CMP/WGMG	E906	3		
K6-16	MWPT	$Qt/Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
K6-16	MWPT	$Qt/Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
K6-16	MWPT	$Qt/Tnbs_1$	S	S	CMP	E601	1	Y	
K6-16	MWPT	$Qt/Tnbs_1$	S	S	CMP	E601	3		
K6-16	MWPT	$Qt/Tnbs_1$	S	S	CMP	E906	1	Y	
K6-16	MWPT	$Qt/Tnbs_1$	S	S	CMP	E906	3		

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 13 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
K6-17	GW	$Qt/Tnbs_1$	S	S	CMP	E300.0:NO3	1	Y	
K6-17	GW	$Qt/Tnbs_1$	S	S	CMP	E300.0:NO3	3		
K6-17	GW	$Qt/Tnbs_1$	S	S	CMP	E300.0:PERC	1	Y	
K6-17	GW	$Qt/Tnbs_1$	S	S	CMP	E300.0:PERC	3		
K6-17	GW	$Qt/Tnbs_1$	Q	Q	CMP	E601	1	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	Q	CMP	E601	2	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	Q	CMP	E601	3		
K6-17	GW	$Qt/Tnbs_1$	Q	Q	CMP	E601	4		
K6-17	GW	$Qt/Tnbs_1$	Q	Q	CMP	E906	1	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	Q	CMP	E906	2	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	Q	CMP	E906	3		
K6-17	GW	$Qt/Tnbs_1$	Q	Q	CMP	E906	4		
K6-18	MWPT	$Qt/Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
K6-18	MWPT	$Qt/Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
K6-18	MWPT	$Qt/Tnbs_1$	S	S	CMP	E601	1	Y	
K6-18	MWPT	$Qt/Tnbs_1$	S	S	CMP	E601	3		
K6-18	MWPT	$Qt/Tnbs_1$	S	S	CMP	E906	1	Y	
K6-18	MWPT	$Qt/Tnbs_1$	S	S	CMP	E906	3		
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 14 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E624	1	Y	
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E624	2	Y	
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E624	3		
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E624	4		
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	2	Y	
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	3		
K6-19[b]	DMW	$Qt/Tnbs_1$		Q	ERD/WGMG	E906	4		
K6-21	MWPT	Qt	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
K6-21	MWPT	Qt	A	A	CMP	E300.0:PERC	1	N	Insufficient water.
K6-21	MWPT	Qt	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
K6-21	MWPT	Qt	A	A	CMP	E906	1	N	Insufficient water. Changed to annual due to continued lack of water.
K6-22	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	1	N	Insufficient water.
K6-22	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	3		
K6-22	GW	$Tnbs_1$	S	S	CMP	E300.0:PERC	1	N	Insufficient water.
K6-22	GW	$Tnbs_1$	S	S	CMP	E300.0:PERC	3		
K6-22	GW	$Tnbs_1$	Q	Q	CMP	E601	1	N	Insufficient water.
K6-22	GW	$Tnbs_1$	Q	Q	CMP	E601	2	N	Insufficient water.
K6-22	GW	$Tnbs_1$	Q	Q	CMP	E601	3		
K6-22	GW	$Tnbs_1$	Q	Q	CMP	E601	4		
K6-22	GW	$Tnbs_1$	Q	Q	CMP	E906	1	N	Insufficient water.
K6-22	GW	$Tnbs_1$	Q	Q	CMP	E906	2	N	Insufficient water.
K6-22	GW	$Tnbs_1$	Q	Q	CMP	E906	3		

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 15 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
K6-22	GW	$Tnbs_1$	Q	Q	CMP	E906	4		
K6-23	MWPT	Tmss			DIS	E239.2	1	Y	
K6-23	MWPT	Tmss	A	A	CMP	E300.0:NO3	1	Y	
K6-23	MWPT	Tmss	A	A	CMP	E300.0:PERC	1	Y	
K6-23	MWPT	Tmss	S	S	CMP	E601	1	Y	
K6-23	MWPT	Tmss	S	S	CMP	E601	3		
K6-23	MWPT	Tmss	S	S	CMP	E906	1	Y	
K6-23	MWPT	Tmss	S	S	CMP	E906	3		
K6-24	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
K6-24	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
K6-24	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
K6-24	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
K6-24	MWPT	$Tnbs_1$	S	S	CMP	E906	1	Y	
K6-24	MWPT	$Tnbs_1$	S	S	CMP	E906	3		
K6-25	MWPT	Tmss	A	A	CMP	E300.0:NO3	1	Y	
K6-25	MWPT	Tmss	A	A	CMP	E300.0:PERC	1	Y	
K6-25	MWPT	Tmss	S	S	CMP	E601	1	Y	
K6-25	MWPT	Tmss	S	S	CMP	E601	3		
K6-25	MWPT	Tmss	S	S	CMP	E906	1	Y	
K6-25	MWPT	Tmss	S	S	CMP	E906	3		
K6-26	MWPT	$Tnbs_1$			DIS	E239.2	1	Y	
K6-26	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
K6-26	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
K6-26	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
K6-26	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
K6-26	MWPT	$Tnbs_1$	S	S	CMP	E906	1	Y	

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 16 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
K6-26	MWPT	$Tnbs_1$	S	S	CMP	E906	3		
K6-27	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
K6-27	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
K6-27	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
K6-27	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
K6-27	MWPT	$Tnbs_1$	S	S	CMP	E906	1	Y	
K6-27	MWPT	$Tnbs_1$	S	S	CMP	E906	3		
K6-32	MWPT	$Tnbs_1$	A	A	CMP/WGMG	E300.0:NO3	1	Y	
K6-32	MWPT	$Tnbs_1$	A	A	CMP/WGMG	E300.0:PERC	1	Y	
K6-32	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E601	1	Y	
K6-32	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E601	3		
K6-32	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	1	Y	
K6-32	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	3		
K6-33	MWPT	$Tnbs_1$			DIS	E239.2	1	Y	
K6-33	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
K6-33	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
K6-33	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
K6-33	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
K6-33	MWPT	$Tnbs_1$	S	S	CMP	E906	1	Y	
K6-33	MWPT	$Tnbs_1$	S	S	CMP	E906	3		
K6-34	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	1	Y	
K6-34	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	3		
K6-34	GW	$Tnbs_1$	S	S	CMP	E300.0:PERC	1	Y	
K6-34	GW	$Tnbs_1$	S	S	CMP	E300.0:PERC	3		
K6-34	GW	$Tnbs_1$	Q	Q	CMP	E601	1	Y	
K6-34	GW	$Tnbs_1$	Q	Q	CMP	E601	2	Y	

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 17 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
K6-34	GW	$Tnbs_1$	Q	Q	CMP	E601	3		
K6-34	GW	$Tnbs_1$	Q	Q	CMP	E601	4		
K6-34	GW	$Tnbs_1$	Q	Q	CMP	E906	1	Y	
K6-34	GW	$Tnbs_1$	Q	Q	CMP	E906	2	Y	
K6-34	GW	$Tnbs_1$	Q	Q	CMP	E906	3		
K6-34	GW	$Tnbs_1$	Q	Q	CMP	E906	4		
K6-35	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
K6-35	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
K6-35	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
K6-35	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
K6-35	MWPT	$Tnbs_1$	S	S	CMP	E906	1	Y	
K6-35	MWPT	$Tnbs_1$	S	S	CMP	E906	3		
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	N	Insufficient water.
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	N	Insufficient water.
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	1	Y	
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	2	N	Insufficient water.
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	3		
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	4		
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	2	N	Insufficient water.

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 18 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	3		
K6-36[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	4		
SPRING15	SPR	Qt	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
SPRING15	SPR	Qt	A	A	CMP	E300.0:PERC	1	N	Insufficient water.
SPRING15	SPR	Qt	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
SPRING15	SPR	Qt	A	A	CMP	E906	1	N	Insufficient water. Changed to annual due to continued lack of water.
SPRING8	SPR	Qt		A	DIS	DWMETALS	2	N	Not on sampling plan.
SPRING8	SPR	Qt		A	DIS	E210.2	2	N	Not on sampling plan.
SPRING8	SPR	Qt		A	DIS	E300.0:PERC	2	N	Not on sampling plan.
SPRING8	SPR	Qt		A	DIS	E601	2	N	Not on sampling plan.
SPRING8	SPR	Qt		A	DIS	E8330:R+H	2	N	Not on sampling plan.
SPRING8	SPR	Qt		A	DIS	E906	2	N	Not on sampling plan.
W-33C-01	MWPT	Tts	A	A	CMP	E300.0:NO3	1	Y	
W-33C-01	MWPT	Tts	A	A	CMP	E300.0:PERC	1	Y	
W-33C-01	MWPT	Tts	S	S	CMP	E601	1	Y	
W-33C-01	MWPT	Tts	S	S	CMP	E601	3		
W-33C-01	MWPT	Tts	S	S	CMP	E906	1	Y	
W-33C-01	MWPT	Tts	S	S	CMP	E906	3		
W-34-01	MWB	$Tnsc_1$		A	DIS	E300.0:NO3	1	Y	
W-34-01	MWB	$Tnsc_1$		A	DIS	E300.0:PERC	1	Y	
W-34-01	MWB	$Tnsc_1$		A	DIS	E601	1	Y	
W-34-01	MWB	$Tnsc_1$		A	DIS	E906	1	Y	

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 19 of 20)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis*	Sampling quarter	Sampled Y/N	Comment
W-34-02	MWB	Upper $Tnbs_1$		A	DIS	E300.0:NO3	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		A	DIS	E300.0:PERC	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		A	DIS	E601	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		A	DIS	E906	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	3		
W-PIT6-1819	GW	$Tnbs_1$	S	S	CMP	E300.0:PERC	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	S	CMP	E300.0:PERC	3		
W-PIT6-1819	GW	$Tnbs_1$	Q	Q	CMP	E601	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	Q	CMP	E601	2	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	Q	CMP	E601	3		
W-PIT6-1819	GW	$Tnbs_1$	Q	Q	CMP	E601	4		
W-PIT6-1819	GW	$Tnbs_1$	Q	Q	CMP	E906	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	Q	CMP	E906	2	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	Q	CMP	E906	3		
W-PIT6-1819	GW	$Tnbs_1$	Q	Q	CMP	E906	4		

Notes and footnotes appear on following page.

Table 2.3-1. Pit 6 (OU3) landfill ground water sampling and analysis plan. (Cont. Page 20 of 20)

Notes:

Pit 6 primary COC: VOCs (E601 or E624).

Pit 6 primary COC: tritium (E906).

Pit 6 secondary COC: nitrate (E300:NO3).

Pit 6 secondary COC: perchlorate (E300.0:PERC).

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

[b] **Non CMP well. DWM analytes and sampling frequency are specified in the Pit 6 Landfill Post-Closure Plan.**

[c] **K6-01 TO BE SAMPLED QUARTERLY IF K6-01S IS DRY.**

Table 2.4-1. Building 815-Source (B815-SRC) volumes of ground water extracted and discharged, January 1, 2004 through June 30, 2004.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Average weekly volume of water treated (gal)
B815-SRC[a]	January	0[a]	0	0
	February	0[a]	0	0
	March	504	33,352	11,117
	April	573	32,952	8,238
	May	672	37,643	9,411
	June	841	45,645	9,129
Total		2,590	149,592	

[a] Facility shut-down due to a discharge tank pump failure.

Table 2.4-2. Building 815-Proximal (B815-PRX) volumes of ground water extracted and discharged, January 1, 2004 through June 30, 2004.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Average weekly volume of water treated (gal)
B815-PRX	January	657	83,696	20,924
	February	701	89,332	22,333
	March	824	77,297	15,459
	April	678	55,784	13,946
	May	679	54,936	13,734
	June	846	67,349	13,470
Total		4,385	428,394	

Table 2.4-3. Building 815-Distal Site Boundary (B815-DSB) volumes of ground water extracted and discharged, January 1, 2004 through June 30, 2004.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Average weekly volume of water treated (gal)
B815-DSB	January	197	19,460	4,865
	February	241	28,494	7,124
	March	385	36,128	7,226
	April	322	56,261	14,065
	May	321	80,461	20,115
	June	390	97,131	19,426
Total		1,856	317,935	

Table 2.4-4. Building 817-Source (B817-SRC) volumes of ground water extracted and discharged, January 1, 2004 through June 30, 2004, 2003.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Average weekly volume of water treated (gal)
B817-SRC	January	17	417	104
	February	19	498	124
	March	29	590	118
	April	24	447	112
	May	25	436	109
	June	36	526	105
Total		150	2,914	

Table 2.4-5. High Explosive Process Area OU 2004 VOCs in ground water treatment system influent and effluent.

Location	Date	Method	TCE (μg/L)	PCE (μg/L)	Total 1,2-DCE (μg/L)	Carbon tetrachloride (μg/L)	Chloroform (μg/L)	1,1-DCA (μg/L)	1,2-DCA (μg/L)	1,1-DCE (μg/L)	1,1,1-TCA (μg/L)	Freon 11 (μg/L)	Freon 113 (μg/L)	Methylene chloride (μg/L)
B817-SRC-E	01/13/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B817-SRC-E	02/04/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B817-SRC-E	03/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B817-SRC-E	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B817-SRC-E	05/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B817-SRC-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B817-SRC-I	01/13/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B817-SRC-I	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B817-SRC-I	04/07/04 DUP	E601	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
B815-SRC-I	03/09/04	E601	5.2	<0.5	<1	<0.5	<0.5	<0.5	<0.5	0.81	<0.5	<0.5	<0.5	<0.5
B815-SRC-I	04/07/04	E601	6.1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	0.82	<0.5	<0.5	<0.5	<0.5
B815-DSB-I	01/13/04	E601	10	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-DSB-I	04/07/04	E601	9.4	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-DSB-E	01/13/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-DSB-E	02/03/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-DSB-E	03/02/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-DSB-E	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-DSB-E	05/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-DSB-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-PRX-I	01/12/04	E601	33	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-PRX-I	04/07/04	E601	32	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-PRX-E	01/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-PRX-E	02/03/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-PRX-E	03/02/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-PRX-E	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-PRX-E	05/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B815-PRX-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2.4-5. High Explosive Process Area OU 2004 VOCs in ground water treatment system influent and effluent (analytes not listed above).

Location	Date	Method	Detection frequency
B817-SRC-E	01/13/04	E601	0 of 21
B817-SRC-E	02/04/04	E601	0 of 21
B817-SRC-E	03/09/04	E601	0 of 21
B817-SRC-E	04/07/04	E601	0 of 21
B817-SRC-E	05/12/04	E601	0 of 21
B817-SRC-E	06/09/04	E601	0 of 21
B817-SRC-I	01/13/04	E601	0 of 21
B817-SRC-I	04/07/04	E601	0 of 21
B817-SRC-I	04/07/04 DUP	E601	0 of 20
B815-SRC-I	03/09/04	E601	0 of 21
B815-SRC-I	04/07/04	E601	0 of 21
B815-DSB-I	01/13/04	E601	0 of 21
B815-DSB-I	04/07/04	E601	0 of 21
B815-DSB-E	01/13/04	E601	0 of 21
B815-DSB-E	02/03/04	E601	0 of 21
B815-DSB-E	03/02/04	E601	0 of 21
B815-DSB-E	04/07/04	E601	0 of 21
B815-DSB-E	05/12/04	E601	0 of 21
B815-DSB-E	06/09/04	E601	0 of 21
B815-PRX-I	01/12/04	E601	0 of 21
B815-PRX-I	04/07/04	E601	0 of 21
B815-PRX-E	01/12/04	E601	0 of 21
B815-PRX-E	02/03/04	E601	0 of 21
B815-PRX-E	03/02/04	E601	0 of 21
B815-PRX-E	04/07/04	E601	0 of 21
B815-PRX-E	05/12/04	E601	0 of 21
B815-PRX-E	06/09/04	E601	0 of 21

Table 2.4-6. High Explosive Process Area OU 2004 nitrate and perchlorate in ground water treatment system influent and effluent.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (μg/L)
B815-SRC-I	04/07/04	94.6 D	20
B815-DSB-I	01/13/04	<0.44	-
B815-DSB-I	04/07/04	<0.44	-
B815-DSB-E	01/13/04	<0.44	-
B815-DSB-E	02/03/04	<0.44	-
B815-DSB-E	03/02/04	<0.44	-
B815-DSB-E	04/07/04	<0.44	-
B815-DSB-E	05/12/04	<0.44	-
B815-DSB-E	06/09/04	<0.44	-
B815-PRX-I	01/12/04	80.7	<4 H
B815-PRX-I	04/07/04	80.8	8.1
B815-PRX-E	01/12/04	79.8	<4 H
B815-PRX-E	02/03/04	81.1	<4
B815-PRX-E	03/02/04	80.4	<4 H
B815-PRX-E	04/07/04	76.2	<4
B815-PRX-E	05/12/04	73.5	<4
B815-PRX-E	06/09/04	72.5	<4
B817-SRC-I	01/13/04	83.7	27 H
B817-SRC-I	04/07/04	87.4	23
B817-SRC-I	04/07/04 DUP	79 DH	16
B817-SRC-E	01/13/04	3.1	<4 H
B817-SRC-E	02/04/04	11.1	<4
B817-SRC-E	03/09/04	12.7	<4
B817-SRC-E	04/07/04	3.7	<4
B817-SRC-E	05/12/04	1.4	<4
B817-SRC-E	06/09/04	0.68	<4

Table 2.4-7. High Explosive Process Area OU 2004 high explosive compounds in ground water treatment system influent and effluent.

Location	Date	HMX (μg/L)	RDX (μg/L)
B815-SRC-I	04/07/04	-	77
B815-PRX-I	01/12/04	<5	<5
B815-PRX-I	04/07/04	<5	<5
B815-PRX-E	01/12/04	<5	<5
B815-PRX-E	02/03/04	<5	<5
B815-PRX-E	03/02/04	<5	<5
B815-PRX-E	04/07/04	<5	<5
B815-PRX-E	05/12/04	<5	<5
B815-PRX-E	06/09/04	<5	<5
B817-SRC-I	01/13/04	19	60
B817-SRC-I	04/07/04 DUP	15	45
B817-SRC-I	04/14/04	14 D	42 D
B817-SRC-E	01/13/04	<5	<5
B817-SRC-E	02/04/04	<5	<5
B817-SRC-E	03/09/04	<5	<5
B817-SRC-E	04/14/04	<5	<5
B817-SRC-E	05/12/04	<5	<5
B817-SRC-E	06/09/04	<5	<5

Table 2.4-8. High Explosive Process Area OU treatment facility sampling and analysis plans.

Sample location	Sample identification	Parameter	Frequency
B815-SRC GWTS			
Influent Port	**GTU02-I**	**VOCs**	**Quarterly**
		RDX	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port (influent to misting system)	**GTU02-E**	**VOCs**	**Monthly**
		RDX	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
B815-PRX GWTS			
Influent Port	**GTU06-I**	**VOCs**	**Quarterly**
		Nitrate	**Quarterly**
		RDX	**Quarterly**
		Perchlorate	**Quarterly**
		pH	**Quarterly**
Effluent Port (influent to misting system)	**GTU06-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		RDX	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
B815-DSB GWTS			
Influent Port	**STU04-I**	**VOCs**	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**STU04-E**	**VOCs**	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

Table 2.4-8. High Explosive Process Area OU treatment facility sampling and analysis plans. (Cont. Page 2 of 2)

Sample location	Sample identification	Parameter	Frequency
B817-SRC GWTS			
Influent Port	**STU10-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**STU10-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:NO3	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E300.0:PERC	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 2 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E601	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	1	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	2	Y	
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	3		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	4		
GALLO1	WS	$Tnbs_2$	M	M	CMP/WGMG	E8330:R+H	4		
SPRING14	SPR	$Tnbs_2$	B	B	CMP	E300.0:NO3	1	N	Next sample required 1ndQ 2005.
SPRING14	SPR	$Tnbs_2$	B	B	CMP	E300.0:PERC	1	N	Next sample required 1ndQ 2005.
SPRING14	SPR	$Tnbs_2$	B	B	CMP	E601	1	N	Next sample required 1ndQ 2005.
SPRING14	SPR	$Tnbs_2$	B	B	CMP	E8330:R+H	1	N	Next sample required 1ndQ 2005.
SPRING5	SPR	Tps	A	A	CMP	E300.0:NO3	2	N	Insufficient water.
SPRING5	SPR	Tps	A	A	CMP	E300.0:PERC	2	N	Insufficient water.

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 3 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
SPRING5	SPR	Tps	S	S	CMP	E601	2	N	Insufficient water.
SPRING5	SPR	Tps	S	S	CMP	E601	4		
SPRING5	SPR	Tps	A	A	CMP	E8330:R+H	2	N	Insufficient water.
W-35B-01	GW	Qal	S	S	CMP	E300.0:NO3	1	Y	
W-35B-01	GW	Qal			DIS	E300.0:NO3	2	Y	
W-35B-01	GW	Qal	S	S	CMP	E300.0:NO3	3		
W-35B-01	GW	Qal	S	S	CMP	E300.0:PERC	1	Y	
W-35B-01	GW	Qal			DIS	E300.0:PERC	2	Y	
W-35B-01	GW	Qal	S	S	CMP	E300.0:PERC	3		
W-35B-01	GW	Qal	Q	Q	CMP	E601	1	Y	
W-35B-01	GW	Qal	Q	Q	CMP	E601	2	Y	
W-35B-01	GW	Qal	Q	Q	CMP	E601	3		
W-35B-01	GW	Qal	Q	Q	CMP	E601	4		
W-35B-01	GW	Qal	S	S	CMP	E8330:R+H	1	Y	
W-35B-01	GW	Qal			DIS	E8330:R+H	2	Y	
W-35B-01	GW	Qal	S	S	CMP	E8330:R+H	3		
W-35B-02	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	1	Y	
W-35B-02	GW	$Tnbs_2$			DIS	E300.0:NO3	2	Y	
W-35B-02	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	3		
W-35B-02	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	1	Y	
W-35B-02	GW	$Tnbs_2$			DIS	E300.0:PERC	2	Y	
W-35B-02	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	3		
W-35B-02	GW	$Tnbs_2$	Q	Q	CMP	E601	1	Y	
W-35B-02	GW	$Tnbs_2$	Q	Q	CMP	E601	2	Y	
W-35B-02	GW	$Tnbs_2$	Q	Q	CMP	E601	3		
W-35B-02	GW	$Tnbs_2$	Q	Q	CMP	E601	4		
W-35B-02	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 4 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-35B-02	GW	$Tnbs_2$			DIS	E8330:R+H	2	Y	
W-35B-02	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	3		
W-35B-03	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	1	Y	
W-35B-03	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	3		
W-35B-03	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	1	Y	
W-35B-03	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	3		
W-35B-03	GW	$Tnbs_2$	Q	Q	CMP	E601	1	Y	
W-35B-03	GW	$Tnbs_2$	Q	Q	CMP	E601	2	Y	
W-35B-03	GW	$Tnbs_2$	Q	Q	CMP	E601	3		
W-35B-03	GW	$Tnbs_2$	Q	Q	CMP	E601	4		
W-35B-03	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	1	Y	
W-35B-03	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	3		
W-35B-04	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	1	Y	
W-35B-04	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	3		
W-35B-04	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	1	Y	
W-35B-04	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	3		
W-35B-04	GW	$Tnbs_2$	Q	Q	CMP	E601	1	Y	
W-35B-04	GW	$Tnbs_2$	Q	Q	CMP	E601	2	Y	
W-35B-04	GW	$Tnbs_2$	Q	Q	CMP	E601	3		
W-35B-04	GW	$Tnbs_2$	Q	Q	CMP	E601	4		
W-35B-04	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	1	Y	
W-35B-04	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	3		
W-35B-05	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	1	Y	
W-35B-05	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	3		
W-35B-05	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	1	Y	
W-35B-05	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	3		
W-35B-05	GW	$Tnbs_2$	Q	Q	CMP	E601	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 5 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-35B-05	GW	$Tnbs_2$	Q	Q	CMP	E601	2	Y	
W-35B-05	GW	$Tnbs_2$	Q	Q	CMP	E601	3		
W-35B-05	GW	$Tnbs_2$	Q	Q	CMP	E601	4		
W-35B-05	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	1	Y	
W-35B-05	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	3		
W-35C-01	MWPT	$Tnsc_2$	A	A	CMP	E300.0:NO3	1	Y	
W-35C-01	MWPT	$Tnsc_2$	A	A	CMP	E300.0:PERC	1	Y	
W-35C-01	MWPT	$Tnsc_2$	S	S	CMP	E601	1	Y	
W-35C-01	MWPT	$Tnsc_2$	S	S	CMP	E601	3		
W-35C-01	MWPT	$Tnsc_2$	A	A	CMP	E8330:R+H	1	Y	
W-35C-02	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	3		
W-35C-02	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	3		
W-35C-02	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
W-35C-02	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
W-35C-02	MWPT	$Tnbs_1$	A	A	CMP	E8330:R+H	3		
W-35C-04	EW	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-35C-04	EW	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-35C-04	EW	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-35C-04	EW	$Tnbs_2$	S	S	CMP	E601	3		
W-35C-04	EW	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-35C-05	MWPT	Tps	A	A	CMP	E300.0:NO3	1	Y	
W-35C-05	MWPT	Tps	A	A	CMP	E300.0:PERC	1	Y	
W-35C-05	MWPT	Tps	S	S	CMP	E601	1	Y	
W-35C-05	MWPT	Tps	S	S	CMP	E601	3		
W-35C-05	MWPT	Tps	A	A	CMP	E8330:R+H	1	Y	
W-35C-06	MWPT	Qal	A	A	CMP	E300.0:NO3	3		
W-35C-06	MWPT	Qal	A	A	CMP	E300.0:PERC	3		

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 6 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-35C-06	MWPT	Qal	S	S	CMP	E601	1	Y	
W-35C-06	MWPT	Qal	S	S	CMP	E601	3		
W-35C-06	MWPT	Qal	A	A	CMP	E8330:R+H	3		
W-35C-07	MWPT	$Tnsc_2$	A	A	CMP	E300.0:NO3	3		
W-35C-07	MWPT	$Tnsc_2$	A	A	CMP	E300.0:PERC	3		
W-35C-07	MWPT	$Tnsc_2$	S	S	CMP	E601	1	Y	
W-35C-07	MWPT	$Tnsc_2$	S	S	CMP	E601	3		
W-35C-07	MWPT	$Tnsc_2$	A	A	CMP	E8330:R+H	3		
W-35C-08	MWPT	$Tnsc_2$	A	A	CMP	E300.0:NO3	3		
W-35C-08	MWPT	$Tnsc_2$	A	A	CMP	E300.0:PERC	3		
W-35C-08	MWPT	$Tnsc_2$	S	S	CMP	E601	1	Y	
W-35C-08	MWPT	$Tnsc_2$	S	S	CMP	E601	3		
W-35C-08	MWPT	$Tnsc_2$	A	A	CMP	E8330:R+H	3		
W-4A	MWPT	$Tnsc_2$	A	A	CMP	E300.0:NO3	3		
W-4A	MWPT	$Tnsc_2$	A	A	CMP	E300.0:PERC	3		
W-4A	MWPT	$Tnsc_2$	S	S	CMP	E601	1	Y	
W-4A	MWPT	$Tnsc_2$	S	S	CMP	E601	3		
W-4A	MWPT	$Tnsc_2$	A	A	CMP	E8330:R+H	3		
W-4AS	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-4AS	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-4AS	MWPT	Tps	S	S	CMP	E601	1	Y	
W-4AS	MWPT	Tps	S	S	CMP	E601	3		
W-4AS	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-4B	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-4B	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-4B	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-4B	MWPT	$Tnbs_2$	S	S	CMP	E601	3		

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 7 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-4B	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-4C	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	1	Y	
W-4C	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	1	Y	
W-4C	MWPT	$Tnsc_1$	S	S	CMP	E601	1	Y	
W-4C	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
W-4C	MWPT	$Tnsc_1$	A	A	CMP	E8330:R+H	1	Y	
W-6BD	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-6BD	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-6BD	MWPT	Tps	S	S	CMP	E601	1	Y	
W-6BD	MWPT	Tps	S	S	CMP	E601	3		
W-6BD	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-6BS	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-6BS	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-6BS	MWPT	Tps	S	S	CMP	E601	1	Y	
W-6BS	MWPT	Tps	S	S	CMP	E601	3		
W-6BS	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-6CD	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-6CD	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-6CD	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-6CD	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-6CD	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-6CI	MWPT	$Tnsc_2$	A	A	CMP	E300.0:NO3	3		
W-6CI	MWPT	$Tnsc_2$	A	A	CMP	E300.0:PERC	3		
W-6CI	MWPT	$Tnsc_2$	S	S	CMP	E601	1	Y	
W-6CI	MWPT	$Tnsc_2$	S	S	CMP	E601	3		
W-6CI	MWPT	$Tnsc_2$	A	A	CMP	E8330:R+H	3		
W-6CS	MWPT	Tps	A	A	CMP	E300.0:NO3	3		

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 8 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-6CS	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-6CS	MWPT	Tps	S	S	CMP	E601	1	Y	
W-6CS	MWPT	Tps	S	S	CMP	E601	3		
W-6CS	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-6EI	MWPT	$Tnsc_2$	A	A	CMP	E300.0:NO3	3		
W-6EI	MWPT	$Tnsc_2$	A	A	CMP	E300.0:PERC	3		
W-6EI	MWPT	$Tnsc_2$	S	S	CMP	E601	1	Y	
W-6EI	MWPT	$Tnsc_2$	S	S	CMP	E601	3		
W-6EI	MWPT	$Tnsc_2$	A	A	CMP	E8330:R+H	3		
W-6ER	EW	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-6ER	EW	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-6ER	EW	$Tnbs_2$	S	S	CMP	E601	1	N	No access.
W-6ER	EW	$Tnbs_2$	S	S	CMP	E601	3		
W-6ER	EW	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-6ER	EW	$Tnbs_2$		S	DIS	NUTRIENTS	1	N	No access.
W-6ER	EW	$Tnbs_2$		S	DIS	NUTRIENTS	3		
W-6ES	MWPT	Qal	A	A	CMP	E300.0:NO3	3		
W-6ES	MWPT	Qal	A	A	CMP	E300.0:PERC	3		
W-6ES	MWPT	Qal	S	S	CMP	E601	1	Y	
W-6ES	MWPT	Qal	S	S	CMP	E601	3		
W-6ES	MWPT	Qal	A	A	CMP	E8330:R+H	3		
W-6F	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-6F	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-6F	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-6F	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-6F	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-6G	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 9 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-6G	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-6G	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-6G	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-6G	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-6H	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	1	Y	
W-6H	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	3		
W-6H	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	1	Y	
W-6H	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	3		
W-6H	GW	$Tnbs_2$	Q	Q	CMP	E601	1	Y	
W-6H	GW	$Tnbs_2$	Q	Q	CMP	E601	2	Y	
W-6H	GW	$Tnbs_2$	Q	Q	CMP	E601	3		
W-6H	GW	$Tnbs_2$	Q	Q	CMP	E601	4		
W-6H	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	1	Y	
W-6H	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	3		
W-6H	GW	$Tnbs_2$		S	DIS	NUTRIENTS	1	Y	
W-6H	GW	$Tnbs_2$		S	DIS	NUTRIENTS	3		
W-6I	MWPT	Tps	A	A	CMP	E300.0:NO3	1	Y	
W-6I	MWPT	Tps	A	A	CMP	E300.0:PERC	1	Y	
W-6I	MWPT	Tps	S	S	CMP	E601	1	Y	
W-6I	MWPT	Tps	S	S	CMP	E601	3		
W-6I	MWPT	Tps	A	A	CMP	E8330:R+H	1	Y	
W-6J	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	1	Y	
W-6J	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	3		
W-6J	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	1	Y	
W-6J	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	3		
W-6J	GW	$Tnbs_2$	Q	Q	CMP	E601	1	Y	
W-6J	GW	$Tnbs_2$	Q	Q	CMP	E601	2	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 10 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-6J	GW	$Tnbs_2$	Q	Q	CMP	E601	3		
W-6J	GW	$Tnbs_2$	Q	Q	CMP	E601	4		
W-6J	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	1	Y	
W-6J	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	3		
W-6J	GW	$Tnbs_2$		S	DIS	NUTRIENTS	1	Y	
W-6J	GW	$Tnbs_2$		S	DIS	NUTRIENTS	3		
W-6K	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-6K	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-6K	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-6K	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-6K	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-6L	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-6L	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-6L	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-6L	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-6L	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-806-06A	MWB	$Tnsc_1$	B	B	CMP	E300.0:NO3	1	N	Next sample required 1ndQ 2005.
W-806-06A	MWB	$Tnsc_1$	B	B	CMP	E300.0:PERC	1	N	Next sample required 1ndQ 2005.
W-806-06A	MWB	$Tnsc_1$	B	B	CMP	E601	1	N	Next sample required 1ndQ 2005.
W-806-06A	MWB	$Tnsc_1$	B	B	CMP	E8330:R+H	1	N	Next sample required 1ndQ 2005.
W-806-07	MWB	$Tnbs_2$	B	B	CMP	E300.0:NO3	1	N	Next sample required 1ndQ 2005.
W-806-07	MWB	$Tnbs_2$	B	B	CMP	E300.0:PERC	1	N	Next sample required 1ndQ 2005.
W-806-07	MWB	$Tnbs_2$	B	B	CMP	E601	1	N	Next sample required 1ndQ 2005.
W-806-07	MWB	$Tnbs_2$	B	B	CMP	E8330:R+H	1	N	Next sample required 1ndQ 2005.
W-808-01	MWPT	Tps	A	A	CMP	E300.0:NO3	1	Y	
W-808-01	MWPT	Tps	A	A	CMP	E300.0:PERC	1	Y	
W-808-01	MWPT	Tps	S	S	CMP	E601	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 11 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-808-01	MWPT	Tps	S	S	CMP	E601	3		
W-808-01	MWPT	Tps	A	A	CMP	E8330:R+H	1	Y	
W-808-02	MWPT	$Tnsc_2$	A	A	CMP	E300.0:NO3	3		
W-808-02	MWPT	$Tnsc_2$	A	A	CMP	E300.0:PERC	3		
W-808-02	MWPT	$Tnsc_2$	S	S	CMP	E601	1	N	Insufficient water.
W-808-02	MWPT	$Tnsc_2$	S	S	CMP	E601	3		
W-808-02	MWPT	$Tnsc_2$	A	A	CMP	E8330:R+H	3		
W-808-03	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-808-03	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
W-808-03	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
W-808-03	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
W-808-03	MWPT	$Tnbs_1$	A	A	CMP	E8330:R+H	1	Y	
W-809-01	MWPT	Tps	A	A	CMP	E300.0:NO3	1	Y	
W-809-01	MWPT	Tps	A	A	CMP	E300.0:PERC	1	Y	
W-809-01	MWPT	Tps	S	S	CMP	E601	1	Y	
W-809-01	MWPT	Tps	S	S	CMP	E601	3		
W-809-01	MWPT	Tps	A	A	CMP	E8330:R+H	1	Y	
W-809-02	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-809-02	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-809-02	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-809-02	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-809-02	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-809-03	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-809-03	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-809-03	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-809-03	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-809-03	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 12 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-809-04	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-809-04	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-809-04	MWPT	Tps	S	S	CMP	E601	1	Y	
W-809-04	MWPT	Tps			DIS	E601	2	Y	
W-809-04	MWPT	Tps	S	S	CMP	E601	3		
W-809-04	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-810-01	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-810-01	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
W-810-01	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	
W-810-01	MWPT	$Tnbs_1$	S	S	CMP	E601	3		
W-810-01	MWPT	$Tnbs_1$	A	A	CMP	E8330:R+H	1	Y	
W-814-01	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-814-01	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-814-01	MWPT	Tps	S	S	CMP	E601	1	Y	
W-814-01	MWPT	Tps	S	S	CMP	E601	3		
W-814-01	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-814-02	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-814-02	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-814-02	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-814-02	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-814-02	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-814-03	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-814-03	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-814-03	MWPT	Tps	S	S	CMP	E601	1	N	Insufficient water.
W-814-03	MWPT	Tps	S	S	CMP	E601	3		
W-814-03	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-814-04	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	3		

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 13 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-814-04	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	3		
W-814-04	MWPT	$Tnsc_1$	S	S	CMP	E601	1	Y	
W-814-04	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
W-814-04	MWPT	$Tnsc_1$	A	A	CMP	E8330:R+H	3		
W-815-01	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-815-01	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-815-01	MWPT	Tps	S	S	CMP	E601	1	N	Insufficient water.
W-815-01	MWPT	Tps			DIS	E601	2	N	Insufficient water.
W-815-01	MWPT	Tps	S	S	CMP	E601	3		
W-815-01	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-815-02	EW	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-815-02	EW	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-815-02	EW	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-815-02	EW	$Tnbs_2$	S	S	CMP	E601	3		
W-815-02	EW	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-815-03	MWPT	Tps	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-815-03	MWPT	Tps	A	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-815-03	MWPT	Tps	S	S	CMP	E601	1	N	Insufficient water.
W-815-03	MWPT	Tps			DIS	E601	2	N	Insufficient water.
W-815-03	MWPT	Tps	S	S	CMP	E601	3		
W-815-03	MWPT	Tps	A	A	CMP	E8330:R+H	1	N	Insufficient water.
W-815-04	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	N	Pump down.
W-815-04	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	N	Pump down.
W-815-04	MWPT	$Tnbs_2$	S	S	CMP	E601	1	N	Pump down.
W-815-04	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-815-04	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	N	Pump down.
W-815-05	MWPT	Tps	A	A	CMP	E300.0:NO3	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 14 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-815-05	MWPT	Tps	A	A	CMP	E300.0:PERC	1	Y	
W-815-05	MWPT	Tps	S	S	CMP	E601	1	Y	
W-815-05	MWPT	Tps	S	S	CMP	E601	3		
W-815-05	MWPT	Tps	A	A	CMP	E8330:R+H	1	Y	
W-815-06	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-815-06	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-815-06	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-815-06	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-815-06	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-815-07	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-815-07	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-815-07	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-815-07	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-815-07	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-815-08	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	2	Y	
W-815-08	GW	$Tnbs_1$	S	S	CMP	E300.0:NO3	4		
W-815-08	GW	$Tnbs_1$	S	S	CMP	E300.0:PERC	2	Y	
W-815-08	GW	$Tnbs_1$	S	S	CMP	E300.0:PERC	4		
W-815-08	GW	$Tnbs_1$	Q	Q	CMP	E601	1	Y	
W-815-08	GW	$Tnbs_1$	Q	Q	CMP	E601	2	Y	
W-815-08	GW	$Tnbs_1$	Q	Q	CMP	E601	3		
W-815-08	GW	$Tnbs_1$	Q	Q	CMP	E601	4		
W-815-08	GW	$Tnbs_1$	S	S	CMP	E8330:R+H	2	Y	
W-815-08	GW	$Tnbs_1$	S	S	CMP	E8330:R+H	4		
W-815-1928	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-815-1928	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-815-1928	MWPT	Tps	S	S	CMP	E601	1	N	Insufficient water.

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 15 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-815-1928	MWPT	Tps	S	S	CMP	E601	3		
W-815-1928	MWPT	Tps			DIS	E624	2	N	Insufficient water.
W-815-1928	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-817-01	EW	$Tnbs_2$	S	S	CMP/WGMG	E300.0:NO3	1	Y	
W-817-01	EW	$Tnbs_2$	S	S	CMP/WGMG	E300.0:NO3	3		
W-817-01	EW	$Tnbs_2$	S	S	CMP/WGMG	E300.0:PERC	1	Y	
W-817-01	EW	$Tnbs_2$	S	S	CMP/WGMG	E300.0:PERC	3		
W-817-01	EW	$Tnbs_2$	Q	Q	CMP/WGMG	E601	1	N	WDR624 analyzed.
W-817-01	EW	$Tnbs_2$	Q	Q	CMP/WGMG	E601	2	N	WDR624 analyzed.
W-817-01	EW	$Tnbs_2$	Q	Q	CMP/WGMG	E601	3		
W-817-01	EW	$Tnbs_2$	Q	Q	CMP/WGMG	E601	4		
W-817-01	EW	$Tnbs_2$	S	S	CMP/WGMG	E8330:R+H	1	N	W8330:LOW analyzed.
W-817-01	EW	$Tnbs_2$	S	S	CMP/WGMG	E8330:R+H	3		
W-817-02[b]	DMW	$Tnbs_2$		A	ERD/WGMG	E300.0:NO3	1	Y	
W-817-02[b]	DMW	$Tnbs_2$		A	ERD/WGMG	E300.0:PERC	1	Y	
W-817-02[b]	DMW	$Tnbs_2$		S	ERD/WGMG	E601	1	Y	
W-817-02[b]	DMW	$Tnbs_2$		S	ERD/WGMG	E601	3		
W-817-02[b]	DMW	$Tnbs_2$		A	ERD/WGMG	E8330:R+H	1	Y	
W-817-02[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	1	Y	
W-817-02[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	2	Y	
W-817-02[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	3		
W-817-02[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	4		
W-817-02[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	1	Y	
W-817-02[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	2	Y	
W-817-02[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	3		

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 16 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-817-02[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	4		
W-817-03[b]	DMW	$Tnbs_2$		A	ERD/WGMG	E300.0:NO3	1	Y	
W-817-03[b]	DMW	$Tnbs_2$		A	ERD/WGMG	E300.0:PERC	1	Y	
W-817-03[b]	DMW	$Tnbs_2$		S	ERD/WGMG	E601	1	Y	
W-817-03[b]	DMW	$Tnbs_2$		S	ERD/WGMG	E601	3		
W-817-03[b]	DMW	$Tnbs_2$		A	ERD/WGMG	E8330:R+H	1	Y	
W-817-03[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	1	Y	
W-817-03[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	2	Y	
W-817-03[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	3		
W-817-03[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	4		
W-817-03[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	1	Y	
W-817-03[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	2	Y	
W-817-03[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	3		
W-817-03[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	4		
W-817-03A	MWPT	Tps			DIS	E1002TOX	1	N	Insufficient water.
W-817-03A	MWPT	Tps			DIS	E1003TOX	1	N	Insufficient water.
W-817-03A	MWPT	Tps	A	A	CMP	E300.0:NO3	3		
W-817-03A	MWPT	Tps	A	A	CMP	E300.0:PERC	3		
W-817-03A	MWPT	Tps	S	S	CMP	E601	1	N	Insufficient water.
W-817-03A	MWPT	Tps	S	S	CMP	E601	3		
W-817-03A	MWPT	Tps	A	A	CMP	E8330:R+H	3		
W-817-04[b]	DMW	$Tnbs_2$		A	ERD/WGMG	E300.0:NO3	1	Y	
W-817-04[b]	DMW	Tnbs2		A	ERD/WGMG	E300.0:PERC	1	Y	
W-817-04[b]	DMW	$Tnbs_2$		S	ERD/WGMG	E601	1	N	WDRE624 was analyzed.

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 17 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-817-04[b]	DMW	$Tnbs_2$		S	ERD/WGMG	E601	3		
W-817-04[b]	DMW	$Tnbs_2$		A	ERD/WGMG	E8330:R+H	1	N	W8330:LOW was analyzed.
W-817-04[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	1	Y	
W-817-04[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	2	Y	
W-817-04[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	3		
W-817-04[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	W8330:LOW	4		
W-817-04[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	1	Y	
W-817-04[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	2	Y	
W-817-04[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	3		
W-817-04[b]	DMW	$Tnbs_2$		Q	ERD/WGMG	WDRE624	4		
W-817-05	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	3		
W-817-05	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	3		
W-817-05	MWPT	$Tnsc_1$	S	S	CMP	E601	1	Y	
W-817-05	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
W-817-05	MWPT	$Tnsc_1$	A	A	CMP	E8330:R+H	3		
W-817-06A	Inj Well	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	N	B817-SRC injection well. Could not collect sample.
W-817-06A	Inj Well	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	N	B817-SRC injection well. Could not collect sample.
W-817-06A	Inj Well	$Tnbs_2$	S	S	CMP	E601	1	N	B817-SRC injection well. Could not collect sample.
W-817-06A	Inj Well	$Tnbs_2$	S	S	CMP	E601	3		B817-SRC injection well
W-817-06A	Inj Well	$Tnbs_2$	A	A	CMP	E8330:R+H	1	N	B817-SRC injection well. Could not collect sample.
W-817-07	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-817-07	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-817-07	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 18 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-817-07	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-817-07	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-818-01	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-818-01	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-818-01	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-818-01	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-818-01	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-818-03	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-818-03	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-818-03	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-818-03	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-818-03	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-818-04	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-818-04	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-818-04	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-818-04	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-818-04	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-818-06	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-818-06	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-818-06	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-818-06	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-818-06	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-818-07	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-818-07	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-818-07	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-818-07	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-818-07	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 19 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-818-08	EW	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-818-08	EW	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-818-08	EW	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-818-08	EW	$Tnbs_2$	S	S	CMP	E601	3		
W-818-08	EW	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-818-09	EW	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-818-09	EW	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-818-09	EW	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-818-09	EW	$Tnbs_2$	S	S	CMP	E601	3		
W-818-09	EW	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-818-11	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-818-11	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-818-11	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-818-11	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-818-11	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	Analyzed for RDX only.
W-819-02	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	3		
W-819-02	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	3		
W-819-02	MWPT	$Tnsc_1$	S	S	CMP	E601	1	Y	
W-819-02	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
W-819-02	MWPT	$Tnsc_1$	A	A	CMP	E8330:R+H	3		
W-823-01	MWPT	Tps	A	A	CMP	E300.0:NO3	1	Y	
W-823-01	MWPT	Tps	A	A	CMP	E300.0:PERC	1	Y	
W-823-01	MWPT	Tps	S	S	CMP	E601	1	Y	
W-823-01	MWPT	Tps	S	S	CMP	E601	3		
W-823-01	MWPT	Tps	A	A	CMP	E8330:R+H	1	Y	
W-823-02	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-823-02	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 20 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-823-02	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-823-02	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-823-02	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-823-03	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-823-03	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-823-03	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-823-03	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-823-03	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	1	Y	
W-823-13	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	3		
W-823-13	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	3		
W-823-13	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-823-13	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-823-13	MWPT	$Tnbs_2$	A	A	CMP	E8330:R+H	3		
W-827-01	MWB	$Tnbs_2$	B	B	CMP	E300.0:NO3	1	N	Next sample required 1ndQ 2005.
W-827-01	MWB	$Tnbs_2$	B	B	CMP	E300.0:PERC	1	N	Next sample required 1ndQ 2005.
W-827-01	MWB	$Tnbs_2$	B	B	CMP	E601	1	N	Next sample required 1ndQ 2005.
W-827-01	MWB	$Tnbs_2$	B	B	CMP	E8330:R+H	1	N	Next sample required 1ndQ 2005.
W-827-02	MWB	$Tnsc_1$	B	B	CMP	E300.0:NO3	1	N	Next sample required 1ndQ 2005.
W-827-02	MWB	$Tnsc_1$	B	B	CMP	E300.0:PERC	1	N	Next sample required 1ndQ 2005.
W-827-02	MWB	$Tnsc_1$	B	B	CMP	E601	1	N	Next sample required 1ndQ 2005.
W-827-02	MWB	$Tnsc_1$	B	B	CMP	E8330:R+H	1	N	Next sample required 1ndQ 2005.
W-827-03	MWB	$Tnsc_1$	B	B	CMP	E300.0:NO3	1	N	Next sample required 1ndQ 2005.
W-827-03	MWB	$Tnsc_1$	B	B	CMP	E300.0:PERC	1	N	Next sample required 1ndQ 2005.
W-827-03	MWB	$Tnsc_1$	B	B	CMP	E601	1	N	Next sample required 1ndQ 2005.
W-827-03	MWB	$Tnsc_1$	B	B	CMP	E8330:R+H	1	N	Next sample required 1ndQ 2005.
W-827-03	MWB	$Tnsc_1$		B	DIS	NUTRIENTS	1	N	Next sample required 1ndQ 2005.
W-827-04[c]	DMW	$Tnbs_1$		A	ERD/WGMG	E300.0:NO3	1	N	Insufficient water.

09-04/ERD CMR:VRD:rtd

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 21 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-827-04[c]	DMW	$Tnbs_1$		A	ERD/WGMG	E300.0:PERC	1	N	Insufficient water.
W-827-04[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	1	N	Insufficient water.
W-827-04[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	3		
W-827-04[c]	DMW	$Tnbs_1$		A	ERD/WGMG	E8330:R+H	1	N	Insufficient water.
W-827-05	MWPT	$Tnbs_1$	S	S	CMP	E300.0:NO3	1	Y	No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$			DIS	E300.0:NO3	2	Y	No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$	S	S	CMP	E300.0:NO3	3		No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$	S	S	CMP	E300.0:PERC	1	Y	No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$	S	S	CMP	E300.0:PERC	3		No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$	S	S	CMP	E601	1	Y	No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$			DIS	E601	2	Y	No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$	S	S	CMP	E601	3		No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$	S	S	CMP	E8330:R+H	1	Y	No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$			DIS	E8330:R+H	2	Y	No longer HEBP DMW; Replaced by W-829-1938
W-827-05	MWPT	$Tnbs_1$	S	S	CMP	E8330:R+H	3		No longer HEBP DMW; Replaced by W-829-1938
W-829-06[c]	DMW	$Tnsc_1$		A	ERD/WGMG	E300.0:NO3	3		
W-829-06[c]	DMW	$Tnsc_1$		A	ERD/WGMG	E300.0:PERC	3		

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 22 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-829-06[c]	DMW	$Tnsc_1$		S	ERD/WGMG	E601	1	Y	
W-829-06[c]	DMW	$Tnsc_1$		S	ERD/WGMG	E601	3		
W-829-06[c]	DMW	$Tnsc_1$		A	ERD/WGMG	E8330:R+H	1	Y	
W-829-08[c]	DMW	$Tnsc_1$		A	ERD/WGMG	E300.0:PERC	1	Y	
W-829-08[c]	DMW	$Tnsc_1$		S	ERD/WGMG	E601	1	Y	
W-829-08[c]	DMW	$Tnsc_1$		S	ERD/WGMG	E601	3		
W-829-08[c]	DMW	$Tnsc_1$		A	ERD/WGMG	E8330:R+H	1	Y	
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
W-829-15[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	1	N	E624 was analyzed.
W-829-15[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	3		
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	1	Y	
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	2	Y	
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	3		
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	4		
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	1	Y	
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	2	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 23 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	3		
W-829-15[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	4		
W-829-1938[c]	DMW	$Tnbs_1$		A	ERD/WGMG	E300.0:NO3	1	Y	
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3			
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3			
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3			
W-829-1938[c]	DMW	$Tnbs_1$		A	ERD/WGMG	E300.0:PERC	1	Y	
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
W-829-1938[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	1	N	E624 was analyzed.
W-829-1938[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	3		
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	1	Y	
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	2	Y	
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	3		
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	4		
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	1	Y	
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	2	Y	
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	3		
W-829-1938[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	4		
W-829-1940	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	3		
W-829-1940	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	3		
W-829-1940	MWPT	$Tnsc_1$	S	S	CMP	E601	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 24 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-829-1940	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
W-829-1940	MWPT	$Tnsc_1$	A	A	CMP	E8330:R+H	3		
W-829-22[c]	DMW	$Tnbs_1$		A	ERD/WGMG	E300.0:NO3	1	Y	
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
W-829-22[c]	DMW	$Tnbs_1$		A	ERD/WGMG	E300.0:PERC	1	Y	
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
W-829-22[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	1	N	E624 was analyzed.
W-829-22[c]	DMW	$Tnbs_1$		S	ERD/WGMG	E601	3		
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	1	Y	
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	2	Y	
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	3		
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E624	4		
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	1	Y	
W-829-22[c]	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	2	Y	
	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	3		
	DMW	$Tnbs_1$		Q	ERD/WGMG	E8330:R+H	4		
W-880-01	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	1	Y	
W-880-01	GW	$Tnbs_2$	S	S	CMP	E300.0:NO3	3		
W-880-01	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	1	Y	
W-880-01	GW	$Tnbs_2$	S	S	CMP	E300.0:PERC	3		

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 25 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-880-01	GW	$Tnbs_2$	Q	Q	CMP	E601	1	Y	
W-880-01	GW	$Tnbs_2$	Q	Q	CMP	E601	2	Y	
W-880-01	GW	$Tnbs_2$	Q	Q	CMP	E601	3		
W-880-01	GW	$Tnbs_2$	Q	Q	CMP	E601	4		
W-880-01	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	1	Y	
W-880-01	GW	$Tnbs_2$	S	S	CMP	E8330:R+H	3		
W-880-02	GW	Qal	S	S	CMP	E300.0:NO3	1	Y	
W-880-02	GW	Qal	S	S	CMP	E300.0:NO3	3		
W-880-02	GW	Qal	S	S	CMP	E300.0:PERC	1	Y	
W-880-02	GW	Qal	S	S	CMP	E300.0:PERC	3		
W-880-02	GW	Qal	Q	Q	CMP	E601	1	Y	
W-880-02	GW	Qal	Q	Q	CMP	E601	2	Y	
W-880-02	GW	Qal	Q	Q	CMP	E601	3		
W-880-02	GW	Qal	Q	Q	CMP	E601	4		
W-880-02	GW	Qal	S	S	CMP	E8330:R+H	1	Y	
W-880-02	GW	Qal	S	S	CMP	E8330:R+H	3		
W-880-03	GW	$Tnsc_1$	S	S	CMP	E300.0:NO3	1	Y	
W-880-03	GW	$Tnsc_1$	S	S	CMP	E300.0:NO3	3		
W-880-03	GW	$Tnsc_1$	S	S	CMP	E300.0:PERC	1	Y	
W-880-03	GW	$Tnsc_1$	S	S	CMP	E300.0:PERC	3		
W-880-03	GW	$Tnsc_1$	Q	Q	CMP	E601	1	Y	
W-880-03	GW	$Tnsc_1$	Q	Q	CMP	E601	2	Y	
W-880-03	GW	$Tnsc_1$	Q	Q	CMP	E601	3		
W-880-03	GW	$Tnsc_1$	Q	Q	CMP	E601	4		
W-880-03	GW	$Tnsc_1$	S	S	CMP	E8330:R+H	1	Y	
W-880-03	GW	$Tnsc_1$	S	S	CMP	E8330:R+H	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 26 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	2	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 27 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	3		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	4		
WELL 18	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	4		
WELL 18	WS	$Tnbs_1$		Q	ERD/WGMG	E900	1	Y	
WELL 18	WS	$Tnbs_1$		Q	ERD/WGMG	E900	2	N	
WELL 18	WS	$Tnbs_1$		Q	ERD/WGMG	E900	3		
WELL 18	WS	$Tnbs_1$		Q	ERD/WGMG	E900	4		
WELL 18	WS	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
WELL 18	WS	$Tnbs_1$		Q	ERD/WGMG	E906	2	N	
WELL 18	WS	$Tnbs_1$		Q	ERD/WGMG	E906	3		

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 28 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
WELL 18	WS	$Tnbs_1$		Q	ERD/WGMG	E906	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:NO3	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E300.0:PERC	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	1	Y	

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 29 of 30)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E601	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	3		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	4		
WELL 20	WS	$Tnbs_1$	M	M	CMP/WGMG	E8330:R+H	4		

Notes and footnotes on following page.

Table 2.4-9. High Explosives Process Area (OU4) ground water sampling and analysis plan. (Cont. Page 30 of 30)

Notes:

HEPA primary COC: VOCs (E601, E502.2, or E624).

HEPA secondary COC: nitrate (E300:NO3).

HEPA secondary COC: perchlorate (E300.0:PERC).

HEPA secondary COC: RDX (E8330).

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

[b] **Non-CMP well. Analytes and sampling frequency are specified in the Waste Discharge Requirements for the High Explosives Surface Water Impoundments.**

[c] **Non-CMP well. Analytes and sampling frequency are specified in the RCRA Closure Plan for the High Explosives Open Burn Facility.**

Table 2.4-10. Building 815-Source (B815-SRC) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	VOC mass removed (g)	RDX mass removed (g)	Nitrate mass removed (g)	Perchlorate mass removed (g)
B815-SRC[a]	January[a]	0.0	0.0	0.0	0.0
	February[a]	0.0	0.0	0.0	0.0
	March	0.8	8.7	11,955	2.3
	April	0.9	9.6	11,799	2.5
	May	1.0	11.0	13,479	2.8
	June	1.2	13.3	16,344	3.5
Total		3.9	42.6	53,577	11.1

[a] Facility shut-down due to a discharge tank pump failure.

Table 2.4-11. Building 815-Proximal (B815-PRX) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (g)
B815-PRX	January	10.5	0.0	25,565
	February	11.2	0.0	27,286
	March	9.7	0.0	23,610
	April	6.8	1.7	17,060
	May	6.7	1.7	16,801
	June	8.2	2.1	20,597
Total		53.1	5.5	130,919

Table 2.4-12. Building 815-Distal Site Boundary (B815-DSB) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	VOC mass removed (g)
B815-DSB	January	0.7
	February	1.1
	March	1.4
	April	2.0
	May	2.9
	June	3.5
Total		11.6

Table 2.4-13. Building 817-Source (B817-SRC) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	VOC mass removed (g)	RDX mass removed (g)	Perchlorate mass removed (g)
B817-SRC	January	0.0	0.09	0.04
	February	0.0	0.11	0.05
	March	0.0	0.13	0.06
	April	0.0	0.07	0.04
	May	0.0	0.07	0.04
	June	0.0	0.8	0.05
Total		0.0	1.27	0.28

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	1	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	2	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	3		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	4		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	1	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	2	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	3		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	4		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
K1-01C[b]	åDMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	1	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	2	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	3		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	4		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	2	Y	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	3		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	4		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	1	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 2 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	2	N	
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	3		
K1-01C[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	4		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	AS:THISO	1	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	AS:THISO	2	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	AS:THISO	3		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	AS:THISO	4		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	AS:UISO	1	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	AS:UISO	2	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	AS:UISO	3		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	AS:UISO	4		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E300.0:NO3	3		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E300.0:NO3	4		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E300.0:PERC	2	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E300.0:PERC	3		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E300.0:PERC	4		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E601	1	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E601	2	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E601	3		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E601	4		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E906	1	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 3 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E906	2	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E906	3		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	E906	4		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	MS:UISO	1	Y	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	MS:UISO	2	N	
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	MS:UISO	3		
K1-02B[b]	DMW	$Tnbs_0$		Q	ERD/WGMG	MS:UISO	4		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	1	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	2	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	3		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	4		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	1	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	2	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	3		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	4		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	1	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 4 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	3		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	4		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	2	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	3		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	4		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	1	Y	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	2	N	
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	3		
K1-03[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	4		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	AS:THISO	1	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	AS:THISO	2	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	AS:THISO	3		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	AS:THISO	4		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	AS:UISO	1	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	AS:UISO	2	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	AS:UISO	3		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	AS:UISO	4		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E300.0:NO3	3		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E300.0:NO3	4		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E300.0:PERC	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 5 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E300.0:PERC	3		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E300.0:PERC	4		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E601	1	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E601	2	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E601	3		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E601	4		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E906	1	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E906	2	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E906	3		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	E906	4		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	MS:UISO	1	Y	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	MS:UISO	2	N	
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	MS:UISO	3		
K1-04[b]	DMW	$Tnbs_1/Tnbs_0$		Q	ERD/WGMG	MS:UISO	4		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	1	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	2	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	3		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	4		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	1	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	2	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	3		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	4		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 6 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	1	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	2	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	3		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	4		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	2	N	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	3		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	4		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	1	Y	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	2	N	
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	3		
K1-05[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	4		
K1-06	DMW	$Tnbs_1$	A	A	CMP	E300.0:NO3	4		
K1-06	DMW	$Tnbs_1$			DIS	E601	2	Y	
K1-06	DMW	$Tnbs_1$	S	S	CMP	E906	2	Y	
K1-06	DMW	$Tnbs_1$	S	S	CMP	E906	4		
K1-06	DMW	$Tnbs_1$	A	A	CMP	MS:UISO	4		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	1	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	2	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	3		

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 7 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	4		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	1	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	2	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	3		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	4		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	1	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	2	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	3		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	4		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	2	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	3		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	4		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	1	Y	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	2	N	
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	3		
K1-07[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	4		

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 8 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	1	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	2	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	3		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	4		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	1	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	2	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	3		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	4		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	1	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	2	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	3		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	4		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	2	Y	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	3		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	4		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	1	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 9 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	2	N	
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	3		
K1-08[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	4		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	1	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	2	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	3		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:THISO	4		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	1	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	2	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	3		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	AS:UISO	4		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	1	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	2	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	3		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:NO3	4		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	1	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	2	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	3		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E300.0:PERC	4		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	1	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	2	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	3		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E601	4		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	1	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 10 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	3		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	E906	4		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	1	Y	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	2	N	
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	3		
K1-09[b]	DMW	$Tnbs_1$		Q	ERD/WGMG	MS:UISO	4		
K2-03	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
K2-03	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
K2-03	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
K2-03	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
K2-04C	MWPT	$Tnbs_1/Tnbs_0$	A	A	CMP	E300.0:NO3	2	N	Abandoned well.
K2-04C	MWPT	$Tnbs_1/Tnbs_0$	S	S	CMP	E906	2	N	Abandoned well.
K2-04C	MWPT	$Tnbs_1/Tnbs_0$	S	S	CMP	E906	4	N	Abandoned well.
K2-04C	MWPT	$Tnbs_1/Tnbs_0$	A	A	CMP	MS:UISO	2	N	Abandoned well.
K2-04D	MWPT	$Tnbs_1$		A	ERD/WGMG	AS:UISO	2	Y	
K2-04D	MWPT	$Tnbs_1$	A	A	CMP/WGMG	E300.0:NO3	2	Y	
K2-04D	MWPT	$Tnbs_1$		A	ERD/WGMG	E300.0:PERC	2	Y	
K2-04D	MWPT	$Tnbs_1$		S	ERD/WGMG	E601	2	N	
K2-04D	MWPT	$Tnbs_1$		S	ERD/WGMG	E601	4		
K2-04D	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	2	Y	
K2-04D	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	4		
K2-04D	MWPT	$Tnbs_1$	A	A	CMP/WGMG	MS:UISO	2	Y	
K2-04S	MWPT	$Tnbs_1$		A	ERD/WGMG	AS:UISO	2	Y	
K2-04S	MWPT	$Tnbs_1$	A	A	CMP/WGMG	E300.0:NO3	2	Y	
K2-04S	MWPT	$Tnbs_1$		A	ERD/WGMG	E300.0:PERC	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 11 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K2-04S	MWPT	$Tnbs_1$		S	ERD/WGMG	E601	2	N	
K2-04S	MWPT	$Tnbs_1$		S	ERD/WGMG	E601	4		
K2-04S	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	2	Y	
K2-04S	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	4		
K2-04S	MWPT	$Tnbs_1$	A	A	CMP/WGMG	MS:UISO	2	Y	
NC2-05	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-05	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC2-05	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-05	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-05	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-05A	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-05A	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC2-05A	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-05A	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-05A	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-06	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-06	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC2-06	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-06	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-06	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-06A	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-06A	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC2-06A	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-06A	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-06A	MWPT	$Tnbs_1$	A	S	CMP	MS:UISO	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 12 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC2-06A	MWPT	$Tnbs_1$	A	S	DIS	MS:UISO	4		
NC2-09	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-09	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-09	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-09	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-09A	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	N	Well was abandoned.
NC2-09A	MWPT	$Tnbs_1$	S	S	CMP	E906	2	N	Well was abandoned.
NC2-09A	MWPT	$Tnbs_1$	S	S	CMP	E906	4	N	Well was abandoned.
NC2-09A	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	N	Well was abandoned.
NC2-10	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-10	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-10	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-10	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-11D	MWPT	$Tnbs_1$		A	ERD/WGMG	AS:UISO	2	Y	
NC2-11D	MWPT	$Tnbs_1$	A	A	CMP/WGMG	E300.0:NO3	2	Y	
NC2-11D	MWPT	$Tnbs_1$		A	ERD/WGMG	E300.0:PERC	2	Y	
NC2-11D	MWPT	$Tnbs_1$		S	ERD/WGMG	E601	4		
NC2-11D	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	2	Y	
NC2-11D	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	4		
NC2-11D	MWPT	$Tnbs_1$	A	A	CMP/WGMG	MS:UISO	2	Y	
NC2-11I	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-11I	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-11I	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-11I	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-11S	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 13 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC2-11S	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-11S	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-11S	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-12D	MWPT	$Tnbs_1$		A	ERD/WGMG	AS:UISO	2	Y	
NC2-12D	MWPT	$Tnbs_1$	A	A	CMP/WGMG	E300.0:NO3	2	Y	
NC2-12D	MWPT	$Tnbs_1$		A	ERD/WGMG	E300.0:PERC	2	Y	
NC2-12D	MWPT	$Tnbs_1$		S	ERD/WGMG	E601	4		
NC2-12D	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	2	Y	
NC2-12D	MWPT	$Tnbs_1$	S	S	CMP/WGMG	E906	4		
NC2-12D	MWPT	$Tnbs_1$	A	A	CMP/WGMG	MS:UISO	2	Y	
NC2-12I	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-12I	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-12I	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-12I	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-12S	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-12S	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-12S	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-12S	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-13	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-13	MWPT	$Tnbs_1$		A	DIS	E601	2	Y	
NC2-13	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-13	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-13	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	N	
NC2-14S	MWPT	$Tnbs_1$		A	DIS	DWMETALS	2	N	
NC2-14S	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 14 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC2-14S	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC2-14S	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-14S	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-14S	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-15	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-15	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-15	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-15	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-16	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-16	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC2-16	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-16	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-16	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-17	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-17	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-17	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-17	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-18	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-18	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC2-18	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-18	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-18	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-19	MWPT	$Tnbs_1$		A	DIS	AS:UISO	2	N	
NC2-19	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-19	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 15 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC2-19	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-19	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC2-20	MWPT	$Tnbs_0$	A	A	CMP	E300.0:NO3	2	Y	
NC2-20	MWPT	$Tnbs_0$	S	S	CMP	E906	2	Y	
NC2-20	MWPT	$Tnbs_0$	S	S	CMP	E906	4		
NC2-20	MWPT	$Tnbs_0$	A	A	CMP	MS:UISO	2	Y	
NC2-21	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-21	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC2-21	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC2-21	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-10	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-10	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-10	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-10	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-10	MWPT	$Tnbs_1$	A	A	DIS	MS:UISO	2	Y	
NC7-11	MWPT	$Qal/Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-11	MWPT	$Qal/Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-11	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-11	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	4		
NC7-11	MWPT	$Qal/Tnbs_1$	A	A	DIS	MS:UISO	2	Y	
NC7-14	MWPT	$Qal/Tnbs_1$	A	A	CMP	E300.0:NO3	2	N	Insufficient water.
NC7-14	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	2	N	Insufficient water.
NC7-14	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	4		
NC7-14	MWPT	$Qal/Tnbs_1$	A	A	CMP	MS:UISO	2	N	Insufficient water.
NC7-15	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 16 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC7-15	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-15	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-15	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-15	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-19	MWPT	$Qal/Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-19	MWPT	$Qal/Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-19	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-19	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	4		
NC7-19	MWPT	$Qal/Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-27	MWPT	$Tnsc_0$	A	A	CMP	E300.0:NO3	2	Y	
NC7-27	MWPT	$Tnsc_0$			DIS	E300.0:PERC	2	Y	
NC7-27	MWPT	$Tnsc_0$	S	S	CMP	E906	2	Y	
NC7-27	MWPT	$Tnsc_0$	S	S	CMP	E906	4		
NC7-27	MWPT	$Tnsc_0$	A	A	CMP	MS:UISO	2	Y	
NC7-28	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-28	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-28	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-28	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-28	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-29	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-29	MWPT	$Tnbs_1$		A	DIS	E300.0:PERC	2	Y	
NC7-29	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-29	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-29	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-43	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 17 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC7-43	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-43	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-43	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-43	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-44	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-44	MWPT	$Tnbs_1$		A	DIS	E300.0:PERC	2	Y	
NC7-44	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-44	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-44	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-45	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	N	Insufficient water.
NC7-45	MWPT	$Tnbs_1$	S	S	CMP	E906	2	N	Insufficient water.
NC7-45	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-45	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	N	Insufficient water.
NC7-46	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-46	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-46	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-46	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-46	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-54	MWPT	Qal	A	A	CMP	E300.0:NO3	2	Y	
NC7-54	MWPT	Qal			DIS	E300.0:PERC	2	Y	
NC7-54	MWPT	Qal	S	S	CMP	E906	2	Y	
NC7-54	MWPT	Qal	S	S	CMP	E906	4		
NC7-54	MWPT	Qal	A	A	CMP	MS:UISO	2	Y	
NC7-54	MWPT	Qal			DIS	MS:UISO	4		
NC7-55	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	N	Insufficient water.

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 18 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC7-55	MWPT	$Tnbs_1$	S	S	CMP	E906	2	N	Insufficient water.
NC7-55	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-55	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	N	Insufficient water.
NC7-56	MWPT	$Qal/Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-56	MWPT	$Qal/Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-56	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-56	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	4		
NC7-56	MWPT	$Qal/Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-57	MWPT	Qal	A	A	CMP	E300.0:NO3	2	N	Insufficient water.
NC7-57	MWPT	Qal	S	S	CMP	E906	2	N	Insufficient water.
NC7-57	MWPT	Qal	S	S	CMP	E906	4		
NC7-57	MWPT	Qal	A	A	CMP	MS:UISO	2	N	Insufficient water.
NC7-58	MWPT	Qal	A	A	CMP	E300.0:NO3	2	Y	
NC7-58	MWPT	Qal			DIS	E300.0:PERC	2	Y	
NC7-58	MWPT	Qal	S	S	CMP	E906	2	Y	
NC7-58	MWPT	Qal	S	S	CMP	E906	4		
NC7-58	MWPT	Qal	A	A	CMP	MS:UISO	2	Y	
NC7-59	MWPT	$Qal/Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-59	MWPT	$Qal/Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-59	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-59	MWPT	$Qal/Tnbs_1$	S	S	CMP	E906	4		
NC7-59	MWPT	$Qal/Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-60	MWPT	$Tnbs_0$		A	DIS	DWMETALS	2	Y	
NC7-60	MWPT	$Tnbs_0$	A	A	CMP	E300.0:NO3	2	Y	
NC7-60	MWPT	$Tnbs_0$			DIS	E300.0:PERC	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 19 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC7-60	MWPT	$Tnbs_0$	S	S	CMP	E906	2	Y	
NC7-60	MWPT	$Tnbs_0$	S	S	CMP	E906	4		
NC7-60	MWPT	$Tnbs_0$	A	A	CMP	MS:UISO	2	Y	
NC7-61	MWPT	$Tnbs_0$		A	ERD/WGMG	AS:UISO	2	Y	
NC7-61	MWPT	$Tnbs_0$		A	ERD/WGMG	DWMETALS	2	N	
NC7-61	MWPT	$Tnbs_0$	A	A	CMP/WGMG	E300.0:NO3	4		
NC7-61	MWPT	$Tnbs_0$		A	ERD/WGMG	E300.0:PERC	2	Y	
NC7-61	MWPT	$Tnbs_0$			ERD/WGMG	E601	4		
NC7-61	MWPT	$Tnbs_0$	S	S	CMP/WGMG	E906	2	Y	
NC7-61	MWPT	$Tnbs_0$	S	S	CMP/WGMG	E906	4		
NC7-61	MWPT	$Tnbs_0$	A	A	CMP/WGMG	MS:UISO	2	Y	
NC7-62	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-62	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-62	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-62	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-62	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-69	MWPT	Tmss		A	ERD/WGMG	AS:UISO	2	Y	
NC7-69	MWPT	Tmss		S	ERD/WGMG	E300.0:NO2	4		
NC7-69	MWPT	Tmss	A	A	CMP/WGMG	E300.0:NO3	2	Y	
NC7-69	MWPT	Tmss		S	ERD/WGMG	E300.0:O-PO2	4		
NC7-69	MWPT	Tmss		A	ERD/WGMG	E300.0:PERC	2	Y	
NC7-69	MWPT	Tmss		S	ERD/WGMG	E350.2	4		
NC7-69	MWPT	Tmss		S	ERD/WGMG	E601	2	Y	
NC7-69	MWPT	Tmss		S	ERD/WGMG	E601	4		
NC7-69	MWPT	Tmss	S	S	CMP/WGMG	E906	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 20 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC7-69	MWPT	Tmss	S	S	CMP/WGMG	E906	4		
NC7-69	MWPT	Tmss	A	A	CMP/WGMG	MS:UISO	2	Y	
NC7-70	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-70	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-70	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-70	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-70	MWPT	$Tnbs_1$			DIS	MS:UISO	1	Y	
NC7-70	MWPT	$Tnbs_1$	A	Q	CMP	MS:UISO	2	Y	
NC7-70	MWPT	$Tnbs_1$			DIS	MS:UISO	3		
NC7-70	MWPT	$Tnbs_1$			DIS	MS:UISO	4		
NC7-71	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-71	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-71	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-71	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-72	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-72	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-72	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-72	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-72	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-73	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC7-73	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
NC7-73	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-73	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-73	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
NC7-76	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 21 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC7-76	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
NC7-76	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
NC7-76	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
SPRING24	SPR	$Tnbs_0/Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	Q	DIS	E906	1		
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	Q	CMP	E906	2	Y	
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	Q	DIS	E906	3		
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	Q	CMP	E906	4		
SPRING24	SPR	$Tnbs_0/Tnbs_1$	A	A	CMP	MS:UISO	2	N	Insufficient water.
W-850-05	MWPT	$Tnbs_1$		S	DIS	DWMETALS	4		
W-850-05	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-850-05	MWPT	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
W-850-05	MWPT	$Tnbs_1$	S	S	CMP	E906	2	Y	
W-850-05	MWPT	$Tnbs_1$	S	S	CMP	E906	4		
W-850-05	MWPT	$Tnbs_1$	A	A	CMP	MS:UISO	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	DWMETALS	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	DWMETALS	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	DWMETALS	3		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	DWMETALS	4		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$			DIS	E200.7:SIO2	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:NO3	1	N	GENMIN was analyzed.
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	A	Q	CMP	E300.0:NO3	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:NO3	3		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:NO3	4		

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 22 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:PERC	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:PERC	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:PERC	3		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:PERC	4		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$			DIS	E601	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$			DIS	E602	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E624	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E624	3		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E624	4		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E8330:R+H	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E8330:R+H	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E8330:R+H	3		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E8330:R+H	4		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E900	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E900	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E900	3		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E900	4		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	S	Q	DIS	E906	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	CMP	E906	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E906	3		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	S	Q	CMP	E906	4		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	GENMIN	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	GENMIN	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	GENMIN	3		

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 23 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	GENMIN	4		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	MS:UISO	1		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	A	Q	CMP	MS:UISO	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	MS:UISO	3		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	MS:UISO	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	DWMETALS	1	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	DWMETALS	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	DWMETALS	3		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	DWMETALS	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$			DIS	E200.7:SIO2	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:NO3	1	N	GENMIN was analyzed.
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	A	Q	CMP	E300.0:NO3	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:NO3	3		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:NO3	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:PERC	1	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:PERC	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:PERC	3		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E300.0:PERC	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$			DIS	E601	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$			DIS	E602	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E624	1	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E624	3		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E624	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E8330:R+H	1	Y	

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 24 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E8330:R+H	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E8330:R+H	3		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E8330:R+H	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E900	1	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E900	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E900	3		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E900	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	S	Q	DIS	E906	1	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	CMP	E906	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	E906	3		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	S	Q	CMP	E906	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	GENMIN	1	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	GENMIN	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	GENMIN	3		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	GENMIN	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	MS:UISO	1		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	A	Q	CMP	MS:UISO	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	MS:UISO	3		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		Q	DIS	MS:UISO	4		
W8SPRNG	SPR	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W8SPRNG	SPR	$Tnbs_1$			DIS	E300.0:PERC	2	Y	
W8SPRNG	SPR	$Tnbs_1$	S	S	CMP	E906	2	Y	
W8SPRNG	SPR	$Tnbs_1$	S	S	CMP	E906	4		
W8SPRNG	SPR	$Tnbs_1$	A	A	CMP	MS:UISO	2	N	Insufficient water.

Table 2.5-1. Building 850 (OU5) ground and surface water sampling and analysis plan. (Cont. Page 25 of 25)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-PIT1-01	MWB	$Tnbs_1$		Q	DIS	E601	1	N	Insufficient water.
W-PIT1-01	MWB	$Tnbs_1$		Q	DIS	E601	2	N	Insufficient water.
W-PIT1-01	MWB	$Tnbs_1$		Q	DIS	E601	3		
W-PIT1-01	MWB	$Tnbs_1$		Q	DIS	E601	4		
W-PIT1-01	MWB	$Tnbs_1$		Q	DIS	E906	1	N	Insufficient water.
W-PIT1-01	MWB	$Tnbs_1$		Q	DIS	E906	3		
W-PIT1-01	MWB	$Tnbs_1$		Q	DIS	E906	4		
W-PIT1-02	MWB	$Tnbs_1$		Q	DIS	E601	1	Y	
W-PIT1-02	MWB	$Tnbs_1$		Q	DIS	E601	2	Y	
W-PIT1-02	MWB	$Tnbs_1$		Q	DIS	E601	3		
W-PIT1-02	MWB	$Tnbs_1$		Q	DIS	E601	4		
W-PIT1-02	MWB	$Tnbs_1$		Q	DIS	E906	1	Y	
W-PIT1-02	MWB	$Tnbs_1$		Q	DIS	E906	2	Y	
W-PIT1-02	MWB	$Tnbs_1$		Q	DIS	E906	3		
W-PIT1-02	MWB	$Tnbs_1$		Q	DIS	E906	4		
W-PIT7-16	MWPT	$Tnsc_0$	S	S	CMP	E906	2	Y	
W-PIT7-16	MWPT	$Tnsc_0$	S	S	CMP	E906	4		
W-PIT7-16	MWPT	$Tnsc_0$	A	A	CMP	MS:UISO	4		
W-PIT7-16	MWPT	$Tnsc_0$	A	A	CMP	E300.0:NO3	4		

Notes:

Building 850 primary COC: tritium (E906).

Building 850 secondary COC: nitrate (E300.0:NO3).

Building 850 secondary COC: uranium (MS:UISO).

Contaminants of concern in the vadose zone not detected in ground water: PCBs.

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

[b] **Non-CMP well. Analytes and sampling frequency for detection monitoring wells (DMW) are specified in Waste Discharge Requirements for the Pit 1 Landfill.**

Table 2.6-1. Building 854-Source (B854-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2004 through June 30, 2004.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Average weekly volume of water treated (gal)
B854-SRC	January	703	42,645	10,661
	February	646	38,167	9,542
	March	796	46,003	9,201
	April	484	27,587	6,897
	May	672	37,765	9,441
	June	841	46,530	9,306
Total		4,142	238,697	

Table 2.6-2. Building 854-Proximal (B854-PRX) volumes of ground water and soil vapor extracted and discharged, January 1, 2004 through June 30, 2004.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Average weekly volume of water treated (gal)
B854-PRX	January	100	6,246	1,562
	February	121	7,625	1,906
	March	287	18,680	3,736
	April	248	15,976	3,994
	May	281	17,981	4,495
	June	506	33,744	6,749
Total		1,543	100,252	

Table 2.6-3. Building 854 OU 2004 VOCs in ground water treatment system influent and effluent.

Location	Date	Method	TCE (μg/L)	PCE (μg/L)	Total 1,2-DCE (μg/L)	Carbon tetrachloride (μg/L)	Chloroform (μg/L)	1,1-DCA (μg/L)	1,2-DCA (μg/L)	1,1-DCE (μg/L)	1,1,1-TCA (μg/L)	Freon 11 (μg/L)	Freon 113 (μg/L)	Methylene chloride (μg/L)
B854-PRX-I	01/13/04	E601	69	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-PRX-I	04/07/04	E601	81	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-PRX-I	04/07/04 DUP	E601	62 DL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
B854-PRX-E	01/13/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-PRX-E	02/11/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-PRX-E	03/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-PRX-E	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-PRX-E	05/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-PRX-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-SRC-I	01/13/04	E601	210 D	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-SRC-I	04/07/04	E601	180 D	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-SRC-I	04/07/04 DUP	E601	200 DL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5	<0.5
B854-SRC-E	01/13/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-SRC-E	02/04/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-SRC-E	03/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-SRC-E	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-SRC-E	05/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B854-SRC-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2.6-3. Building 854 OU 2004 VOCs in ground water treatment system influent and effluent (analytes not listed above).

Location	Date	Method	Detection frequency
B854-PRX-I	01/13/04	E601	0 of 21
B854-PRX-I	04/07/04	E601	0 of 21
B854-PRX-I	04/07/04 DUP	E601	0 of 20
B854-PRX-E	01/13/04	E601	0 of 21
B854-PRX-E	02/11/04	E601	0 of 21
B854-PRX-E	03/09/04	E601	0 of 21
B854-PRX-E	04/07/04	E601	0 of 21
B854-PRX-E	05/12/04	E601	0 of 21
B854-PRX-E	06/09/04	E601	0 of 21
B854-SRC-I	01/13/04	E601	0 of 21
B854-SRC-I	04/07/04	E601	0 of 21
B854-SRC-I	04/07/04 DUP	E601	0 of 20
B854-SRC-E	01/13/04	E601	0 of 21
B854-SRC-E	02/04/04	E601	0 of 21
B854-SRC-E	03/09/04	E601	0 of 21
B854-SRC-E	04/07/04	E601	0 of 21
B854-SRC-E	05/12/04	E601	0 of 21
B854-SRC-E	06/09/04	E601	0 of 21

Table 2.6-4. Building 854 OU 2004 nitrate and perchlorate in ground water treatment system influent and effluent.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (μg/L)
B854-PRX-I	04/07/04	45.7	15
B854-PRX-I	04/07/04 DUP	40 D	11
B854-PRX-E	01/13/04	17.6	<4 H
B854-PRX-E	02/11/04	15.3	<4
B854-PRX-E	03/09/04	17.5	<4 H
B854-PRX-E	04/14/04	22.6	<4
B854-PRX-E	05/12/04	19.5	<4
B854-PRX-E	06/09/04	17.9	<4
B854-SRC-I	01/13/04	53.8	6.3 H
B854-SRC-I	04/07/04	53.3	6.5
B854-SRC-I	04/07/04 DUP	42 D	4
B854-SRC-E	01/13/04	53.7	<4 H
B854-SRC-E	02/04/04	20.7	<4
B854-SRC-E	03/09/04	55.4	<4
B854-SRC-E	04/07/04	48.6	<4
B854-SRC-E	05/12/04	48.1	<4
B854-SRC-E	06/09/04	46.2	<4

Table 2.6-5. Building 854 OU treatment facility sampling plans.

Sample location	Sample identification	Parameter	Frequency
B854-SRC GWTS			
Influent Port	**STU08-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**STU08-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
B854-PRX GWTS			
Influent Port	**STU02-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**BTU03-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

Note:
One duplicate and one blank (given fictitious labels) shall be taken for every 10 samples.

Table 2.6-6. Building 854 (OU6) ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
SPRING10	SPR	Qls	Q	Q	CMP	E601	1	Y	
SPRING10	SPR	Qls	Q	Q	CMP	E601	2	Y	
SPRING10	SPR	Qls	Q	Q	CMP	E601	3		
SPRING10	SPR	Qls	Q	Q	CMP	E601	4		
SPRING10	SPR	Qls	A	A	CMP	E300.0:NO3	2	Y	
SPRING10	SPR	Qls	A	A	CMP	E300.0:PERC	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	Q	CMP	E601	1	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	Q	CMP	E601	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	Q	CMP	E601	3		
SPRING11	SPR	Qls-$Tnbs_1$	Q	Q	CMP	E601	4		
SPRING18	SPR	Qls		A	DIS	AS:UISO	2	Y	
SPRING18	SPR	Qls		A	DIS	DWMETALS	2	Y	
SPRING18	SPR	Qls		A	DIS	E210.2	2	Y	
SPRING18	SPR	Qls		A	DIS	E601	2	Y	
SPRING18	SPR	Qls		A	DIS	E8330:R+H	2	Y	
SPRING18	SPR	Qls		A	DIS	E900	2	Y	
SPRING18	SPR	Qls		A	DIS	E906	2	Y	
W-854-01	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-854-01	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-854-01	MWPT	$Tnbs_1$	S	S	CMP	E601	2	Y	
W-854-01	MWPT	$Tnbs_1$	S	S	CMP	E601	4		
W-854-02	EW	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-854-02	EW	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-854-02	EW	$Tnbs_1$	S	S	CMP	E601	2	Y	
W-854-02	EW	$Tnbs_1$	S	S	CMP	E601	4		

09-04/ERD CMR:VRD:rtd

Table 2.6-6. Building 854 (OU6) ground and surface water sampling and analysis plan. (Cont. Page 2 of 6)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-854-02	EW	$Tnbs_1$			DIS	TBOS	1	Y	
W-854-03	EW	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-854-03	EW	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-854-03	EW	$Tnbs_1$	S	S	CMP	E601	2	Y	
W-854-03	EW	$Tnbs_1$	S	S	CMP	E601	4		
W-854-04	MWPT	Tmss	A	A	CMP	E300.0:NO3	2	Y	
W-854-04	MWPT	Tmss	A	A	CMP	E300.0:PERC	2	Y	
W-854-04	MWPT	Tmss	S	S	CMP	E601	2	Y	
W-854-04	MWPT	Tmss	S	S	CMP	E601	4		
W-854-05	MWPT	$Qls\text{-}Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-854-05	MWPT	$Qls\text{-}Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-854-05	MWPT	$Qls\text{-}Tnbs_1$	S	S	CMP	E601	2	Y	
W-854-05	MWPT	$Qls\text{-}Tnbs_1$	S	S	CMP	E601	4		
W-854-06	MWPT	$Tnsc_0$	A	A	CMP	E300.0:NO3	2	Y	
W-854-06	MWPT	$Tnsc_0$	A	A	CMP	E300.0:PERC	2	Y	
W-854-06	MWPT	$Tnsc_0$	S	S	CMP	E601	2	Y	
W-854-06	MWPT	$Tnsc_0$	S	S	CMP	E601	4		
W-854-07	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-854-07	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-854-07	MWPT	$Tnbs_1$	S	S	CMP	E601	2	Y	
W-854-07	MWPT	$Tnbs_1$	S	S	CMP	E601	4		
W-854-08	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-854-08	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-854-08	MWPT	$Tnbs_1$	S	S	CMP	E601	2	Y	
W-854-08	MWPT	$Tnbs_1$	S	S	CMP	E601	4		
W-854-09	MWPT	$Tnsbs_0$	A	A	CMP	E300.0:NO3	2	Y	
W-854-09	MWPT	$Tnsbs_0$	A	A	CMP	E300.0:PERC	2	Y	

Table 2.6-6. Building 854 (OU6) ground and surface water sampling and analysis plan. (Cont. Page 3 of 6)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-854-09	MWPT	$Tnsbs_0$	S	S	CMP	E601	2	Y	
W-854-09	MWPT	$Tnsbs_0$	S	S	CMP	E601	4		
W-854-10	MWPT	$Tnsbs_0$	A	A	CMP	E300.0:NO3	2	Y	
W-854-10	MWPT	$Tnsbs_0$	A	A	CMP	E300.0:PERC	2	Y	
W-854-10	MWPT	$Tnsbs_0$	S	S	CMP	E601	2	Y	
W-854-10	MWPT	$Tnsbs_0$	S	S	CMP	E601	4		
W-854-10	MWPT	$Tnsbs_0$			DIS	TBOS	1	Y	
W-854-10	MWPT	$Tnsbs_0$			DIS	TBOS	2	Y	
W-854-11	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-854-11	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	N	Insufficient water.
W-854-11	MWPT	$Tnbs_1$	A	A	CMP	E601	2	N	Insufficient water. Sampling frequency changed to annual due to continued lack of water.
W-854-12	MWPT	Tmss	A	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-854-12	MWPT	Tmss	A	A	CMP	E300.0:PERC	2	N	Insufficient water.
W-854-12	MWPT	Tmss	S	S	CMP	E601	2	N	Insufficient water.
W-854-12	MWPT	Tmss	S	S	CMP	E601	4		
W-854-13	MWPT	$Tnsc_0$	A	A	CMP	E300.0:NO3	2	Y	
W-854-13	MWPT	$Tnsc_0$	A	A	CMP	E300.0:PERC	2	Y	
W-854-13	MWPT	$Tnsc_0$	S	S	CMP	E601	2	Y	
W-854-13	MWPT	$Tnsc_0$	S	S	CMP	E601	4		
W-854-13	MWPT	$Tnsc_0$	B	B	CMP	PCBS	2	N	Not required. Next sample required 2ndQ 2005.
W-854-14	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-854-14	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	N	Insufficient water.
W-854-14	MWPT	$Tnbs_1$	A	A	CMP	E601	2	N	Insufficient water. Sampling frequency changed to annual due to continued lack of water.
W-854-15	MWPT	Qls	A	A	CMP	E300.0:NO3	2	Y	

Table 2.6-6. Building 854 (OU6) ground and surface water sampling and analysis plan. (Cont. Page 4 of 6)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-854-15	MWPT	Qls	A	A	CMP	E300.0:PERC	2	Y	
W-854-15	MWPT	Qls	S	S	CMP	E601	2	Y	
W-854-15	MWPT	Qls	S	S	CMP	E601	4		
W-854-15	MWPT	Qls			DIS	MS:UISO	1	Y	
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$	A	A	CMP	E300.0:NO3	2	Y	
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$	A	A	CMP	E300.0:PERC	2	Y	
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$	S	S	CMP	E601	2	Y	
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$	S	S	CMP	E601	4		
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$			DIS	TBOS	1	Y	
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$			DIS	TBOS	2	Y	
W-854-1701	MWPT	$Tnsc_0$	A	A	CMP	E300.0:NO3	2	Y	
W-854-1701	MWPT	$Tnsc_0$	A	A	CMP	E300.0:PERC	2	Y	
W-854-1701	MWPT	$Tnsc_0$	S	S	CMP	E601	2	Y	
W-854-1701	MWPT	$Tnsc_0$	S	S	CMP	E601	4		
W-854-1706	MWPT	Qal-$Tnbs_1$	A	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-854-1706	MWPT	Qal-$Tnbs_1$	A	A	CMP	E300.0:PERC	2	N	Insufficient water.
W-854-1706	MWPT	Qal-$Tnbs_1$	A	A	CMP	E601	2	N	Insufficient water. Sampling frequency changed to annual due to continued lack of water.
W-854-1707	MWPT	$Tnsc_0$	A	A	CMP	E300.0:NO3	2	Y	
W-854-1707	MWPT	$Tnsc_0$	A	A	CMP	E300.0:PERC	2	Y	
W-854-1707	MWPT	$Tnsc_0$	S	S	CMP	E601	2	Y	
W-854-1707	MWPT	$Tnsc_0$	S	S	CMP	E601	4		
W-854-1731	MWPT	Tmss	A	A	CMP	E300.0:NO3	2	Y	
W-854-1731	MWPT	Tmss	A	A	CMP	E300.0:PERC	2	Y	
W-854-1731	MWPT	Tmss	S	S	CMP	E601	2	Y	
W-854-1731	MWPT	Tmss	S	S	CMP	E601	4		
W-854-1731	MWPT	Tmss			DIS	E906	2	Y	

Table 2.6-6. Building 854 (OU6) ground and surface water sampling and analysis plan. (Cont. Page 5 of 6)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-854-1822	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-854-1822	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-854-1822	MWPT	$Tnbs_1$	S	S	CMP	E601	2	Y	
W-854-1822	MWPT	$Tnbs_1$	S	S	CMP	E601	4		
W-854-1822	MWPT	$Tnbs_1$			DIS	TBOS	1	Y	
W-854-1822	MWPT	$Tnbs_1$			DIS	TBOS	2	Y	
W-854-1823	MWPT	$Tnsbs_1$-$Tnsc_0$	A	A	CMP	E300.0:NO3	2	Y	
W-854-1823	MWPT	$Tnsbs_1$-$Tnsc_0$	A	A	CMP	E300.0:PERC	2	Y	
W-854-1823	MWPT	$Tnsbs_1$-$Tnsc_0$	S	S	CMP	E601	2	Y	
W-854-1823	MWPT	$Tnsbs_1$-$Tnsc_0$	S	S	CMP	E601	4		
W-854-1823	MWPT	$Tnsbs_1$-$Tnsc_0$		Q	DIS	TBOS	1	Y	
W-854-1823	MWPT	$Tnsbs_1$-$Tnsc_0$		Q	DIS	TBOS	2	Y	
W-854-1823	MWPT	$Tnsbs_1$-$Tnsc_0$		Q	DIS	TBOS	3		
W-854-1823	MWPT	$Tnsbs_1$-$Tnsc_0$		Q	DIS	TBOS	4		
W-854-18A	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-854-18A	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-854-18A	MWPT	$Tnbs_1$	S	S	CMP	E601	2	Y	
W-854-18A	MWPT	$Tnbs_1$	S	S	CMP	E601	4		
W-854-18A	MWPT	$Tnbs_1$		Q	DIS	MS:UISO	1	Y	
W-854-18A	MWPT	$Tnbs_1$			DIS	TBOS	1	Y	
W-854-18A	MWPT	$Tnbs_1$			DIS	TBOS	2	Y	
W-854-19	MWPT	Qls	A	A	CMP	E300.0:NO3	2	N	Insufficient water.
W-854-19	MWPT	Qls	A	A	CMP	E300.0:PERC	2	N	Insufficient water.
W-854-19	MWPT	Qls	A	A	CMP	E601	2	N	Insufficient water. Sampling frequency changed to annual due to continued lack of water.
W-854-1902	MWPT	$Tnsbs_1$-$Tnsc_0$	A	A	CMP	E300.0:NO3	2	Y	
W-854-1902	MWPT	$Tnsbs_1$-$Tnsc_0$	A	A	CMP	E300.0:PERC	2	Y	

Table 2.6-6. Building 854 (OU6) ground and surface water sampling and analysis plan. (Cont. Page 6 of 6)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-854-1902	MWPT	$Tnsbs_1$-$Tnsc_0$	S	S	CMP	E601	2	Y	
W-854-1902	MWPT	$Tnsbs_1$-$Tnsc_0$	S	S	CMP	E601	4		
W-854-1902	MWPT	$Tnsbs_1$-$Tnsc_0$		Q	DIS	TBOS	1	Y	
W-854-1902	MWPT	$Tnsbs_1$-$Tnsc_0$		Q	DIS	TBOS	2	Y	
W-854-1902	MWPT	$Tnsbs_1$-$Tnsc_0$		Q	DIS	TBOS	3		
W-854-1902	MWPT	$Tnsbs_1$-$Tnsc_0$		Q	DIS	TBOS	4		
W-854-45	MWPT	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-854-45	MWPT	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-854-45	MWPT	$Tnbs_1$	S	S	CMP	E601	2	Y	
W-854-45	MWPT	$Tnbs_1$	S	S	CMP	E601	4		
W-854-F2	MWPT	Qls-$Tnbs_1$	B	B	CMP	E300.0:NO3	2	N	Not required. Next sample required 2ndQ 2005.
W-854-F2	MWPT	Qls-$Tnbs_1$	B	B	CMP	E300.0:PERC	2	N	Not required. Next sample required 2ndQ 2005.
W-854-F2	MWPT	Qls-$Tnbs_1$	B	B	CMP	E601	2	N	Not required. Next sample required 2ndQ 2005.

Notes:

Building 854 primary Contaminants of Concern in Ground Water: VOCs (E601 or E624).

Building 854 secondary COC: nitrate (E300:NO3).

Building 854 secondary COC: perchlorate (E300.0:PERC).

Contaminants of Concern in the Vadose Zone not detected in Ground Water: PCBs.

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

Table 2.6-7. Building 854-Source (B854-SRC) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	VOC mass removed (g)	Nitrate mass removed (kg)	Perchlorate mass removed (g)
B854-SRC	January	33.9	8.7	1.0
	February	30.3	7.8	0.9
	March	36.6	9.4	1.1
	April	18.8	5.6	0.7
	May	25.7	7.6	1.0
	June	31.7	9.3	1.2
Total		177	48	5.9

Table 2.6-8. Building 854-Proximal (B854-PRX) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	VOC mass removed (g)	Nitrate mass removed (g)	Perchlorate mass removed (g)
B854-PRX	January	1.6	1.1	0.3
	February	2.0	1.4	0.3
	March	4.9	3.3	0.8
	April	4.9	2.8	0.9
	May	5.5	3.1	1.0
	June	10.3	5.8	1.9
Total		29.2	18	5.2

Table 2.7-1. Building 832-Source (B832-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2004 through June 30, 2004.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Volume of vapor extracted (thousands of ft^3)	Average weekly volume of water treated (gal)
B832-SRC	January	696	580	0[a]	145
	February	696	1,319	0[a]	330
	March	816	2,408	0[a]	482
	April	672	1,740	0[a]	435
	May	648	1,094	0[a]	274
	June	840	1,116	0[a]	233
Total		4,368	8,257	0[a]	

[a] B832-SRC SVE system is off line as part of a vapor rebound test being conducted at this facility.

Table 2.7-2. Building 830-Source (B830-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2004 through June 30, 2004.

Treatment facility	Month	Operational hours (SVE)	Volume of ground water discharged (gal)	Volume of vapor extracted (thousands of ft^3)	Average weekly volume of water treated (gal)
B830-SRC	January	472	1,845	7.08[b]	461
	February	503	2,042	7.55[b]	510
	March	661	1,249	9.92[b]	250
	April	324	2,792	4.86[b]	698
	May	374	2,916	5.61[b]	729
	June	385	3,359	5.78[b]	672
Total		2,918	14,203	40.8[b]	

[b] B830-SRC SVE system in testing phase. A flow rate of 0.25 scfm was assumed.

Table 2.7-3. Building 830-Proximal North (B830-PRXN) volumes of ground water and soil vapor extracted and discharged, January 1, 2004 through June 30, 2004.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Average weekly volume of water treated (gal)
B830-PRX	January	223	18,523	4,631
	February	319	28,712	7,178
	March	396	45,184	9,037
	April	476	40,028	10,007
	May	494	41,037	10,259
	June	627	53,224	10,645
Total		2,535	226,708	

Table 2.7-4. Building 830-Distal South (B830-DISS) volumes of ground water and soil vapor extracted and discharged, January 1, 2004 through June 30, 2004, 2003.

Treatment facility	Month	Operational hours	Volume of ground water discharged (gal)	Average weekly volume of water treated (gal)
B830-DISS	January	696	78,760	19,690
	February	672	48,730	12,183
	March	840	53,000	10,600
	April	672	52,310	13,078
	May	672	44,610	11,153
	June	840	50,110	10,022
Total		4,392	327,520	

Table 2.7-5. Building 832 Canyon OU 2004 VOCs in ground water treatment system influent and effluent.

Location	Date	Method	TCE (μg/L)	PCE (μg/L)	Total 1,2-DCE (μg/L)	Carbon tetrachloride (μg/L)	Chloroform (μg/L)	1,1-DCA (μg/L)	1,2-DCA (μg/L)	1,1-DCE (μg/L)	1,1,1-TCA (μg/L)	Freon 11 (μg/L)	Freon 113 (μg/L)	Methylene chloride (μg/L)
B830-PRXN-E	01/13/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-PRXN-E	02/04/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-PRXN-E	03/03/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-PRXN-E	04/06/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-PRXN-E	05/06/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-PRXN-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-PRXN-I	01/13/04	E601	33	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.53	0.7	<0.5
B830-SRC-I	01/13/04	E601	3,900 D	7.9 D	<10 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
B830-SRC-I	04/07/04	E601	3,100 D	6.1 D	<10 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D	<5 D
B830-SRC-I	04/07/04 DUP	E601	2,900 D	6.2	<0.5	<0.5	1.3	<0.5	3	0.8	<0.5	<0.5	<0.5	<0.5
B830-SRC-E	01/13/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-SRC-E	02/11/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-SRC-E	03/18/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-SRC-E	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-SRC-E	05/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-SRC-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B832-SRC-I	01/21/04	E601	38	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B832-SRC-I	04/07/04	E601	48	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TF-832-E	01/21/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TF-832-E	02/19/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TF-832-E	03/03/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TF-832-E	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TF-832-E	05/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TF-832-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-DISS-I	01/13/04	E601	100	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-DISS-I	04/07/04	E601	96	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-DISS-I	04/07/04 DUP	E601	89 DL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 L	<0.5	<0.5	<0.5	<0.5
B830-DISS-E	01/13/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-DISS-E	02/04/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-DISS-E	03/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-DISS-E	04/07/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-DISS-E	05/12/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B830-DISS-E	06/09/04	E601	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2.7-5. Building 832 Canyon OU 2004 VOCs in ground water treatment system influent and effluent (analytes not listed above).

Location	Date	Method	Detection frequency	1,1,2-Trichloroethane (μg/L)	cis-1,2-Dichloroethene (μg/L)
B830-PRXN-E	01/13/04	E601	0 of 21	-	-
B830-PRXN-E	02/04/04	E601	0 of 21	-	-
B830-PRXN-E	03/03/04	E601	0 of 21	-	-
B830-PRXN-E	04/06/04	E601	0 of 21	-	-
B830-PRXN-E	05/06/04	E601	0 of 21	-	-
B830-PRXN-E	06/09/04	E601	0 of 21	-	-
B830-PRXN-I	01/13/04	E601	0 of 21	-	-
B830-SRC-I	01/13/04	E601	0 of 21	-	-
B830-SRC-I	04/07/04	E601	0 of 21	-	-
B830-SRC-I	04/07/04 DUP	E601	1 of 20	0.5	-
B830-SRC-E	01/13/04	E601	0 of 21	-	-
B830-SRC-E	02/11/04	E601	0 of 21	-	-
B830-SRC-E	03/18/04	E601	0 of 21	-	-
B830-SRC-E	04/07/04	E601	0 of 21	-	-
B830-SRC-E	05/12/04	E601	0 of 21	-	-
B830-SRC-E	06/09/04	E601	0 of 21	-	-
B832-SRC-I	01/21/04	E601	1 of 21	-	0.91
B832-SRC-I	04/07/04	E601	1 of 21	-	0.91
TF-832-E	01/21/04	E601	0 of 21	-	-
TF-832-E	02/19/04	E601	0 of 21	-	-
TF-832-E	03/03/04	E601	0 of 21	-	-
TF-832-E	04/07/04	E601	0 of 21	-	-
TF-832-E	05/12/04	E601	0 of 21	-	-
TF-832-E	06/09/04	E601	0 of 21	-	-
B830-DISS-I	01/13/04	E601	0 of 21	-	-
B830-DISS-I	04/07/04	E601	0 of 21	-	-
B830-DISS-I	04/07/04 DUP	E601	0 of 20	-	-
B830-DISS-E	01/13/04	E601	0 of 21	-	-
B830-DISS-E	02/04/04	E601	0 of 21	-	-
B830-DISS-E	03/09/04	E601	0 of 21	-	-
B830-DISS-E	04/07/04	E601	0 of 21	-	-
B830-DISS-E	05/12/04	E601	0 of 21	-	-
B830-DISS-E	06/09/04	E601	0 of 21	-	-

Table 2.7-6. Building 832 Canyon OU 2004 nitrate and perchlorate in ground water treatment system influent and effluent.

Location	Date	Acetic acid (mg/L)	Nitrate (as NO3) (mg/L)	Perchlorate (μg/L)
B830-PRXN-E	02/04/04	-	15.3	<4
B830-PRXN-E	03/03/04	-	-	<4 H
B830-PRXN-E	04/06/04	-	16.6 D	<4
B830-PRXN-E	05/06/04	-	16.4	<4
B830-PRXN-E	06/09/04	-	16.1 D	<4
B830-PRXN-I	01/13/04	-	17.4 D	<4 H
B830-SRC-I	01/13/04	-	121 D	<4 H
B830-SRC-I	02/24/04	-	-	8.2
B830-SRC-I	04/07/04 DUP	-	24 H	4
B830-SRC-I	04/14/04	-	98.5 D	<4
B830-SRC-E	01/13/04	-	6.4 D	<4 H
B830-SRC-E	02/11/04	-	<0.88 D	4.1
B830-SRC-E	02/24/04	-	-	4.1
B830-SRC-E	03/18/04	-	2.4	<4
B830-SRC-E	04/07/04	-	51.3 D	<4
B830-SRC-E	05/12/04	-	3.9	<4
B830-SRC-E	06/09/04	-	7.4 D	<4
B832-SRC-I	01/21/04	-	135 D	<4 H
B832-SRC-I	04/07/04	-	126 D	13
TF-832-E	01/21/04	-	103 D	<4 H
TF-832-E	02/19/04	-	111 D	<4
TF-832-E	03/03/04	-	84.7 D	<4 H
TF-832-E	04/07/04	-	127 D	<4
TF-832-E	05/12/04	-	116 D	<4
TF-832-E	06/09/04	-	122 D	<4
B830-DISS-I	01/13/04	-	65.4 H	<4 H
B830-DISS-I	04/07/04 DUP	-	60 DH	<4
B830-DISS-I	04/14/04	-	64.5	<4 L
B830-DISS-E	01/13/04	0.28	34.3	<4
B830-DISS-E	02/04/04	-	25.8	<4
B830-DISS-E	03/09/04	-	26.4	4.3
B830-DISS-E	04/14/04	<0.09 D	35.5	<4 L
B830-DISS-E	05/12/04	-	19	<4
B830-DISS-E	06/09/04	-	21.1	<4

Table 2.7-7. Building 832 Canyon treatment facility sampling plans.

Sample Location	Sample Identification	Parameter	Frequency
B832-SRC GWTS			
Influent Port	**TF-832-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port (influent to misting system)	**TF-832-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		PH	**Monthly**
B832-SRC SVE			
Influent Port	**TF-832-SVI**	**No CMP Requirements**	
Effluent Port	**TF-832-SVE**	**VOCs**	**Weekly[a]**
B830-SRC GWTS			
Influent Port	**GTU05-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		PH	**Quarterly**
Effluent Port (influent to misting system)	**GTU05-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		PH	**Monthly**
B830-SRC SVE			
Influent Port	**VES06-I**	**No CMP Requirements**	
Effluent Port	**VES06-E**	**VOCs**	**Weekly[a]**
B830-PRX GWTS			
Influent Port	**STU03-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
Effluent Port	**STU03-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**

Table 2.7-7. Building 832 Canyon treatment facility sampling plans. (Cont. Page 2 of 2)

Sample Location	Sample Identification	Parameter	Frequency
B830-DISS GWTS			
Influent Port	**TF830DS-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**TF830DS-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

[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.**

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
SPRING3	SPR	Qal	A	A	CMP	E300.0:NO3	3		
SPRING3	SPR	Qal	A	A	CMP	E300.0:PERC	3		
SPRING3	SPR	Qal	S	S	CMP	E601	1	Y	
SPRING3	SPR	Qal	S	S	CMP	E601	3		
SPRING4	SPR	Tps	B	B	CMP	E300.0:NO3	1	N	Next sample required 1ndQ 2005.
SPRING4	SPR	Tps	B	B	CMP	E300.0:PERC	1	N	Next sample required 1ndQ 2005.
SPRING4	SPR	Tps	B	B	CMP	E601	1	N	Next sample required 1ndQ 2005.
SVI-830-031	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
SVI-830-031	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	1	N	Insufficient water.
SVI-830-031	MWPT	$Tnsc_1$	S	S	CMP	E601	1	N	Insufficient water.
SVI-830-031	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
SVI-830-032	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
SVI-830-032	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	1	N	Insufficient water.
SVI-830-032	MWPT	$Tnsc_1$	S	S	CMP	E601	1	N	Insufficient water.
SVI-830-032	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
SVI-830-033	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
SVI-830-033	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	1	N	Insufficient water.
SVI-830-033	MWPT	$Tnsc_1$	S	S	CMP	E601	1	N	Insufficient water.
SVI-830-033	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
SVI-830-035	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
SVI-830-035	MWPT	$Tnsc_1$			DIS	E300.0:NO3	2	Y	
SVI-830-035	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	1	N	Insufficient water.
SVI-830-035	MWPT	$Tnsc_1$			DIS	E300.0:PERC	2	Y	
SVI-830-035	MWPT	$Tnsc_1$	S	S	CMP	E601	1	Y	
SVI-830-035	MWPT	$Tnsc_1$			DIS	E601	2	Y	

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 2 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
SVI-830-035	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
W-830-04A	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-04A	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-04A	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-04A	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-05	MWPT	$Tnbs_2$-$Tnsc_{1c}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-05	MWPT	$Tnbs_2$-$Tnsc_{1c}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-05	MWPT	$Tnbs_2$-$Tnsc_{1c}$	S	S	CMP	E601	1	Y	
W-830-05	MWPT	$Tnbs_2$-$Tnsc_{1c}$	S	S	CMP	E601	3		
W-830-07	MWPT	$Tnsc_1$	A	A	CMP	E300.0:NO3	3		
W-830-07	MWPT	$Tnsc_1$	A	A	CMP	E300.0:PERC	3		
W-830-07	MWPT	$Tnsc_1$	S	S	CMP	E601	1	N	Insufficient water.
W-830-07	MWPT	$Tnsc_1$	S	S	CMP	E601	3		
W-830-09	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	3		
W-830-09	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	3		
W-830-09	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-09	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	3		
W-830-10	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-10	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-10	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-10	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-11	MWPT	$Tnsc_{1c}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-11	MWPT	$Tnsc_{1c}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-11	MWPT	$Tnsc_{1c}$	S	S	CMP	E601	1	Y	
W-830-11	MWPT	$Tnsc_{1c}$	S	S	CMP	E601	3		

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 3 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-830-12	MWPT	Lower $Tnbs_1$	A	A	CMP	E300.0:NO3	3		
W-830-12	MWPT	Lower $Tnbs_1$	A	A	CMP	E300.0:PERC	3		
W-830-12	MWPT	Lower $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-12	MWPT	Lower $Tnbs_1$	S	S	CMP	E601	3		
W-830-13	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-830-13	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-830-13	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-830-13	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-830-14	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-14	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-14	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-14	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-15	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	3		
W-830-15	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	3		
W-830-15	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-15	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	3		
W-830-16	GW	$Tnsc_{1b}$	S	S	CMP	E300.0:NO3	1	Y	
W-830-16	GW	$Tnsc_{1b}$	S	S	CMP	E300.0:NO3	3		
W-830-16	GW	$Tnsc_{1b}$	S	S	CMP	E300.0:PERC	1	Y	
W-830-16	GW	$Tnsc_{1b}$	S	S	CMP	E300.0:PERC	3		
W-830-16	GW	$Tnsc_{1b}$	Q	Q	CMP	E601	1	Y	
W-830-16	GW	$Tnsc_{1b}$	Q	Q	CMP	E601	2	Y	
W-830-16	GW	$Tnsc_{1b}$	Q	Q	CMP	E601	3		
W-830-16	GW	$Tnsc_{1b}$	Q	Q	CMP	E601	4		
W-830-17	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 4 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-830-17	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-830-17	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-830-17	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-830-1730	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-1730	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-1730	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-1730	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-18	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-830-18	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
W-830-18	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-18	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	3		
W-830-1807	EW	$Qal/Tnsc_1$			DIS	DWMETALS	2	Y	
W-830-1807	EW	$Qal/Tnsc_1$	A	A	CMP	E300.0:NO3	1	Y	
W-830-1807	EW	$Qal/Tnsc_1$			DIS	E300.0:NO3	2	Y	
W-830-1807	EW	$Qal/Tnsc_1$	A	A	CMP	E300.0:PERC	1	Y	
W-830-1807	EW	$Qal/Tnsc_1$			DIS	E300.0:PERC	2	Y	
W-830-1807	EW	$Qal/Tnsc_1$	S	S	CMP	E601	1	Y	
W-830-1807	EW	$Qal/Tnsc_1$			DIS	E601	2	Y	
W-830-1807	EW	$Qal/Tnsc_1$	S	S	CMP	E601	3		
W-830-1807	EW	$Qal/Tnsc_1$			DIS	E602	2	Y	
W-830-1807	EW	$Qal/Tnsc_1$			DIS	E8330:R+H	2	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	AS:UISO	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	DWMETALS	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	DWMETALS	2	Y	
W-830-1829	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 5 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	E300.0:NO3	2	Y	
W-830-1829	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	E300.0:PERC	2	Y	
W-830-1829	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	E601	2	Y	
W-830-1829	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	E602	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	E602	2	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	E8330:R+H	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	E8330:R+H	2	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	E900	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	E906	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	GENMIN	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$			DIS	GENMIN	2	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	AS:UISO	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	DWMETALS	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	DWMETALS	2	Y	
W-830-1830	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	E300.0:NO3	2	Y	
W-830-1830	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	E300.0:PERC	2	Y	
W-830-1830	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	E601	2	Y	
W-830-1830	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	E602	1	Y	

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 6 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	E602	2	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	E8330:R+H	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	E8330:R+H	2	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	E900	1	N	Insufficient water.
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	E906	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	GENMIN	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$			DIS	GENMIN	2	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	AS:UISO	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	DWMETALS	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	DWMETALS	2	Y	
W-830-1831	GW	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	E300.0:NO3	2	Y	
W-830-1831	GW	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	E300.0:PERC	2	Y	
W-830-1831	GW	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	E601	2	Y	
W-830-1831	GW	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-1831	GW	$Tnsc_{1b}$			DIS	E602	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	E602	2	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	E8330:R+H	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	E8330:R+H	2	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	E900	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	E906	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	GENMIN	1	Y	
W-830-1831	GW	$Tnsc_{1b}$			DIS	GENMIN	2	Y	

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 7 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-830-1832	GW	Upper $Tnbs_1$			DIS	AS:UISO	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	DWMETALS	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	DWMETALS	2	Y	
W-830-1832	GW	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	E300.0:NO3	2	Y	
W-830-1832	GW	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	E300.0:PERC	2	Y	
W-830-1832	GW	Upper $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	E601	2	Y	
W-830-1832	GW	Upper $Tnbs_1$	S	S	CMP	E601	3		
W-830-1832	GW	Upper $Tnbs_1$			DIS	E602	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	E602	2	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	E8330:R+H	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	E8330:R+H	2	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	E900	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	E906	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	GENMIN	1	Y	
W-830-1832	GW	Upper $Tnbs_1$			DIS	GENMIN	2	Y	
W-830-19	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	3		
W-830-19	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	3		
W-830-19	EW	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-19	EW	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-20	GW	Upper $Tnbs_1$	S	S	CMP	E300.0:NO3	1	Y	
W-830-20	GW	Upper $Tnbs_1$	S	S	CMP	E300.0:NO3	3		
W-830-20	GW	Upper $Tnbs_1$	S	S	CMP	E300.0:PERC	1	Y	

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 8 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-830-20	GW	Upper $Tnbs_1$	S	S	CMP	E300.0:PERC	3		
W-830-20	GW	Upper $Tnbs_1$	Q	Q	CMP	E601	1	Y	
W-830-20	GW	Upper $Tnbs_1$	Q	Q	CMP	E601	2	Y	
W-830-20	GW	Upper $Tnbs_1$	Q	Q	CMP	E601	3		
W-830-20	GW	Upper $Tnbs_1$	Q	Q	CMP	E601	4		
W-830-21	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-21	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-21	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-21	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-22	MWPT	$Tnsc_{1a}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-22	MWPT	$Tnsc_{1a}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-22	MWPT	$Tnsc_{1a}$	S	S	CMP	E601	1	Y	
W-830-22	MWPT	$Tnsc_{1a}$	S	S	CMP	E601	3		
W-830-25	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-25	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-25	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-25	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-26	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-830-26	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
W-830-26	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-26	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	3		
W-830-27	MWPT	$Tnsc_{1a}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-27	MWPT	$Tnsc_{1a}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-27	MWPT	$Tnsc_{1a}$	S	S	CMP	E601	1	Y	
W-830-27	MWPT	$Tnsc_{1a}$	S	S	CMP	E601	3		

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 9 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-830-28	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-830-28	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
W-830-28	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-28	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	3		
W-830-29	MWPT	Lower $Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-830-29	MWPT	Lower $Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
W-830-29	MWPT	Lower $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-29	MWPT	Lower $Tnbs_1$	S	S	CMP	E601	3		
W-830-30	MWPT	$Qal/Tnsc_1$	A	A	CMP	E300.0:NO3	3		
W-830-30	MWPT	$Qal/Tnsc_1$	A	A	CMP	E300.0:PERC	3		
W-830-30	MWPT	$Qal/Tnsc_1$	S	S	CMP	E601	1	Y	
W-830-30	MWPT	$Qal/Tnsc_1$	S	S	CMP	E601	3		
W-830-34	MWPT	$Qal/Tnsc_1$	A	A	CMP	E300.0:NO3	3		
W-830-34	MWPT	$Qal/Tnsc_1$	A	A	CMP	E300.0:PERC	3		
W-830-34	MWPT	$Qal/Tnsc_1$	S	S	CMP	E601	1	Y	
W-830-34	MWPT	$Qal/Tnsc_1$	S	S	CMP	E601	3		
W-830-49	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-49	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-49	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-49	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-50	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-50	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-50	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-50	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-51	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 10 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-830-51	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-51	EW	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-51	EW	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-52	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-52	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-52	EW	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-52	EW	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-53	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-53	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-53	EW	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-53	EW	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-54	MWPT	$Tnsc_{1c}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-54	MWPT	$Tnsc_{1c}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-54	MWPT	$Tnsc_{1c}$	S	S	CMP	E601	1	Y	
W-830-54	MWPT	$Tnsc_{1c}$	S	S	CMP	E601	3		
W-830-55	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-55	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-55	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-55	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-56	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-56	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-56	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-56	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-57	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-830-57	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 11 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-830-57	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-57	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	3		
W-830-58	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-58	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-58	EW	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-58	EW	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-59	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-830-59	EW	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-830-59	EW	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-830-59	EW	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-830-60	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-830-60	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
W-830-60	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	1	Y	
W-830-60	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	3		
W-831-01	MWB	Lower $Tnbs_1$	B	B	CMP	E300.0:NO3	1	N	Next sample required 1ndQ 2005.
W-831-01	MWB	Lower $Tnbs_1$	B	B	CMP	E300.0:PERC	1	N	Next sample required 1ndQ 2005.
W-831-01	MWB	Lower $Tnbs_1$	B	B	CMP	E601	1	N	Next sample required 1ndQ 2005.
W-832-01	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-832-01	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-832-01	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-832-01	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-832-05	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-832-05	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-832-05	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-832-05	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 12 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-832-06	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-832-06	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-832-06	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-832-06	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-832-09	MWPT	Lower $Tnbs_1$	A	A	CMP	E300.0:NO3	1	Y	
W-832-09	MWPT	Lower $Tnbs_1$	A	A	CMP	E300.0:PERC	1	Y	
W-832-09	MWPT	Lower $Tnbs_1$	S	S	CMP	E601	1	Y	
W-832-09	MWPT	Lower $Tnbs_1$	S	S	CMP	E601	3		
W-832-10	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-832-10	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-832-10	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-832-10	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-832-11	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-832-11	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-832-11	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-832-11	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-832-12	EW	Qal/fill	A	A	CMP	E300.0:NO3	1	Y	
W-832-12	EW	Qal/fill	A	A	CMP	E300.0:PERC	1	Y	
W-832-12	EW	Qal/fill	S	S	CMP	E601	1	Y	
W-832-12	EW	Qal/fill	S	S	CMP	E601	3		
W-832-13	EW	Qal/fill	A	A	CMP	E300.0:NO3	1	Y	
W-832-13	EW	Qal/fill	A	A	CMP	E300.0:PERC	1	Y	
W-832-13	EW	Qal/fill	S	S	CMP	E601	1	Y	
W-832-13	EW	Qal/fill	S	S	CMP	E601	3		
W-832-14	EW	Qal/fill	A	A	CMP	E300.0:NO3	3		

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 13 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-832-14	EW	Qal/fill	A	A	CMP	E300.0:PERC	3		
W-832-14	EW	Qal/fill	S	S	CMP	E601	1	N	Insufficient water.
W-832-14	EW	Qal/fill	S	S	CMP	E601	3		
W-832-15	EW	Qal/fill	A	A	CMP	E300.0:NO3	3		
W-832-15	EW	Qal/fill	A	A	CMP	E300.0:PERC	3		
W-832-15	EW	Qal/fill	S	S	CMP	E601	1	Y	
W-832-15	EW	Qal/fill	S	S	CMP	E601	3		
W-832-15	EW	Qal/fill	B	B	CMP	E8330	1	N	Next sample required 1ndQ 2005.
W-832-16	EW	Qal/fill	A	A	CMP	E300.0:NO3	3		
W-832-16	EW	Qal/fill	A	A	CMP	E300.0:PERC	3		
W-832-16	EW	Qal/fill	S	S	CMP	E601	1	N	Insufficient water.
W-832-16	EW	Qal/fill	S	S	CMP	E601	3		
W-832-17	EW	Qal/fill	A	A	CMP	E300.0:NO3	3		
W-832-17	EW	Qal/fill	A	A	CMP	E300.0:PERC	3		
W-832-17	EW	Qal/fill	S	S	CMP	E601	1	N	Insufficient water.
W-832-17	EW	Qal/fill	S	S	CMP	E601	3		
W-832-18	EW	Qal/fill	A	A	CMP	E300.0:NO3	3		
W-832-18	EW	Qal/fill	A	A	CMP	E300.0:PERC	3		
W-832-18	EW	Qal/fill	S	S	CMP	E601	1	N	Insufficient water.
W-832-18	EW	Qal/fill	S	S	CMP	E601	3		
W-832-19	MWPT	Qal/fill	A	A	CMP	E300.0:NO3	3		
W-832-19	MWPT	Qal/fill	A	A	CMP	E300.0:PERC	3		
W-832-19	MWPT	Qal/fill	S	S	CMP	E601	1	N	Insufficient water.
W-832-19	MWPT	Qal/fill	S	S	CMP	E601	3		
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	AS:UISO	1	Y	

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 14 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	DWMETALS	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	DWMETALS	2	Y	
W-832-1927	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	E300.0:NO3	2	Y	
W-832-1927	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	E300.0:PERC	2	Y	
W-832-1927	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	E601	2	Y	
W-832-1927	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	E602	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	E602	2	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	E8330:R+H	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	E8330:R+H	2	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	E900	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	GENMIN	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$			DIS	GENMIN	2	Y	
W-832-20	EW	Qal/fill	A	A	CMP	E300.0:NO3	3		
W-832-20	EW	Qal/fill	A	A	CMP	E300.0:PERC	3		
W-832-20	EW	Qal/fill	S	S	CMP	E601	1	N	Insufficient water.
W-832-20	EW	Qal/fill	S	S	CMP	E601	3		
W-832-21	MWPT	Qal/fill	A	A	CMP	E300.0:NO3	3		
W-832-21	MWPT	Qal/fill	A	A	CMP	E300.0:PERC	3		
W-832-21	MWPT	Qal/fill	S	S	CMP	E601	1	N	Insufficient water.
W-832-21	MWPT	Qal/fill	S	S	CMP	E601	3		
W-832-22	EW	Qal/fill	A	A	CMP	E300.0:NO3	3		

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 15 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-832-22	EW	Qal/fill	A	A	CMP	E300.0:PERC	3		
W-832-22	EW	Qal/fill	S	S	CMP	E601	1	N	Insufficient water.
W-832-22	EW	Qal/fill	S	S	CMP	E601	3		
W-832-23	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-832-23	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-832-23	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-832-23	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-832-24	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-832-24	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-832-24	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-832-24	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-832-25	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:NO3	1	Y	
W-832-25	MWPT	$Tnsc_{1b}$	A	A	CMP	E300.0:PERC	1	Y	
W-832-25	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	1	Y	
W-832-25	MWPT	$Tnsc_{1b}$	S	S	CMP	E601	3		
W-832-SC1	MWPT	Qal	A	A	CMP	E300.0:NO3	3		
W-832-SC1	MWPT	Qal	A	A	CMP	E300.0:PERC	3		
W-832-SC1	MWPT	Qal	S	S	CMP	E601	1	N	Insufficient water.
W-832-SC1	MWPT	Qal	S	S	CMP	E601	3		
W-832-SC2	MWPT	Qal	A	A	CMP	E300.0:NO3	3		
W-832-SC2	MWPT	Qal	A	A	CMP	E300.0:PERC	3		
W-832-SC2	MWPT	Qal	S	S	CMP	E601	1	N	Insufficient water.
W-832-SC2	MWPT	Qal	S	S	CMP	E601	3		
W-832-SC3	MWPT	Qal	A	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-SC3	MWPT	Qal	A	A	CMP	E300.0:PERC	1	N	Insufficient water.

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 16 of 17)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-832-SC3	MWPT	Qal	S	S	CMP	E601	1	Y	
W-832-SC3	MWPT	Qal	S	S	CMP	E601	3		
W-832-SC4	MWPT	Qal	A	A	CMP	E300.0:NO3	1	Y	
W-832-SC4	MWPT	Qal	A	A	CMP	E300.0:PERC	1	Y	
W-832-SC4	MWPT	Qal	S	S	CMP	E601	1	Y	
W-832-SC4	MWPT	Qal	S	S	CMP	E601	3		
W-870-01	MWPT	Qal	A	A	CMP	E300.0:NO3	3		
W-870-01	MWPT	Qal	A	A	CMP	E300.0:PERC	3		
W-870-01	MWPT	Qal	S	S	CMP	E601	1	N	Insufficient water.
W-870-01	MWPT	Qal	S	S	CMP	E601	3		
W-870-02	MWPT	$Tnbs_2$	A	A	CMP	E300.0:NO3	1	Y	
W-870-02	MWPT	$Tnbs_2$	A	A	CMP	E300.0:PERC	1	Y	
W-870-02	MWPT	$Tnbs_2$	S	S	CMP	E601	1	Y	
W-870-02	MWPT	$Tnbs_2$	S	S	CMP	E601	3		
W-880-01	GW	$Tnbs_2$	S		CMP	E300.0:NO3			See High Explosives Process Area.
W-880-01	GW	$Tnbs_2$	S		CMP	E300.0:PERC			See High Explosives Process Area.
W-880-01	GW	$Tnbs_2$	Q		CMP	E601			See High Explosives Process Area.
W-880-02	GW	Qal	S		CMP	E300.0:NO3			See High Explosives Process Area.
W-880-02	GW	Qal	S		CMP	E300.0:PERC			See High Explosives Process Area.
W-880-02	GW	Qal	Q		CMP	E601			See High Explosives Process Area.
W-880-03	GW	$Tnsc_{1b}$	S		CMP	E300.0:NO3			See High Explosives Process Area.
W-880-03	GW	$Tnsc_{1b}$	S		CMP	E300.0:PERC			See High Explosives Process Area.
W-880-03	GW	$Tnsc_{1b}$	Q		CMP	E601			See High Explosives Process Area.

Notes and footnote appear on following page.

Table 2.7-8. Building 832 Canyon (OU7) ground and surface water sampling and analysis plan. (Cont. Page 17 of 17)

Notes:

Building 830 primary Contaminants of Concern in Ground Water: VOCs (E601 or E624).

Building 830 secondary COC: nitrate (E300:NO3).

Building 830 secondary COC: perchlorate (E300.0:PERC).

Building 832 primary Contaminants of Concern in Ground Water: VOCs (E601 or E624).

Building 832 secondary COC: nitrate (E300:NO3).

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

Table 2.7-9. Building 832-Source (B832-SRC) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	GWTS VOC mass removed (g)	GWTS Nitrate mass removed (g)	GWTS Perchlorate mass removed (g)	SVE VOC mass removed (g)
B832-SRC	January	0.1	296	0	0[a]
	February	0.2	674	0	0[a]
	March	0.4	1,230	0	0[a]
	April	0.3	830	0.09	0[a]
	May	0.2	522	0.05	0[a]
	June	0.2	556	0.06	0[a]
Total		1.4	4,108	0.2	0[a]

[a] B832-SRC SVE system is off line as part of a vapor rebound test being conducted at this facility.

Table 2.7-10. Building 830-Source (B830-SRC) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	GWTS VOC mass removed (g)	GWTS Nitrate mass removed (g)	GWTS Perchlorate mass removed (g)	SVE VOC mass removed (g)
B830-SRC	January	31.4	914	0	37.7[b]
	February	34.4	1,024	0.06	40.2[b]
	March	22.5	625	0.04	28.7[b]
	April	45.1	1,437	0.05	14.1[b]
	May	46.0	1,492	0.05	16.2[b]
	June	53.8	1,752	0.06	15.8[b]
Total		233.2	7,244	0.26	152.7[b]

[b] The values reported are estimates as the B830-SRC SVE system is in the testing phase. A flow rate of 0.25 scfm was assumed.

Table 2.7-11. Building 830-Proximal North (B830-PRXN) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	VOC mass removed (g)	Nitrate mass removed (g)
B830-PRX	**January**	**2.4**	**1,220**
	February	**3.7**	**1,891**
	March	**5.9**	**2,976**
	April	**4.9**	**2,545**
	May	**5.0**	**2,609**
	June	**6.5**	**3,384**
Total		**28.4**	**14,625**

Table 2.7-12. Building 830-Distal South (B830-DISS) mass removed, January 1, 2004 through June 30, 2004.

Treatment facility	Month	VOC mass removed (g)	Nitrate mass removed (g)	Perchlorate mass removed (g)
B830-DISS	**January**	**29.8**	**19,496**	**0**
	February	**18.4**	**12,063**	**0**
	March	**20.1**	**13,106**	**0**
	April	**18.3**	**12,325**	**0**
	May	**15.6**	**10,511**	**0**
	June	**17.5**	**11,807**	**0**
Total		**121.7**	**80,574**	**0**

Table 2.8-1. Building 801 firing table and Pit 8 landfill (OU8) ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K8-01	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
K8-01	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
K8-01	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	2	Y	
K8-01	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	4		
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	A	CMP	CMPTRIMET	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	A	CMP	E340.2	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	A	CMP	E601	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	A	CMP	E8330:R+H	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	Q	CMP	E906	1	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	Q	CMP	E906	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	Q	CMP	E906	3		
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	Q	CMP	E906	4		
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	B	B	CMP	MS:THISO	2	N	Next sample required 2ndQ 2005.
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	B	B	CMP	MS:UISO	2	N	Next sample required 2ndQ 2005.
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	A	CMP	T26METALS	2	Y	
K8-03B	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
K8-03B	MWPT	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
K8-03B	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	2	Y	
K8-03B	MWPT	Upper $Tnbs_1$	S	S	CMP	E601	4		
K8-04	CMP DMW	Upper $Tnbs_1$	A	A	CMP	CMPTRIMET	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	A	CMP	E340.2	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	A	CMP	E601	2	Y	

Table 2.8-1. Building 801 firing table and Pit 8 landfill (OU8) ground water sampling and analysis plan. (Cont. Page 2 of 3)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K8-04	CMP DMW	Upper $Tnbs_1$	A	A	CMP	E8330:R+H	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	Q	CMP	E906	1	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	Q	CMP	E906	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	Q	CMP	E906	3		
K8-04	CMP DMW	Upper $Tnbs_1$	Q	Q	CMP	E906	4		
K8-04	CMP DMW	Upper $Tnbs_1$	B	B	CMP	MS:THISO	2	N	Next sample required 2ndQ 2005.
K8-04	CMP DMW	Upper $Tnbs_1$	B	B	CMP	MS:UISO	2	N	Next sample required 2ndQ 2005.
K8-04	CMP DMW	Upper $Tnbs_1$	A	A	CMP	T26METALS	2	Y	
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	CMPTRIMET	2	N	Insufficient water. Changed to biennial due to continued lack of water.
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	E300.0:NO3	2	N	Insufficient water. Changed to biennial due to continued lack of water.
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	E300.0:PERC	2	N	Insufficient water. Changed to biennial due to continued lack of water.
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	E340.2	2	N	Insufficient water. Changed to biennial due to continued lack of water.
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	E601	2	N	Insufficient water. Changed to biennial due to continued lack of water.
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	E8330:R+H	2	N	Insufficient water. Changed to biennial due to continued lack of water.
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	E906	2	N	Insufficient water. Changed to biennial due to continued lack of water..
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	MS:THISO	2	N	Insufficient water. Changed to biennial due to continued lack of water.
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	MS:UISO	2	N	Insufficient water. Changed to biennial due to continued lack of water.
K8-05	CMP DMW	$Tnbs_2$	B	B	CMP	T26METALS	2	N	Insufficient water. Changed to biennial due to continued lack of water.

Notes and footnote appear on following page.

Table 2.8-1. Building 801 firing table and Pit 8 landfill (OU8) ground water sampling and analysis plan. (Cont. Page 3 of 3)

Notes:

No COCs in ground water.

CMP Detection monitoring analyte: tritium (E906) sampled quarterly.

CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.

CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.

CMP Detection monitoring analyte: HE compounds (E8330:R+H) sampled annually.

CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.

CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.

CMP Detection monitoring analytes: Title 26 metals plus U, Th, Li, Be (T26METALS and CMPTRIMET) sampled annually.

CMP Detection monitoring analytes: uranium and thorium isotopes by mass spectrometry (MS:UISO and MS:THISO) sampled biennially.

Contaminants of Concern in the Vadose Zone not detected in Ground Water: HE Compounds and uranium.

Building 801 primary COC: VOCs (E601 or E624).

Building 801 secondary COC: nitrate (E300.0:NO3).

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

Table 2.8-2. Building 833 (OU8) ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-833-03	MWPT	Tps	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due continued to lack of water.
W-833-12	MWPT	Qt	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-833-18	MWPT	Tps	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-833-22	MWPT	Tps	B	B	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-833-28	MWPT	Tps	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-833-30	MWPT	Lower $Tnbs_1$	S	S	CMP	E601	1	Y	
W-833-30	MWPT	Lower $Tnbs_1$	S	S	CMP	E601	3		
W-833-33	MWPT	Tps	B	B	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-833-34	MWPT	Tps	A	A	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-833-43	MWPT	Tps	B	B	CMP	E601	1	N	Insufficient water. Changed to annual due to continued lack of water.
W-840-01	MWPT	Lower $Tnbs_1$		A	DIS	E300.0:NO3	1	N	Insufficient water.
W-840-01	MWPT	Lower $Tnbs_1$		A	DIS	E300.0:PERC	1	N	Insufficient water.
W-840-01	MWPT	Lower $Tnbs_1$		A	DIS	E601	1	N	Insufficient water.

Table 2.8-2. Building 833 (OU8) ground water sampling and analysis plan. (Cont. Page 2 of 2)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-841-01	MWPT	Upper $Tnbs_1$		A	DIS	E300.0:NO3	1	N	Insufficient water.
W-841-01	MWPT	Upper $Tnbs_1$		A	DIS	E300.0:PERC	1	N	Insufficient water.
W-841-01	MWPT	Upper $Tnbs_1$		A	DIS	E601	1	N	Insufficient water.

Note:

Building 833 primary COC: VOCs (E601).

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

Table 2.8-3. Building 845 firing table and Pit 9 Landfill (OU8) ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K9-01	CMP DMW	Tmss	A	A	CMP	CMPTRIMET	2	Y	
K9-01	CMP DMW	Tmss	A	A	CMP	E300.0:NO3	2	Y	
K9-01	CMP DMW	Tmss	A	A	CMP	E300.0:PERC	2	Y	
K9-01	CMP DMW	Tmss	A	A	CMP	E340.2	2	Y	
K9-01	CMP DMW	Tmss	A	A	CMP	E601	2	Y	
K9-01	CMP DMW	Tmss	A	A	CMP	E8330	2	Y	
K9-01	CMP DMW	Tmss	Q	Q	CMP	E906	1	Y	
K9-01	CMP DMW	Tmss	Q	Q	CMP	E906	2	Y	
K9-01	CMP DMW	Tmss	Q	Q	CMP	E906	3		
K9-01	CMP DMW	Tmss	Q	Q	CMP	E906	4		
K9-01	CMP DMW	Tmss	B	B	CMP	MS:THISO	2	N	Next sample required 2ndQ 2005.
K9-01	CMP DMW	Tmss	B	B	CMP	MS:UISO	2	N	Next sample required 2ndQ 2005.
K9-01	CMP DMW	Tmss	A	A	CMP	T26METALS	2	Y	
K9-02	CMP DMW	Tmss	A	A	CMP	CMPTRIMET	2	Y	
K9-02	CMP DMW	Tmss	A	A	CMP	E300.0:NO3	2	Y	
K9-02	CMP DMW	Tmss	A	A	CMP	E300.0:PERC	2	Y	
K9-02	CMP DMW	Tmss	A	A	CMP	E340.2	2	Y	
K9-02	CMP DMW	Tmss	A	A	CMP	E601	2	Y	
K9-02	CMP DMW	Tmss	A	A	CMP	E8330	2	Y	
K9-02	CMP DMW	Tmss	Q	Q	CMP	E906	1	Y	
K9-02	CMP DMW	Tmss	Q	Q	CMP	E906	2	Y	
K9-02	CMP DMW	Tmss	Q	Q	CMP	E906	3		
K9-02	CMP DMW	Tmss	Q	Q	CMP	E906	4		
K9-02	CMP DMW	Tmss	B	B	CMP	MS:THISO	2	N	Next sample required 2ndQ 2005.
K9-02	CMP DMW	Tmss	B	B	CMP	MS:UISO	2	N	Next sample required 2ndQ 2005.

Table 2.8-3. Building 845 firing table and Pit 9 Landfill (OU8) ground water sampling and analysis plan. (Cont. Page 2 of 3)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K9-02	CMP DMW	Tmss	A	A	CMP	T26METALS	2	Y	
K9-03	CMP DMW	Tmss	A	A	CMP	CMPTRIMET	2	Y	
K9-03	CMP DMW	Tmss	A	A	CMP	E300.0:NO3	2	Y	
K9-03	CMP DMW	Tmss	A	A	CMP	E300.0:PERC	2	Y	
K9-03	CMP DMW	Tmss	A	A	CMP	E340.2	2	Y	
K9-03	CMP DMW	Tmss	A	A	CMP	E601	2	Y	
K9-03	CMP DMW	Tmss	A	A	CMP	E8330	2	Y	
K9-03	CMP DMW	Tmss	Q	Q	CMP	E906	1	Y	
K9-03	CMP DMW	Tmss	Q	Q	CMP	E906	2	Y	
K9-03	CMP DMW	Tmss	Q	Q	CMP	E906	3		
K9-03	CMP DMW	Tmss	Q	Q	CMP	E906	4		
K9-03	CMP DMW	Tmss	B	B	CMP	MS:THISO	2	N	Next sample required 2ndQ 2005.
K9-03	CMP DMW	Tmss	B	B	CMP	MS:UISO	2	N	Next sample required 2ndQ 2005.
K9-03	CMP DMW	Tmss	A	A	CMP	T26METALS	2	Y	
K9-04	CMP DMW	Tmss	A	A	CMP	CMPTRIMET	2	Y	
K9-04	CMP DMW	Tmss	A	A	CMP	E300.0:NO3	2	Y	
K9-04	CMP DMW	Tmss	A	A	CMP	E300.0:PERC	2	Y	
K9-04	CMP DMW	Tmss	A	A	CMP	E340.2	2	Y	
K9-04	CMP DMW	Tmss	A	A	CMP	E601	2	Y	
K9-04	CMP DMW	Tmss	A	A	CMP	E8330	2	Y	
K9-04	CMP DMW	Tmss	Q	Q	CMP	E906	1	Y	
K9-04	CMP DMW	Tmss	Q	Q	CMP	E906	2	Y	
K9-04	CMP DMW	Tmss	Q	Q	CMP	E906	3		
K9-04	CMP DMW	Tmss	Q	Q	CMP	E906	4		
K9-04	CMP DMW	Tmss	B	B	CMP	MS:THISO	2	N	Next sample required 2ndQ 2005.

Table 2.8-3. Building 845 firing table and Pit 9 Landfill (OU8) ground water sampling and analysis plan. (Cont. Page 3 of 3)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K9-04	CMP DMW	Tmss	B	B	CMP	MS:UISO	2	N	Next sample required 2ndQ 2005.
K9-04	CMP DMW	Tmss	A	A	CMP	T26METALS	2	Y	

Notes:

No COCs in ground water.

CMP Detection monitoring analyte: tritium (E906) sampled quarterly.

CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.

CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.

CMP Detection monitoring analyte: HE compounds (E8330:R+H) sampled annually.

CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.

CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.

CMP Detection monitoring analytes: Title 26 metals plus U, Th, Li, Be (T26METALS and CMPTRIMET) sampled annually.

CMP Detection monitoring analytes: uranium and thorium isotopes by mass spectrometry (MS:UISO and MS:THISO) sampled biennially.

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

Table 2.8-4. Building 851 (OU8) ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-851-05	MWPT	Tmss	B	B	CMP	E601	2	N	Next sample required 2ndQ 2005.
W-851-05	MWPT	Tmss	A	A	CMP	E906	2	Y	
W-851-05	MWPT	Tmss	S	S	CMP	MS:UISO	2	Y	
W-851-05	MWPT	Tmss	S	S	CMP	MS:UISO	4		
W-851-06	MWPT	Tmss	A	A	CMP	E906	2	Y	
W-851-06	MWPT	Tmss	S	S	CMP	MS:UISO	2	Y	
W-851-06	MWPT	Tmss	S	S	CMP	MS:UISO	4		
W-851-07	MWPT	Tmss	A	A	CMP	E906	2	Y	
W-851-07	MWPT	Tmss	S	S	CMP	MS:UISO	2	Y	
W-851-07	MWPT	Tmss	S	S	CMP	MS:UISO	4		
W-851-08	MWPT	Tmss	A	A	CMP	E906	2	Y	
W-851-08	MWPT	Tmss	S	S	CMP	MS:UISO	2	Y	
W-851-08	MWPT	Tmss	S	S	CMP	MS:UISO	4		

Notes:

Building 851 primary COC: uranium (MS:UISO).

Building 851 secondary COC: tritium (E906).

Contaminants of Concern in the Vadose Zone not detected in Ground Water: VOCs (E601).

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

Table 3.1-1. Pit 2 (OU5) landfill ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
K2-01C	CMP DMW	$Tnbs_1$			ERD/WGMG	AS:UISO	1	Y	
K2-01C	CMP DMW	$Tnbs_1$			ERD/WGMG	AS:UISO	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	A	A	CMP/WGMG	CMPTRIMET	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	A	A	CMP/WGMG	E300.0:NO3	1	Y	
K2-01C	CMP DMW	$Tnbs_1$			ERD/WGMG	E300.0:NO3	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	A	A	CMP/WGMG	E300.0:PERC	1	Y	
K2-01C	CMP DMW	$Tnbs_1$			ERD/WGMG	E300.0:PERC	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	A	A	CMP/WGMG	E340.2	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	A	A	CMP/WGMG	E601	1	Y	
K2-01C	CMP DMW	$Tnbs_1$			ERD/WGMG	E601	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	A	A	CMP/WGMG	E8330:R+H	1	Y	
K2-01C	CMP DMW	$Tnbs_1$			ERD/WGMG	E8330:R+H	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	Q	Q	CMP/WGMG	E906	1	Y	
K2-01C	CMP DMW	$Tnbs_1$	Q	Q	CMP/WGMG	E906	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	Q	Q	CMP/WGMG	E906	3		
K2-01C	CMP DMW	$Tnbs_1$	Q	Q	CMP/WGMG	E906	4		
K2-01C	CMP DMW	$Tnbs_1$	B	B	CMP/WGMG	MS:THISO	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	B	B	CMP/WGMG	MS:UISO	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	A	A	CMP/WGMG	T26METALS	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	A	A	CMP	CMPTRIMET	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	A	A	CMP	E340.2	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	A	A	CMP	E601	2	Y	

Table 3.1-1. Pit 2 (OU5) landfill ground water sampling and analysis plan. (Cont. Page 2 of 3)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
NC2-08	CMP DMW	$Tnbs_1$	A	A	CMP	E8330:R+H	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	Q	Q	CMP	E906	1	Y	
NC2-08	CMP DMW	$Tnbs_1$	Q	Q	CMP	E906	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	Q	Q	CMP	E906	3		
NC2-08	CMP DMW	$Tnbs_1$	Q	Q	CMP	E906	4		
NC2-08	CMP DMW	$Tnbs_1$	B	B	CMP	MS:THISO	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	B	B	CMP	MS:UISO	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	A	A	CMP	T26METALS	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	A	A	CMP	CMPTRIMET	3		
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$			DIS	DWMETALS	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E340.2	3		
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E601	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$			DIS	E602	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E8330:R+H	3		
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	Q	Q	CMP	E906	1	N	New well.
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	Q	Q	CMP	E906	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	Q	Q	CMP	E906	3		
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	Q	Q	CMP	E906	4		
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	B	B	CMP	MS:THISO	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	B	B	CMP	MS:UISO	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	A	A	CMP	T26METALS	3		
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	A	CMP	CMPTRIMET	3		

Table 3.1-1. Pit 2 (OU5) landfill ground water sampling and analysis plan. (Cont. Page 3 of 3)

Sampling location	Location type	Completion interval	Sampling frequency required	Sampling frequency planned	Sampling type	Requested analysis[a]	Sampling quarter	Sampled Y/N	Comment
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$			DIS	DWMETALS	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E300.0:NO3	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E300.0:PERC	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E340.2	3		
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E601	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$			DIS	E602	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	A	CMP	E8330:R+H	3		
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	Q	Q	CMP	E906	1	N	New well.
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	Q	Q	CMP	E906	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	Q	Q	CMP	E906	3		
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	Q	Q	CMP	E906	4		
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	B	B	CMP	MS:THISO	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	B	B	CMP	MS:UISO	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	A	CMP	T26METALS	3		

Notes:

CMP Detection monitoring analyte: tritium (E906) sampled quarterly.

CMP Detection monitoring analyte: VOCs (E601 or E624) sampled annually.

CMP Detection monitoring analyte: fluoride (E340.2) sampled annually.

CMP Detection monitoring analyte: HE compounds (E8330:R+H) sampled annually.

CMP Detection monitoring analyte: nitrate (E300.0:NO3) sampled annually.

CMP Detection monitoring analyte: perchlorate (E300.0:PERC) sampled annually.

CMP Detection monitoring analytes: Title 26 metals plus U, Th, Li, Be (T26METALS and CMPTRIMET) sampled annually.

CMP Detection monitoring analytes: uranium and thorium isotopes by mass spectrometry (MS:UISO and MS:THISO) sampled biennially.

[a] **See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.**

Table 4.2-1. Results of important species surveys conducted in Spring 2004 at Building 850, Building 834, and Pit 6.

Survey Area	Date/ Start/Time	Temperature Weather	Results
Building 850	**3 May/2004/1000**	**84.7° F Sunny with clear skies, winds 1 – 3 mph.**	• **A burrowing owl pair was observed at a burrow west of the B850 shot table (within the survey area). They appeared to be nesting.** • **A hare was seen foraging in the survey area west of B850.** • **A golden eagle was seen foraging N-W of B850, just outside the immediate survey area.** • **Evidence (piles of seeds) of small rodents such as kangaroo rats was seen east of B850, within the survey area.** • **American badger dens were observed on the hillside west of the shot table.** • **The ground squirrel colony surrounding B850 was active, and many squirrels were observed.**
Building 834	**3 May/2004/1100**	**85° F Sunny, with clear skies. Winds 0.8 – 3 mph.**	• **Ground squirrel burrows were scattered throughout the survey area** • **Western meadow larks and Say's phoebes observed** • **No species of concern observed**
Pit 6	**8 May/2004/1415**	**84.5° F 50% cloud cover. Winds 0.5 – 1.5 mph.**	• **Many ground squirrel burrows observed on south facing slope near Corral Hollow Rd.** • **Fence lizards observed.** • **No species of concern observed in the survey area.**

Table 4.2-2. Burrow air sampling parameters.

	On					Off				
			Wind					Wind		
Sample ID	Time (PST)	Vacuum (Hg)	Speed (m/s)	Direction (degrees)	Temp (C)	Time (PST)	Vacuum (Hg)	Speed (m/s)	Direction (degrees)	Temp (C)
4-Sep-03										
Pit 6										
Ambient (9)	7:27	28.5	4.6	274	28.4	15:30	6.0	4.0	280	30.4
9	7:27	28.5	4.6	274	28.4	15:30	6.0	4.0	280	30.4
9 co-located	7:27	29.5	4.6	274	28.4	15:30	6.6	4.0	280	30.4
10	7:31	28.5	4.6	274	28.4	15:48	6.6	3.1	287	30.4
11	7:34	29.3	4.6	274	28.4	15:40	6.4	3.1	287	30.4
Building 834										
Ambient (5)	6:37	30.0	2.1	308	26.1	14:44	6.6	5.5	308	30.7
5	6:38	27.5	2.1	308	26.1	14:44	6.8	5.5	308	30.7
5 co-located	6:36	29.5	2.1	308	26.1	14:44	7.0	5.5	308	30.7
6	6:34	29.7	2.1	308	26.1	14:36	7.0	5.3	308	30.7
7	6:40	28.4	2.1	308	26.1	15:00	7.0	5.3	315	30.7
19-Dec-03										
Pit 6										
Ambient (21)	7:16	29.1	1.2	300	8.85	14:44	7.8	4.0	319	7.44
21	7:16	28.9	1.2	300	8.85	14:44	8.0	4.0	319	7.44
21 co-located	7:16	29.0	1.2	300	8.85	14:44	8.1	4.0	319	7.44
22	7:11	29.0	1.2	300	8.85	14:38	8.5	4.0	319	7.44
23	7:08	28.9	1.2	300	8.85	14:35	8.4	4.0	319	7.44
Building 834										
Ambient (25)	7:38	26.5	1.3	345	9.89	15:38	6.6	3.4	323	9.29
24	7:41	29.5	1.3	345	9.89	15:43	6.5	3.4	323	9.29
25	7:38	29.2	1.3	345	9.89	15:38	6.5	3.4	323	9.29
26	7:44	25.6	1.3	345	9.89	15:48	6.6	3.4	323	9.29
17-Mar-04										
Pit 6										
31	7:38	29.0	7.4	283	17.70	15:15	8.0	6.5	328	23.15
32	7:47	29.8	7.1	288	17.34	15:29	7.4	5.7	330	23.20
33	7:45	30.0	7.1	288	17.34	15:23	7.5	5.7	330	23.20
33 co-located	7:44	28.5	7.1	288	17.34	15:21	8.0	6.5	328	23.15
Ambient (33)	7:43	28.6	7.4	283	17.70	15:25	7.5	5.7	330	23.20
Building 834										
34	7:19	27.6	7.4	283	17.70	15:43	6.0	4.67	315	23.10
34 co-located	7:08	27.8	7.1	288	17.34	15:38	6.6	4.67	315	23.10
Ambient (34)	7:06	27.9	7.1	288	17.34	15:38	5.5	4.67	315	23.10
35	7:08	28.4	7.1	288	17.34	15:38	5.5	4.67	315	23.10
36	7:15	28.2	7.4	283	17.70	15:48	6.0	4.67	315	23.10

Table 4.2-2. Burrow air sampling parameters. (Cont. Page 2 of 2)

	On					Off				
			Wind					Wind		
Sample ID	Time (PST)	Vacuum (Hg)	Speed (m/s)	Direction (degrees)	Temp (C)	Time (PST)	Vacuum (Hg)	Speed (m/s)	Direction (degrees)	Temp (C)
24-Jun-04										
Pit 6										
41	7:03	29.0	10.7	249	18.87	15:15	5.9	9.51	278	24.27
42	7:03	29.1	10.7	249	18.87	15:15	7.6	9.51	278	24.27
43	7:00	29.5	10.7	249	18.87	15:10	7.7	9.51	278	24.27
43 co-located	7:00	28.5	10.7	249	18.87	15:10	7.5	9.51	278	24.27
Ambient (43)	7:00	28.6	10.7	249	18.87	15:10	7.6	9.51	278	24.27
Building 834										
44	7:24	26.0	10.0	245	20.00	15:48	3.6	8.0	276	24.70
44 co-located	7:24	27.8	10.0	245	20.00	15:48	4.7	8.0	276	24.70
Ambient (44)	7:24	28.0	10.0	245	20.00	15:48	4.1	8.0	276	24.70
45	7:21	27.6	10.0	245	20.00	15:41	5.4	8.0	276	24.70
46	7:19	27.5	10.0	245	20.00	15:36	5.6	8.0	276	24.70

[a] Ambient air samples were obtained adjacent to the location number in parenthesis

All meteorological data obtained from the 10 m Site 300 meteorological tower. All times are in Pacific Standard Time.

Table 4.2-3. Burrow air sampling results for Pit 6.

		$\mu g/m^3$		
Sample ID[a]	cis-1,2-DCE	TCE	PCE	trans-1,2-DCE
4-Sep-03				
Ambient (9)[b]	<0.15	<0.20	<0.25	<0.74
9	<0.15	<0.20	<0.25	<0.74
9 co-located	<0.15	<0.20	<0.25	<0.74
10	<0.15	<0.20	0.34	<0.74
11	<0.15	<0.20	<0.25	<0.74
19-Dec-03				
Ambient (21)[b]	<0.14	0.63	<0.24	<0.70
21	<0.14	0.55	3.8	<0.69
21 co-located	<0.14	0.50	8.1	<0.69
22	<0.14	0.71	81.0	<0.70
23	<0.14	<0.19	<0.24	<0.70
17-Mar-04				
Ambient (33)[b]	<0.15	<0.21	<0.26	<0.77
31	<0.15	<0.21	<0.26	<0.77
32	<0.15	<0.21	<0.26	<0.77
33	<0.12	5.25	21	<0.62
33 co-located	<0.16	<0.21	<0.27	<0.79
24-Jun-04				
Ambient (43)[b]	<0.15	<0.20	<0.26	<0.75
41	<0.14	1.2	<0.24	<0.70
42	<0.14	<0.20	<0.25	<0.72
43	<0.15	<0.21	<0.26	<0.77
43 co-locate	<0.15	<0.20	<0.26	<0.75

[a] Full sample identifiers, as reported in analytical laboratory reports, are described in experiment 3x-068, maintained by the Environmental Restoration Division's Information Systems Management Group.

[b] Ambient air samples were obtained adjacent to the location number in parenthesis

Table 4.2-4. Burrow air sampling results for Building 834.

		$\mu g/m^3$		
Sample ID[a]	**cis-1,2-DCE**	**TCE**	**PCE**	**trans-1,2-DCE**
4-Sep-03				
Ambient (5)[b]	**<0.15**	**<0.21**	**<0.26**	**<0.77**
5	**<0.15**	**<0.20**	**<0.26**	**<0.75**
5 co-located	**<0.15**	**<0.21**	**0.29**	**<0.77**
6	**<0.15**	**<0.21**	**<0.26**	**<0.77**
7	**<0.15**	**<0.20**	**<0.26**	**<0.75**
19-Dec-03				
Ambient (25)[b]	**<0.14**	**<0.18**	**<0.23**	**<0.68**
24	**<0.14**	**0.27**	**0.61**	**<0.68**
25	**<0.14**	**4.2**	**0.33**	**<0.68**
26	**<0.14**	**0.19**	**<0.23**	**<0.68**
17-Mar-04				
Ambient (34)[b]	**<0.14**	**<0.20**	**<0.25**	**<0.72**
34	**<0.14**	**1.4**	**0.83**	**<0.70**
34 co-located	**<0.15**	**2**	**<0.26**	**<0.75**
35	**<0.14**	**<0.19**	**<0.24**	**<0.70**
36	**<0.14**	**0.42**	**<0.24**	**<0.70**
24-Jun-04[c]				
Ambient (46)[b]	**<0.14**	**<0.18**	**<0.23**	**<0.68**
46	**<0.12**	**0.22**	**<0.21**	**<0.61**
46 co-located	**<0.14**	**<0.19**	**<0.24**	**<0.69**
47	**<0.14**	**<0.19**	**<0.24**	**<0.70**
48	**<0.14**	**2.5**	**<0.24**	**<0.70**

[a] **Full sample identifiers, as reported in analytical laboratory reports, are described in experiment 3x-068, maintained by the Environmental Restoration Division's Information Systems Management Group.**

[b] **Ambient air samples were obtained adjacent to the location number in parenthesis.**

[c] **15% of each sample taken on 24-Jun-04 starting at 10:00.**

Table 4.2-5. Estimates for burrowing owl physiological and behavioral variables used in contaminant exposure models.

Variable	Adult owls	Juveniles
Weight (g)[a]	157	78.5
Air intake (m^3/d)[b]	0.176	0.0879
Water intake (L/d)[c]	0.0173	0.00864
Fraction of water from study area	1	1
Fraction of time spent in study area	1	1
Fraction of time spent above ground[d]	0.6	0.1
Fraction of time spent in burrow[d]	0.4	0.9
Fraction of contamination absorbed from air[e]	0.5	0.5
Fraction of prey captured in study area	1	1
Prey intake (g/d)[f]	25	13
Fraction of diet consisting of soil[g]	0.05	0.05
Soil intake (g/d)	1.25	0.65
Fraction of soil intake occurring at surface	0.25	0.1
Fraction of soil intake occurring in burrow	0.75	0.9
Surface soil intake (g/d)	0.313	0.065
Subsurface (burrow) soil intake (g/d)	0.938	0.585

[a] Average of values reported in Earhart and Johnson (1970), Thomsen (1971), Plumpton (1992), Haug et al. (1993), and Sample et al. (1997) for adult owls. Juveniles assumed to be half of that of an adult.

[b] Air intake (A) estimated as A = 1.12 m^3/kg-d × kg body weight, taken from Boggs & Kilgore (1983) as cited in Sample et al. (1997).

[c] Coulombe (1970, 1971), Sample et al. (1997).

[d] Based on Thomsen (1971) and Haug & Oliphant (1990).

[e] Used in SWRI (Webster-Scholten, 1994).

[f] From Zarn (1973).

[g] From Thomsen (1971).

Table 4.2-6. Contaminant levels and Toxicity Reference Values (TRVs) used in the cadmium exposure model for burrowing owls at Building 850.

Variable	Value
Cadmium surface soil concentration (mg/kg) as reported in the SWRI (Webster-Scholten 1994)[a]	7.2
Cadmium surface soil concentration (mg/kg) as reported in Bench et al. 2001[a]	0.152
Cadmium spring concentration (mg/L)[b]	0.001
Measured prey cadmium muscle concentration (mg/kg)[c]	0.08
High Cadmium TRV (mg/kg/d) for mallard[d]	1.45
Low Cadmium TRV (mg/kg/d) for mallard[e]	0.080

[a] No subsurface soil concentration data are available. Therefore, surface soil and subsurface soil concentrations were assumed to be equal.

[b] Highest cadmium concentration reported from Spring 23 and Spring 6.

[c] Reported in Bench et al. (2001).

[d] From Sample et al. (1996).

[e] From US EPA (2002).

Table 4.2-7. Contaminant levels and Toxicity Reference Values (TRVs) used in the PCB exposure model for burrowing owls at Building 850.

Variable	Value
PCB (Arochlor 1254) 95% UCL surface soil concentration (mg/kg)	24.1
Spring PCB concentration (mg/L)	NA
Meat biotransfer factor (BTF) (d/kg)[a]	0.0794
Estimated Prey PCB concentration (mg/kg)	0.0363
High PCB (Arochlor 1254) TRV (mg/kg/d) for pheasant[b]	0.180
Low PCB (Arochlor 1254) TRV (mg/kg/d) for chicken [c]	0.09

[a] Estimated using Travis and Arms (1988)

[b] From Sample et al. (1996).

[c] From US EPA (2002).

NA = Not available.

Table 4.2-8. Estimated Hazard Quotients (HQ) for burrowing owl exposure to cadmium in surface soil at Building 850.

	SWRI cadmium surface soil concentration		Bench et al. (2001) cadmium surface soil concentration	
Combined oral/Inhalation pathway	Adults	Juveniles	Adults	Juveniles
Cadmium exposure (mg/kg/d)	7×10^{-2}	7×10^{-2}	1×10^{-2}	1×10^{-2}
Cadmium HQ using high mallard TRV	5×10^{-2}	5×10^{-2}	1×10^{-2}	1×10^{-2}
Cadmium HQ using low mallard TRV	9×10^{-1}	9×10^{-1}	2×10^{-1}	2×10^{-1}

Table 4.2-9. Estimated Hazard Quotients (HQ) for burrowing owl exposure to PCB (Arochlor 1254) in surface soil at Building 850.

Combined Oral/Inhalation Pathway	Adult owls	Juveniles
PCB exposure (mg/kg/d)	2×10^{-1}	2×10^{-1}
PCB HQ using high TRV for pheasant	1×10^{0}	1×10^{0}
PCB HQ using low TRV for chicken	2×10^{0}	2×10^{0}

Appendix A

Results of Influent and Effluent pH Monitoring

Table A-1. Results of influent and effluent pH monitoring, January through June 2004.

Sample location	Sample date	Influent pH result	Effluent pH result
Central GSA			
CGSA GWTS	**01/05/04**	**7**	**7**
CGSA GWTS	**NA[a]**	**NM**	**NM**
CGSA GWTS	**03/03/04**	**NM**	**7**
CGSA GWTS	**04/07/04**	**7**	**7.5**
CGSA GWTS	**05/12/04**	**NM**	**7.5**
CGSA GWTS	**06/09/04**	**NM**	**7.5**
Building 834 OU			
B834 GWTS	**NM**	**NM**	**NM**
HEPA OU			
B815-SRC GWTS	**01/12/04**	**NM**	**NM**
B815-SRC GWTS	**02/09/04**	**NM**	**NM**
B815-SRC GWTS	**03/08/04**	**7**	**7**
B815-SRC GWTS	**04/07/04**	**7**	**7**
B815-SRC GWTS	**05/12/04**	**NM**	**7**
B815-SRC GWTS	**06/09/04**	**NM**	**7**
B815-PRX GWTS	**01/12/04**	**7**	**7**
B815-PRX GWTS	**02/09/04**	**NM**	**7**
B815-PRX GWTS	**03/08/04**	**NM**	**7**
B815-PRX GWTS	**04/07/04**	**7**	**7**
B815-PRX GWTS	**05/12/04**	**NM**	**7**
B815-PRX GWTS	**06/09/04**	**NM**	**7**
B815-DSB GWTS	**01/12/04**	**7**	**7**
B815-DSB GWTS	**02/04/04**	**NM**	**7**
B815-DSB GWTS	**03/08/04**	**7**	**7**
B815-DSB GWTS	**04/07/04**	**7**	**7**
B815-DSB GWTS	**05/12/04**	**NM**	**7**
B815-DSB GWTS	**06/09/04**	**NM**	**7**
B817-SRC GWTS	**01/13/04**	**7**	**7**

Table A-1. (Continued)

Sample location	Sample date	Influent pH result	Effluent pH result
B817-SRC GWTS	**02/04/04**	**NM**	**7**
B817-SRC GWTS	**03/03/04**	**NM**	**7**
B817-SRC GWTS	**04/07/04**	**7.5**	**7**
B817-SRC GWTS	**05/12/04**	**NM**	**7**
B817-SRC GWTS	**06/09/04**	**NM**	**7**
Building 854 OU			
B854-SRC GWTS	**01/13/04**	**7**	**7**
B854-SRC GWTS	**02/04/04**	**NM**	**7**
B854-SRC GWTS	**03/09/04**	**NM**	**7**
B854-SRC GWTS	**04/07/04**	**7**	**7**
B854-SRC GWTS	**05/12/04**	**NM**	**7**
B854-SRC GWTS	**06/09/04**	**NM**	**7**
B854-PRX GWTS	**01/13/04**	**7**	**7**
B854-PRX GWTS	**02/11/04**	**NM**	**7**
B854-PRX GWTS	**03/09/04**	**NM**	**7**
B854-PRX GWTS	**04/07/04**	**7**	**7**
B854-PRX GWTS	**05/12/04**	**NM**	**7**
B854-PRX GWTS	**06/09/04**	**NM**	**7**
832 Canyon OU			
B832-SRC GWTS	**01/21/04**	**6.5**	**7**
B832-SRC GWTS	**02/19/04**	**NM**	**6.5**
B832-SRC GWTS	**03/03/04**	**NM**	**6.5**
B832-SRC GWTS	**04/07/04**	**7**	**7**
B832-SRC GWTS	**04/28/04**	**NM**	**7**
B832-SRC GWTS	**06/09/04**	**NM**	**6.5**
B830-SRC GWTS	**01/13/04**	**7**	**7**
B830-SRC GWTS	**02/11/04**	**NM**	**7**
B830-SRC GWTS	**03/18/04**	**NM**	**7**
B830-SRC GWTS	**04/07/04**	**7**	**7**
B830-SRC GWTS	**05/12/04**	**NM**	**7**

Table A-1. (Continued)

Sample location	Sample date	Influent pH result	Effluent pH result
B830-SRC GWTS	06/09/04	NM	7
B830-PRXN GWTS	01/13/04	7	7
B830-PRXN GWTS	02/04/04	NM	7
B830-PRXN GWTS	03/03/04	NM	7
B830-PRX GWTS	04/06/04	7	7
B830-PRXN GWTS	05/06/04	NM	7
B830-PRXN GWTS	06/09/04	NM	7
B830-DISS GWTS	01/13/04	7	7
B830-DISS GWTS	02/04/04	NM	7
B830-DISS GWTS	03/09/04	NM	7
B830-DISS GWTS	04/07/04	7	7
B830-DISS GWTS	05/12/04	NM	7
B830-DISS GWTS	06/09/04	NM	7

Notes:

B815 = Building 815.
B817 = Building 817.
B830 = Building 830.
B832 = Building 832.
B834 = Building 834.
B854 = Building 854.
CGSA = Central General Services Area.
DISS = Distal south.
DSB = Distal site boundary.
GWTS = Ground water treatment system.
NA = Not applicable.
NM = Not measured.
OU = Operable unit.
pH = A measure of the acidity or alkalinity of an aqueous solution.
SRC = Source.

[a] **Facility was shut down due to a failed level transducer.**