U.S. Department of Energy

Livermore Site Office, Livermore, California 94550

Lawrence Livermore National Laboratory

University of California, Livermore, California 94550

UCRL-AR-206769-06

First Semester 2006
Compliance Monitoring Report
Lawrence Livermore National Laboratory
Site 300

Authors:

V. Dibley
M. Taffet
J. Valett*
M. Denton*
S. Gregory
T. Carlsen
Z. Demir
W. Daily
D. Mason*
P. McKereghan
R. Goodrich
S. Chamberlain

Contributors:

K. Heyward
S. Lambaren
G. Lorega
D. MacQueen
V. Madrid
S. Martins
L. Paterson
J. Radyk*

September 30, 2006

*Weiss Associates, Emeryville, California

Environmental Protection Department

Environmental Restoration Division

This work was performed under the auspices of the U. S. Department of Energy by the University of California, Lawrence Livermore National Laboratory under Contract W-7405-Eng-48.

UCRL-AR-206769-06

First Semester 2006
Compliance Monitoring Report
Lawrence Livermore National Laboratory
Site 300

Authors:

V. Dibley
M. Taffet
J. Valett*
M. Denton*
S. Gregory
T. Carlsen
Z. Demir
W. Daily
D. Mason*
P. McKereghan
R. Goodrich
S. Chamberlain

Contributors:

K. Heyward	**V. Madrid**
S. Lambaren	**S. Martins**
G. Lorega	**L. Paterson**
D. MacQueen	**J. Radyk***

September 30, 2006

*Weiss Associates, Emeryville, California

Table of Contents

List of Figures

List of Tables

Appendices

Errata

1. Introduction

This Compliance Monitoring Report (CMR) summarizes the Lawrence Livermore National Laboratory (LLNL) Site 300 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Remedial Action compliance monitoring activities performed during January through June 2006. 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 and Eastern General Services Area (GSA) monitoring data, which were collected in compliance with the GSA CMP (Rueth, 1998) and Eastern GSA Substantive Requirements, are also included in this report.

During the reporting period of January through June 2006, 15,307 thousands of gallons of ground water and 39,426 thousands of cubic feet of soil vapor were treated at Site 300, removing approximately 31,000 grams (g) of volatile organic compounds (VOCs), 450 kilograms (kg) nitrate, 71 g Research Department explosive (RDX), 7 g of tetra-2-ethylbutylortho silicate (TBOS) and 95 g perchlorate (Table Summ-1).

Since remediation began in 1991, approximately 326,025 thousands of gallons of ground water and over 225,788 thousands of cubic feet of soil vapor have been treated, removing approximately 410 kg of VOCs, 3,800 kg nitrate, 0.65 kg RDX, 9.4 kg TBOS, and 490 g 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 operable unit (OU) as follows:

2.1. General Services Area (GSA) OU 1

2.2. Building 834 OU 2

2.3. Pit 6 Landfill (Pit 6) OU 3

2.4. High Explosive Process Area (HEPA) 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.

Total VOC isoconcentration contour maps were constructed by summing the results of the following VOCs: trichloroethene (TCE); tetrachloroethene (PCE); cis-1,2-dichloroethene (DCE); trans-1,2-DCE; carbon tetrachloride; chloroform; 1,1-dichlorethane (DCA); 1,2-DCA;

1,1-DCE; 1,1,1-trichloroethane (TCA); Freon 11; Freon 113; 1,1,2-TCA; and vinyl chloride. The resultant sums were rounded to two significant figures before plotting on the maps.

Only primary contaminants of concern (COC) isoconcentration contour maps are presented in the semi-annual reports. Secondary COC data will be presented in the annual report.

Treatment facility operations and maintenance issues that occurred during the first semester of 2006 and influent and effluent analytical data collected during first semester of 2006 are included in this report. Treatment facility pH, dissolved oxygen, and temperature data collected during the first semester of 2006 are presented in Appendix A. Eastern GSA receiving water field monitoring and visual observations are included in Appendix B. Ground and surface water monitoring analytical data and ground water elevations for the entire calendar year 2006 will be presented in the annual report. In addition, data collected during the installation of new wells or boreholes will be presented in the annual report.

2.1. General Services Area (GSA) OU1

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

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

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

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

At the Central GSA, chlorinated solvents, mainly TCE, were used as degreasing agents in craft shops, such as Building 875. Rinse water from these degreasing operations was disposed of in dry wells. Typically, dry wells were gravel-filled holes about 3 to 4 feet deep and two feet in diameter. The Central GSA dry wells were used until 1982. In 1983 and 1984, these dry wells were decommissioned and excavated.

The Central GSA GWTS treats ground water for VOCs and has been in operation since 1992. Contaminated ground water is extracted from eight wells (W-7I, W-875-07, W-875-08, W-873-07, W-872-02, W-7O, W-7P, and W-7R). The current GWTS configuration includes particulate filtration, air stripping to remove VOCs from extracted water, and granular activated carbon (GAC) to treat vapor effluent from the air stripper. Treated ground water is discharged to the surrounding natural vegetation using misting towers. Treated vapors are discharged to the atmosphere under permit from the San Joaquin Valley Unified Air Pollution Control District.

The Central GSA soil vapor extraction (SVE) and treatment system treats soil vapor for VOCs and has been in operation in the GSA adjacent to the Building 875 dry well contaminant source area since 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 SVE 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 2.1-2.

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

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

2.1.1.1. GSA Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes and rates and operational hours are summarized in Table 2.1-1 and 2.1.2. 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, effluent, and receiving water samples are shown in Tables 2.1-3 through 2.1-10. The pH, dissolved oxygen, and temperature measurement results are presented in Appendix A.

2.1.1.2. GSA Operations and Maintenance Issues

The Central GSA SVE and the Eastern and Central GSA GWTSs operated continuously throughout the first semester of 2006 with the following exceptions:

- Central GSA GWTS was shut down temporarily on June 7th for maintenance.

The following maintenance was performed at the Eastern and Central GSA treatment facilities:

- A Central GSA GWTS compressor was replaced with a temporary one. The permanent replacement compressor will be installed during second semester.

2.1.1.3. GSA Receiving Water Monitoring

No surface water was present in Corral Hollow Creek during the first two months of this reporting period to necessitate Eastern GSA receiving water monitoring. However, continuous flow did exist within Corral Hollow Creek from March through June 2006 between the upstream (3SW-CHC-R1) and downstream (3SW-CHC-R2) monitoring points. Quarterly analytical data is included in Tables 2.1-3, 2.1-4, 2.1-5, 2.1-6, 2.1-7, and 2.1-9. Field measurements and visual observations of the upstream and downstream monitoring points are presented in Tables B-1 and B-2, respectively, in Appendix B. Although there was continuous flow in Corral Hollow Creek in March, inadvertently no field measurements or visual observations were made until April.

2.1.1.4. GSA Compliance Summary

The Central GSA GWTS operated in compliance with the Substantive Requirements for Wastewater Discharge. The Central GSA SVE system operated in compliance with the San Joaquin Valley Unified Air Pollution Control District permit limitations.

The Eastern GSA GWTS operated in compliance with the Substantive Requirements for Wastewater Discharge. Inadvertently, no GWTS effluent sample was collected for VOCs in February. However, it is believed that no VOCs were discharged since intermediate GAC samples were collected in January and April, both of which were non-detect for VOCs. The RWQCB has given LLNL permission to discharge constituents other than VOCs and pH above discharge limits until 2010. Constituents that were over the discharge limits included sulfate, aluminum, selenium, and specific conductance. Selenium, specific conductance, and sulfate were detected in all effluent samples above their respective discharge limits of 0.004 milligrams per liter (mg/L), 900 micro ohms per centimeter (μmhos/cm), and 250 mg/L. Aluminum was detected in only one effluent sample above the discharge limit of 0.071 mg/L, at a concentration of 0.086 mg/L. Issues regarding discharge limits for these constituents are included in the Eastern GSA Remediation Optimization Plan (Ferry and Holtzapple, 2006). As discussed in this plan, the Department of Energy (DOE) has committed to be within compliance for these constituents by 2010 or this facility will be shut down.

Eastern GSA Monitoring and Reporting Program Certification

Per the requirements of the Eastern GSA Monitoring And Reporting Program (California Regional Water Quality Control Board, 2005), the names and telephone numbers of persons to contact regarding the facility for emergency and routine situations are provided below:

- Gregory Santucci, (925) 422-3089
- Edwin Folsom, (925) 422-0389

The Operations and Maintenance (O&M) Manual for the Central and Eastern GSA extraction and treatment systems were last updated in 2004 (Daily, 2004) and 1999 (LLNL, 1999), respectively. The revision of the Eastern GSA ground water extraction and treatment system O&M Manual is in progress.

The GSA Contingency Plan was developed during the remedial design phase and included in the Remedial Design report (Rueth, 1998). The Contingency Plan was reviewed and is still relevant to the current operating system.

2.1.1.5. GSA Facility Sampling Plan Evaluation and Modifications

The GSA treatment facility sampling and analysis plans comply with Substantive Requirements and the GSA CMP (Rueth, 1998) monitoring requirements. The treatment facility sampling and analysis plans are presented in Table 2.1-11. Exceptions to this plan include one missed Eastern GSA GWTS effluent VOC sample in February, and missed receiving water field monitoring for first quarter 2006. There were no modifications made to the Central GSA plan during the reporting period.

2.1.2. GSA Surface Water and Ground Water Monitoring

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; nine samples were not collected due to dry conditions or insufficient water. The sampling and analysis plans for ground water and surface water monitoring at the Central and Eastern GSA are presented in Tables 2.1-12 and 2.1.13, respectively. These tables also delineate and explain deviations from the sampling plan and indicate any additions made to the CMP.

Ground water potentiometric surface maps of the Eastern and Central GSA are presented in Figures 2.1-3 and 2.1-4, respectively. Ground water elevation data collected from wells within the OU are similar to those collected during past quarters.

2.1.3. GSA Remediation Progress Analysis

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

2.1.3.1. GSA Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Tables 2.1-14 and 2.1-15. The cumulative mass estimates are summarized in Table Summ-2.

2.1.3.2. GSA Contaminant Concentrations and Distribution

At the Eastern GSA, VOCs are the primary COCs in ground water. A VOC plume exists within a shallow hydrostratigraphic unit (HSU) (Qal-$Tnbs_1$) contained within Quaternary alluvial deposits (Qal) that directly overlie $Tnbs_1$ bedrock. Underlying the Qal-$Tnbs_1$ HSU, very low and intermittent VOC concentrations exist within the $Tnbs_1$ HSU. A total VOC isoconcentration contour map for the Qal-$Tnbs_1$ HSU is presented in Figure 2.1.5.

VOCs have been detected at low concentrations in only one $Tnbs_1$ HSU well, W-25N-08 at a concentration of 0.81 micrograms per liter (μg/L) (May 2006). The current (first semester 2006) maximum total VOC concentration in the Qal-$Tnbs_1$ HSU (5.2 μg/L, June 2006) was detected in a sample from well W-26R-04, located in the immediate vicinity of the debris burial pit where the historical maximum total VOC concentration of 77.4 μg/L have been detected in 1992. The individual VOCs that make up the total VOC concentration of 5.2 μg/L are TCE (4.6 μg/L) and PCE (0.6 μg/L). The highest TCE concentration detected during first semester 2006 was 4.7 μg/L in a sample from well W-26R-01. First semester 2006 data indicate that remediation of Eastern GSA ground water has successfully reduced concentrations of TCE and other VOCs to below their drinking water maximum contaminant levels (MCL) in all wells. Since extraction and treatment began at the Eastern GSA in 1991, TCE concentrations in ground water have decreased from a historical maximum of 74 μg/L to below analytical reporting limits (0.5 μg/L) in the majority of wells.

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

- Qt-$Tnsc_1$ HSU, a shallow water-bearing zone in the western portion of the Central GSA. This HSU includes saturated Qt deposits, and the $Tnbs_2$ sandstone and $Tnsc_1$ siltstone/claystone bedrock units that subcrop beneath the Qt.
- $Tnbs_1$ HSU, a deeper regional aquifer within the western portion of the Central GSA which consists of $Tnbs_1$ sandstone bedrock.

- Qal-$Tnbs_1$ HSU, a shallow water-bearing zone within the eastern portion of the Central GSA. In the eastern portion of the Central GSA (near the sewage treatment pond), Qt deposits and the $Tnbs_2$ and $Tnsc_1$ bedrock units are not present. Qal deposits directly overlie the shallow $Tnbs_1$ bedrock that comprises the Qal-$Tnbs_1$ HSU in this area.

A VOC plume exists within the Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSUs and a total VOC isoconcentration contour map for these HSUs is presented in Figure 2.1.6.

The current extent of detectable total VOCs in the shallow Qt-$Tnsc_1$ HSU is similar to that shown in the 2005 Annual CMR (Dibley et al., 2006). The current (first semester 2006) maximum total VOC concentration in the Qt-$Tnsc_1$ HSU (368 μg/L, April 2006) was detected in a sample from well W-875-08, located in the Building 875 dry well pad area where the historical maximum total VOC concentrations have been detected (133,000 μg/L, July 1993). 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 $Tnbs_1$ well, W-7N at a concentration of 0.58 μg/L (May 2006). The number of wells in the Qt-$Tnsc_1$ HSU in which VOC concentrations exceed the MCL cleanup standard has decreased from 28 to 14 by first semester 2006. In light of the very low concentration detected in only one $Tnbs_1$ well, a map depicting VOCs in the $Tnbs_1$ HSU is not included in this report.

The Central GSA SVE system was operating fulltime during first semester 2006. A TCE soil vapor concentration contour map for second semester 2005 is presented in Figure 2.1-7. The concentrations were similar to those shown during second semester 2005.

2.1.3.3. GSA Remediation Optimization Evaluation

At the Eastern GSA, DOE/LLNL has proposed to initiate the "Requirements for Closeout" described in the Remedial Design for the GSA Operable Unit (OU) (Rueth et al., 1998). These requirements specify that, "when VOC concentrations in ground water have been reduced to cleanup standards, the ground water extraction and treatment system will be shut off and placed on standby." DOE/LLNL is currently awaiting agency approval to shut off the treatment system. As required, ground water monitoring will be conducted to determine if VOC concentrations rise or "rebound" above cleanup standards after extraction ceases. No additional action is expected to achieve cleanup standards unless monitoring indicates that VOC concentrations rebound.

During the first semester of 2006, Central GSA extraction wells W-7O, W-7R, and W-7P removed the majority of ground water while extraction wells W-7I, W-875-07, W-875-08, W-873-07 and W-872-02 removed lesser amounts of ground water. Based on the ground water elevation map shown in Figure 2.1-4, 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.

2.1.3.4. GSA OU Performance Issues

There were no performance issues during the 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. Past spills, piping leaks, and septic system leachate 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. A map of Building 834 OU showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.2-1.

GWTS and SVE 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 GWTS treats VOCs, nitrate, and TBOS within the Tpsg HSU and the SVE system treats VOCs in the shallow ground water and vadose zone. The area to the south of the core area is referred to as the distal (T2) area. The area immediately to the southwest of the core area is the leachfield area and further to the south is the distal (T2) area. Due to the very low ground water yield from individual ground water extraction wells (<0.1 gallons per minute), the GWTS and SVE systems have been operated simultaneously in batch mode. Although the GWTS can be operated alone, the SVE system is not operational without ground water extraction due to the upconing of the ground water in the well that covers the well screen and prevents soil vapor flow.

The current extraction wellfield consists of 12 extraction wells for both ground water and soil vapor extraction. Nine extraction wells (W-834-B2, -B3, -D4, -D5, -D6, -D7, -D12, -D13, and -J1) are located within the core area and three (W-834-S1, -S12A, and -S13) in the leachfield portion of the distal area. The current GWTS configuration includes floating hydrocarbon adsorption devices (pigs) to remove the floating silicon oil, TBOS, followed by aqueous-phase GAC to remove VOCs and dissolved-phase TBOS from ground water. Nitrate-bearing treated ground water is discharged to the surrounding grasslands via a misting system to be utilized by the indigenous grasses. The current SVE configuration includes vapor-phase GAC for VOC removal. Treated vapors are discharged to the atmosphere under an air permit from the San Joaquin Valley Unified Air Pollution Control District.

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

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

2.2.1.1. Building 834 OU Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes and rates and operational hours are summarized in Table 2.2-1. The total volume of ground water and vapor extracted and treated and 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 Tables 2.1-2 through 2.1-5. The pH measurement results are presented in Appendix A.

2.2.1.2. Building 834 OU Operations and Maintenance Issues

The Building 834 SVE and GWTS operated normally and continuously during the first semester of 2006.

A water knock-out system was installed in February to resolve the condensation problems the facility has been experiencing.

Monitor well W-834-2001 was converted to a ground water extraction well on March 6, 2006. The RWQCB has requested extraction from this well to remove diesel contamination from ground water.

2.2.1.3. Building 834 OU Compliance Summary

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

2.2.1.4. Building 834 OU Facility Sampling Plan Evaluation and Modifications

The Building 834 treatment facility sampling and analysis plan complies with CMP monitoring requirements. The sampling and analysis plan is presented in Table 2.2-6. There were no modifications made to the plan during the reporting period.

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; sixty-six samples were not collected due to dry conditions or insufficient water. The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.2-7. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

A ground water potentiometric surface map is presented in Figure 2.2-2. Ground water elevation data collected from wells within the OU are similar to those collected during past quarters.

2.2.3. Building 834 OU Remediation Progress Analysis

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

2.2.3.1. Building 834 OU Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Table 2.2-8. The cumulative mass estimates are summarized 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, benzene, toluene, ethylbenzene, and total xylene (BTEX), and nitrate are the secondary COCs. These COCs have been identified in two shallow HSUs, the Tpsg perched water-bearing gravel zone and the underlying Tps-clay/$Tnsc_2$ 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 included in the annual report. The concentration and distribution of total VOCs in the three sub-areas that comprise the Building 834 OU: the core area, the leachfield area, and the distal T2 area, are discussed below.

Core Area

Within the Tpsg HSU in the Building 834 core area, total VOC concentrations ranged from a high of 31,000 μg/L (April 2006) in a ground water sample obtained from well W-834-D4, to a low of 84 μg/L in a sample obtained from well W-834-C4 (January 2006). VOC concentrations in the Building 834 core area ground water have decreased from an historical pre-remediation maximum concentration of 1,060,000 μg/L in 1993 to a maximum of 31,000 μg/L in the first semester of 2006. In addition, maximum core area VOC concentrations were 83,000 μg/L in August 2004, 58,000 μg/L in August 2005, and 31,000 μg/L in April 2006. This shows a continued significant decrease in VOC concentrations. In the areas impacted by active extraction, ground water VOC concentrations have dropped by at least two orders of magnitude. VOC concentrations in some wells have dropped by even three orders of magnitude. The average TCE concentration within the Tpsg HSU in the core area between 1993 and 1994 was 84,000 μg/L. This has dropped to an average core area TCE concentration of 5,000 μg/L during first semester 2006. This decline in VOC concentrations exemplifies the effectiveness of the cleanup operations.

The highest total VOC ground water concentration in the Building 834 OU occurred within the core area in the underlying Tps-Tnsc$_2$ perching horizon. A ground water sample collected from the Tps-Tnsc$_2$ HSU core area well W-834-A1 contained 231,000 μg/L (February 2006) of total VOCs during first semester of 2006. VOCs at these concentrations in ground water are generally indicative of free-phase product. The concentrations within the Tps-Tnsc$_2$ unit have remained relatively stable, as no active treatment has been conducted within this unit. Pump and treat operations within fine-grained sediments found in the Tps-Tnsc$_2$ unit are expected to have poor effectiveness due to very low hydraulic and pneumatic conductivities. Other less proven and more experimental treatment options, such as hydraulic fracturing and enhanced *in situ* biodegradation are being considered to remediate the underlying perching horizon.

Intrinsic TCE biodegradation continues within the core area where significant amounts of TBOS are present and serve as an electron donor. The primary byproduct of this biodegradation has historically been cis-1,2-DCE, although limited vinyl chloride has also been detected. Twenty-one wells within the core area had measurable quantities of cis-1,2-DCE during the first semester 2006, with the highest concentration detected in well W-834-D4 at 6,700 μg/L (January 2006). Vinyl chloride was detected during the first semester 2006 in ground water samples from three core area wells (W-834-B3, -D3, and –D5) at concentrations ranging from 5.2 μg/L to 190 μg/L.

TBOS continues to be detected at high concentrations almost exclusively in the core area where this compound exists as floating product. The first semester 2006 maximum TBOS concentration (15,000 μg/L, March 2006) was measured in well W-834-D3. The wells with the highest historical concentrations of TBOS (W-834-D3 and W-834-D4) vary by orders-of-magnitude from one sampling event to the next. This is most likely due to varying amounts of free-phase TBOS in the sample. Although the maximum TBOS concentration has decreased below its historical maximum, TBOS concentrations remain high in the core area, primarily in wells W-834-D3 and W-834-D4.

The maximum nitrate concentration during first semester 2006 within the core area was detected in the sample from well W-834-J2 (270 mg/L, January 2006). Nitrate concentrations in the core area vary spatially and temporally related to denitrification associated with the intrinsic biodegradation. The likely source of the nitrate is both natural and anthropogenic (e.g., septic). The nitrate influent concentration to the treatment facility has continued to exhibit an increasing trend since the initial startup in October of 2004. Concentrations have increased from 35 mg/L in October 2004 to 87 mg/L in April 2006. This increase is probably due to the introduction of oxygen into the subsurface during SVE operation that subdues intrinsic biodegradation and denitrification.

The extent of diesel contamination related to the previous underground storage tank appears to be limited to a very small area. A 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. During first semester 2006, diesel fuel was detected in two of these wells, W-834-2001 and W-834-U1, at concentrations of 2,000 μg/L and 340 μg/L, respectively. No BTEX compounds were detected in these wells during first semester 2006. BTEX data will continue to be evaluated to justify the reduction in the number of wells used to track this contamination.

Chromium monitoring continues in wells that were affected by improperly wired pressure transducers that produced electrical short circuits in 2000. Chromium samples were collected from four wells during first semester 2006. All of these wells, except W-834-M1, showed chromium results significantly below the MCL of 0.05 mg/L. The routine chromium concentration in well W-834-M1 was 0.46 mg/L (January 2006); however it was found that this sample was not filtered. The duplicate sample result from this well was 0.04 mg/L.

Perchlorate samples were collected from three wells during first semester 2006. Well W-834-1711 (which showed a previous result of 28 μg/L during second semester 2005) was below the reporting limit (<4 μg/L) for perchlorate during first semester 2006. The other two wells, W-834-2117 and W-834-2118, showed perchlorate results of <4 μg/L and 6.4 μg/L, respectively.

Leachfield Area

The VOC concentrations in the leachfield area Tpsg HSU continue to be relatively stable. The maximum total VOC concentration in the leachfield area during the first semester 2006 was detected in a ground water sample from Tpsg well W-834-2113 (22,000 μg/L, January 2006). Residual free-phase product may be present in the leachfield area as demonstrated by the long-term stable VOC concentrations. Extraction wells have been operating in the leachfield area since second semester 2004. VOC concentrations should decrease over time as ground water extraction and treatment continues in the future. Cis-1,2-DCE has also been detected in three leachfield area wells during first semester 2006, and although low concentrations of TBOS have been periodically detected in some leachfield area wells, it has not yet been determined whether TBOS fermentation is the main driving mechanism for biodegradation within the leachfield area. No vinyl chloride has ever been detected in any leachfield area wells.

TBOS was detected in one well within the leachfield during first semester 2006 (11 μg/L in W-834-2113). The maximum nitrate concentration in the leachfield area during first semester 2006 was detected in a sample from well W-834-S8 (110 mg/L, March 2006).

Distal T2 Area

The VOC concentrations in the distal T2 area Tpsg HSU continue to be relatively stable. The maximum total VOC concentration in the T2 area during first semester 2006 was detected in a ground water sample from Tpsg well W-834-2117 (20,000 μg/L, January 2006). Residual free-phase product may still be present in the distal area as demonstrated by long-term stable VOC concentrations. In situ bioremediation in this area is being implemented and VOC concentrations should decrease as a result. Ground water extraction and treatment would be implemented in the future if bioremediation is shown to be ineffective. Cis-1,2-DCE has also been detected in five T2 area wells during first semester 2006, and although low concentrations of TBOS have been periodically detected in some T2 area wells, it has not yet been determined whether TBOS fermentation is the main driving mechanism for biodegradation within the distal areas. No vinyl chloride has ever been detected in any T2 area wells.

TBOS was detected in eight wells within the T2 Area during first semester 2006 at concentrations ranging from 1.1 μg/L to 28 μg/L. TBOS continues to remain below reporting limits in the deep $Tnbs_1$ guard wells, W-834-T1 and W-834-T3. The maximum nitrate concentration in the T2 area during first semester 2006 was again detected in a sample from well W-834-S7 (330 mg/L, March, 2006). Nitrate was not detected during first semester 2006 in the deep $Tnbs_1$ guard wells, W-834-T1 and W-834-T3. Perchlorate was detected in one T2 Area well during first semester 2006 (6.4 μg/L in W-834-2118).

Monitoring related to the long-term T2 Area tracer injection test continued during first semester 2006. The majority of the test wells, except W-834-1825 and W-834-T2D, have rebounded in total VOC concentration since 2005. The total VOC concentration in injection well W-834-1824 rebounded from 110 μg/L in 2005 to 3,400 μg/L during first semester 2006. The next phase of this experiment will include injection of a carbon source (lactate) followed by injection of anaerobic bacteria (KB-1). This phase recently gained regulatory approval and it will be implemented during second semester 2006.

2.2.3.3. Building 834 OU Remediation Optimization Evaluation

The GWTS and the SVE system were operational throughout first semester 2006. Significant VOC mass was removed from the vapor-phase during this period of operation mostly due to the three new expansion wells in the leach field area, an area of known high VOC concentrations in soil and ground water. The new leach field extraction wells, W-834-S1, -S12A, and -S13, accounted for approximately 90% (17.93 kg) of VOC mass removed in vapor during first semester 2006. The VOC mass removed from ground water during first semester 2006 was 1.78 kg; 1.46 kg from the core area and 0.32 kg from the leach field area. For comparison, 2.36 kg were removed during all of 2005.

2.2.3.4. Building 834 OU Performance Issues

There were no performance issues during the reporting period.

2.3. Pit 6 Landfill (Pit 6) OU3

The Pit 6 Landfill covers an area of 2.6 acres near the southern boundary of Site 300. This landfill was used from 1964 to 1973 to bury waste in nine unlined debris trenches and animal pits. The buried waste, which includes laboratory equipment, craft shop debris, and biomedical waste is located on or adjacent to the Corral Hollow-Carnegie fault zone. 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 Landfill 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; sixteen samples were not collected due to dry conditions. The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.3-1.

In addition to satisfying the CMP and post-closure sampling requirements, ground water is also monitored at the Pit 6 Landfill 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 for the first semester 2006 is presented in Figure 2.3-2. Ground water elevation data collected from wells within the OU are similar to those collected during past semesters. Ground water generally occurred at a depth of about 30 feet below the buried waste trenches.

2.3.2. Pit 6 Landfill OU Remediation Progress Analysis

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

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

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

A first semester 2006 ground water total VOC isoconcentration contour map for the Pit 6 Landfill OU is presented in Figure 2.3-3. This semester, total VOC concentrations varied from 0.88 μg/L to 6.6 μg/L in the OU. TCE was detected in ground water samples from six wells during the first semester with concentrations ranging from 0.88 μg/L to 6.6 μg/L. TCE concentration was above the 5 μg/L MCL in a sample from only one well, EP6-09, during the semester at a maximum concentration of 6.6 μg/L (May 2006). Other VOCs detected in ground water include cis-1,2-DCE and PCE. During 2004 and 2005, cis-1,2-DCE was detected in ground water samples from two wells (K6-01 and K6-01S). This semester, cis-1,2-DCE was only detected in samples from well K6-01S with a maximum concentration of 2.5 μg/L (January 2006). During 2005, samples from wells K6-01 and K6-01S contained maximum concentrations of cis-1,2-DCE of 0.5 μg/L and 2.6 μg/L, respectively. During 2005, samples from wells EP6-08 and K6-36 contained maximum PCE concentrations of 0.97 μg/L and 0.64 μg/L, respectively. This semester, PCE was not detected in samples from any wells above the detection limit of 1 μg/L. Concentrations of cis-1,2-DCE and PCE were below the MCLs of 6 μg/L and 5 μg/L, respectively in all samples. Based on the current data, the total VOC plume appears to be relatively stable and there are no indications of new releases of VOCs from the Pit 6 Landfill.

A first semester 2006 ground water tritium activity contour map for the Pit 6 Landfill OU is presented in Figure 2.3-4. Ground water tritium activities measured during the semester remained below the 20,000 picocuries per liter (pCi/L) MCL. However, tritium continues to be detected above background activity (100 pCi/L) and above the 400 pCi/L State of California Public Health Goal (PHG) in ground water samples from wells located north of the Corral Hollow-Carnegie Fault Zone and screened in the Qt-$Tnbs_1$ North HSU. Along a transect north of, and subparallel to the fault zone, first semester 2006 ground water tritium activities in this HSU decreased from a maximum of 1,100 pCi/L in a sample from well K6-36, located immediately east of Pit 6, to <100 pCi/L in a sample from well W-PIT6-1819, located immediately west of the CARNRW1 and CARNRW2 water-supply wells. This current ground water tritium activity is less than half the maximum historical activity of 3,420 pCi/L (2003). Tritium activities in samples from all three wells (K6-36, K6-24, and K6-33) in the Qt-Tnbs1 North HSU, north of the Corral Hollow-Carnegie fault zone, are below 2005 maxima. Thus, tritium activities are decreasing with time. Tritium was not detected above background activities in monthly first semester 2006 ground water samples from the CARNRW water-supply wells.

Wells K6-25, K6-26, K6-27, K6-34, K6-35, BC6-10 and EP6-07 are screened in a deeper HSU (Lower $Tnbs_1$) than the wells mentioned in the paragraph above (Qt-$Tnbs_1$ North HSU). During the reporting period, tritium was not detected above the 100 pCi/L detection limit in samples from any of these wells.

The maximum first semester tritium activity in samples from wells within the fault zone and screened within the Qt-$Tnbs_1$ South HSU was 341 pCi/L (January 2006), in a sample from well K6-18, indicating that tritium activities continue to be slightly above background locally.

During the first semester 2006, two wells, K6-18 and EP6-09, yielded ground water samples containing perchlorate concentrations above the reporting limit of 4 μg/L with maximum concentrations of 10 μg/L and 4.2 μg/L, respectively in January 2006. The May 2006 sample from EP6-09 did not yield perchlorate above the 4 μg/L reporting limit. During 2005, only one well from the OU, EP6-09, yielded perchlorate in a ground water sample (6.9 μg/L, July 2005). In 2004, perchlorate was detected in ground water samples from three wells, EP6-09, K6-18, and K6-36. Perchlorate concentrations in ground water have been steadily decreasing from their historical maximum concentration of 65 μg/L, in a ground water sample collected from well K6-19 in 1998. A map of the distribution of perchlorate in ground water at Pit 6 will be presented in the 2006 annual report.

Nitrate was only detected above the 45 mg/L MCL in a ground water sample from well K6-23 during the first semester 2006. This same 200 mg/L maximum was found in a sample from well K6-23 in 2005 and had increased slightly from the 2004 maximum of 181 mg/L. Nitrate in ground water samples from this well are likely related to septic system discharge from Building 899 rather than discharges from the Pit 6 Landfill. A map of the distribution of nitrate in ground water at Pit 6 will be presented in the 2006 annual report.

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 Landfill OU exhibit stable to decreasing trends and ground water elevations beneath the landfill remain well below the buried waste. 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.

Six GWTSs operate in the HEPA: Building 815-Source (B815-SRC), Building 815-Proximal (B815-PRX), Building 815-Distal Site Boundary (B815-DSB), Building 817- Source (B817-SRC), Building 817-Proximal (B817-PRX), and Building 829-Source (B829-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 GWTS treats ground water for TCE, RDX, and perchlorate and has been in operation since September 2000. Ground water is extracted from well W-815-02 and W-815-04 at a combined flow rate of about 1 gpm to 1.5 gpm. Treated water containing nitrate is being injected into the $Tnbs_2$ well W-815-1918 where a natural denitrification process reduces the nitrate to nitrogen. The current GWTS configuration includes 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 B815-PRX GWTS treats ground water for TCE and perchlorate and has been in operation since October 2002. Ground water is extracted from wells W-818-08 and W-818-09 at approximately 1 gpm and 1.5 gpm, respectively. The current GWTS configuration includes 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 water containing nitrate is being injected into the $Tnbs_2$ well W-815-2134. The nitrate-bearing ground water is naturally denitrified to nitrogen in the confined portion of the $Tnbs_2$ HSU.

The B815-DSB GWTS treats ground water for low concentrations (<10 μg/L) of TCE and has been in operation since September 1999. Ground water is extracted from wells W-35C-04 and W-6ER located near the Site 300 boundary at 2 gpm and 2 gpm, respectively. This facility initially was operating intermittently using solar power and was converted to 24-hour operation using site power in late April 2005. The current GWTS configuration includes 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 ground water is discharged to the Corral Hollow alluvium in a nearby infiltration trench.

The B817-SRC GWTS treats ground water for RDX and perchlorate and has been in operation since September 2003. Well W-817-01 extracts ground water from a very low yield portion of the $Tnbs_2$ aquifer. It pumps ground water using solar power intermittently at flow rates ranging from 200 to 600 gallons per month. The current GWTS configuration includes 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 ground water containing nitrate is injected into upgradient injection well W-817-06A. The nitrate-bearing ground water is naturally denitrified to nitrogen in the confined portion of the $Tnbs_2$ HSU.

The B817-PRX GWTS treats ground water for VOCs, RDX, and perchlorate and has been in operation since September 2005. Ground water is extracted from wells W-817-03 and W-817-04 at a combined flow of 0.3 gpm to 3 gpm. The current GWTS configuration includes ion-exchange columns containing SR-7 resin connected in series for perchlorate removal and aqueous-phase GAC canisters connected in series for VOC removal. Treated ground water containing nitrate is injected into upgradient injection well W-817-2109. The nitrate-bearing ground water is naturally denitrified to nitrogen in the confined portion of the $Tnbs_2$ HSU.

The B829-SRC GWTS treats ground water for VOCs, nitrate, and perchlorate and has been in operation since August 2005. Solar power is used to extract ground water from well W-829-06 at 0.2 gpm. The current GWTS configuration includes ion-exchange columns containing SR-7 resin connected in series for perchlorate removal, a biotreatment unit to treat nitrate, and aqueous-phase GAC canisters connected in series for VOC removal. Treated ground water is injected into injection well W-829-08.

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

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

2.4.1.1. HEPA OU Facility Performance Assessment

The monthly ground water discharge volumes, extraction flow rates, and operational hours are summarized in Tables 2.4-1 through 2.4-6. The total volume of ground water extracted and treated and the total contaminant mass removed during this reporting period is presented in Table Summ-1. The total volume of ground water treated and discharged and the total contaminant mass removed are summarized in Table Summ-2. Analytical results for influent and effluent samples are presented in Tables 2.4-7 through 2.4-9. The pH measurement results are presented in Appendix A.

2.4.1.2. HEPA OU Operations and Maintenance Issues

The B815-SRC, B815-PRX, B815-DSB, B817-SRC, B817-PRX, and B829-SRC GWTSs operated continuously throughout the second semester of 2006 with the following exceptions:

- B815-SRC was shut down on June 8th due to a detection of perchlorate just above the 4 ppb reporting limit in the effluent. The ion-exchange resin was changed out and the facility restarted on June 14th. Perchlorate was detected in the system effluent again on June 15th. The ion-exchange canisters were reconfigured and the system was restarted on June 21st.
- B815-DSB extraction well pump in W-35C-04 failed March 30th and was repaired. The facility continued to operate treating ground water pumped from extraction well W-6ER. The facility was temporarily shut down on May 23rd and June 15th for maintenance.
- B817-PRX ground water treatment system flows were reduced to accommodate the volume of treated effluent water that could be accommodated by the injection well. The facility was automatically shutting down due to a high-pressure alarm beginning April 24th. Adjustments to the pressure sensors were made and the facility was restarted on May 11th.
- B815-PRX ground water extraction and treatment system was shutdown on February 16th as a result of the detection of chloroform in the treatment system effluent and a subsequent verification sample. Samples were collected from the influent to the second and third GAC canisters, and no chloroform was detected above the reporting limit. Due to high TCE concentrations at these intermediate ports, the GAC was changed out on February 23rd and the system was restarted on February 27th. In April, the ion-exchange drums were replaced with fiberglass tanks to prevent rusting and leaks in the system.
- B817-PRX extraction well W-817-04 has not pumped continuously since this facility was installed. The pump in this well has mechanical problems that will be fixed during the second semester 2006.

2.4.1.3. HEPA OU Compliance Summary

The B815-DSB, B817-PRX, B817-SRC, and B829-SRC GWTSs operated in compliance with the Substantive Requirements for Wastewater Discharge. Contaminants were detected in the effluent samples of the B815-SRC, and B815-PRX GWTSs during this reporting period as described below.

Perchlorate was detected above the reporting limit of 4.0 μg/L in two effluent samples collected from the B815-SRC during this reporting period. The first detection at 4.4 μg/L prompted the change out of the ion-exchange columns. During the ion-exchange change out process, the columns were placed between the second and third GAC canisters instead of their previous configuration, down-stream of the GAC to treat any VOCs being released from the new resin. Since all GAC canisters were previously located upstream of the ion-exchange, some residual perchlorate was contained within the canisters. Therefore, upon re-start sampling, perchlorate was bleeding from the third GAC and detected in the effluent sample at a concentration of 7.2 μg/L. After repositioning the ion-exchange columns to the previous position, no perchlorate was detected in the GWTS effluent. The system had only run for approximately four days in this configuration. In addition, the $Tnbs_2$ HSU used for injection contains higher levels of perchlorate (~10 μg/L) than the effluent water discharged during this time period.

Chloroform was detected in two consecutive effluent samples collected from B815-PRX in February 2006 slightly above the reporting limit of 0.5 μg/L. These results are suspect because chloroform had not been detected in either extraction well for the previous four years, chloroform was not detected in samples collected from intermediate GAC ports immediately following the chloroform detections, and chloroform is a common laboratory contaminant. No chloroform was detected in any subsequent samples collected during 2006.

2.4.1.4. HEPA OU Facility Sampling Plan Evaluation and Modifications

The HEPA facility sampling and analysis plans comply with CMP monitoring requirements. The sampling and analysis plans are presented in Table 2.4-10. There were no modifications made to the plan during the reporting period.

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; twenty-four samples were not collected due to dry conditions. The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.4-11. This table also explains deviations from the sampling plan and indicates any additions made to the CMP.

Ground water potentiometric surface data are contoured for the $Tnbs_2$ HSU and are posted for the $Tnsc_{1b}$ HSU in the Building 829 area as presented in Figures 2.4-2 and 2.4-3.

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 mass removal estimates are summarized in Tables 2.4-12 through 2.4-17. Cumulative mass estimates are summarized in Table Summ-2.

2.4.3.2. HEPA OU Contaminant Concentrations and Distribution

At the HEPA OU, VOCs (mainly TCE) are the primary COCs detected in ground water; RDX, perchlorate, and nitrate are secondary COCs.

Most ground water contamination at the HE Process Area OU is present in the $Tnbs_2$ HSU. It contains VOCs, RDX, perchlorate, and elevated nitrate and is the main focus of ground water remediation at this OU. Contamination has not been detected in the $Tnsc_{1b}$ HSU throughout most of the HE Process Area OU. However, the leading edge of the TCE plume from upgradient sources in Building 832 Canyon OU occurs beneath the northeast portion of the HE Process Area OU. Limited amounts of perched ground water in the $Tnsc_{1b}$ HSU that is contaminated with TCE, perchlorate and elevated nitrate occur locally beneath the former Building 829 HE Burn Pit and Waste Accumulation Area, located in the northwest part of the HE Process Area. This ground water is being remediated by the recently installed B829-SRC facility that pumps from W-829-06.

TCE, RDX, and perchlorate have been detected in the Tpsg sands and gravels of the Tpsg-Tps HSU in the vicinity of Building 815 source area, although wells in this area have recently been dry. No contamination has been detected in the Tps portion of the Tpsg-Tps HSU, or the upper and lower $Tnbs_1$ HSUs in the HE Process Area OU Area OU.

Total VOC concentration data are contoured for $Tnbs_2$ and posted for $Tnsc_{1b}$ based on data collected during the reporting period and are presented in Figures 2.4-4 and 2.4-5. For collocated wells, the highest concentration was used for contouring. Concentration maps for the secondary COCs will be presented in the 2006 Annual CMR.

During the first semester of 2006, VOCs were detected in ground water samples from $Tnbs_2$ wells at concentrations ranging from a maximum concentration of 47 μg/L (February 2006) in well W-818-08 to below reporting limits of 0.5 μg/L. Overall, VOC concentrations in ground water in the $Tnbs_2$ HSU in the HEPA have decreased from a maximum historical concentration of 110 μg/L (May 1992). The B815-PRX extraction wellfield captures the highest concentrations in the HEPA VOC plume. Total VOC concentrations have decreased in the B815-PRX influent from their historical maximum of 53 μg/L in 2002 to 21 μg/L in January 2006.During first semester 2006, VOCs were detected in onsite HEPA guard wells W-880-02 (Qal/WBR), W-815-2110 ($Tnbs_2$), and W-815-2111 ($Tnbs_2$). Two ground water samples from W-880-02 contained VOCs at 0.6 μg/L (January 2006) and 0.5 μg/L (April 2006), one sample from W-815-2110 contained 1.4 μg/L (January 2006), and two samples from W-815-2111 contained VOCs at 1.5 μg/L (January 2006) and 1.8 μg/L (April 2006). VOCs were not detected in any of the other onsite or offsite guard wells for the HEPA. Some of the guard wells have historically had sporadic trace detections of VOCs at concentrations ranging from 0.5 μg/L to 1.9 μg/L. The locations of the guard wells are shown in Figure 2.4-1. Previous detections of total VOCs in the guard wells were most likely related to the intermittent operation of the B815-DSB treatment facility. The facility was converted from solar power to site power in April 2005 and total VOC concentrations have decreased back to non-detectable levels in most guard wells. Trace VOCs were detected in two out of 16 samples collected during the first semester in offsite water-supply well, GALLO1 at concentrations of 0.62 μg/L and 0.63 μg/L. This well has a long screen that extends from the shallow Corral Hollow Creek alluvial aquifer (Qal/WBR HSU) to a depth of nearly 200 feet at the base of the $Tnbs_2$ aquifer. Although sporadic detections of total VOCs ranging from 0.2 μg/L to 4.0 μg/L have been detected in samples from GALLO1, total VOCs have never been detected above the 0.5 μg/L reporting limit in ground water samples collected from upgradient water-supply guard wells (W-6H and W-6J). However, VOCs were detected in ground water samples taken from upgradient guard wells W-815-2110 and W-815-2111 as described above. The B817-PRX and B815-DSB facilities were installed to prevent migration of VOCs near the Site 300 boundary. The B815-DSB facility was converted to 24hour/7 day per week operation in March of 2005. Since that time no VOCs have been detected in the $Tnbs_2$ site boundary guard wells downgradient from this facility. The B817-PRX facility was installed in September 2005 so there has not been sufficient time to fully determine the effectiveness of this facility's extraction wells (W-817-03 and W-817-04) to mitigate further migration of the leading edge of the VOC plume upgradient of well Gallo-1. VOC concentrations will be monitored closely in this area. If VOC concentrations continue to be detected in this area, modifications to the remedial design in the form of increased pumping of existing extraction wells or installation of new extraction wells will be considered.

Two new $Tnbs_2$ monitoring wells, W-815-2217 and W-830-2216 were drilled during the first semester of 2006. W-830-2216 was initially drilled as an injection well for B815-DSB, however, total VOC concentrations were too high for this well to be used as an injection well. The VOC concentrations in W-815-2216 will be monitored to establish if the TCE in this area exhibits an increasing or decreasing trend. If TCE concentrations increase in this well, it will be converted to an extraction well and connected to the B815-DSB facility near the site boundary. Well W-815-2217 was installed as a replacement for well W-6CD because the low concentrations (generally less than 1 μg/L) in this well were thought to be non-representative of TCE contamination in the $Tnbs_2$ HSU at this location due to the long screen from 78 to 137 ft. Well W-815-2217 has a 10 ft screen at 90 to 100 ft below ground surface in the $Tnbs_2$ HSU. To date, the TCE concentrations of less than 1 μg/L in ground water samples from the new well confirm the history of TCE concentrations at this location.

VOCs, mainly TCE, have been detected in the Tpsg sands and gravels of the Tpsg-Tps HSU in the vicinity of Building 815. For the most part, VOC concentrations in this HSU have been steadily decreasing over time. In addition, the limited recharge to this zone has resulted in declining water levels resulting in insufficient water for sampling. In the first semester 2006, VOCs were detected in the vicinity of Spring 5 in Tpsg well W-817-03A (February 2006). Total VOC concentrations in this well have decreased from a maximum of 152 μg/L in 1987 to 57 μg/L during this reporting period. A ground water extraction well is planned for fiscal year 2007 near W-817-03A that will be connected to the B817-PRX GWTS. Total VOCs were also detected at a concentration of 12 μg/L in Tpsg well W-815-05 in the Building 815 source area. Other Building 815 source area Tpsg wells, W-815-01 and W-815-03, have been dry since 1999 and 2001, respectively. Tpsg well W-35C-05, located near the site boundary, remains below the 0.5 μg/L reporting limit for total VOCs.

With the exception of two trace detections (0.5 and 0.6 μg/L) of TCE in Qal/WBR well W-880-02 and 2.1 μg/L in W-4AS, the Qal/WBR HSU has been devoid of VOCs in the HE Process Area OU. VOC concentrations in Qal/WBR wells W-35C-06 and W-6ES, located near the site boundary, remain below the 0.5 μg/L reporting limit for total VOCs. No contamination has been detected in the Tps portion of the Tpsg-Tps HSU, or the upper and lower $Tnbs_1$ HSUs in the HE Process Area OU.

During first semester 2006, VOCs were detected in ground water samples from B829-SRC ($Tnsc_{1b}$) extraction well W-829-06 at concentrations ranging from 26 μg/L (January 2006) to 16 μg/L (April 2006). VOCs have never been detected in nearby monitoring well W-829-1940. Concentrations in well W-829-06 have decreased significantly from an historical maximum of 1,013 μg/L (August, 1993).

In the first semester of 2006, RDX was not detected in any of the HEPA guard wells. During this reporting period the maximum RDX ground water concentration was 77 μg/L (January, 2006) in a sample from B815-SRC extraction well W-815-04. Overall, RDX concentrations in the HEPA have decreased from a historical maximum of 200 μg/L in 1992 to a maximum of 77 μg/L in 2006. The extent of RDX contamination in the $Tnbs_2$ HSU is more limited than VOCs and an isoconcentration map will be presented in the 2006 Annual CMR. RDX has never been detected in any of the Qal/WBR, or $Tnsc_{1b}$ wells.

Perchlorate was not detected in any of the HEPA guard wells during first semester 2006. During this reporting period a maximum perchlorate concentration of 35 μg/L was detected in ground water samples from B817-PRX extraction well W-817-03 (January 2006). The extent of perchlorate contamination in the $Tnbs_2$ HSU is more limited than VOCs and an isoconcentration map will be presented in the 2006 Annual CMR.

During first semester 2006, perchlorate was detected in ground water samples from $Tnsc_{1b}$ wells at concentrations ranging from 11 μg/L in well W-829-06 to 5.4 μg/L in W-829-1940. Concentrations have decreased from an historical maximum of 29 μg/L (December, 2000) in well W-829-06. Perchlorate was detected in Tps wells W-814-01, W-815-05, and W-817-03A at 4.4 μg/L, 6.9 μg/L, and 12 μg/L, respectively. Perchlorate was not detected in any Qal/WBR wells during the reporting period.

During the first semester of 2006, nitrate was not detected above 45 mg/L MCL in any of the HEPA guard wells. The current maximum nitrate concentration (590 mg/L) occurs in Tps well W-6CS. All Qal/WBR wells have nitrate concentrations below the MCL. The maximum nitrate concentration detected in the $Tnbs_2$ HSU was 100 mg/L in a sample from well W-815-04 (B815-SRC extraction well, January 2006). The maximum nitrate concentration in the $Tnsc_{1b}$ HSU was 98 mg/L in a sample from well W-829-06 (B829-SRC extraction well, April 2006).

Overall, the nitrate concentrations detected in ground water during 2006 continue to support the interpretation that nitrate is being treated in situ by natural processes. Nitrate concentrations decrease significantly due to microbial denitrification near the Site 300 boundary where the $Tnbs_2$ HSU is anoxic and under confined conditions. Nitrate concentrations are significantly lower than the drinking-water standard of 45 mg/L and below 10 mg/L in all wells near the Site 300 boundary.

2.4.3.3. HEPA OU Remediation Optimization Evaluation

The key to remediation optimization at the HEPA OU is to manage extraction wellfield flow rates to balance the influence of site boundary pumping with upgradient pumping in the source area. Based on the $Tnbs_2$ ground water elevation map and the total VOC isoconcentration map shown in Figures 2.4-2 and 2.4-4, the existing extraction wellfield captures the highest concentrations in the VOC plume (Total VOC < 50 μg/L) in the vicinity of wells W-818-08 and W-818-09.

Although the extent of the primary and secondary COC plumes in the HEPA remains relatively unchanged, VOC and RDX concentrations within the plume interiors continue to decline from their historical maximums. These trends are due to remediation efforts in the Source and Proximal areas of this OU. Perchlorate, concentrations have remained essentially unchanged since this COC has been monitored starting in 1998. The B817-PRX extraction wells, W-817-03 and W-817-04, have the highest perchlorate concentrations in this OU. With increased pumping at B817-PRX, the maximum perchlorate concentrations should begin to decline. RDX concentrations continue to exhibit decreasing trends since this COC has been monitored starting in 1985. The B815-SRC extraction wells, W-815-02 and W-815-04, have the highest RDX concentrations in this OU and increased pumping initiated in these wells during the last year should result in significant decreases in RDX in the Building 815 source area.

2.4.3.4. HEPA OU Performance Issues

Increased ground water extraction in the source and proximal areas of the HE Process Area OU have resulted in increased capture of the total VOC and perchlorate plumes, thereby minimizing the impact from these plumes near the site boundary. Continued pumping at

B815-PRX (W-818-08 and W-818-09) and the addition of extraction well (W-815-04) at B815-SRC as well as the initiation of ground water injection at wells W-815-1918, W-814-2134, W-817-2109, and W-829-08, will improve long-term ground water yield and mass removal at this OU and further prevent contaminated ground water from reaching the Site 300 boundary.

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. In the past, infiltrating ground water mobilized chemicals from contaminated gravel and debris to underlying soil, bedrock, and ground water. However, since the practice of watering down the firing table following explosives tests was discontinued and the overall experimental activity at this firing table has decreased, the firing table no longer releases significant contamination to the subsurface. A map of the 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; seven samples were not collected due to insufficient water/dryness, three were not accessible due to erosion, and two wells were inadvertently not sampled. The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.5-1. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

Ground water potentiometric surface maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs within the OU for the first semester 2006 are presented in Figures 2.5-2 and 2.5-3, respectively. Ground water elevation data collected from wells within the OU are similar to those collected during past years.

2.5.2. Building 850 OU Remediation Progress Analysis

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

2.5.2.1. Building 850 OU Contaminant Concentrations and Distribution

At the Building 850 OU, tritium is the primary COC detected in ground water; nitrate and depleted uranium are the secondary COCs.

Ground water tritium activity maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs within the OU for the first semester 2006 are presented in Figures 2.5-4 and 2.5-5, respectively. The maximum first semester 2006 tritium activity in ground water within the OU was 92,700 ± 9,700 pCi/L (May 2006) in a sample collected from well NC7-70, located near the firing table. 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 generally continue to decline. Tritium activities in ground water in this area have decreased from a historical maximum activity of 566,000 pCi/L in 1985 to a maximum of 92,700 pCi/L in the first semester 2006. The extent of the 20,000 pCi/L ground water tritium activity contour in both the Qal/WBR and $Tnbs_1/Tnbs_0$ bedrock HSUs in Doall Ravine continues to diminish. First semester 2006 tritium activities in

Building 850 plume in the area north of the Pit 1 and Pit 2 Landfills are generally below recent highs detected during the last few years and are consistent with 2005 activities. The maximum current ground water tritium activity detected in this area was 4,010 ± 410 pCi/L (April 2006) in a sample from well K1-02B. The maximum tritium activities detected in ground water samples in this area during 2005 were 3,980 ± 410 pCi/L.

Tritium activities in the Building 850 plume in the area immediately south and east of the Pit 2 Landfill continue to decline from a maximum historical tritium activity of 19,200 pCi/L in 2005 to a maximum of 9,460 pCi/L in the first semester of 2006. Tritium activities in ground water in wells located further south in Elk Ravine also continue to decrease over time. The maximum tritium activity in this area has decreased from 8,370 pCi/L in the second semester 2003 to 7,000 pCi/L in the first semester of 2006.

Uranium was not detected at activities above the 20 pCi/L State drinking water MCL in Building 850 OU ground water during the first semester 2006. Atom ratios indicative of depleted uranium were identified in ground water samples collected from several wells in the OU during the first semester 2006. 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. The maximum first semester 2006 total uranium activity detected in ground water immediately downgradient of Building 850 was 19 pCi/L in a ground water sample from well NC7-28 (January 2006). This sample yielded a $^{235}U/^{238}U$ atom ratio of about 0.0023 indicating the presence of some depleted uranium. While total uranium activities are below the MCL in all Building 850 wells, $^{235}U/^{238}U$ atom ratios indicate the presence of depleted uranium in wells in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs. The distribution of uranium in Building ground water has not changed significantly over time. Ground water uranium activity and $^{235}U/^{238}U$ atom ratio maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs will be presented in the annual report.

Depleted uranium has also been detected in ground water samples collected from wells NC2-05 and NC2-06A, located immediately north of the Building 802 area. The $^{235}U/^{238}U$ atom ratios (0.0065 in 2006) in samples from these wells indicate that the vast majority of the uranium is natural in origin. The maximum total uranium activity detected in the first semester 2006 activities of 12 pCi/L, well below the 20 pCi/L uranium MCL. Ground water uranium data from several wells immediately downgradient of the Pit 2 Landfill also indicated the presence of some depleted uranium. These data are discussed in Section 3.1.1 of this report.

During 2005, nitrate was detected above the 45 mg/L MCL in ground water samples from seven wells. The extent of nitrate is localized in the area downgradient of the Building 850 septic system leachfield. The 2006 maximum nitrate concentration was 140 mg/L (April 2006) detected in a ground water sample from well NC7-29. Historical ground water data indicate that nitrate concentrations are limited in extent and relatively stable. Overall, the distribution and concentrations of nitrate in ground water are similar to those observed in previous years. Ground water nitrate concentration maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs within the OU will be presented in the annual CMR report.

Recent monitoring data indicate the presence of perchlorate in Building 850 ground water at concentrations exceeding the 6 μg/L PHG. The maximum first semester 2006 perchlorate concentration of 66 μg/L was detected in a ground water sample collected from well NC7-28, immediately downgradient of Building 850. Perchlorate was first detected in ground water at

Building 850 in 2003. Monitoring for perchlorate was subsequently expanded in this area. The perchlorate plume extends 3,000 ft downgradient from Building 850 in the Qal/WBR HSU in Doall Ravine and approximately 1,000 ft downgradient in the $Tnbs_1/Tnbs_0$ HSU. Perchlorate has also been detected at concentrations above the 6 μg/L PHG in ground water from wells east and south of Building 850, in western Doall Ravine, and east of Pit 1. DOE/LLNL will be discussing possible measures needed to address perchlorate in ground water with the regulatory agencies. DOE/LLNL also plan to conduct a treatability study of in situ bioremediation of perchlorate in the Building 850 area. Ground water perchlorate concentration maps for the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs within the OU will be presented in the annual CMR report.

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 in 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. The significant decreases in activities and extent of the Building 850 tritium plume with activities exceeding the MCL indicate that natural attenuation (radioactive decay) continues to be effective in reducing tritium activities in ground water. In general, ground water tritium activities continue to decline or are below historic highs in all areas except southern Elk Ravine. South of the Pit 2 Landfill, maximum tritium activities in ground water increased slightly from 2003 to 2004 and then decreased in 2005 and 2006. Tritium activities in ground water samples from wells located in the southern Elk Ravine have dropped slightly for the last few years 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 below the 20 pCi/L MCL in all wells in the Building 850 OU. The extent of total uranium activities in ground water proximal to Building 850, as well as in the suite of wells that sample ground water containing some depleted uranium, are similar to past years. The extent of depleted uranium in ground water at Building 802 has not changed from 2003 to 2006. Although from 2003 to 2006 the maximum uranium activity in Building 802 ground water did increase from 5.54 pCi/L to 12 pCi/L, the vast majority of this uranium is natural in origin. The remediation strategy for uranium at Building 850 continues to be protective because: (1) total uranium activities in Building 850 ground water remain below the 20 pCi/L MCL, (2) the areal extent of depleted uranium has not changed during the period of monitoring, and (3) the temporal trends in $^{235}U/^{238}U$ atom ratios remain stable. The extent of nitrate in ground water is also similar to that observed in previous years. The extent of perchlorate in ground water and number of wells in the OU that yielded perchlorate ground water concentrations in excess of the State PHG is similar to 2004 and 2005. The maximum perchlorate concentration detected in ground water in the OU in 2006 is lower than 2005 (75.2 mg/L) but higher than the 2004 (53 μg/L) and 2003 (54 μg/L) maxima.

2.5.2.3. Building 850 OU Performance Issues

There were no performance issues during the reporting period.

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 the Building 854 OU showing the locations of monitoring and extraction wells and treatment facilities is presented in Figure 2.6-1.

Three GWTSs currently operate in the Building 854 OU; Building 854-Source (B854-SRC), Building 854-Proximal (B854-PRX), and Building 854-Distal (B854-DIS).

The B854-SRC GWTS treats ground water for VOCs, nitrate, and perchlorate and began operation in December 1999. Ground water is extracted at a rate of approximately 1 gpm from well W-854-02. The current GWTS configuration includes a particulate filtration system, two ion-exchange columns containing SR-7 resin connected in series for perchlorate, and aqueous-phase GAC connected in series for VOC removal. The treated ground water is discharged through nearby misting towers to indigenous grasses to remove nitrate.

An SVE system was installed at the B854-SRC and began operating on November 7th 2005. This system is being operated as part of a treatability test that is being conducted to determine if SVE is a viable method for increasing mass removal from the Building 854 source area.

The B854-PRX GWTS treats ground water for VOCs, nitrate, and perchlorate and began operation in November 2000. Ground water is extracted at a rate of 1 gpm from well W-854-03 located southeast of the Building 854 complex. The current GWTS configuration includes aqueous-phase GAC connected in series for VOC removal, above ground containerized wetland biotreatment for perchlorate and nitrate removal, and an ion-exchange resin treatment for polishing prior to being discharged into an infiltration trench.

The B854-DIS GWTS treats ground water for VOCs and perchlorate and began operation June 19, 2006. Ground water is extracted at a rate of 1.4 gpm from well W-854-2139. Since it was not anticipated that perchlorate contamination existed at this location, the original GWTS configuration only included aqueous-phase GAC connected in series for VOC removal. The treated ground water is discharged into an infiltration trench. Subsequent to start-up, perchlorate was detected at the influent to the GWTS, therefore ion exchange resin is being added to the system. Startup sampling had not occurred by the end of the first semester because sufficient water had not yet accumulated in the system from which to collect compliance samples. Samples were collected as soon as sufficient water was available. Mass removed and analytical data will be reported in the annual report.

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

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

2.6.1.1. Building 854 OU Facility Performance Assessment

The monthly ground water discharge volumes and rates and operational hours are summarized in Tables 2.6-1 and 2.6-2. 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 Tables 2.6-3 and 2.6-4. The pH measurement results are presented in Appendix A.

2.6.1.2. Building 854 OU Operations and Maintenance Issues

The B854-SRC GWTS and SVE system and B854-PRX GWTS operated continuously throughout the first semester of 2006 with the following exceptions:

- B854-SRC GWTS was taken off-line temporarily on January 5th to replace a GAC drum.
- B854-SRC SVE system was off-line several times during February due to a malfunctioning thermocouple. The problem was corrected.
- B854-PRX ground water extraction and treatment system was off-line from March 13th to the 15th due to dead batteries.
- B854-SRC SVE system was taken off-line on April 19th while Well W-854-F2 was being connected to the system for a short-term SVE test. The test ran from April 24 to May 8th, at which time the main extraction well, W-854-1834, was put back on-line.
- B854-SRC SVE system experienced high extracted soil vapor temperatures that caused several shutdowns in May. A covering over the pipeline was able to keep the vapor cooler and the system running.

2.6.1.3. Building 854 OU Compliance Summary

The B854-SRC and B54-PRX GWTSs 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 and analysis plans comply with CMP monitoring requirements. The sampling and analysis plans are presented in Table 2.6-5. There were no modifications made to the plans during the reporting period.

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: six samples were not collected due to dry conditions or insufficient water. The sampling and analysis plan for ground water and surface water monitoring is 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.

A ground water potentiometric surface map for the primary water-bearing unit in the Building 854 OU, the $Tnbs_1/Tnsc_0$ HSU, is presented in Figure 2.6-2. 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 subsections: mass removal; analysis of contaminant distribution and concentration trends; remediation optimization evaluation; and performance issues.

2.6.3.1. Building 854 OU Mass Removal

The monthly ground water mass removal estimates are summarized in Tables 2.6-7 and 2.6-8. 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 are the primary COCs detected in ground water and perchlorate and nitrate are the secondary COCs.

A first semester 2006 total VOC isoconcentration contour map for the $Tnbs_1/Tnsc_0$ HSU is presented in Figure 2.6-3. Overall, VOC concentrations in Building 854 ground water have decreased from an historical, pre-remediation maximum of 2,900 μg/L in 1997 to a maximum concentration of 180 μg/L in the first semester of 2006. The extent of the total VOC plume emanating from the Building 854 Complex is bounded to the south by a region where total VOC concentrations are below the 0.5 μg/L reporting limit in ground water samples from wells W-854-1822 and W-854-1902. Downgradient and south of this region, a less extensive total VOC plume occurs in ground water in the vicinity of former water-supply Well 13. The extent of this plume is limited to the south by well W-854-1707, where VOCs have not been detected in ground water. While the extent of total VOCs in Building 854 ground water with concentrations above the 0.5 μg/L background level has remained relatively stable over time, since remediation has started: (1) the portion of the northern VOC plume with concentrations greater than 50 μg/L has decreased and is limited to the immediate vicinity of the source areas, (2) the extent of the northern VOC plume with concentrations greater than 10 μg/L has decreased, and (3) the extent of the southern VOC plume with concentrations greater than 5 μg/L has decreased significantly in size.

During the first semester 2006, three wells yielded ground water samples containing perchlorate concentrations above the reporting limit of 4 μg/L and the 6 μg/L PHG. Perchlorate concentrations have continued to decrease from an historical maximum concentration of 27 mg/L in 2003 to a maximum concentration of 18 μg/L in the first semester 2006. During the first semester 2005, perchlorate was detected for the first time in samples from Well W-854-13 and Spring 11. However, perchlorate was not detected above the 4 μg/L reporting limit in samples collected from this well or spring during the second semester 2005 or first semester 2006. A total perchlorate isoconcentration contour map for the $Tnbs_1/Tnsc_0$ HSU will be presented in the annual report.

During first semester 2006, nitrate was detected above the 45 mg/L MCL in ground water samples from two wells completed in the $Tnbs_1/Tnsc_0$ HSU; W-854-02 and W-854-03 Nitrate concentrations have continued to decrease from an historical maximum concentration of 180 mg/L in 1996 to a maximum concentration of 68 mg/L in the first semester 2006. Elevated nitrate in ground water may be attributable to a combination of natural and anthropogenic sources in the Building 854 OU. While the extent of nitrate in ground water has not changed significantly during the period of remediation for this OU, this could be the result of the ongoing contribution of nitrate from natural sources in the Neroly bedrock. A nitrate concentration map for the $Tnbs_1/Tnsc_0$ HSU will be presented in the annual report.

2.6.3.3. Building 854 OU Remediation Optimization Evaluation

The B854-SRC GWTS extraction well, W-854-02, consistently pumped at about 1 gpm during the first semester 2006. The VOC concentrations in ground water from source area well W-854-02 have decreased from an historical maximum of 2,900 μg/L in 1997 to a first semester 2006 maximum of 180 μg/L, indicating significant decrease in VOC source strength. The VOC concentrations in ground water from B854-PRX GWTS extraction well W-854-03 have decreased from an historical maximum of 270 μg/L in 1999 to 55 μg/L during the first semester 2006.

The third ground water treatment facility at Building 854, B854-DIS, began operation on June 19, 2006. This system is currently treating ground water pumped at about 1.3 gpm from extraction well W-854-2139, near abandoned Well 13, where first semester 2006 total VOC concentration in ground water was 60 μg/L.

The SVE treatability study continued in the Building 854 source area, treating VOCs extracted from well W-854-1834. The extracted vapor is treated at the B854-SRC soil vapor treatment facility. TCE concentrations from the SVE well have remained relatively stable at 2-3 $ppm_{v/v}$. Although the soil vapor concentrations are relatively low, the high flow rate from this well (40 to 50 cubic feet per minutes) allows for the removal of significant mass of TCE from the source area.

2.6.3.4. Building 854 OU Performance Issues

The main issue influencing mass removal performance at the Building 854 OU continues to be the low permeability of the Neroly bedrock in this area. Although fractures appear to be important ground water flow-controlling features, the overall primary and secondary permeability in many wells is relatively low.

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 GWTSs and two SVE 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 GWTS treats ground water for VOCs, perchlorate, and nitrate and soil vapor for VOCs. The GWTS and SVE began operation in September and October 1999, respectively. Ground water is extracted from wells W-832-01, W-832-10, W-832-11, W-832-12, and W-832-15, while soil vapor is extracted from only W-832-12 and W-832-15. Ground water extraction rates at this facility are seasonally variable. Yield at this facility is currently varies from about 600 to 1,800 gallons per day. The current GWTS configuration includes 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. A positive displacement rotary lobe blower is used to create a vacuum at selected wellheads 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 GWTS treats ground water for VOCs, perchlorate, and nitrate and soil vapor for VOCs. The GWTS and SVE began operation in February and May 2003, respectively. 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. The current GWTS configuration includes 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 to indigenous grasses to remove nitrate. The B830-SRC SVE treats soil vapor extracted from well W-830-1807 using a liquid ring vacuum pump. 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 GWTS treats ground water for VOCs and began operation in October 2000. Ground water is extracted from extraction well W-830-57 using a solar-powered ground water treatment unit at approximately 300 gallons per day. The ground water is treated using three aqueous-phase GAC units connected in series to remove VOCs; the effluent is discharged to the shallow subsurface via a French drain in a disposal trench. B830-PRXN was shutdown and disconnected on April 25th. Well W-830-57 is in the process of being connected to B830-SRC as part of the B830-SRC expansion planned for second semester 2006.

The B830-DISS GWTS treats ground water for VOCs, perchlorate, and nitrate and began operation in July 2000. For the first semester of 2005, approximately 1,600 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. DOE/LLNL are currently evaluating alternative discharge method for the facility effluent at the request of the RWQCB.

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

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

2.7.1.1. Building 832 Canyon OU Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes, rates, and operational hours are summarized in Tables 2.7-1 through 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 Tables 2.7-5 and 2.7-6. The pH measurement results are presented in Appendix A.

2.7.1.2. Building 832 Canyon OU Operations and Maintenance Issues

The B830-SRC, B832-SRC, B830-PRXN, and B830-DISS GWTSs operated continuously throughout the second semester of 2005 with the following exceptions:

- B832-SRC extraction wells, W-832-10 and W-832-11 were periodically shut down from January 23rd to March 20th to prevent damage from freezing temperatures. The yield from these extraction wells is so low, a constant flow through the pipeline cannot be maintained. As a result, the piping is subject to freezing. Pipe insulation was subsequently installed to prevent pipe ruptures. The facility was shut down from March 13th to the 14th to repair a GAC leak and again in April to replace the ion-exchange drums with fiberglass tanks to prevent rusting and leaks in the system.
- B830-DISS was shutdown from January 9th to April 6th due to the poor performance of the nitrate biotreatment system at low temperatures. During periods of prolonged cold weather, bacterial de-nitrification becomes ineffective and resulting increases in nitrate concentrations in the effluent can occur. The facility remained off-line while an alternate discharge method was evaluated, and until ambient temperatures had increased enough for bacterial de-nitrification to occur. The system was off-line April 20th to the 24th to change a leaking carbon canister.
- B830-PRXN GWTS was disconnected from extraction well W-830-57 on April 25th. This treatment system was transported to the Building 854 OU on May 2nd for use at the B854-DIS location. The extraction well W-830-57 that was previously connected to this facility will be plumbed to B830-SRC GWTS as part of the extraction wellfield expansion planned for this facility during second semester 2006.
- B830-SRC SVE and treatment system began operations on March 7th upon completion of the vapor extraction system upgrade. On March 9th, a San Joaquin Valley Unified Air Pollution Control District inspector observed operation of the SVE system and determined that the facility was in compliance with air permit requirements. The new liquid ring pump has increased vacuum on the system resulting in increased vapor-flow and volatile organic compound mass removal.
- Perchlorate was detected in the effluent sample from the B830-SRC GWTS on April 11th. Additional verification samples of the treatment facility effluent and the intermediate ion-exchange resin were collected for perchlorate analysis. The treatment system was shut down until the results of the verification samples were received. Perchlorate was not detected in the verification sample of the effluent, or from the sample collected between the two ion-exchange resins, indicating that the perchlorate detection in the first sample was a false positive. The treatment facility was re-started on April 18th.

2.7.1.3. Building 832 Canyon OU Compliance Summary

The B832-SRC, B830-DISS, B830-SRC, and B830-PRXN GWTSs operated in compliance with Substantive Requirements during this reporting period. However, the B830-DISS GWTS was shutdown from January 9th to April 6th due to the inadequate treatment of nitrate related to problems with the biotreatment tanks at this facility as discussed in Section 2.7.1.2. No nitrate was discharged from B830-DISS above the discharge limit of 45 mg/L. As mentioned above, although perchlorate was detected in one effluent sample collected from the B830-SRC GWTS, this result proved to be a false positive after evaluation.

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

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

2.7.2. Building 832 Canyon OU Ground Water Monitoring

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; forty samples were not collected due to dryness/insufficient water. The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.7-8. This table explains deviations from the sampling plan and indicates any additions made to the CMP.

Ground water potentiometric surface data are posted for the Qal/WBR and $Tnsc_{1a}$ HSUs and contoured for $Tnsc_{1b}$ and Upper $Tnbs_1$ HSUs as presented in Figures 2.7-2, 2.7-4, 2.7-3, and 2.7-5, respectively. 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 subsections: mass removal; contaminant concentrations and distribution; remediation optimization evaluation; and performance issues.

2.7.3.1. Building 832 Canyon OU Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Tables 2.7-9 through 2.7-12. 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 (mainly TCE) are the primary COCs detected in ground water. Perchlorate and nitrate are the secondary COCs. These constituents have been identified primarily in the $Tnsc_{1b}$ and Qal/WBR HSUs. The highest concentrations of VOCs, perchlorate, and nitrate in ground water in these HSUs are generally detected in or immediately downgradient of the Buildings 830 and 832 source areas. VOCs have been detected at lower concentrations in the $Tnbs_2$, $Tnsc_{1a}$, and Upper $Tnbs_1$ aquifers. Total VOC isoconcentration data are posted for the Qal/WBR and $Tnsc_{1a}$ and contoured for the $Tnsc_{1b}$ and Upper $Tnbs_1$ HSUs as presented in Figures 2.7-6, 2.7-8, 2.7-7, and 2.7-9, respectively. Isoconcentration contour maps for the secondary COCs will be presented in the 2006 Annual CMR.

Overall, VOC concentrations have decreased in the Building 832 Canyon OU from an historical, pre-remediation maximum of over 30,000 μg/L in 1997 to 7,300 μg/L in the first semester of 2006. In the first semester of 2006, VOCs were detected in ground water samples from Qal/WBR wells in the Building 832 Canyon OU at concentrations ranging from <0.5 μg/L to 3,900 μg/L (January 2006) in well SVI-830-035, located in the Building 830 source area. Historically nearby well W-830-30 has had the highest total VOC concentrations in the

Qal/WBR HSU. The total VOC concentrations in well W-830-30 have decreased from a high of 8,100 μg/L in 1997 to a current concentration of 460 μg/L (March 2006). Total VOC concentrations in well W-830-1807 decreased from 2,600 μg/L (January 2006) to 640 μg/L (April 2006).

The current maximum total VOC concentration (7,300 μg/L, April 2006) in this OU was detected in the $Tnsc_{1b}$ HSU in well W-830-19. Historically, the highest total VOC concentrations have been detected in nearby well W-830-49. Total VOCs were detected in ground water samples from newly installed $Tnsc_{1b}$ well W-830-2213 at 590 μg/L (April 2006). This well will be connected to the B830-SRC GWTS in second semester 2006.

VOCs have also been detected in the $Tnsc_{1a}$ HSU. The total VOC concentrations in the $Tnsc_{1a}$ HSU during first semester 2006 ranged from 10 μg/L in well W-830-22 (March 2006) to 730 μg/L in well W-830-27 (March 2006). Total VOCs were detected in ground water samples from newly installed $Tnsc_{1a}$ well W-830-2214 at 570 μg/L (May 2006). Currently there are no extraction wells in this HSU. In second semester 2006, $Tnsc_{1a}$ HSU wells W-832-25 and W-830-2214 will be connected to the B832-SRC GWTS and B830-SRC GWTS, respectively.

The total VOC concentrations in the Upper $Tnbs_1$ HSU during first semester 2006 ranged from <0.5 μg/L to a maximum of 72 μg/L (May 2006) in newly installed well W-830-2215. Currently, one extraction well (W-830-57) is pumping and treating total VOCs in ground water from this HSU at the B830-PRXN GWTS and will be connected to the B830-SRC GWTS in second semester 2006. The total VOC concentration in this well has decreased slightly from a maximum of 47 μg/L in October 2000 when remediation began at B830-PRXN to 29 μg/L in first semester 2006. The recently installed well, W-830-2215, and existing well W-830-60, will be connected as part of the B830-SRC expansion. Total VOC concentration trends in the Upper $Tnbs_1$ and vertical gradients between this HSU and overlying HSUs will be monitored carefully to prevent any additional downward migration of VOCs. Total VOCs were not detected in the Lower $Tnbs_1$ HSU during the first semester of 2006.

During the first semester of 2006, VOCs were detected in ground water samples above the 0.5 μg/L detection limit in one (W-880-02) of the four site-boundary guard wells for the Building 832 OU at concentrations of 0.6 μg/L (January 2006) and 0.5 μg/L (April 2006). Historically, this Qal/WBR well has had sporadic trace detections of VOCs ranging from 0.5 μg/L to 1.2 μg/L. VOCs were not detected above the 0.5 μg/L detection limit in ground water samples collected from any of the remaining guard wells. The leading edge of the plume at the 0.5 μg/L TCE detection limit in the $Tnsc_{1b}$ HSU remains in the vicinity of the site boundary.

Overall, perchlorate concentrations have decreased in the Building 832 Canyon OU from an historical, pre-remediation maximum of over 51 μg/L in 1998 to 18 μg/L in the first semester of 2006. During the first semester of 2006, perchlorate was detected in ground water samples from $Tnsc_{1a}$ wells at concentrations ranging from the 4 μg/L reporting limit to 8.9 μg/L in well W-832-25 (March 2006). The 2006 maximum perchlorate concentration (18 μg/L, January 2006) in this OU was detected in the $Tnsc_{1b}$ HSU in extraction well W-832-11. Perchlorate was not detected above the 4 μg/L reporting limit in any Qal/WBR or $Tnbs_1$ HSU wells, or in any guard wells in the Building 832 Canyon OU in the first semester of 2006.

Overall, nitrate concentrations have decreased in the Building 832 Canyon OU from an historical, pre-remediation maximum of over 501 mg/L in 1998 to 200 mg/L in the first semester of 2006. Nitrate was detected in ground water samples from Qal/WBR HSU wells in the Building 832 Canyon OU at concentrations ranging from below the 0.5 mg/L detection limit to 120 mg/L (March 2006) in well W-830-34. Nitrate was detected in the $Tnsc_{1a}$ HSU at concentrations ranging from 1.1 mg/L to 96 mg/L in well W-832-25 (March 2006). Nitrate was detected in the Upper $Tnbs_1$ HSU at concentrations ranging from below the detection limit to 17 mg/L (January and April 2006) in well W-830-57, the extraction well at the B830-PRXN treatment facility. Nitrate was detected in the $Tnsc_{1b}$ HSU at concentrations ranging from below the detection limit to 200 mg/L (January 2006) in well W-830-49. The likely source of this nitrate is the Building 830 septic system leachfield. Nitrate was not detected in the Lower $Tnbs_1$ HSU during 2006. During first semester 2006, nitrate was not detected above the 45 mg/L MCL in any of the Building 832 Canyon guard wells.

2.7.3.3. Building 832 Canyon OU Remediation Optimization Evaluation

The B832-SRC SVE system was shut down in October 2003 to evaluate soil vapor rebound. The system was restarted in January 2005. TCE was not detected in preliminary soil vapor samples above the 0.2 $ppm_{v/v}$ detection limit. Soil vapor samples collected during first semester 2006 from B832-SRC extraction wells W-832-12 and W-832-15 contained TCE at concentrations ranging from 0.3 $ppm_{v/v}$ to 0.8 $ppm_{v/v}$.

In September 2005, the B832-SRC extraction wellfield was expanded to include existing monitor wells W-832-01, W-832-10, and W-832-11. These wells contain higher total VOC concentrations than extraction wells W-832-12 and W-832-15. Initially the ground water yield increased to an average of 40,000 gallons per month and total VOC mass removal increased from less than 1 gram per month to 13 grams per month. However, during the first semester of 2006 the yield has decreased to an average of 6,000 gallons due to dewatering and limited recharge.

A new liquid ring pump was connected to the B830-SRC SVE system in March 2006. The volume of vapor extracted from well W-830-1807 increased from an average of 1,700 cubic feet (ft^3) per month to 400,000 ft^3 per month. The total VOC mass removal increased from an average of 5 g per month to 375 g per month.

Ground water yield is so low in the Building 832 Canyon OU source area extraction wells that capture is difficult to assess because these source area extraction wells cannot maintain continuous operation. The low yield is due to a combination of low hydraulic conductivity geologic materials, dewatering, and limited recharge. Based on the map shown in Figure 2.7-7, the plumes emanating from the Buildings 832 and 830 source areas have much the same shape and extent as that shown in recent CMR reports. Total VOC concentrations in the facility influent for B832-SRC, B830-PRXN, and B830-DISS have remained relatively constant throughout this reporting period. Total VOC concentrations in the facility influent for B830-SRC ranged from 3,800 μg/L to 2,400 μg/L during this reporting period.

In general, COC concentrations in the Building 832 Canyon OU source areas exhibit decreasing trends. For example, maximum total VOC concentrations have decreased by an average of 50% in Building 830 source area wells W-830-1807, W-830-34, and W-830-59. Total VOCs in Building 832 source area wells have also decreased. For example, VOC concentrations in extraction well W-832-15 have declined from 131 μg/L (March 1998) to 26 μg/L (January 2006). COC concentrations in the proximal and distal areas have remained relatively constant.

2.7.3.4. Building 832 Canyon OU Performance Issues

Overall well yields remain low due to a combination of limited recharge, dewatering, and low hydraulic conductivity in the B832-SRC and B830-SRC facility areas. An evaluation to determine how to increase mass removal at this OU was presented in the Interim Remedial Design (RD) report for the Building 832 Canyon Operable Unit (Madrid et al., 2005) report for this area. The remedial design included the following major components:

- Continue vacuum-assisted soil vapor and ground water extraction and treatment in the Building 832 and 830 source areas.
- Expand the Building 832 and 830 wellfields to extract soil vapor and ground water from the downgradient portion of the VOC, nitrate, and perchlorate plumes.
- Install additional ground water monitor and extraction wells.
- Optimize contaminant mass removal through: (1) monitoring, evaluation and management of extraction wellfield pumping, (2) evaluation of potential for naturally occurring denitrification processes in ground water, and (3) continued evaluation of more aggressive, innovative technologies to expedite source cleanup.

In accordance with the recommendation specified in the RD report, a treatment facility extraction wellfield expansion is scheduled for the second semester 2006 at B830-SRC. This expansion is expected to significantly increase the VOC mass removal performance at this OU. Several new extraction wells are proposed as part of the B830-SRC expansion and were specified in the RD report. The extraction well, W-830-57, at the B830-PRXN facility will be connected to B830-SRC and three existing monitor wells will be added as ground water extraction wells: $Tnsc_{1b}$ wells W-830-49 and W-830-1829, and Upper $Tnbs_1$ well W-830-60. Three new ground water extraction wells (one Upper $Tnbs_1$ extraction well W-830-2215, one $Tnsc_{1b}$ well W-830-2213, and one $Tnsc_{1a}$ well W-830-2214) were installed during the first semester of 2006 and will be connected to the facility during the second semester of 2006. Additionally, well W-830-49 will be connected to the soil vapor extraction system at this facility. The expansion wells will be connected to the B830-SRC facility and begin operation during the second semester of 2006. Extraction of high concentrations of VOCs in this area should result in significant increase in VOC mass removal at this facility.

Increased ground water extraction at the B832-SRC facility was achieved in second semester 2005 by adding additional ground water extraction wells W-832-01, W-832-10, and W-832-11. However, the yield in these wells declined during the first semester of 2006 due to dewatering and limited recharge. An additional extraction well, W-832-25, is planned at B832-SRC in second semester 2006. This well is completed in the $Tnsc_{1a}$ HSU located beneath the $Tnsc_{1b}$ HSU.

Low concentrations of TCE and PCE have been detected in Upper $Tnbs_1$ well W-830-1832 located upgradient of Site 300 water-supply Well 20. A new Upper $Tnbs_1$ guard well, W-832-2112, located downgradient (southwest) of well W-830-1832, and upgradient of Well 20 was installed in 2005. Samples taken from this well during first semester 2006 were below reporting limits for total VOCs, nitrate, and perchlorate.

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 are 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. During the first semester 2006, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the exception that biennial samples for K8-05 could not be collected due to dry conditions. The sampling and analysis plan for ground water monitoring is presented in Table 2.8-1. This table delineates any additions made to the CMP.

A map showing the locations of monitor wells and first semester 2006 ground water elevations, ground water flow direction, and total VOC concentrations in the $Tnbs_1$ HSU for the Building 801/Pit 8 Landfill area is presented in Figure 2.8-1. Ground water elevation data for the Building 801/Pit 8 Landfill area are similar to those collected during 2005 and previous years.

During the first semester 2006, total VOCs were detected in ground water samples from wells in the Building 801/Pit 8 Landfill area at concentrations ranging from 1.7 μg/L (June 2006) in a sample from well K8-03B to 6.5 μg/L (June 2006) in a sample from well K8-01. Total VOC concentrations detected in ground water samples collected from wells downgradient of Building 801 have decreased from a historical maximum of 10 μg/L of total VOCs in May 1990 to a maximum of 3.6 μg/L in the second semester of 2005. TCE concentrations in ground water have been below the Federal and State MCL of 5 μg/L since 1992. 1,2-DCE has never been detected in ground water at concentrations above the Federal MCL of 5 μg/L, but remains above the State MCL of 0.5 μg/L.

During the first semester 2006, perchlorate was not detected in ground water samples above the 4 μg/L reporting limit from any of the Building 801/Pit 8 monitor wells.

Nitrate concentrations in ground water in the Building 801/Pit 8 Landfill area have been fairly stable over time. During the first semester 2006, nitrate was detected in ground water samples from wells in the Building 801/Pit 8 Landfill area at concentrations ranging from 19 mg/L (June 2006) in a sample from well K8-03B to a maximum of 58 mg/L (June 2006) in a sample from well K8-04. All other nitrate concentrations from area ground water samples collected during these years were below the 45 mg/L MCL. Overall, nitrate concentrations in ground water at the Building 801/Pit 8 Landfill generally are similar to previous years. A map of nitrate concentrations in $Tnbs_1$/ $Tnbs_0$ HSU ground water at Building 801/Pit 8 will be presented in the annual report.

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 perched ground water in the Tpsg HSU. A map showing the locations of monitoring wells and first semester 2006 ground water elevations, hydraulic gradient direction, and total VOC concentrations in the Tpsg HSU is presented in Figure 2.8-2. The sampling and analysis plan for ground water monitoring is 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.

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 2004 has shown little evidence of saturation. Monitoring conducted from 1993 to 2006 has shown a decline in VOC concentrations in Tpsg HSU ground water from an historical maximum concentration of 2,100 μg/L in 1992 to maximum of 110.6 μg/L in the first semester of 2006. During the first semester 2006, only two wells contained sufficient water from which to collect ground water samples. The samples from these two wells, W-833-12 and W-833-33, contained 4.8 μg/L and 110.6 μg/L of total VOCs (all TCE), respectively. During 2005, all the wells screened in the Tpsg HSU at Building 833 were dry or had insufficient water to collect a valid sample, except for well W-833-12. A ground water sample collected from this well during the first quarter of 2005 contained 7.5 μg/L of TCE.

The only $Tnbs_1$ HSU well (W-833-30) contained sufficient water to collect a sample during the first semester 2006. VOCs were not detected in that sample or previous samples from this well, indicating that any VOC contamination continues to be confined to the shallow, Tpsg perched water-bearing zone.

2.8.3. Building 845 Firing Table and Pit 9 Landfill

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 and hydraulic gradient direction in the $Tnsc_0$ HSU is presented in Figure 2.8-3. The sampling and analysis plan for ground water monitoring is presented in Table 2.8-3. All required CMP detection monitoring samples were collected. There continues to be no contamination detected in ground water in the Building 845 and Pit 9 Landfill area. Ground water elevation data collected from wells within the OU are similar to those collected during 2004 and 2005 (Figure 2.8-3).

Detection monitoring of the Pit 9 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 and ground water elevations, hydraulic gradient direction, total uranium activities, and $^{235}U/^{238}U$ atom ratios in the Tmss HSU are presented in Figure 2.8-4. During the first semester of 2006, ground water monitoring was conducted in accordance with the CMP monitoring requirements. The sampling and analysis plan for ground water monitoring is presented in Table 2.8-4. All required samples were collected and analyzed.

Ground water elevation data collected from wells within the Building 851 area during the first semester are similar to those collected during 2004 and 2005 (Figure 2.8-4).

Figure 2.8-4 shows first semester 2006 ground water uranium activities and $^{235}U/^{238}U$ atom ratios for the Tmss HSU at Building 851. Total uranium activities in Building 851 monitor wells during the semester ranged from 0.011 pCi/L in the ground water sample from well W-851-05 to 0.49 pCi/L in the sample from well W-851-08. The maximum total uranium activity of 0.49 pCi/L in the first semester 2006 is only a fraction of the 20 pCi/L MCL, and represents a decrease from the historical maximum uranium activity of 1.3 pCi/L detected in the Building 851 area in 1991. The atom ratio of $^{235}U/^{238}U$ in all of the first semester samples from wells W-851-05, W-851-06, and W-851-08 indicated the addition of some depleted uranium, though the samples from well W-851-07 contained only natural uranium.

During the first semester 2006, tritium activities were below the 100 pCi/L reporting limit in all Building 851 monitor wells, consistent with analytical results from 2004 and 2005. Because tritium has not been detected at activities above the 100 pCi/L background levels in Building 851 ground water for the past 2.5 years, DOE/LLNL propose to discontinue monitoring of tritium in Building 851 ground water.

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 the Pit 2 Landfill. No unacceptable risk or hazard to human or ecological receptors associated with these landfills 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 reporting period.

3.1. Pit 2 Landfill

During the first semester 2006, all required ground water samples were collected from Pit 2 Landfill detection monitoring wells K2-01C, NC2-08, W-PIT2-1934, and W-PIT2-1935 and analyzed for the CMP detection monitoring analytes. A map showing the locations of monitoring wells and Pit 2 is presented in Figure 2.5-1. Additional detection monitoring wells are scheduled for installation at the Pit 2 Landfill during 2007.

The first semester 2006 ground water potentiometric surface maps that the include Pit 2 Landfill are presented in Figures 2.5-2 and 2.5-3. Depth to ground water was measured at 50 to 55 ft beneath the Pit 2 Landfill. These data are consistent with previous water elevations.

A map of the first semester 2006 ground water tritium activity within the $Tnbs_1/Tnbs_0$ HSU and including Pit 2 is presented in Figure 2.5-5. Tritium was detected below the 20,000 pCi/L

MCL during 2005 in samples from all four wells. Tritium was detected at a maximum activity of 9,460 pCi/L in the February 2006 sample from well NC2-08. The 2005 tritium maximum was also detected in a sample from well NC2-08 (10,100 pCi/L in November 2005). The overall distribution of ground water tritium activities in the Pit 2 area (Figure 2.5-5) is primarily a result of transport of the Building 850 tritium plume into the Pit 2 Landfill area. While it is possible that some tritium may have been released to ground water from the Pit 2 Landfill, data indicate that tritium activities in ground water downgradient of the landfill are decreasing.

Uranium activities detected in ground water samples from the Pit 2 Landfill monitor wells are all historically below the drinking water standard of 20 pCi/L. Depleted uranium was detected in first semester 2006 ground water samples from well K2-01C, W-PIT2-1934, and W-PIT2-1935. The 2006 maximum total uranium activity of 13 pCi/L was detected in a sample from well W-PIT2-1934. 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 to the naturally-occurring uranium in the ground water by the Pit 2 Landfill. The release may have been the result of the discharge of potable water that was used to maintain a wetland habitat for red-legged frogs (a Federally-listed endangered species) within a drainage channel that extends along the northern and eastern margin of the Pit 2 Landfill. This discharge was discontinued in 2005. Since the discharge was discontinued, total uranium activities detected in Pit 2 detection monitor wells have decreased from an historical maximum of 17.4 pCi/L in 2004 to a maximum activity of 13 pCi/L in 2006. A map of 2006 ground water uranium activity and $^{235}U/^{238}U$ atom ratio within the $Tnbs_1/Tnbs_0$ HSU and including Pit 2 will be presented in the annual report.

During the first semester of 2006, perchlorate was detected in the May 2006 sample from well NC2-08 at a concentration of 5.6 μg/L. When last sampled in May 2004, this well yielded a perchlorate concentration of 6 μg/L. During the semester, ground water samples from the other three Pit 2 wells did not contain perchlorate in excess of the 4 μg/L reporting limit.

No other constituents that were monitored during the first semester 2006 as part of the Detection Monitoring Program were detected in ground water. None of the other chemicals monitored in ground water at the Pit 2 Landfill (metals, fluoride, HMX, RDX, or nitrate) were detected above regulatory limits.

3.1.2. Sampling and Analysis Plan Modifications

The sampling and analysis plan for the Pit 2 Landfill ground water Detection Monitoring Program are presented in Table 3.1-1. There were no deviations from the sampling plan.

3.1.3. Landfill Inspection Results

The Pit 2 Landfill was inspected twice during the first semester 2006. No problems were observed.

3.1.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring will conducted during the second semester of 2006.

3.1.5. Maintenance

Maintenance on the pit cover will be completed during the second semester of 2006 if necessary.

3.2. Pit 8 Landfill

3.2.1. Contaminant Detection Monitoring Results

During the first semester 2006, ground water samples were collected from the Pit 8 Landfill monitoring wells and analyzed for VOCs, high explosives compounds RDX and HMX, nitrate, uranium and thorium isotopes, tritium, and Title 26 metals. Well K8-05 continued to be dry. There were no new detections of constituents of concern in the Pit 8 Landfill area wells as indicated by the Detection Monitoring Program ground water data collected during the semester.

Tritium activities in first semester 2006 samples from wells K8-01, K8-02B, K8-03B, and K8-04 all contained tritium below the 100 pCi/L reporting limit. The 2005 samples from the Pit 8 Landfill wells also conclusively indicated background tritium activities.

Historical and current VOC data indicate that VOCs detected in ground water in the Pit 8 Landfill area are the result of releases from the former Building 801 dry well, which have migrated downgradient from Building 801 to beneath the landfill.

Ground water potentiometric surface elevations are presented in Figure 2.8-1. 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 2006 compared to the previous years.

3.2.2. Sampling and Analysis Plan Modifications

The sampling and analysis plan for the Pit 8 Landfill ground water Detection Monitoring Program are presented in Table 2.8-1. As stated above, well K8-05 was dry during first semester 2006 and could not be sampled.

3.2.3. Landfill Inspection Results

The Pit 8 Landfill was inspected twice during 2006. No problems were observed.

3.2.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring will be conducted during the second semester of 2006.

3.2.5. Maintenance

Any necessary maintenance on the pit cover will be completed during the second semester of 2006.

3.3. Pit 9 Landfill

3.3.1. Contaminant Detection Monitoring Results

During the first semester 2006, ground water samples were collected from the four Pit 9 Landfill 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 above background ranges in the Pit 9 Landfill area ground water samples as indicated by the Detection Monitoring Program ground water sample analytical results.

A ground water elevation map that includes the locations of monitoring wells and Pit 9 is presented in Figure 2.8-3. 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 and analysis plan for the Pit 9 Landfill ground water Detection Monitoring Program are presented in Table 2.8-3. There were no additional modifications made to the plan.

3.3.3. Landfill Inspection Results

The Pit 9 Landfill was inspected twice during the first semester 2006. No problems were observed.

3.3.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring will be conducted during the second semester of 2006.

3.3.5. Maintenance

Any necessary maintenance on the pit cover will be completed during the second semester of 2006.

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

4.1.1. Annual Inhalation Risk Evaluation

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

- Indoor Ambient Air in Building 834D
- Indoor Ambient Air in Building 854A
- Indoor Ambient Air in Building 830
- Indoor Ambient Air in Building 833

Institutional controls, such as restricting access to or activities in areas of elevated risk, remained in place during the first semester of 2006 to prevent unacceptable exposure to contaminants during remediation for those buildings and areas that continue to show an unacceptable risk and/or hazard.

4.1.2. Ambient Air Sampling

The CMP requires annual sampling of outdoor air above contaminated surface water, when surface water is present to determine VOC concentrations. The following springs will be evaluated in 2006:

- Ambient Air Near Spring 3 in the Building 832 Canyon OU
- Ambient Air Near Spring 5 in the HEPA OU
- Ambient Air Near Spring 7 in the Pit 6 Landfill OU

No surface water or green hydrophilic vegetation was present at Springs 3, 5 and 7 during 2006, therefore no ambient air VOC sampling was performed. Springs 5 and 7 have been devoid of surface water or green hydrophilic vegetation since monitoring began in 2003. Ambient air was monitored for VOCs at Spring 3 during 2003 and the results indicated that there was potential risk to onsite workers. Spring 3 has been devoid of surface water or green hydrophilic vegetation since 2004. These springs will be monitored for the presence of surface water or green hydrophilic vegetation in 2007.

4.2. Ecological Risk and Hazard Management

The Ecological Risk and Hazard Management Program, as outlined in the Compliance Monitoring Plan consisted of the following components:

1. Semiannual surveys for important burrowing species (these include special status species such as State of California or federally listed threatened or endangered species or State of California species of special concern) in areas associated with hazard indices greater than 1 (the areas identified in the CMP were Building 834, Building 850 and Pit 6),
2. Quarterly burrow air sampling for the presence of VOCs in the Pit 6 and Building 834 survey areas,
3. Surface soil sampling and analysis for the presence of cadmium in the Building 834 survey area,
4. An evaluation of the ecological significance of the presence of PCBs and dioxins/furans at Building 854 and 850, and
5. A re-evaluation every 5 years of the Site 300 ecology and contaminants, to ensure ecological risk from Site 300 contaminants remains adequately characterized.

The CMP-required 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., 2004a). The results indicated no potential for ecological hazard from cadmium in surface soil at Building 834, therefore cadmium has been deleted from the list of ecological contaminants of concern and will no longer be evaluated and reported.

The CMP-required burrow air sampling for the presence of VOCs in the Pit 6 Landfill and Building 834 survey areas was completed in 2004 and reported in the First Semester 2004 CMR (Dibley et al., 2004b). The results indicated that burrow air did not contain VOCs at concentrations that would result in a hazard quotient (HQ) greater than 1. Since there is no potential for ecological harm, VOCs in burrow air has been deleted from the list of ecological contaminants of concern and will no longer be evaluated and reported. For this reason, surveys for sensitive species at the Pit 6 Landfill and Building 834 have been discontinued.

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 conducted and reported in the First Semester 2004 CMR. The results of this evaluation showed amphibians to be potentially at risk at Building 854 and burrowing owls at Building 850 to be potentially at risk from the presence of PCBs in surface soil. As discussed in the First Semester 2005 CMR (Dibley et al., 2005b), the contaminated soil at Building 854 was removed in July 2005, effectively eliminating the ecological hazard. Therefore, the presence of burrowing owls and other special status species at Building 850 was the focus of work in the first semester of 2006.

Surveys for important burrowing species are required in the survey areas specified in the CMP as long as a potential ecological hazard is present. The CMP initially required surveys at Building 834, Pit 6 Landfill, and Building 850. Only Building 850 continues to present a potential ecological hazard.

Previous wildlife surveys have revealed the presence of the Western Burrowing Owl in the area adjacent to the Building 850 Firing Table. Western Burrowing Owls are a Federal and State species of concern (California Department of Fish and Game, 2004), and therefore fit the description of important burrowing species as presented in the CMP.

A preliminary exposure analysis for the Western Burrowing Owl to estimate hazard to cadmium and PCBs was completed and reported on in the First Semester 2004 CMR. Results suggest cadmium is unlikely to pose a hazard to burrowing owls nesting in the vicinity of Building 850. However, concentrations of Arochlor 1254 in the soil at Building 850 may pose a hazard to burrowing owls nesting in the area, as the hazard quotient (HQ) exceeds 1. Various remedial options are currently under consideration for this area. Refinement of the owl model will be conducted if necessary to evaluate the remedial options.

In addition to Western Burrowing Owls, the California Tiger Salamander has been observed near the West Observation Point, located approximately 500 meters from the Building 850 survey area. The West Observation Point is approximately 900 meters from the nearest breeding pool (Ambrosino pool), which is located in the northwest corner of the site. The Building 850 study area is located with 1,200 meters of Ambrosino pool. In 2005, a seasonal pool was constructed approximately 700 meters from the Building 850 study area. Evidence of California Tiger Salamander breeding was observed in the new pool in 2006.

Field surveys for the presence of important burrowing species, such as the Western Burrowing Owl and the California Tiger Salamander, are continuing at the Building 850 study area (Figure 4.2.1). Results of the Western Burrowing Owl surveys will be presented in the 2006 annual report. A survey for California Tiger Salamanders was conducted on the slopes behind (west of) the Building 850 shot table on February 26, 2006. Survey efforts were focused in this area because the largest concentration of ground squirrel burrows within the study area are found to the west of Route 4 and the California Tiger Salamander breeding pools closest to Building 850 are located to the west and north of the building. The survey was conducted starting approximately two hours after sunset. The temperature was 62 degrees Fahrenheit and there was light precipitation. These surveys included walking transects through the area and visually surveying the entrances of burrows for California Tiger Salamanders using hand held flashlights. No California Tiger Salamanders were observed in the Building 850 area during this survey, although California Tiger Salamanders were observed in burrows at other Site 300 locations on February 26, 2006.

Although California Tiger Salamanders are known to move up to 2 kilometers from breeding ponds, (U.S. Fish and Wildlife Service, 2004), research conducted by Trenham (2001) suggests that most (95%) California Tiger Salamanders use habitat within 173 meters of breeding ponds. Our survey results support this finding. Although California Tiger Salamanders can utilize the Building 850 study area as upland habitat, the largest concentration of California Tiger Salamanders is likely to be closer to breeding ponds. A biological assessment is currently under preparation for the US Fish and Wildlife Service to evaluate impacts to the California Tiger Salamander and other sensitive species from the remedial alternatives under consideration for this area.

5. Data Management Program

The management of data collected during the reporting period was subject to the standard Environmental Restoration Division (ERD) data management process and standard operating procedures (Goodrich and Depue, 2003). 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

During the reporting period, a relational database was used to maintain the data collected for the CMR. Web tools and applications were used to access and manage the data according to the standard ERD data management process and standard operating procedures.

5.2. New Procedures

The Site 300 CMR sampling and analysis plan was developed based upon the negotiated sampling locations and frequencies. The software tools used to create and execute the sampling plan were completely rewritten and implemented in the second semester of 2004 to increase efficiency in plan inputting, creating labels and Chains of Custody, and tracking sampling and receipt of analytical data. As a result of the changes, new procedures were implemented in 2004 and in 2005. Refinements were needed to make the new procedures more effective. Efforts to improve the sample planning, tracking and storage procedures continued in 2006. The tool for sample planning of treatment facility samples was tested and is just now being implemented. The written data management standard operating procedures are being formally updated.

6. Quality Assurance/Quality Control Program

LLNL conducted all compliance monitoring in accordance with the Quality Assurance Project Plan (QAPP) (Dibley, 1999) requirements for planning, performing, documenting, and verifying the quality of activities and data. The QAPP was prepared for CERCLA compliance and ensures that the precision, accuracy, completeness, and representativeness of project data are known and are of acceptable quality. The QAPP is used in conjunction with the LLNL ERD Standard Operating Procedures (SOPs), Operations and Maintenance Manuals (O&Ms), workplans, Integration Worksheets (IWSs), Site Safety Plans, and the LLNL Environmental Protection Department Quality Assurance Management Plan (QAMP).

6.1. Modifications to Existing Procedures

Chapters one and four of the ERD SOPs are in the process of being reviewed and revised. The projected release date (April 2006) for the revised SOPs has been delayed until September 2006, due to allowing additional time for the Environmental Project Leaders to review the procedures. This additional review was conducted in an effort to follow the management chain as outlined in the Integrated Safety Management System (ISMS).

6.2. New Procedures

Operations and Maintenance (O&M) manuals for treatment facility operations are being developed. Controlled copies of Volume VI: "O&M Manual for Treatment Facility at Central General Services Area (TFCGSA)" has been recently distributed. O&Ms currently being reviewed for future release include Volume VII: "O&M Manual for Treatment Facility at Eastern General Services Area (TFEGSA)", Volume XII: "O&M Manual for Portable Treatment Units (PTUs)", and Volume XIII: "O&M Manual for Miniature Treatment Units (MTUs), Groundwater Treatment Units (GTUs), and Solar Treatment Units (STUs)." Additionally, a new procedure was developed during this reporting period to ensure that monthly well inspections are performed to meet monitoring requirements set forth in the Site 300 Building 829 Post-Closure Operation Plan (ORAD, 2005). Implementation of the procedure will commence in July 2006.

6.3. Self-assessments

The Safety and Environmental Protection (SEP) Directorate, and the ERD perform formal and informal self-assessments at an annual or triennial frequency. These assessments are used to evaluate work activities to QA procedures, management practices, and the integration of ES&H programmatic requirements. The ERD senior management as well as external regulatory agencies also performs frequent walkabouts during ERD work activities. During this reporting period, there were a total of seven assessments and walkabouts performed for the ERD Site 300 work activities. Issues and deficiencies observed during the assessments are tracked from inception to resolution using the institutional Issues Tracking System (ITS).

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 five QIFs were processed during this reporting period. Suggested improvements were addressed and corrective measures employed to improve related processes. Two of the QIFs have been successfully closed-out. Corrective actions or suggested improvements specified in the remaining QIFs are being implemented.

6.5. Analytical Quality Control

Data review, validation, and verification are conducted on 100% of the incoming analytical data. Contract analytical laboratories (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.

The cost-effective algorithm (CES) was run as part of the routine quarterly ground water monitoring optimization effort for the Livermore Project, and in doing so the program detected some variations in historical data trends. Further examination uncovered some specific data quality issues with one of the CALs. For example, the CALs electronic deliverables were not matching the hardcopy data reports, analytes were missing from suites, the CAL was not meeting contractually required reporting limits, and unnecessarily diluting samples. A QIF was developed and submitted to the CAL to address and correct the issues. ERD has stopped submitting samples for analysis to the CAL until all data quality issues have been adequately addressed and rectified by the CAL. Concurrently, ERD is closely evaluating the data received from the CAL during the October 2005 through March 2006 timeframe and applying appropriate data qualifier flags.

6.6. Field Quality Control

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

7. References

California Department of Fish and Game (2004), State and Federally Listed Endangered and Threatened Animals of California. Available online at: http://www.dfg.ca.gov/hcpb/species/t_e_spp/tespp.shtml.

California Regional Water Quality Control Board, Central Valley Region (2005), *Monitoring And Reporting Program For Regents Of The University Of California United States Department Of Energy And Lawrence Livermore National Laboratory Site 300 Eastern General Services Area Groundwater Treatment System, San Joaquin County*.

Carlsen, T., V. Dibley, S. Gregory, V. Madrid, M. Taffet, J. Valett (2003), *First Semester 2003 Compliance Report for Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif.

Daily, W. (2004), *Operations and Maintenance Manual, Volume VI: Central General Services Area Vapor and Ground Water Treatment Facilities (VTFCGSA and TFCGSA)*, Lawrence Livermore National Laboratory, Livermore, Calif.

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

Dibley, V., R. Blake, T. Carlsen, M. Denton, R. Goodrich, S. Gregory, K. Grote, V. Madrid, C. Stoker, M. Taffet, J. Valett (2004a), *2003 Annual Compliance Report for Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-206319).

Dibley, V., R. Blake, T. Carlsen, S. Chamberlain, W. Daily, Z. Demir, M. Denton, R. Goodrich, S. Gregory, V. Madrid, M. Taffet, J. Valett (2004b), *First Semester 2004 Compliance Monitoring Report, Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-206769-04).

Dibley, V., T. Carlsen, S. Chamberlain, W. Daily, Z. Demir, M. Denton, R. Goodrich, S. Gregory, V. Madrid, M. Taffet, J. Valett (2005a), *2004 Annual Compliance Monitoring Report, Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-206319-04).

Dibley, V., T. Carlsen, S. Chamberlain, W. Daily, Z. Demir, M. Denton, R. Goodrich, S. Gregory, V. Madrid, M. Taffet, J. Valett (2005b), *First Semester 2005 Compliance Monitoring Report, Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-206769-05).

Dibley, V., T. Carlsen, S. Chamberlain, W. Daily, Z. Demir, M. Denton, R. Goodrich, S. Gregory, V. Madrid, D. Mason, P. McKereghan, M. Taffet, J. Valett (2006), *2005 Annual Compliance Monitoring Report, Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-206319-05).

Ferry, R., L. Ferry, M. Dresen, and T. Carlsen (2002), *Compliance Monitoring Plan/Contingency Plan for Interim Remedies at Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-147570).

Ferry, L., and C. Holtzapple (2006), Lawrence Livermore National Laboratory, Environmental Restoration Division, Livermore, Calif., letter to Susan Timm, January 25, 2006, "Remediation Optimization Plan/Implementation Schedule for the Eastern General Services Area Treatment Facility at Lawrence Livermore National Laboratory Site 300."

Goodrich, R., and R. Depue (Eds.) (2003), *LLNL Livermore Site and Site 300 Environmental Restoration Project Standard Operating Procedures (SOPs)*, Lawrence Livermore National Laboratory Livermore, Calif. (UCRL-MA-109115 Rev. 11).

LLNL (1999), *Eastern GSA Treatment Facility Operations Checklist*, Lawrence Livermore National Laboratory, Livermore, Calif.

Madrid, V., J. Valett, M. Denton, Z. Demir, M. Dresen, B. Daily, and V. Dibley (2005), *Interim Remedial Design Document for the Building 832 Canyon Operable Unit Lawrence Livermore National Laboratory,* Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-214990).

Rueth, L.S., R.A. Ferry, L.K. Green-Horner, and T.H. De Lorenzo (1998), *Remedial Design Document for the General Services Area Operable Unit Treatment Facilities Lawrence Livermore National Laboratory Site 300*, Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-127465).

Trenham, P.C. (2001), *Terrestrial habitat use by adult California tiger salamanders,* Journal of Herpetology Vol. 25, No. 2, pp. 343-346.

U.S. Department of Energy (2001), *Interim Site-Wide Record of Decision for Lawrence Livermore National Laboratory Site 300,* Lawrence Livermore National Laboratory, Livermore, Calif. (UCRL-AR-138470).

U.S. Fish and Wildlife Service (2004), "Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the California Tiger Salamander; and Special Exemption for Existing Routine Ranching Activities; Final Rule," Federal Register **69**(149) 47212–47248.

Figures

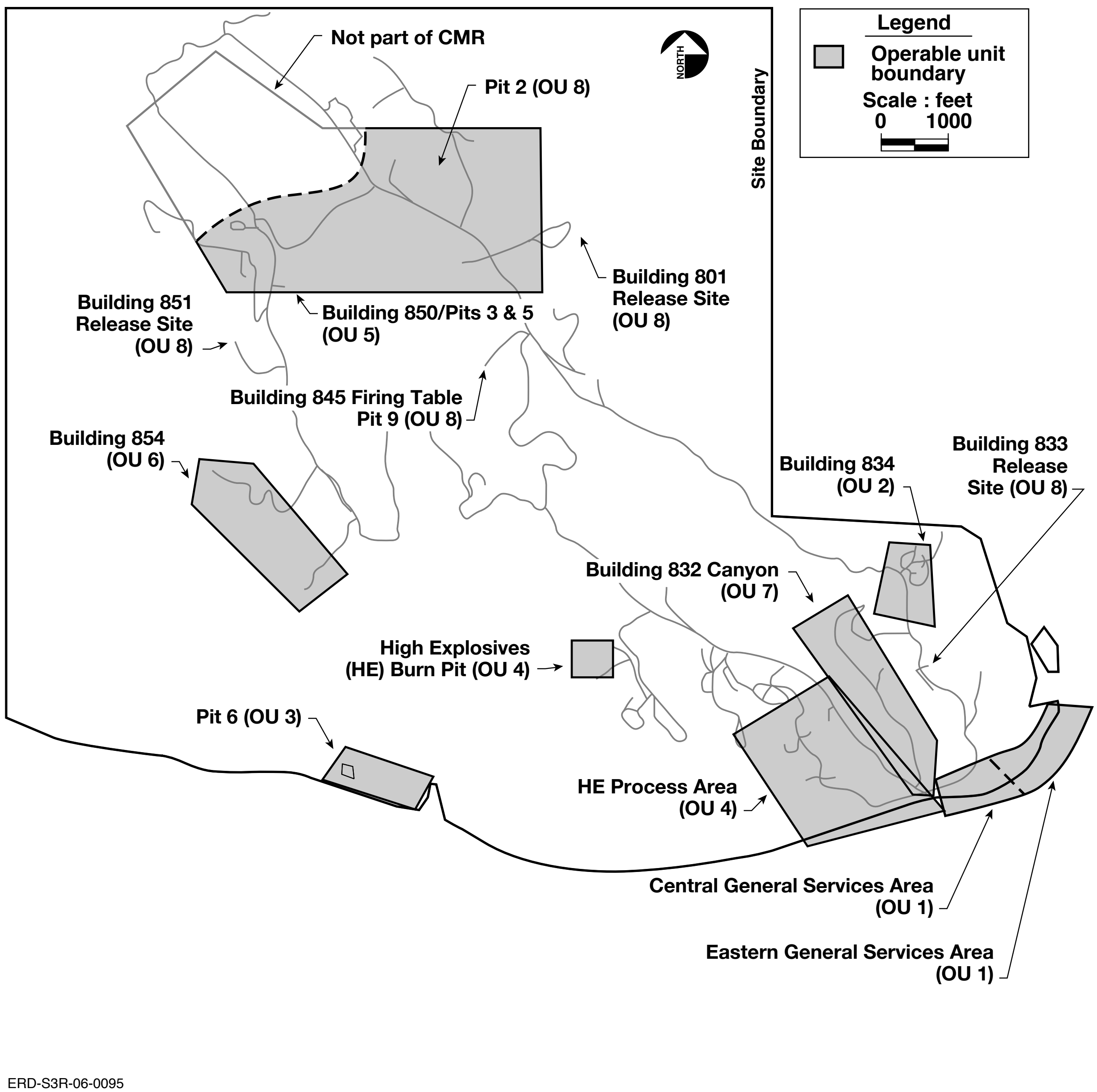


Figure 2-1. Site 300 map showing OU locations.

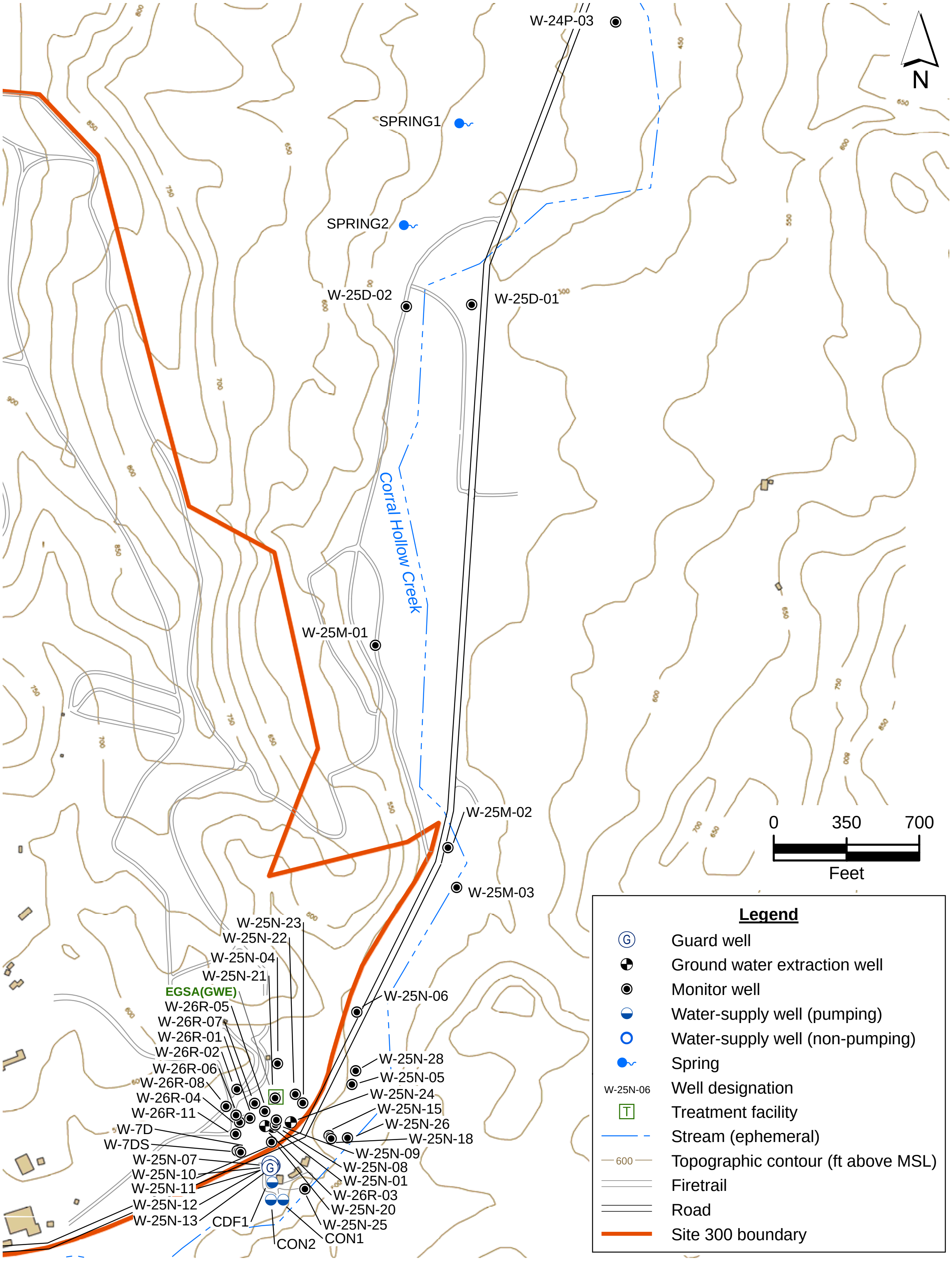


Figure 2.1-1. Eastern General Services Area OU site map showing monitor, extraction and water-supply wells, and treatment facilities.

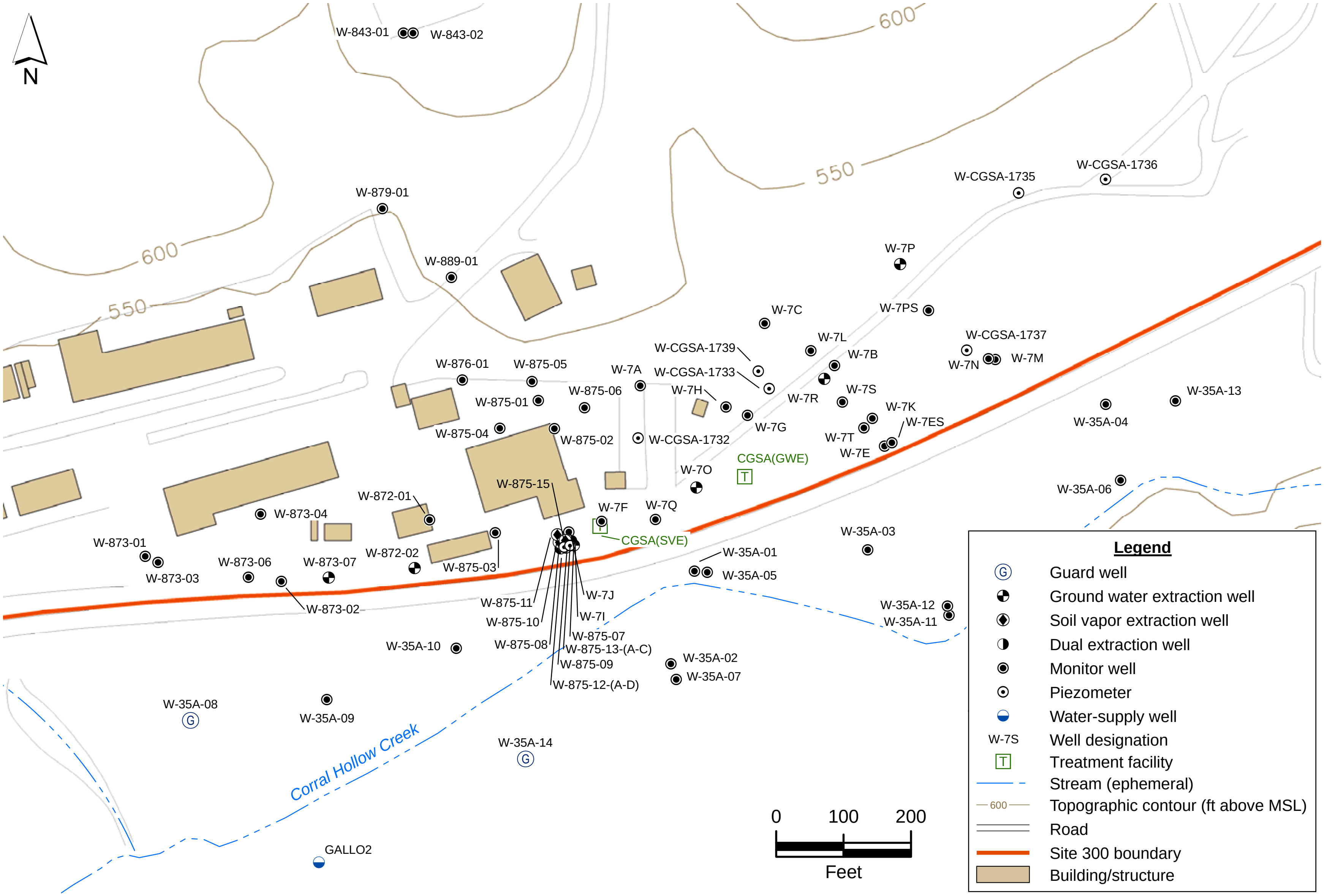


Figure 2.1-2. Central General Services Area OU site map showing monitor, extraction and water-supply wells, and treatment facilities.

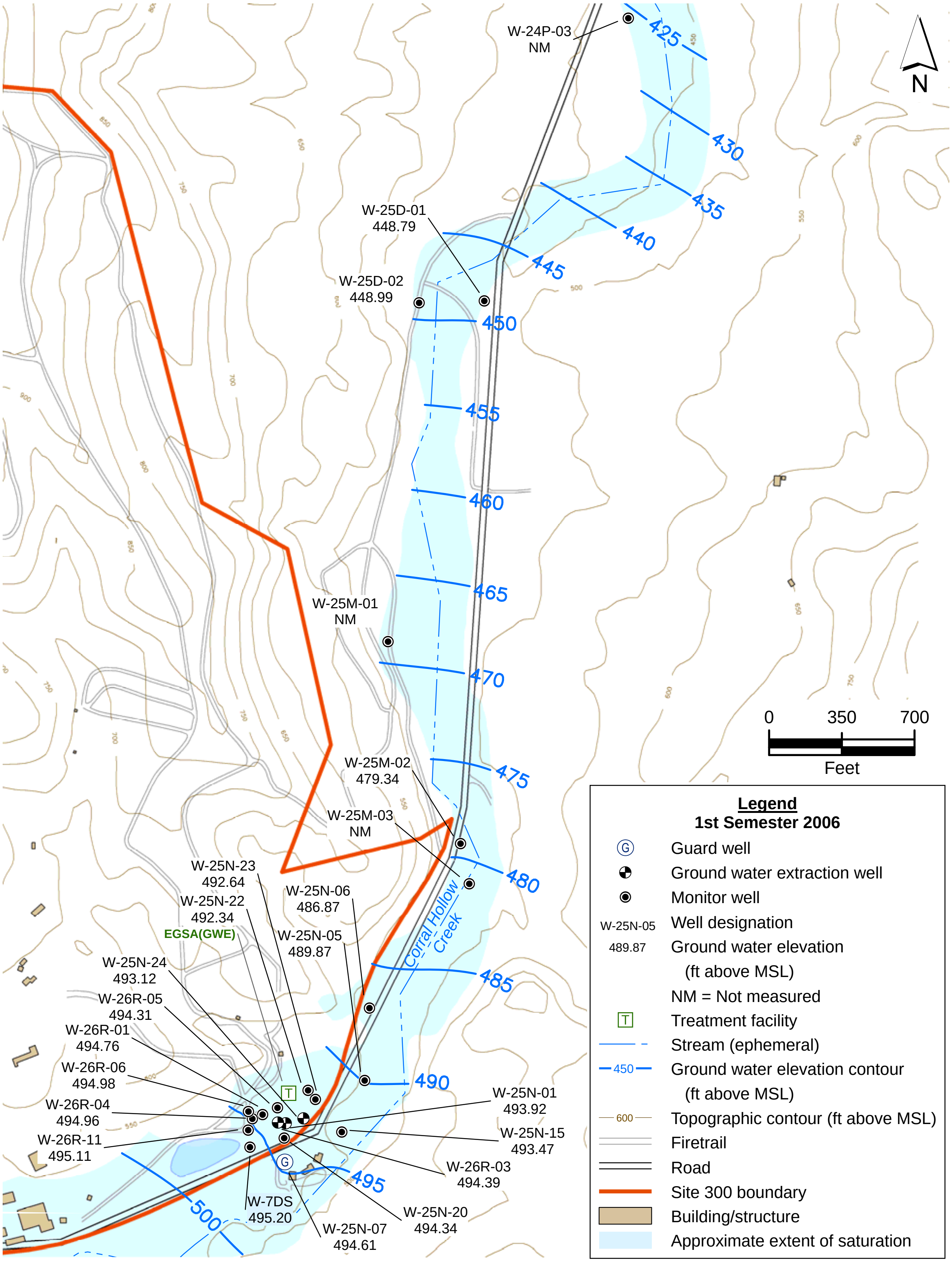


Figure 2.1-3. Eastern General Services Area OU ground water potentiometric surface map for the Qal-Tnbs$_1$ HSU.

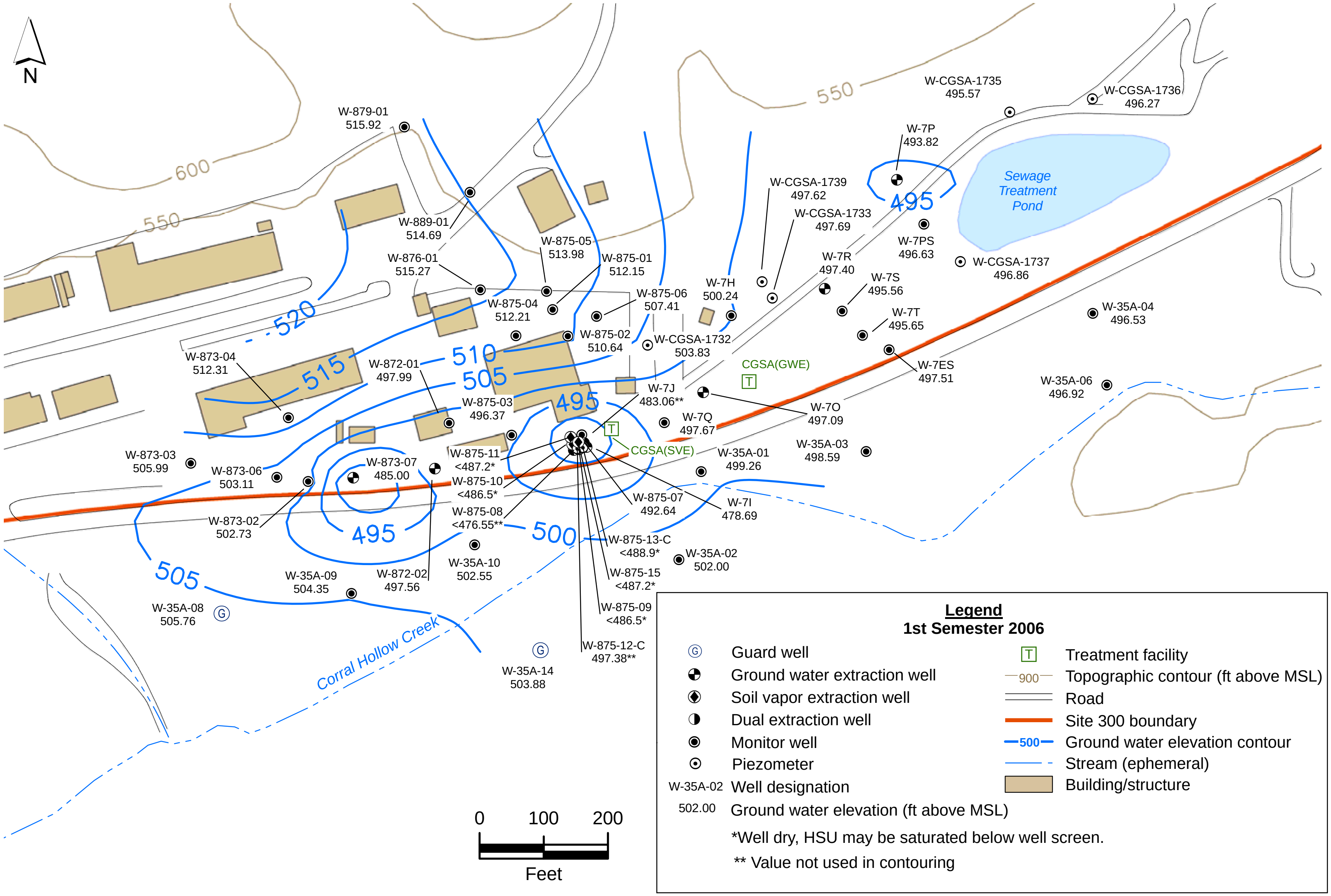


Figure 2.1-4. Central General Services Area OU ground water potentiometric surface map for the Qt-Tnsc$_1$ and Qal-Tnbs$_1$ HSUs.

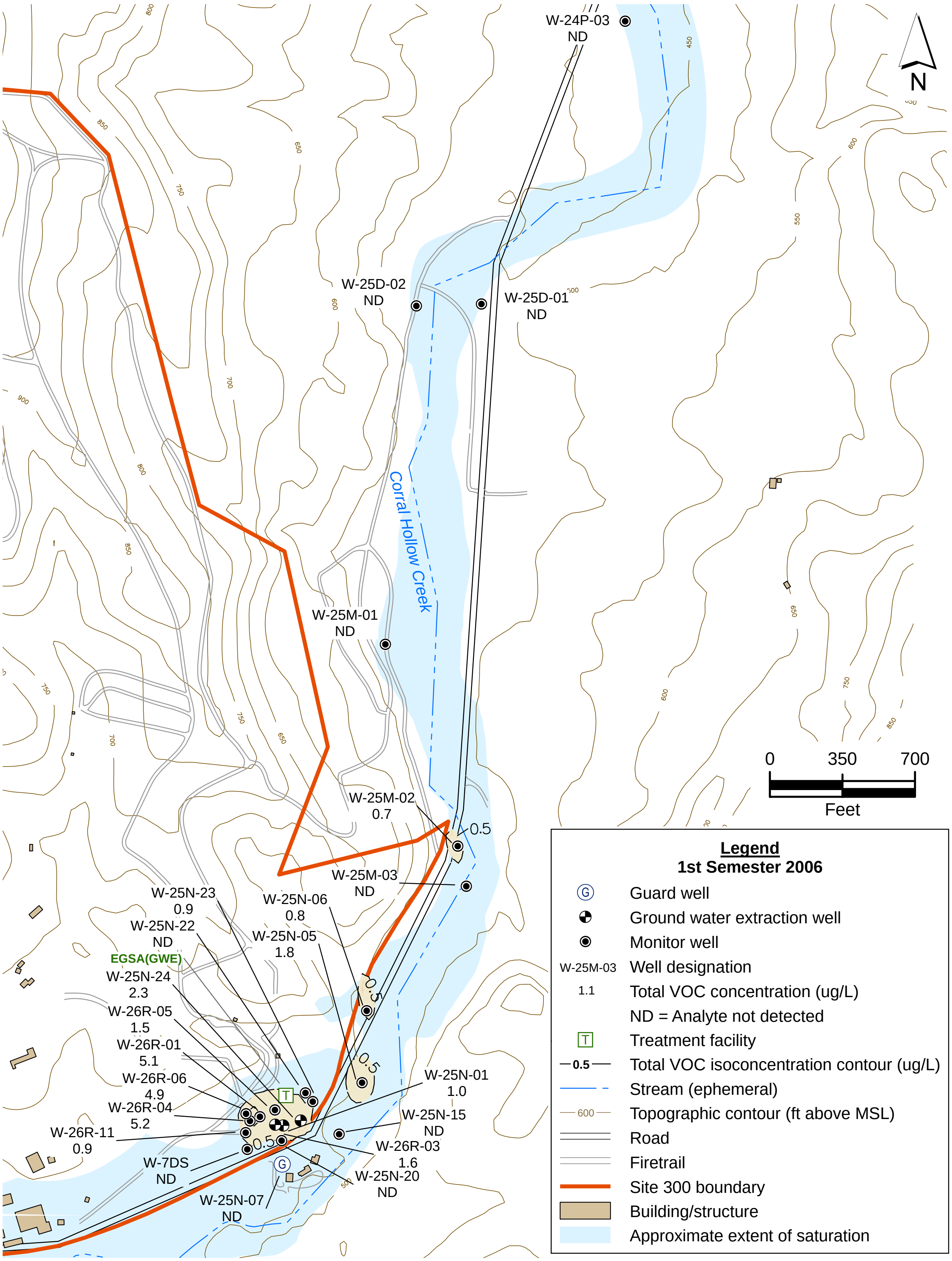


Figure 2.1-5. Eastern General Services Area OU total VOC isoconcentration contour map for the Qal-Tnbs$_1$ HSU.

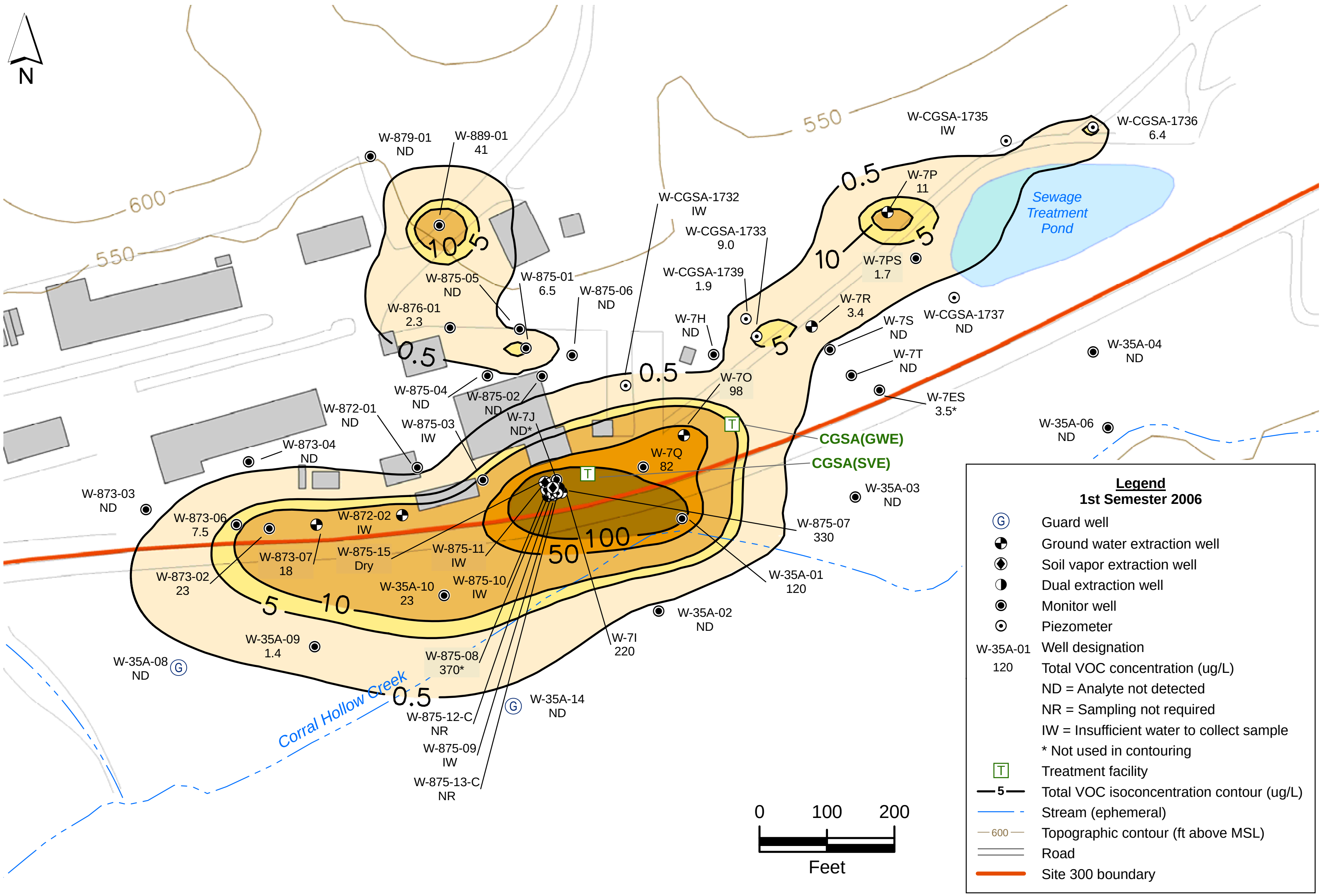
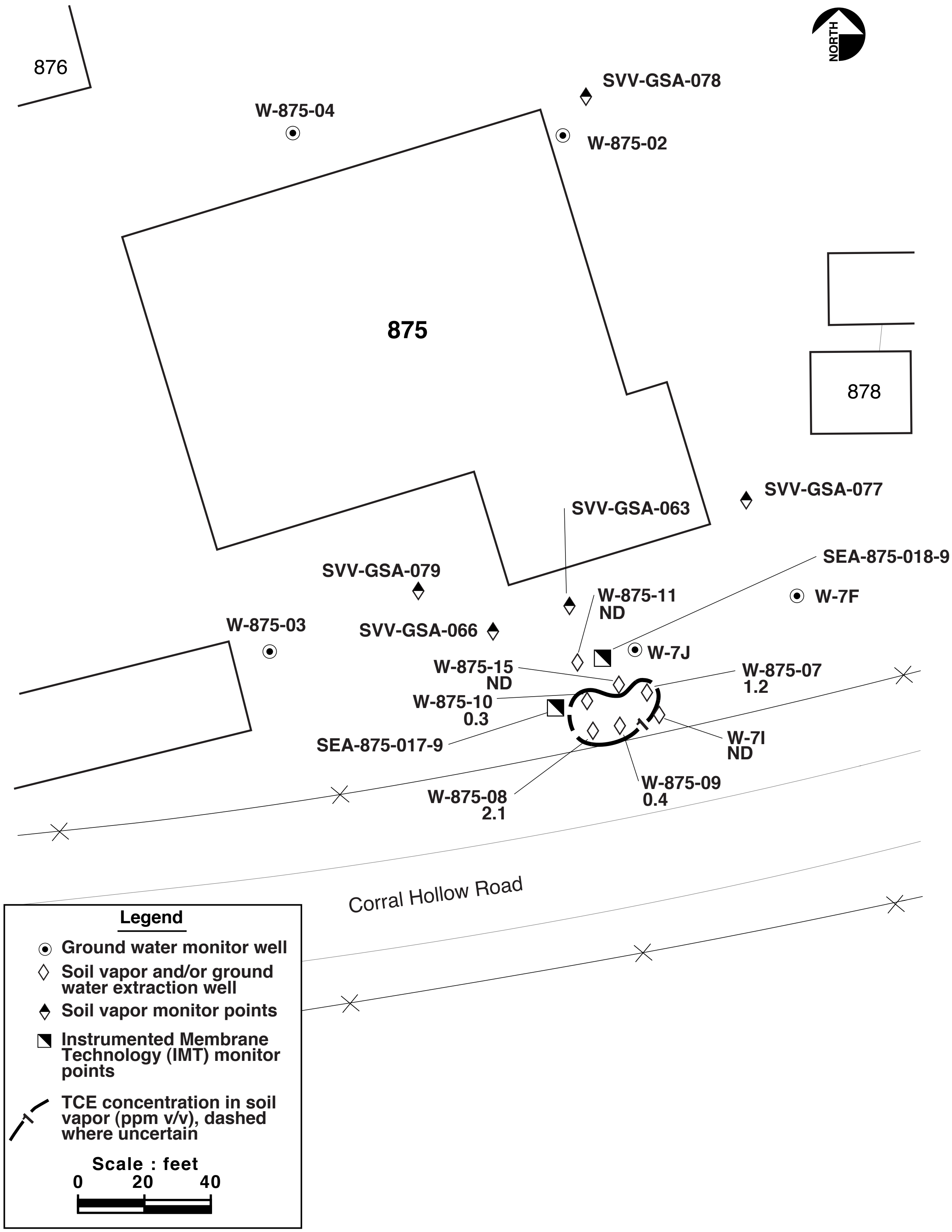


Figure 2.1-6. Central General Services Area OU total VOC isoconcentration contour map for the Qt-Tnsc$_1$ and Qal-Tnbs$_1$ HSUs.



ERD-S3R-06-0093

Figure 2.1-7. TCE concentration (ppm v/v) in soil vapor near Building 875 of the Central GSA, May 3 and 4, 2006.

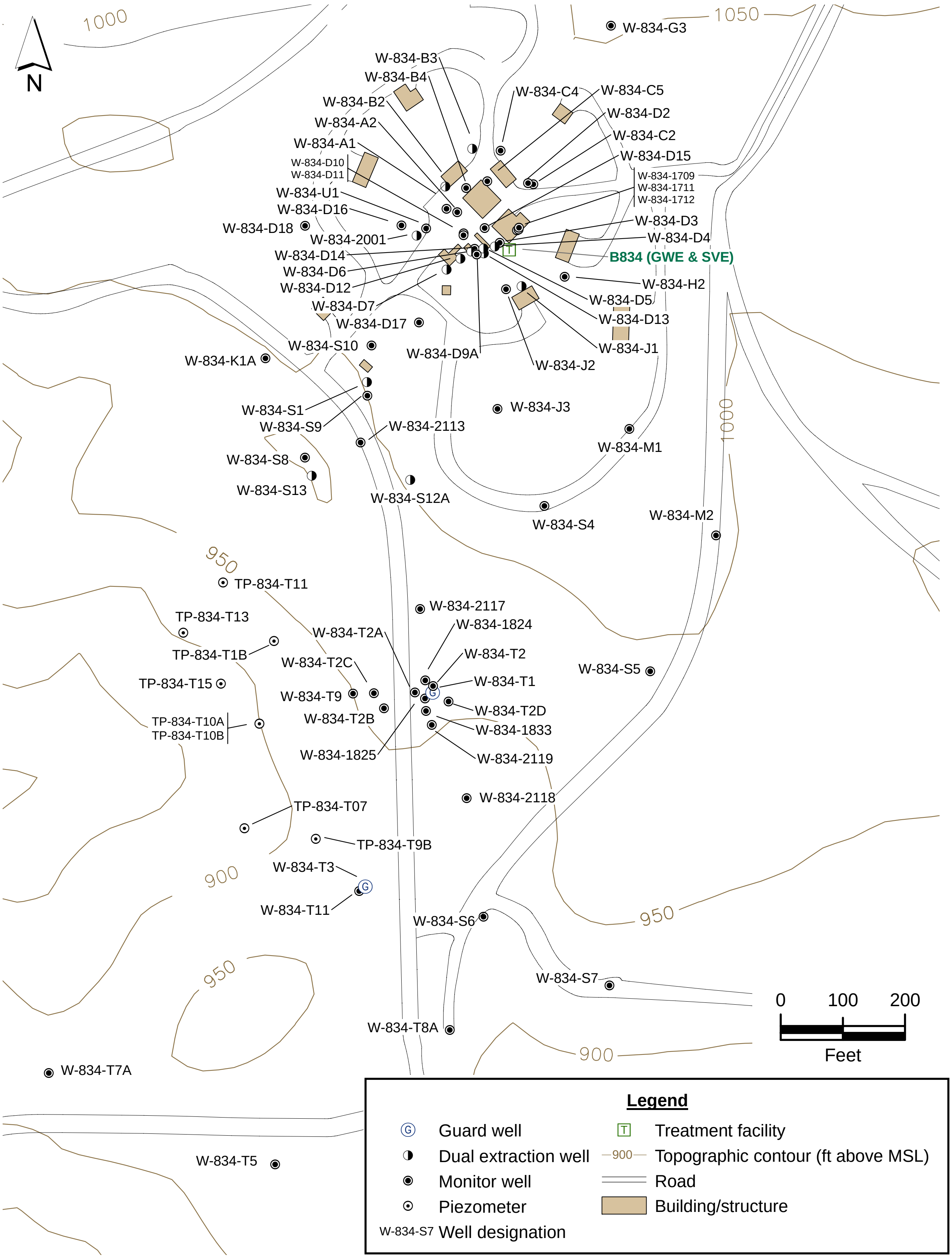


Figure 2.2-1. Building 834 OU site map showing monitor and extraction wells, and treatment facilities.

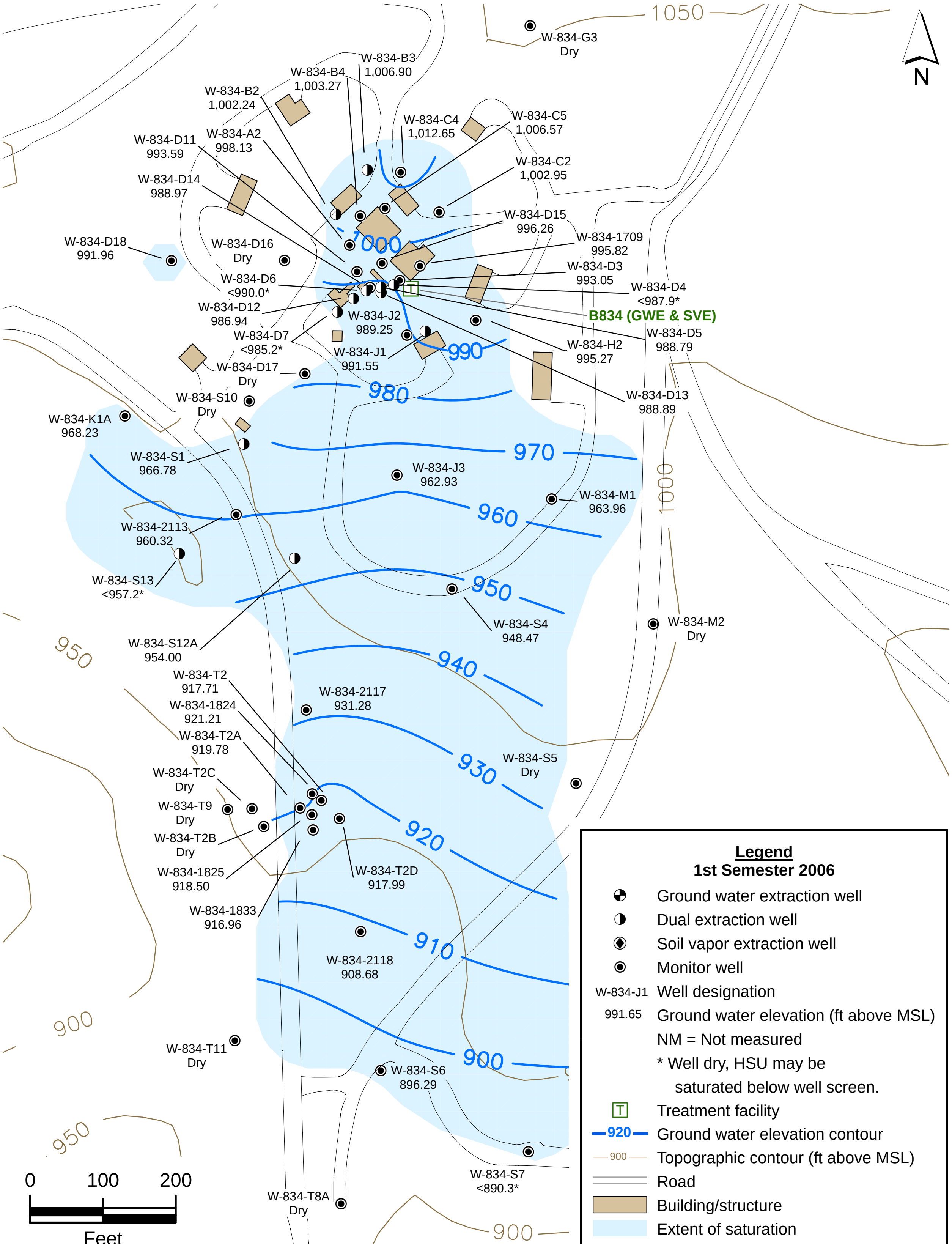


Figure 2.2-2. Building 834 OU ground water potentiometric surface map for the Tpsg perched water-bearing zone.

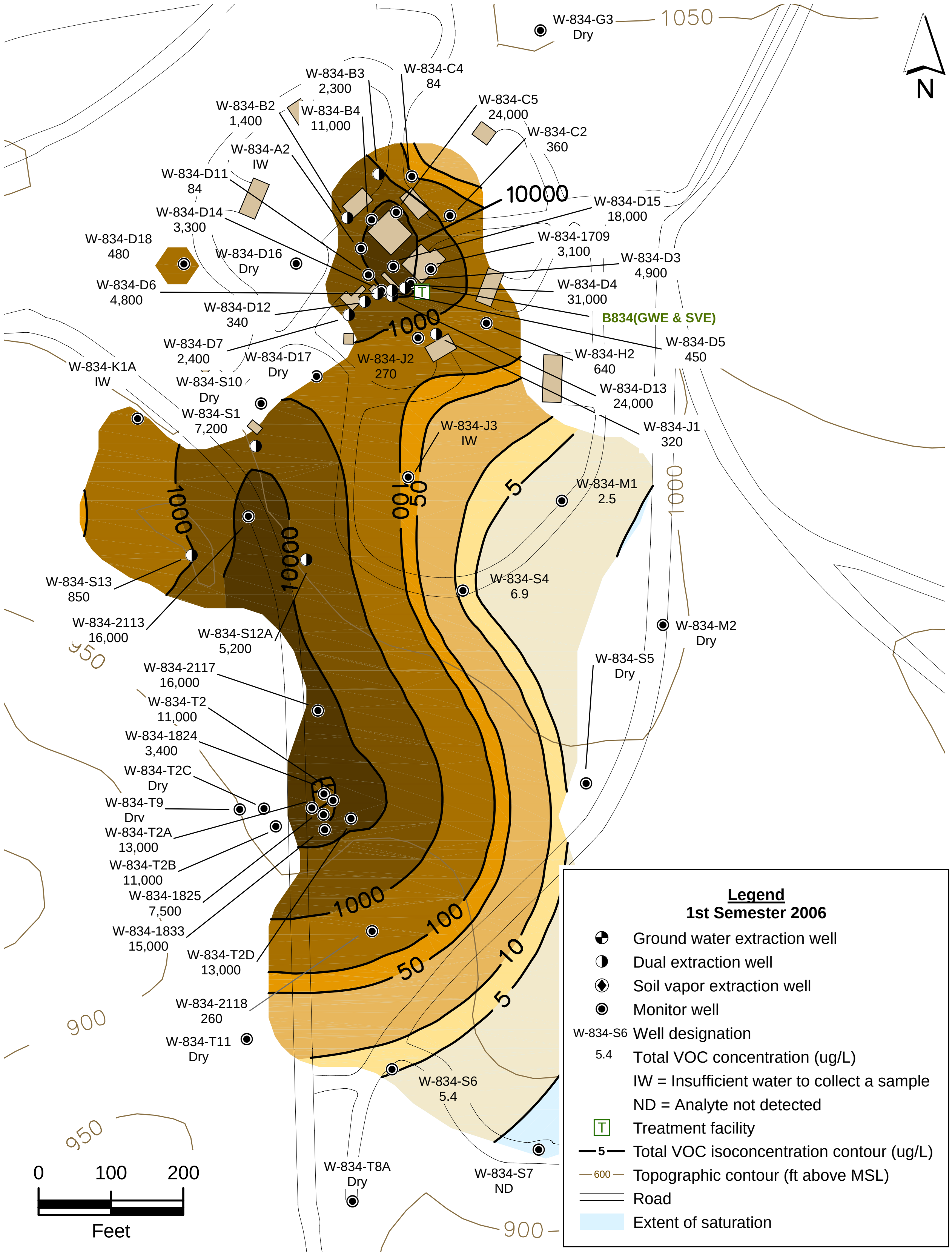


Figure 2.2-3. Building 834 OU total VOC isoconcentration contour map for the Tpsg perched water-bearing zone.

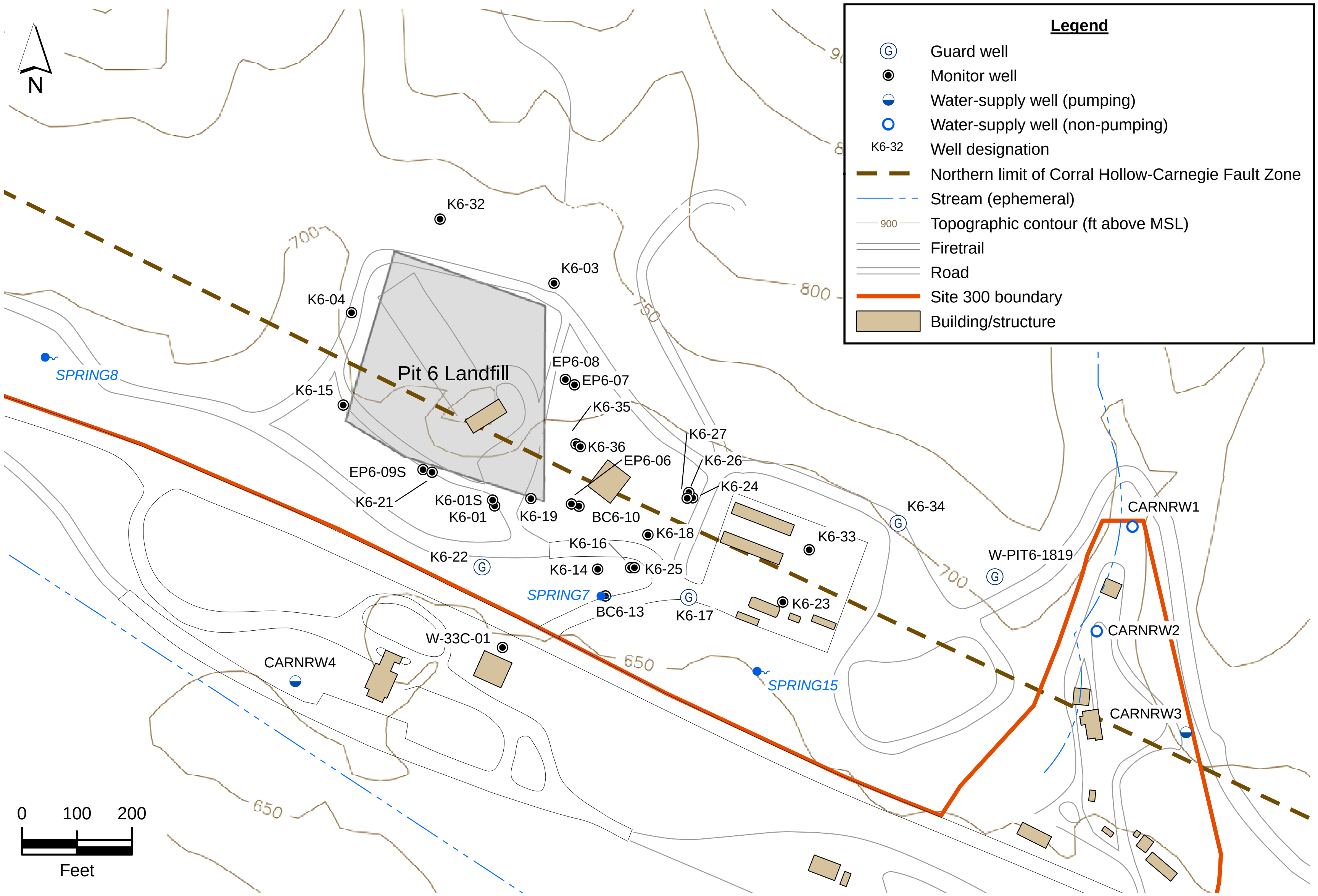


Figure 2.3-1. Pit 6 Landfill OU site map showing monitor and water-supply wells.

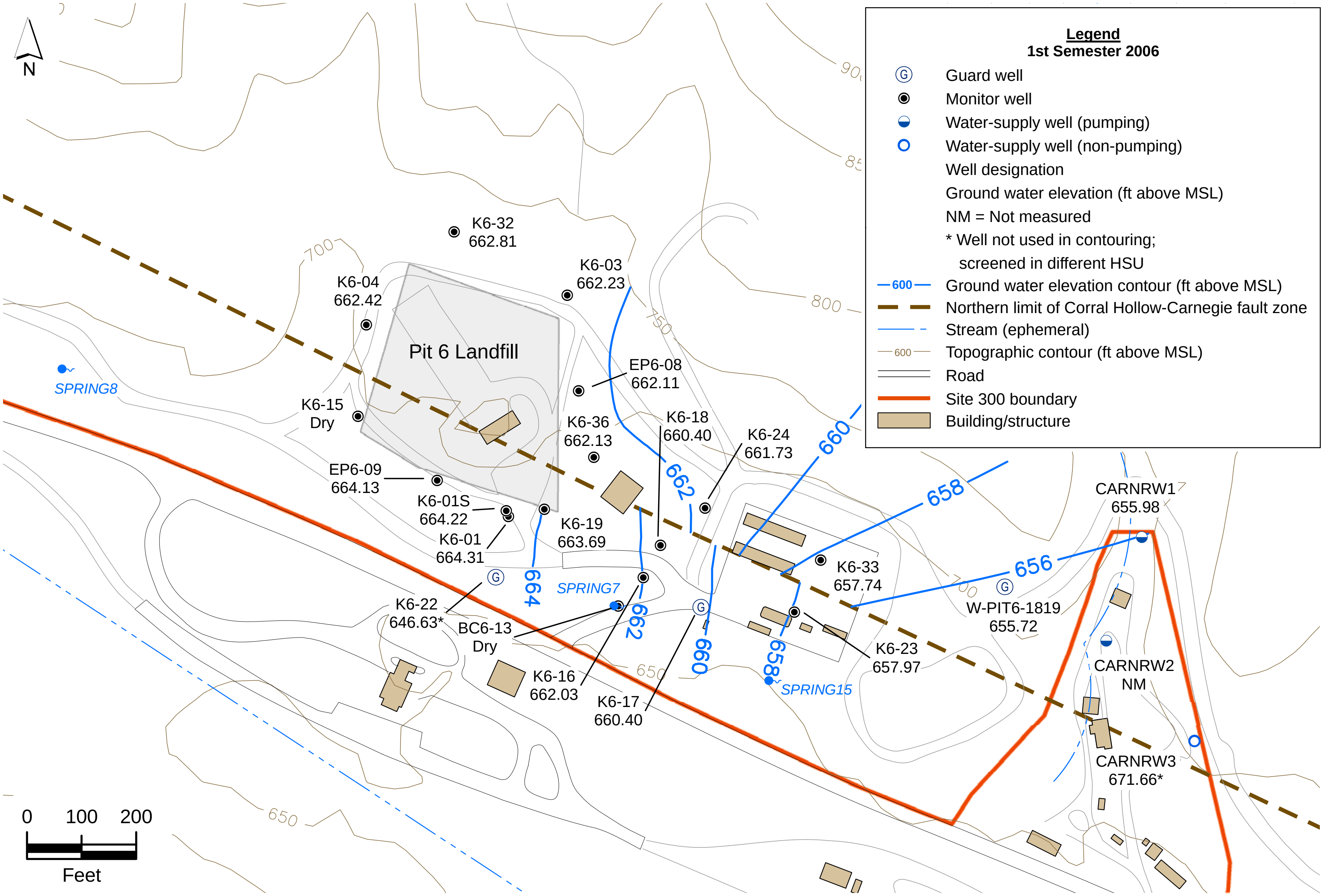


Figure 2.3-2. Pit 6 Landfill OU ground water potentiometric surface map for the Qt-Tnbs$_1$ HSU.

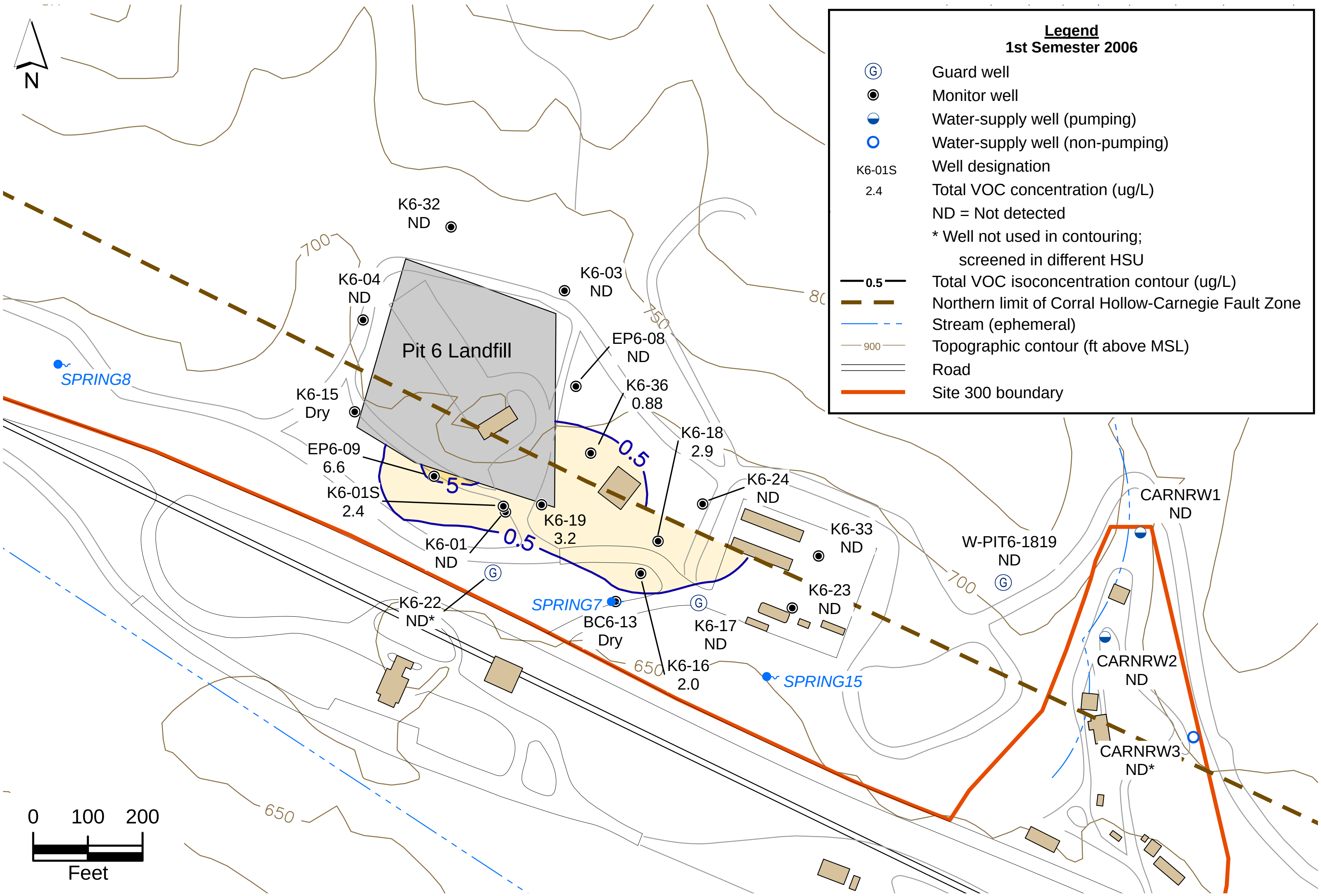


Figure 2.3-3. Pit 6 Landfill OU total VOC isoconcentration contour map for the Qt-Tnbs$_1$ HSU.

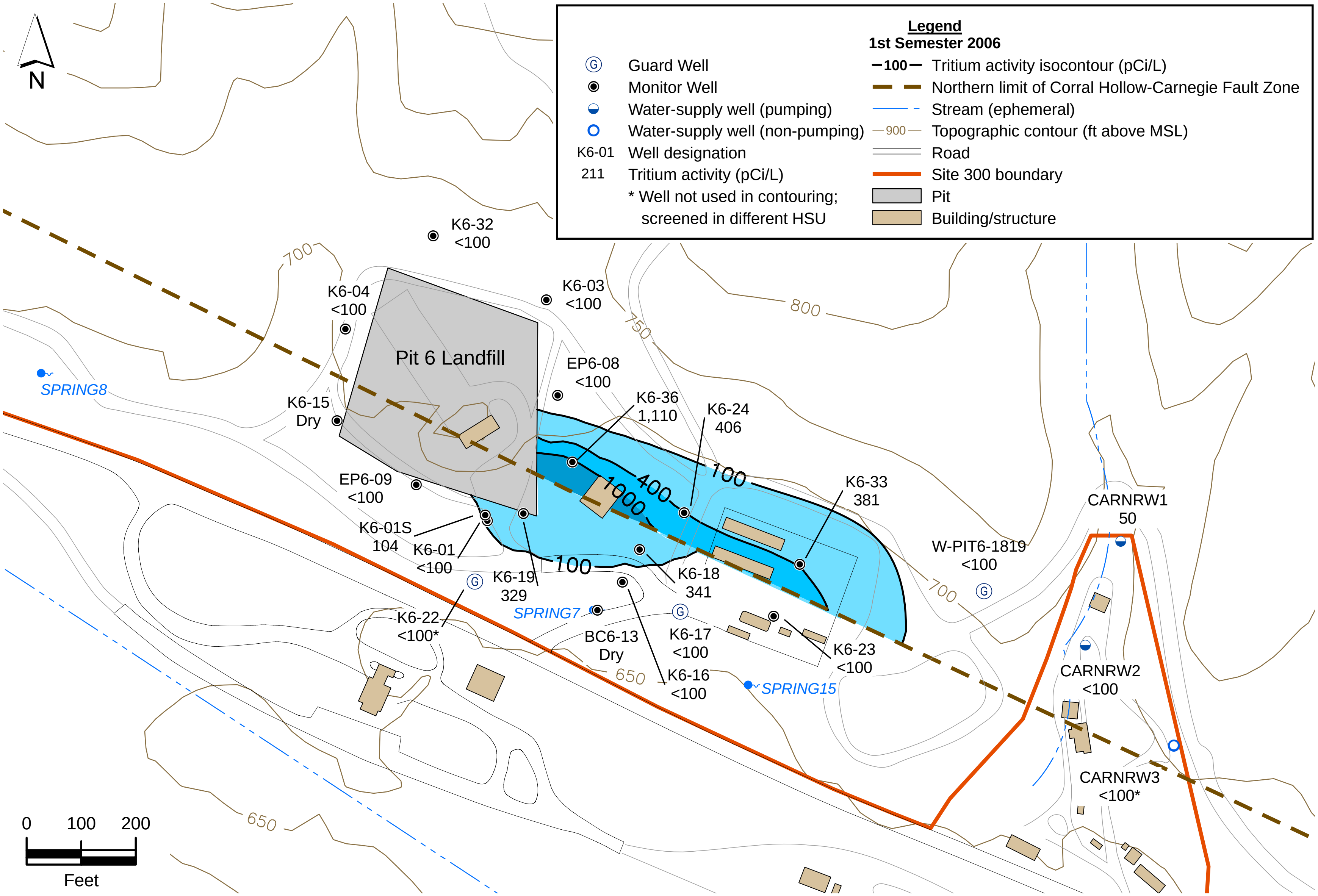


Figure 2.3-4. Pit 6 Landfill OU tritium activity isocontour map for the Qt-Tnbs$_1$ HSU.

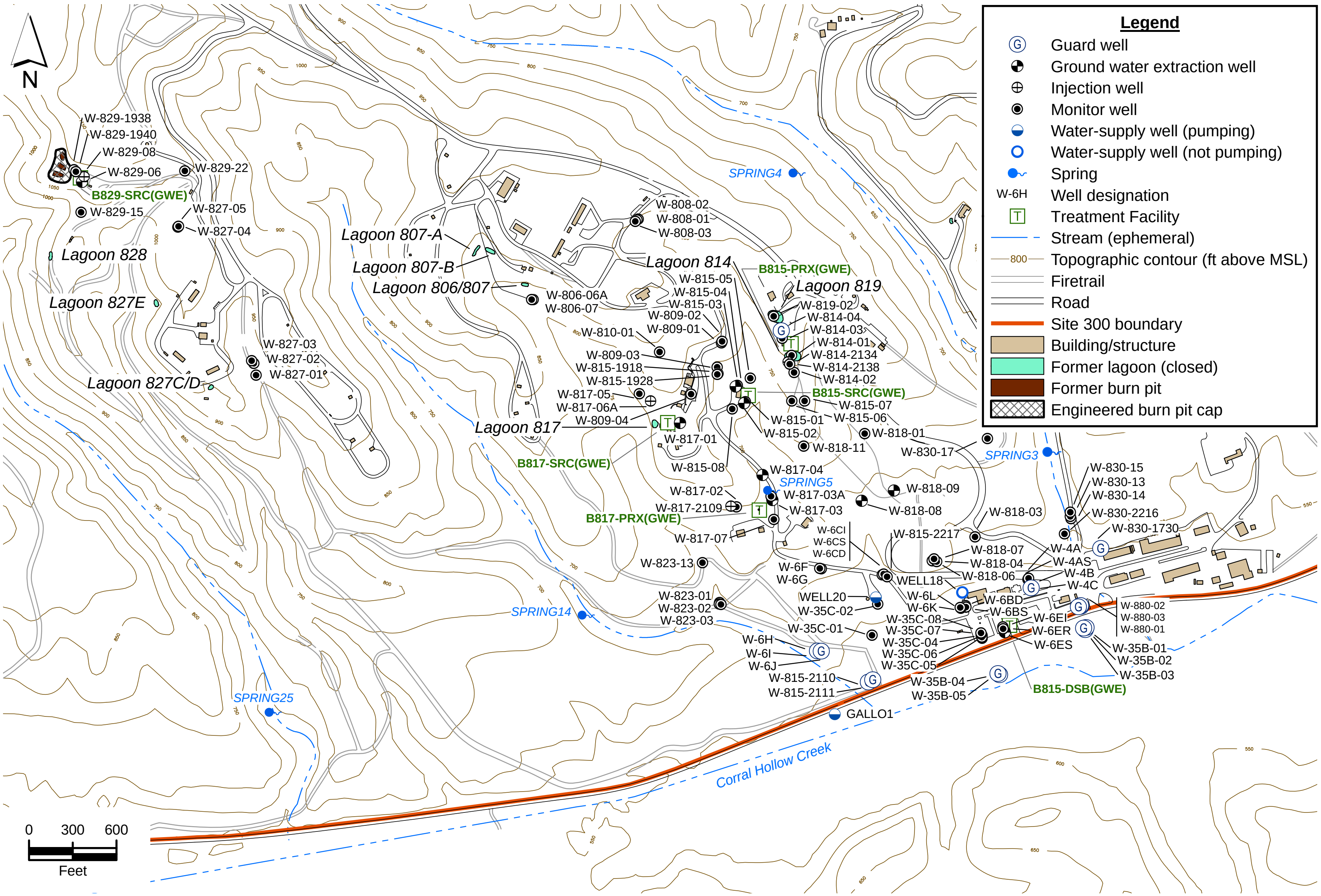


Figure 2.4-1. High Explosive Process Area OU site map showing monitor, extraction, injection, and water-supply wells, and treatment facilities.

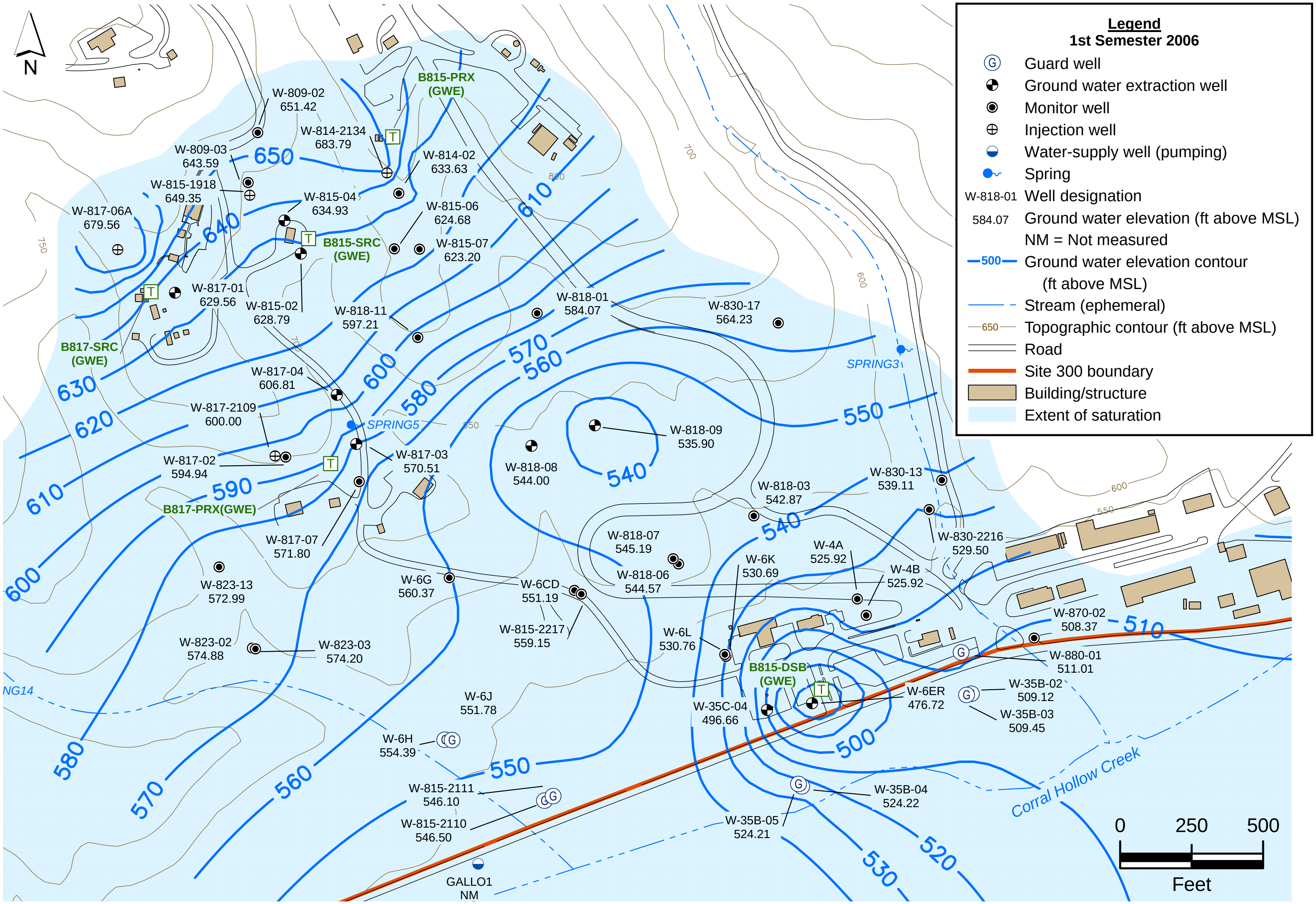


Figure 2.4-2. High Explosive Process Area OU ground water potentiometric surface map for the Tnbs$_2$ HSU.

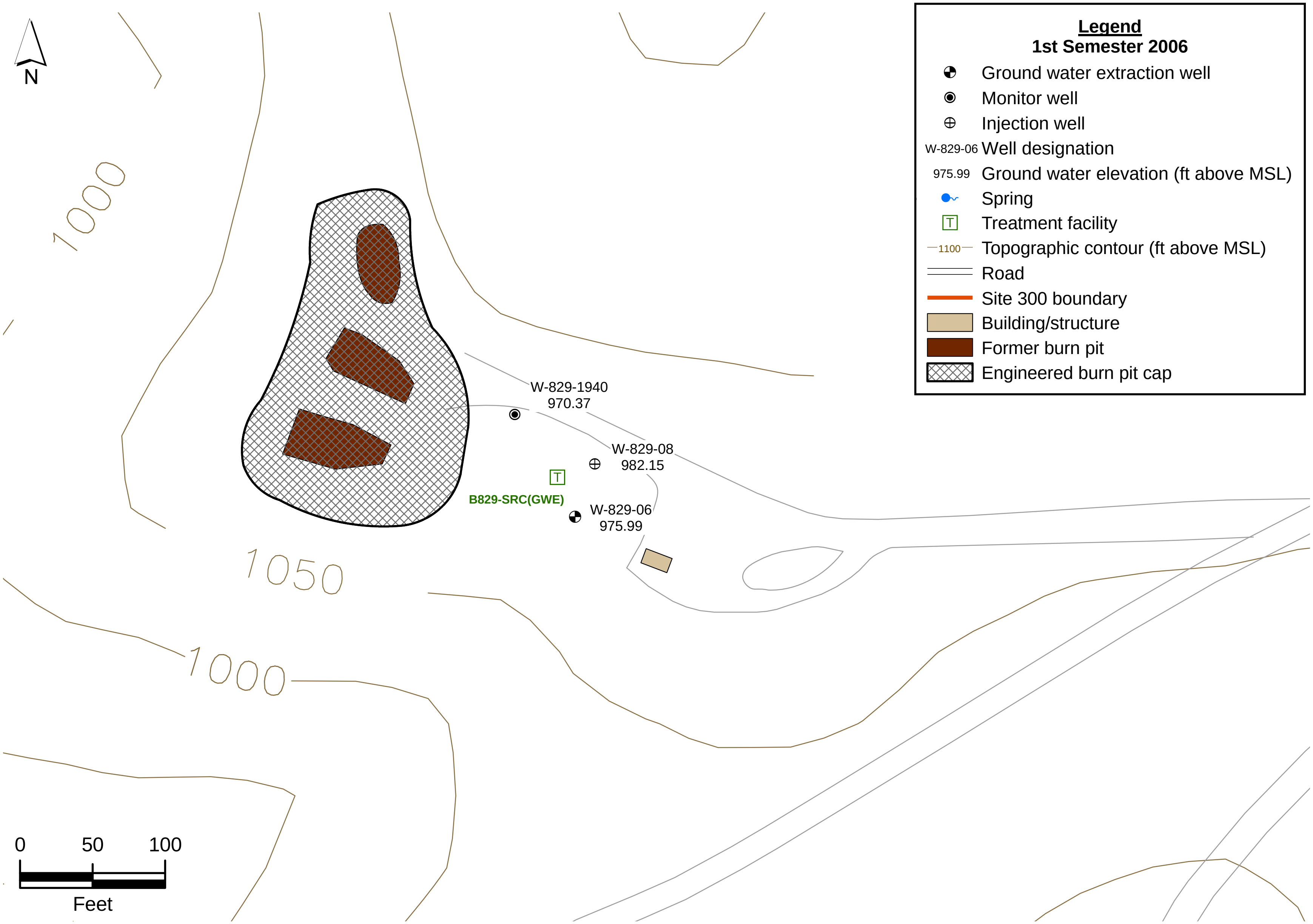


Figure 2.4-3. Building 829 burn pit map showing ground water elevations for the Tnsc$_{1b}$ HSU.

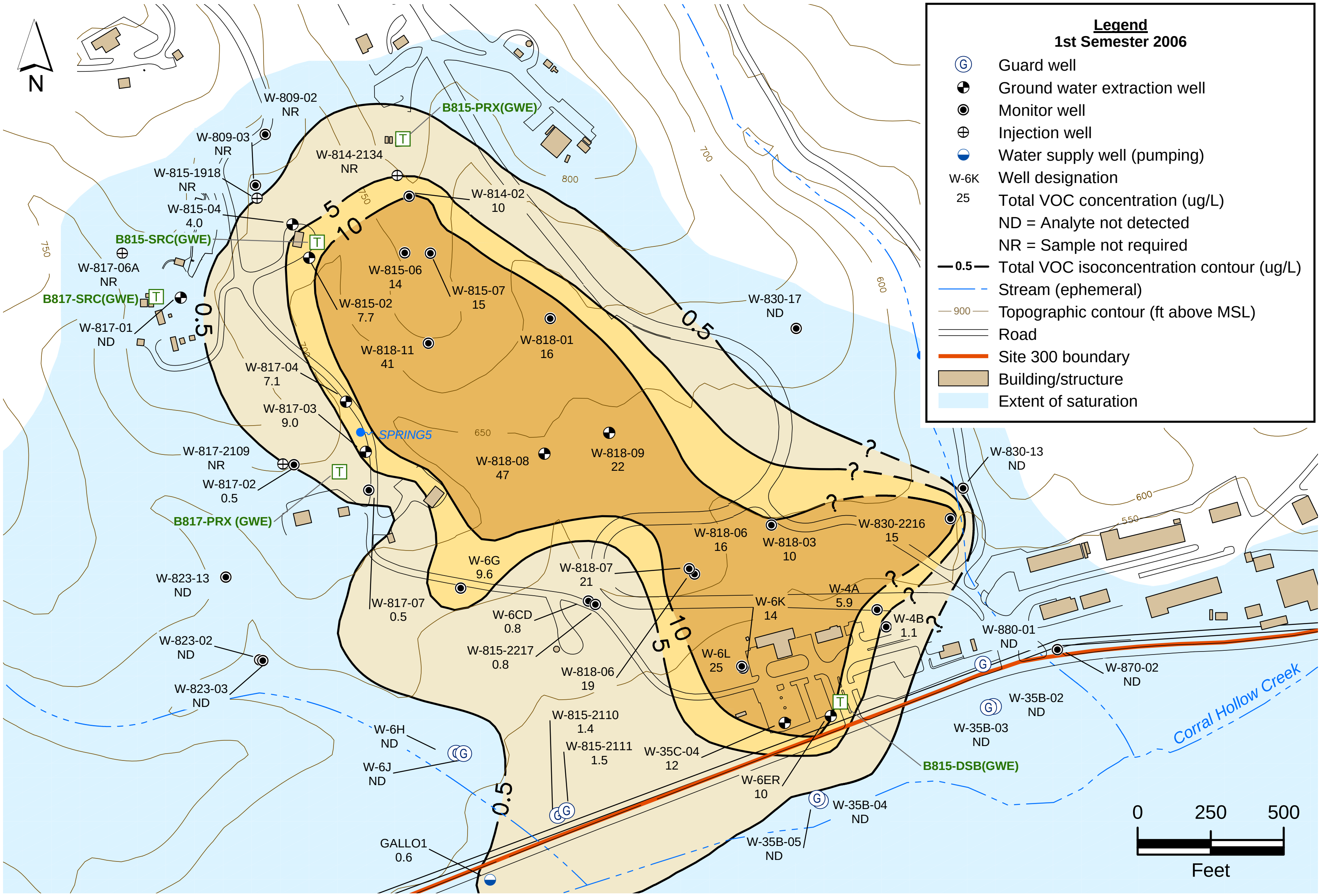


Figure 2.4-4. High Explosive Process Area total VOC isoconcentration contour map for the Tnbs$_2$ HSU.

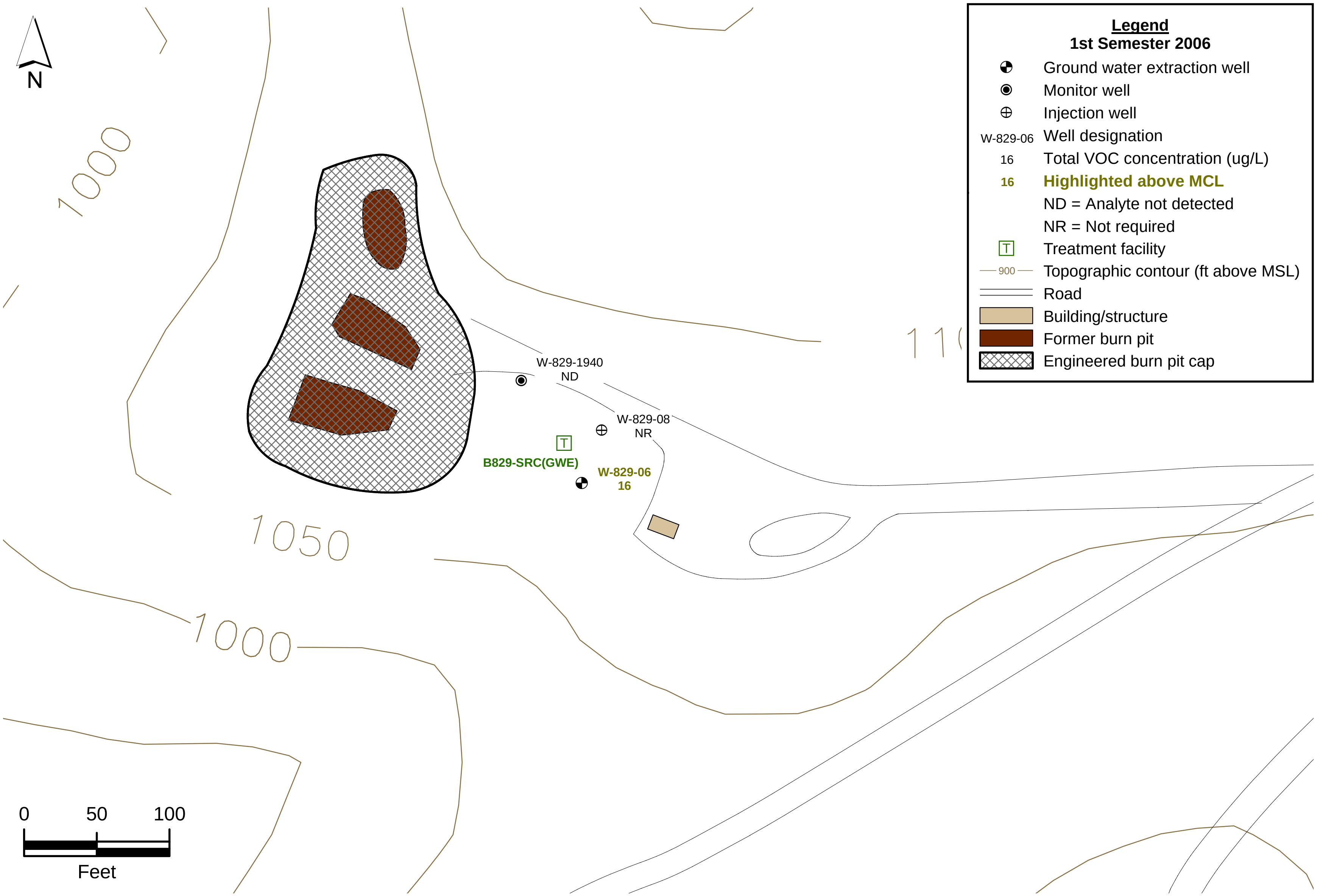


Figure 2.4-5. Building 829 burn pit map showing total VOC concentrations for the Tnsc$_{1b}$ HSU.

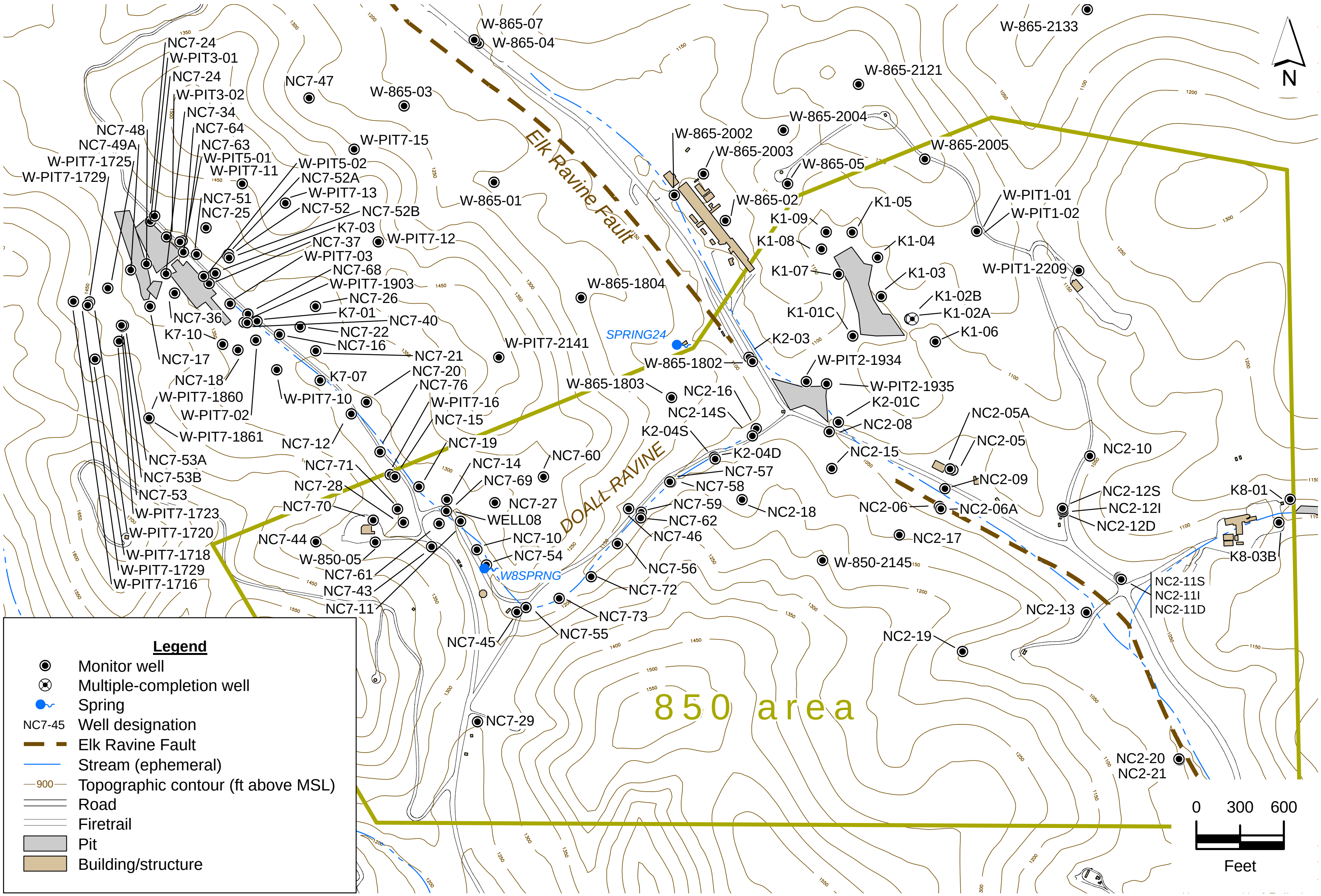


Figure 2.5-1. Building 850 area site map showing monitor wells and springs.

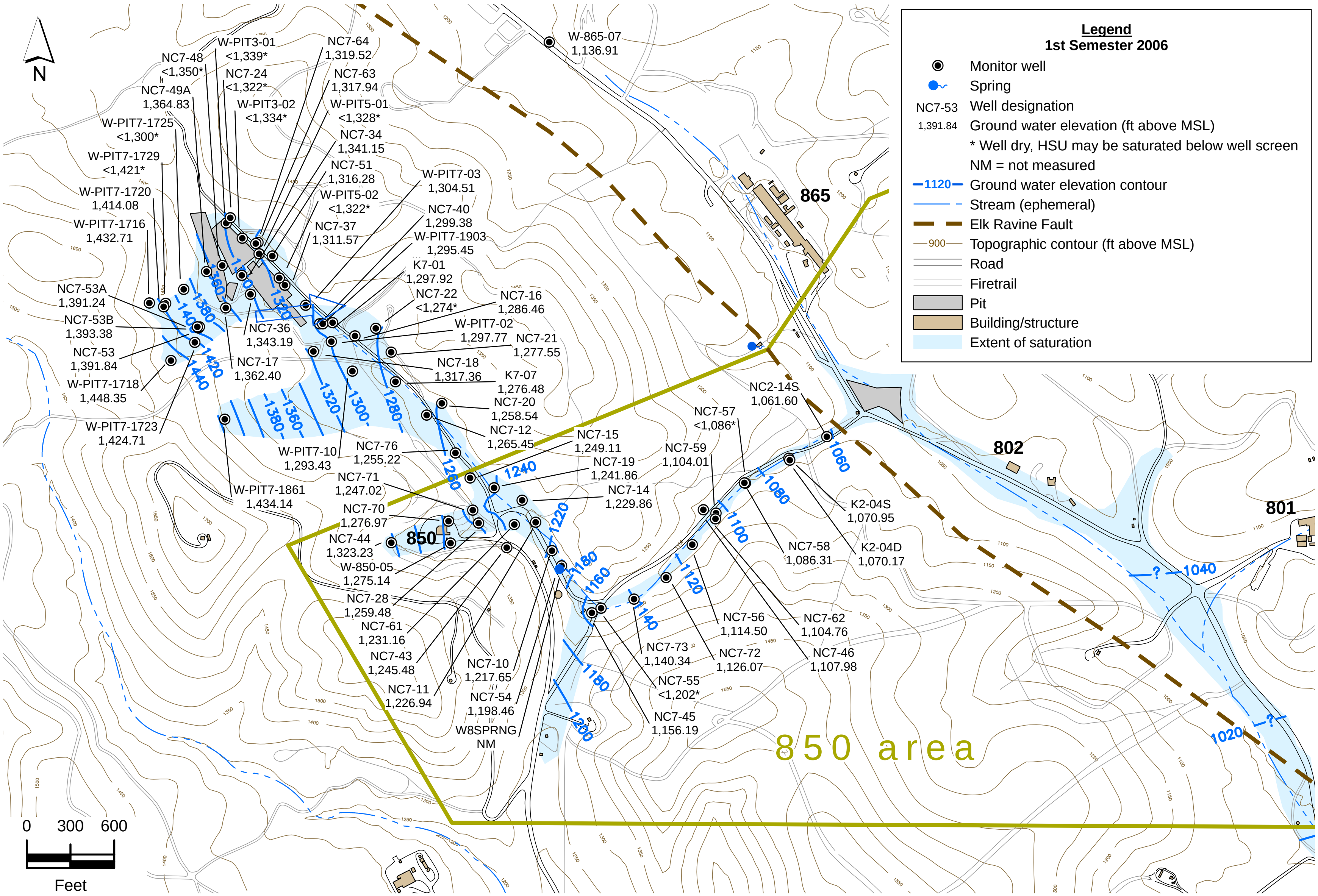


Figure 2.5-2. Building 850 area ground water potentiometric surface map for the Qal/WBR HSU.

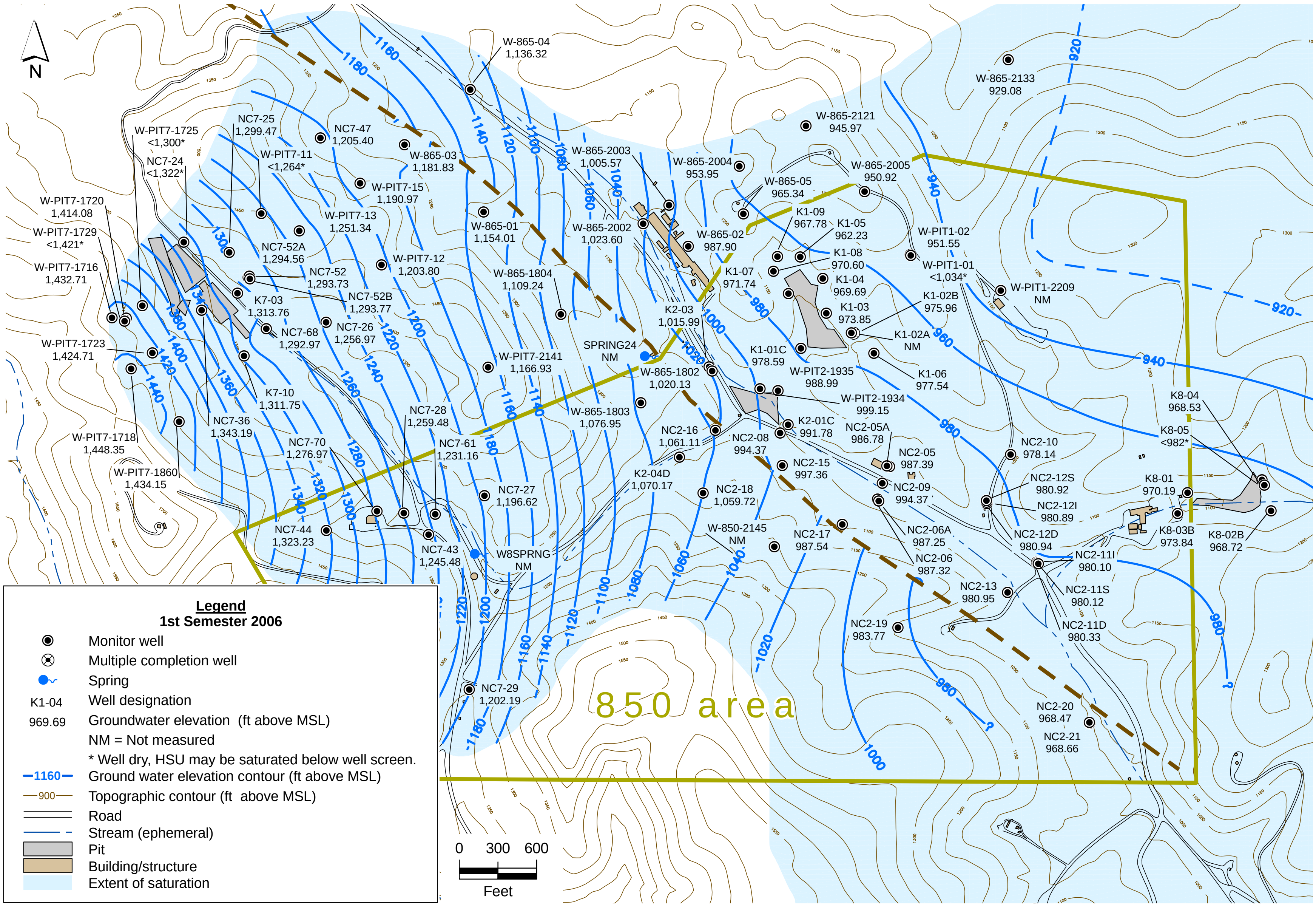


Figure 2.5-3. Building 850 OU ground water potentiometric surface map for the $Tnbs_1/Tnbs_0$ HSU.

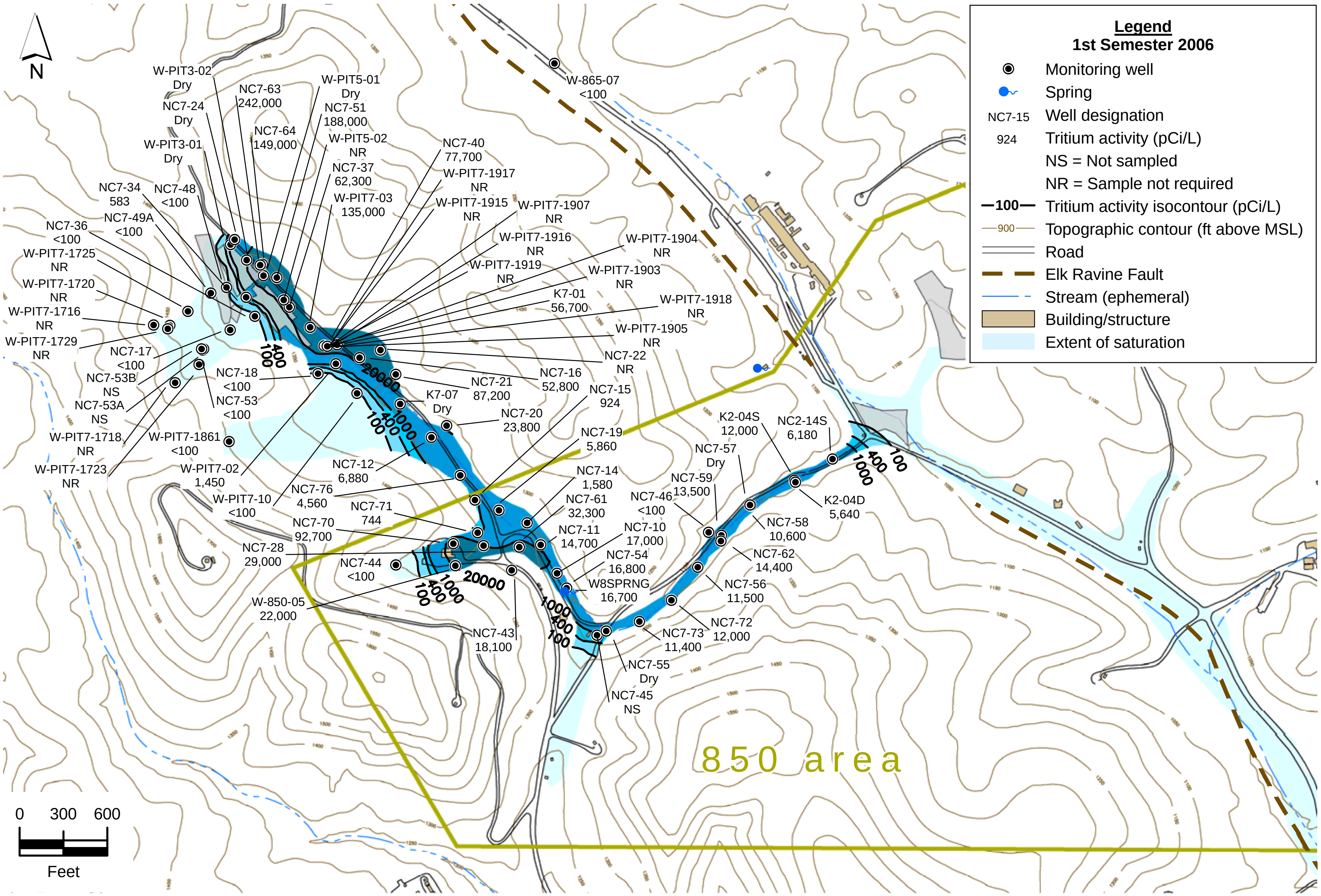


Figure 2.5-4. Building 850 area tritium activity isocontour map for the Qal/WBR HSU.

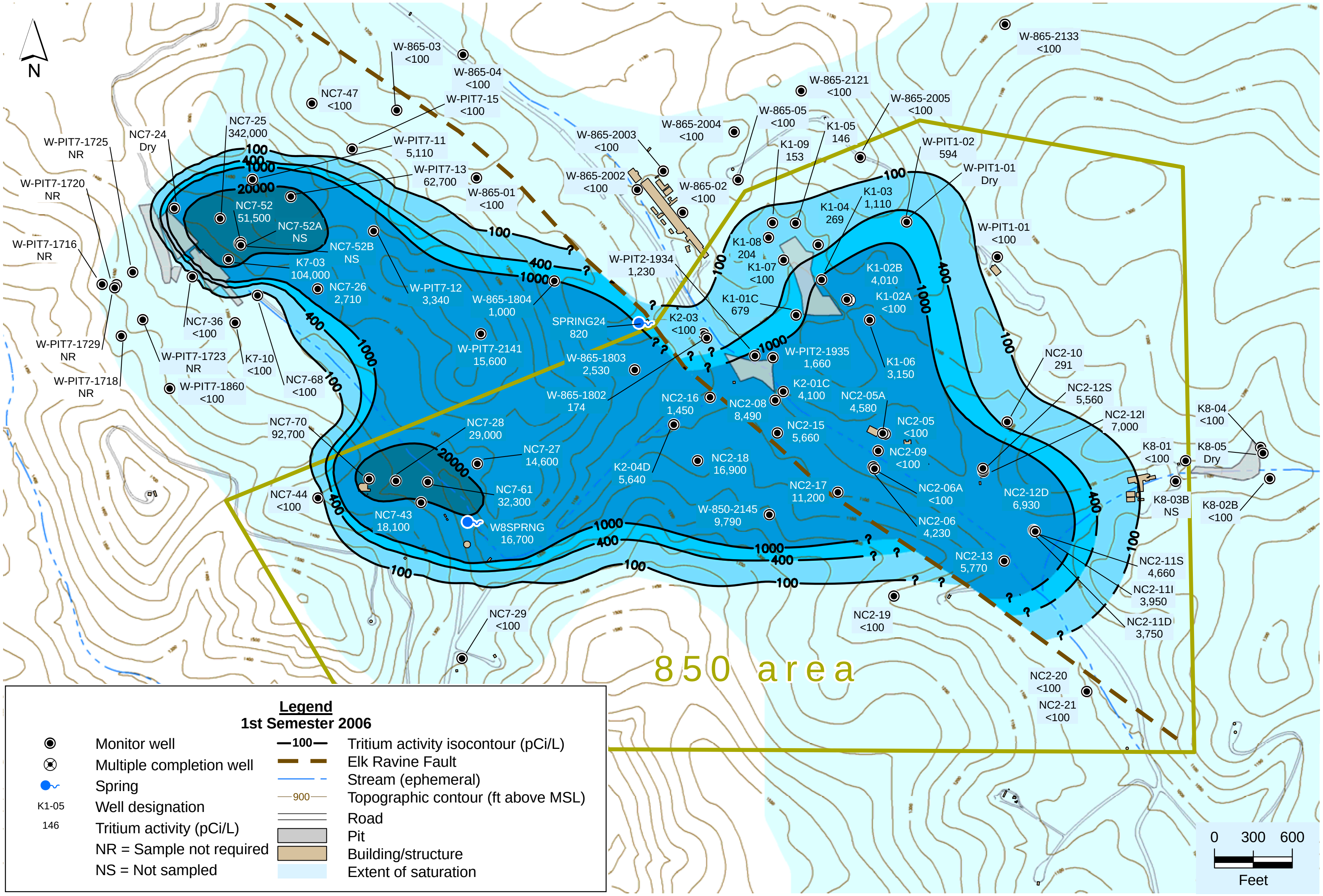


Figure 2.5-5. Building 850 area tritium activity isocontour map for the $Tnbs_1/Tnbs_0$ HSU.

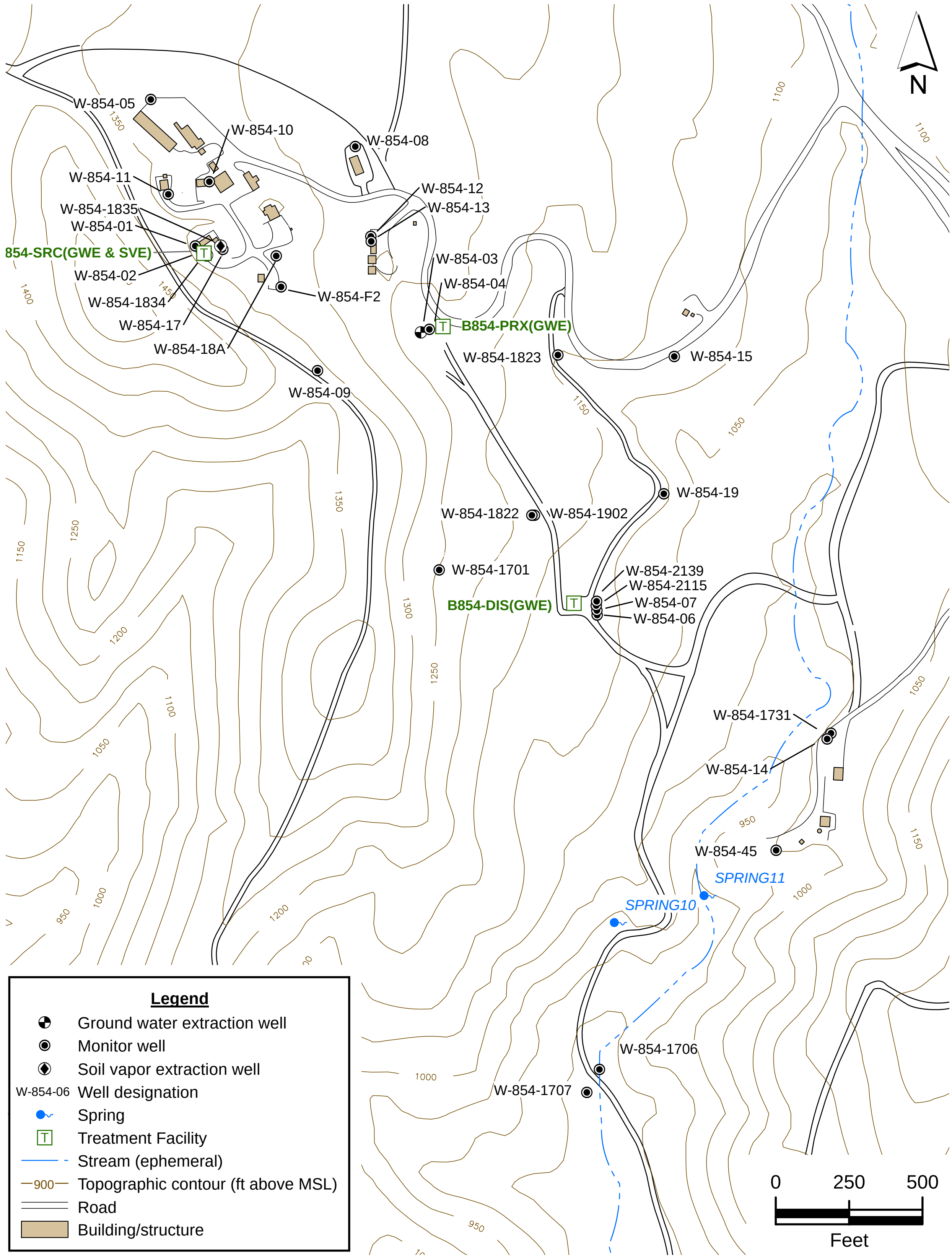


Figure 2.6-1. Building 854 OU site map showing monitor and extraction wells, and treatment facilities.

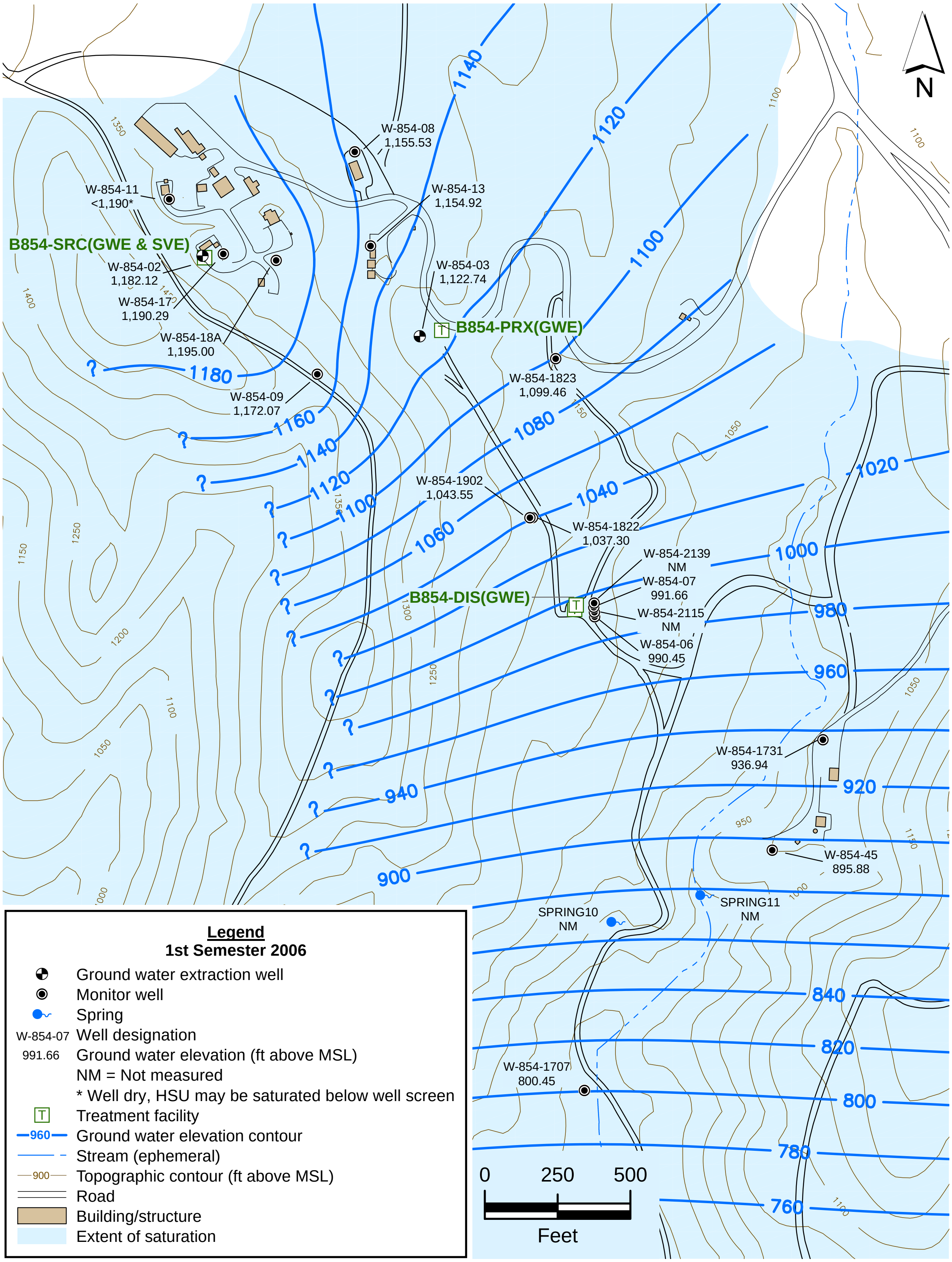


Figure 2.6-2. Building 854 OU ground water potentiometric surface map for the $Tnbs_1/Tnsc_0$ HSU.

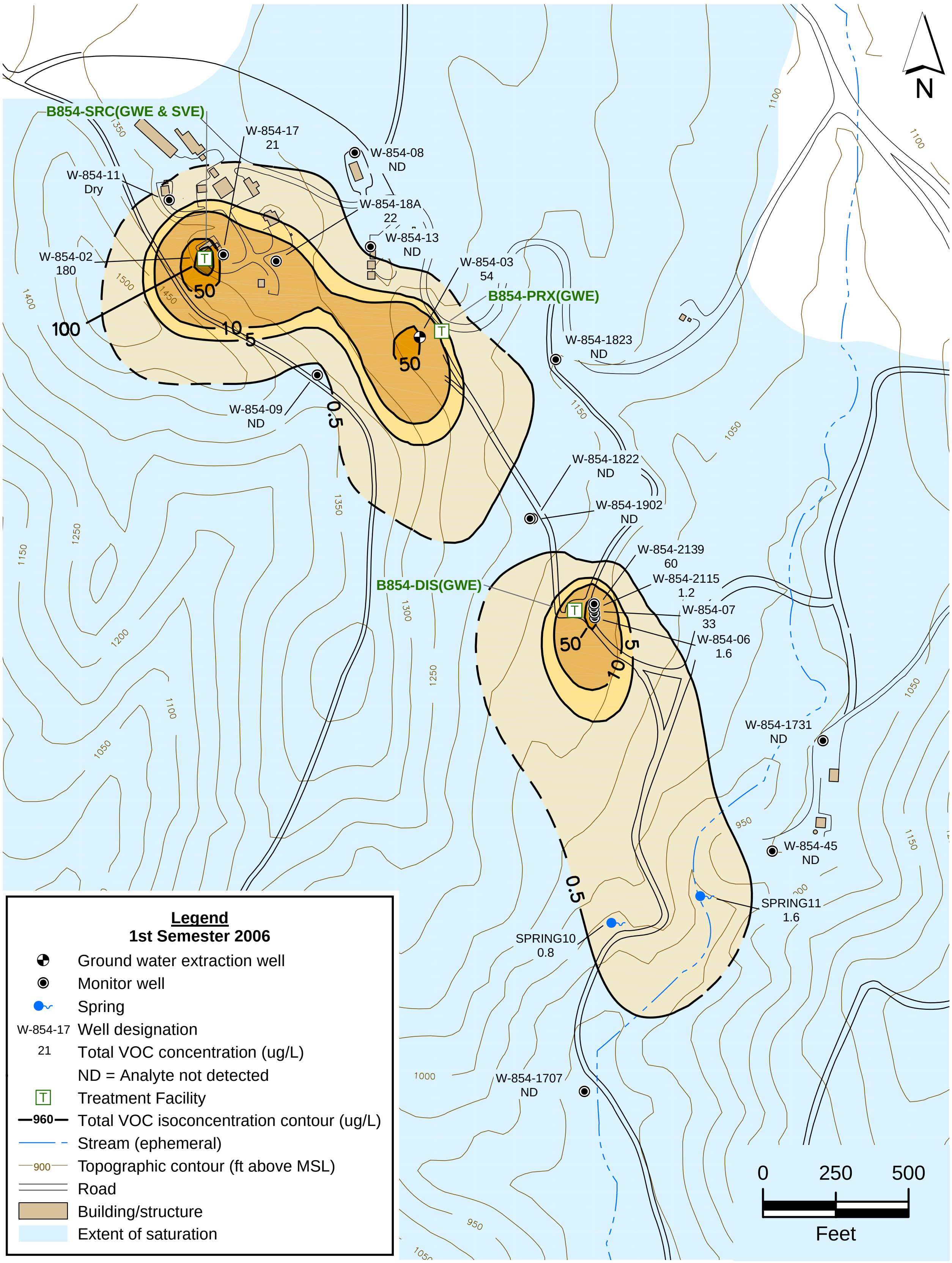


Figure 2.6-3. Building 854 OU total VOC isoconcentration contour map for the $Tnbs_1/Tnsc_0$ HSU.

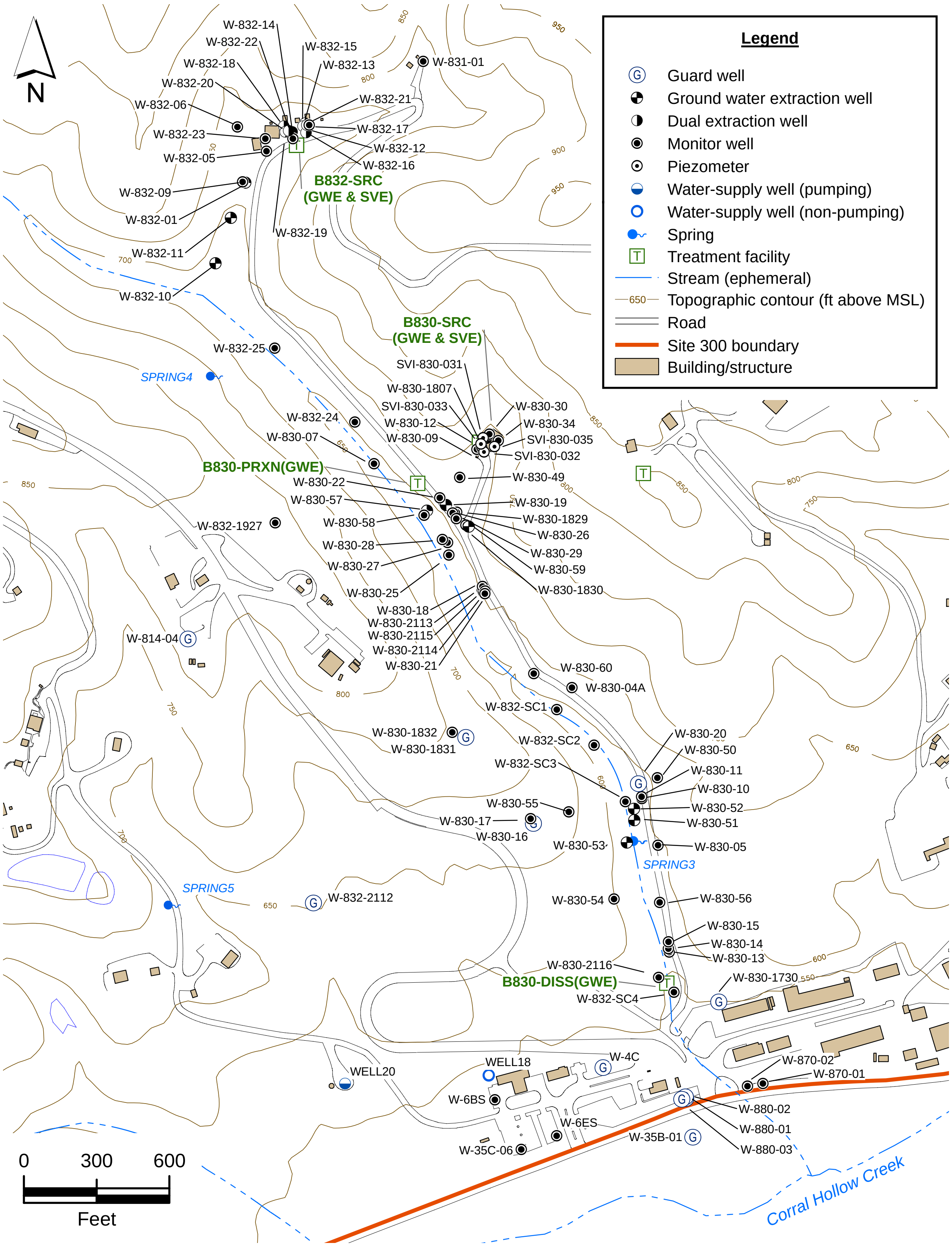


Figure 2.7-1. Building 832 Canyon OU site map showing monitor, extraction and water-supply wells, and treatment facilities.

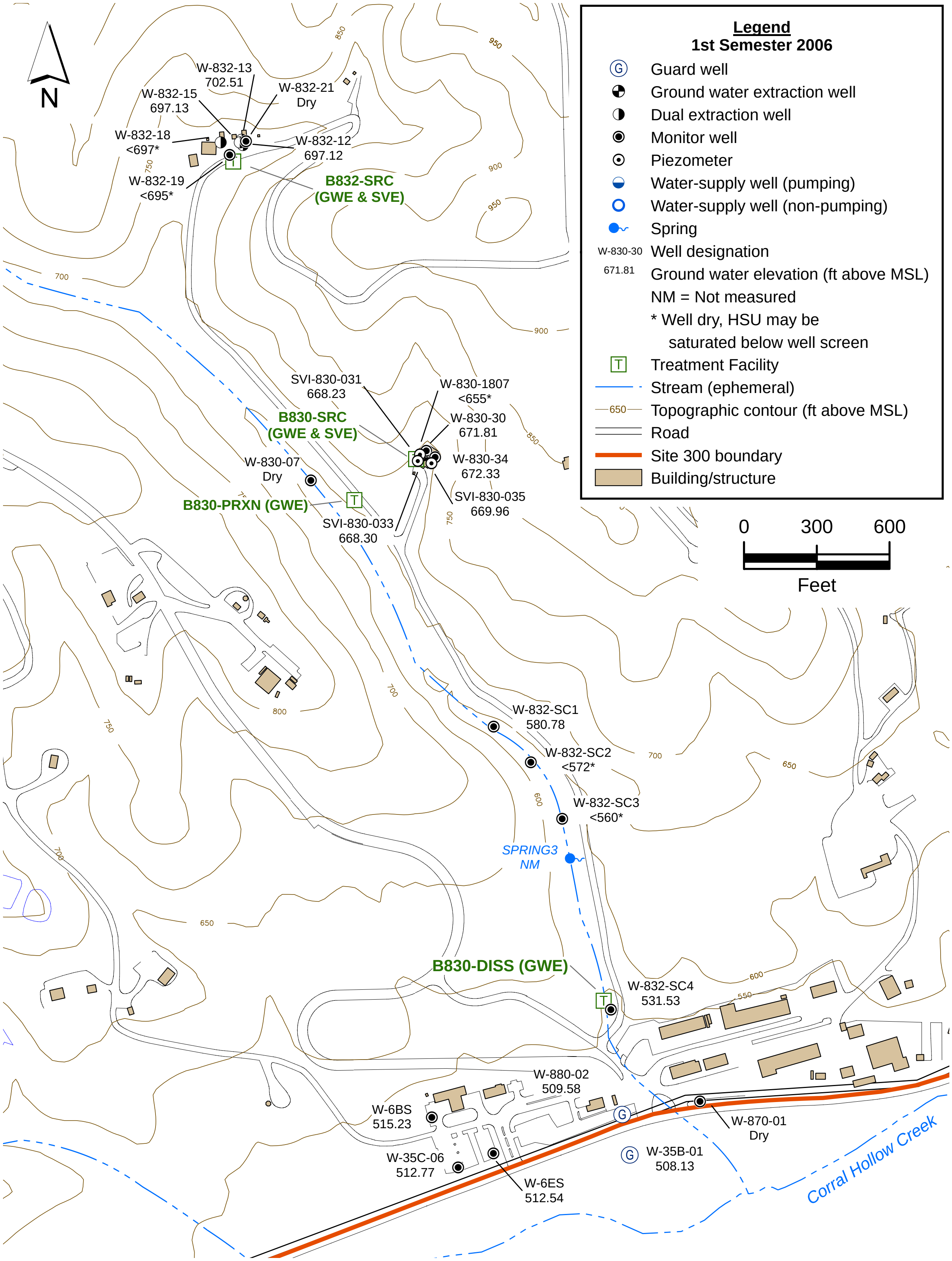


Figure 2.7-2. Building 832 Canyon OU map showing ground water elevations for the Qal/WBR HSU.

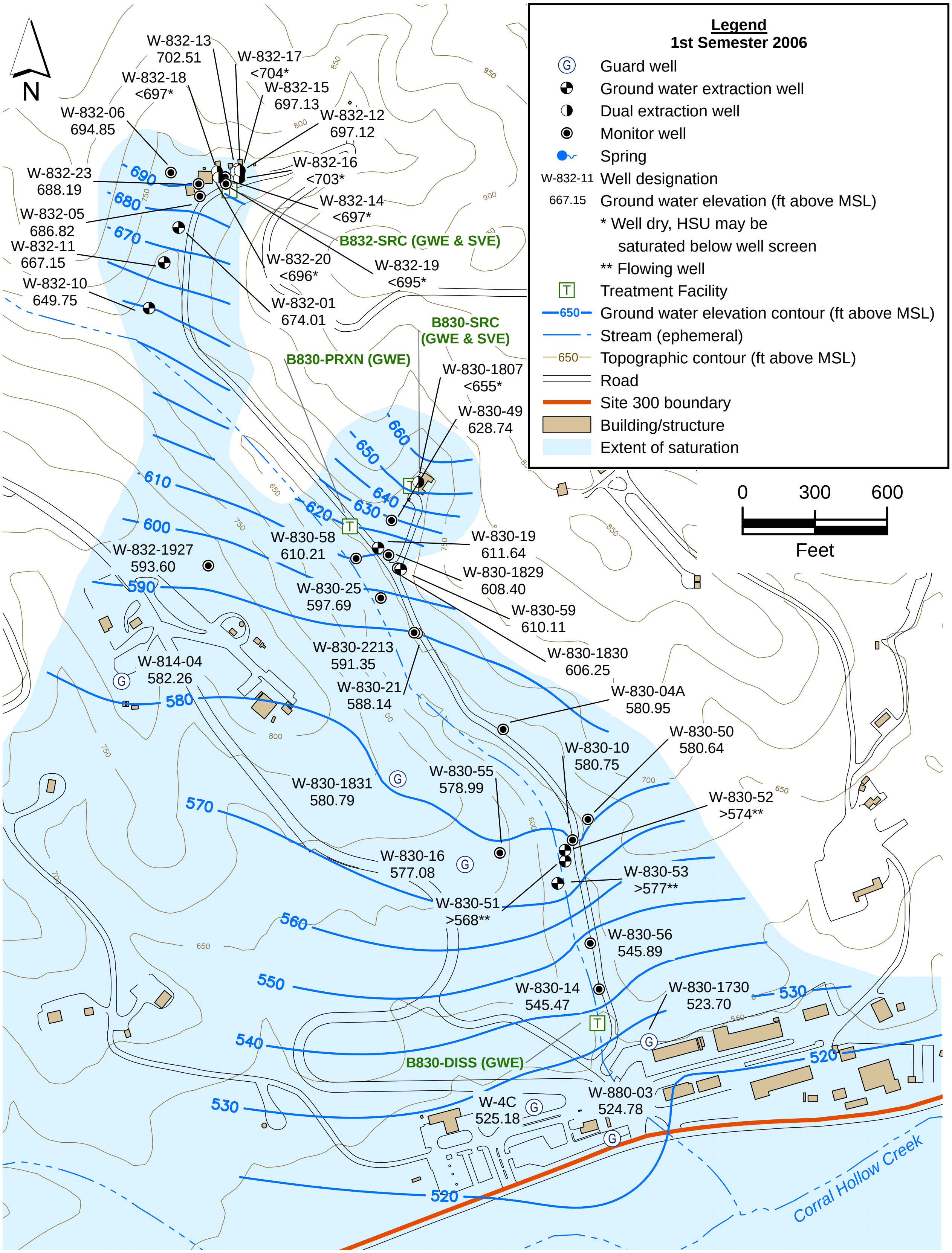


Figure 2.7-3. Building 832 Canyon OU ground water potentiometric surface map for the Tnsc$_{1b}$ HSU.

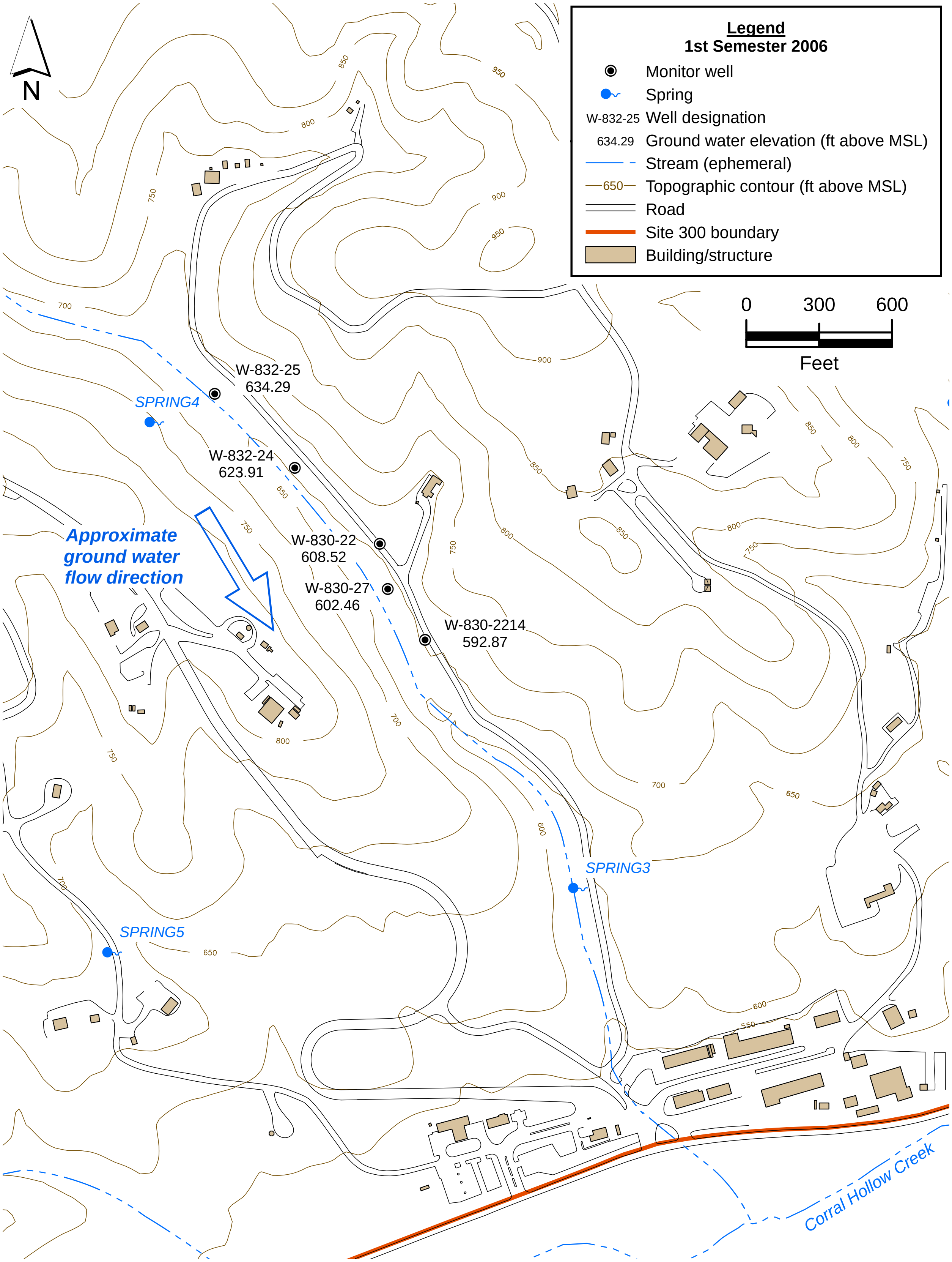


Figure 2.7-4. Building 832 Canyon OU map showing ground water elevations and hydraulic gradient direction for the Tnsc$_{1a}$ HSU.

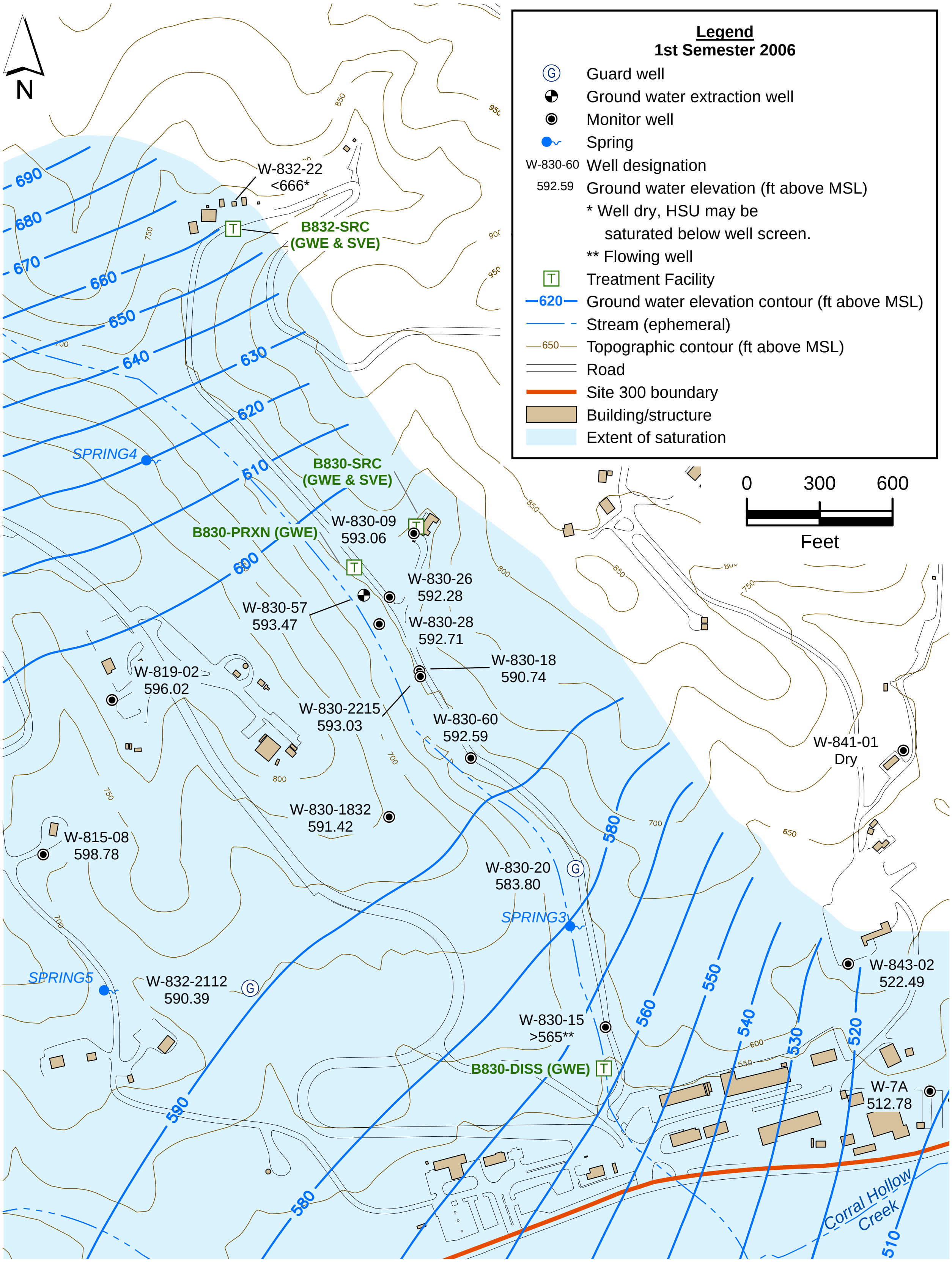


Figure 2.7-5. Building 832 Canyon OU ground water potentiometric surface map for the Upper Tnbs$_1$ HSU.

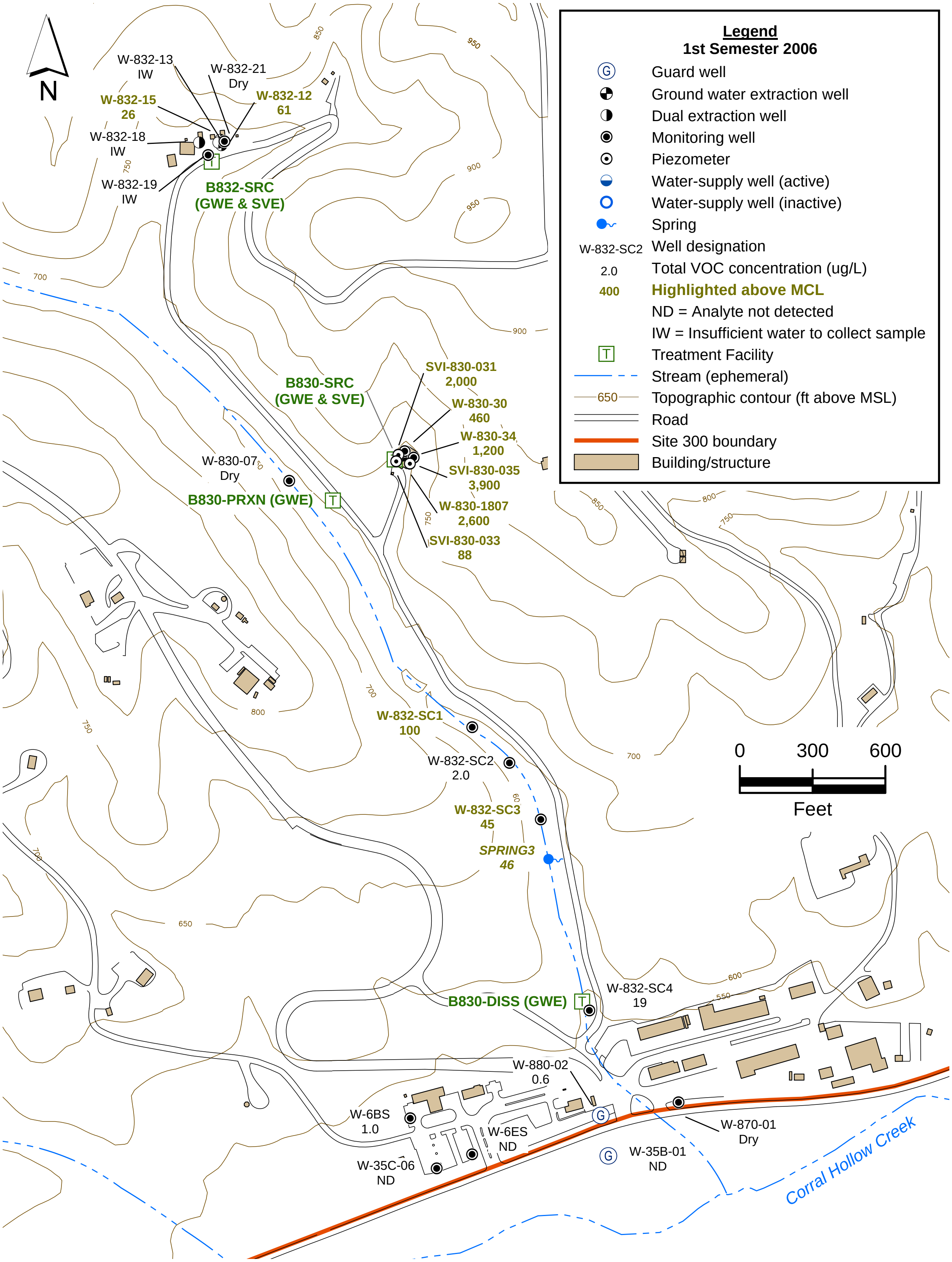


Figure 2.7-6. Building 832 Canyon OU map showing total VOC concentrations for the Qal/WBR HSU.

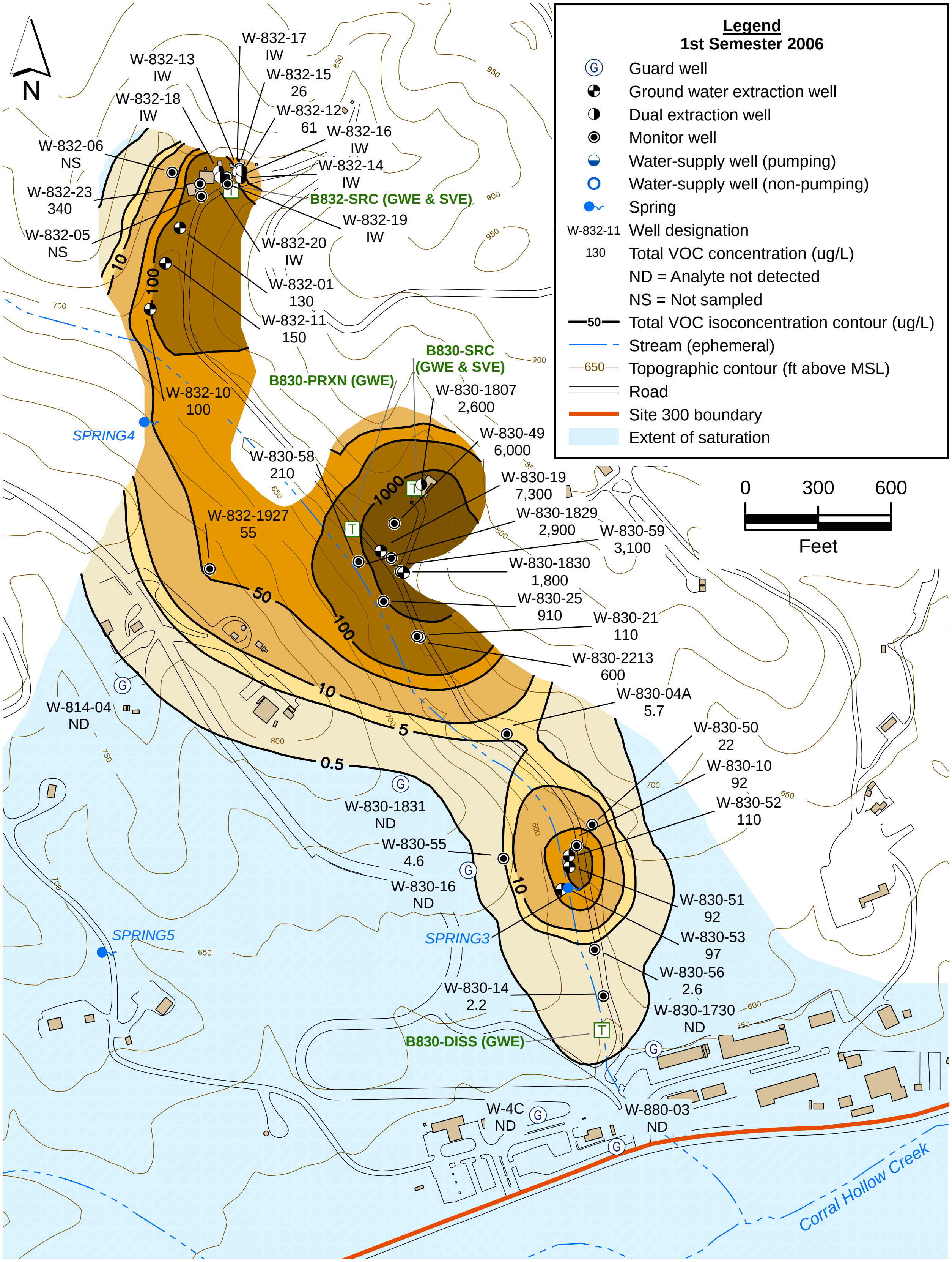


Figure 2.7-7. Building 832 Canyon OU total VOC isoconcentration contour map for the Tnsc$_{1b}$ HSU.

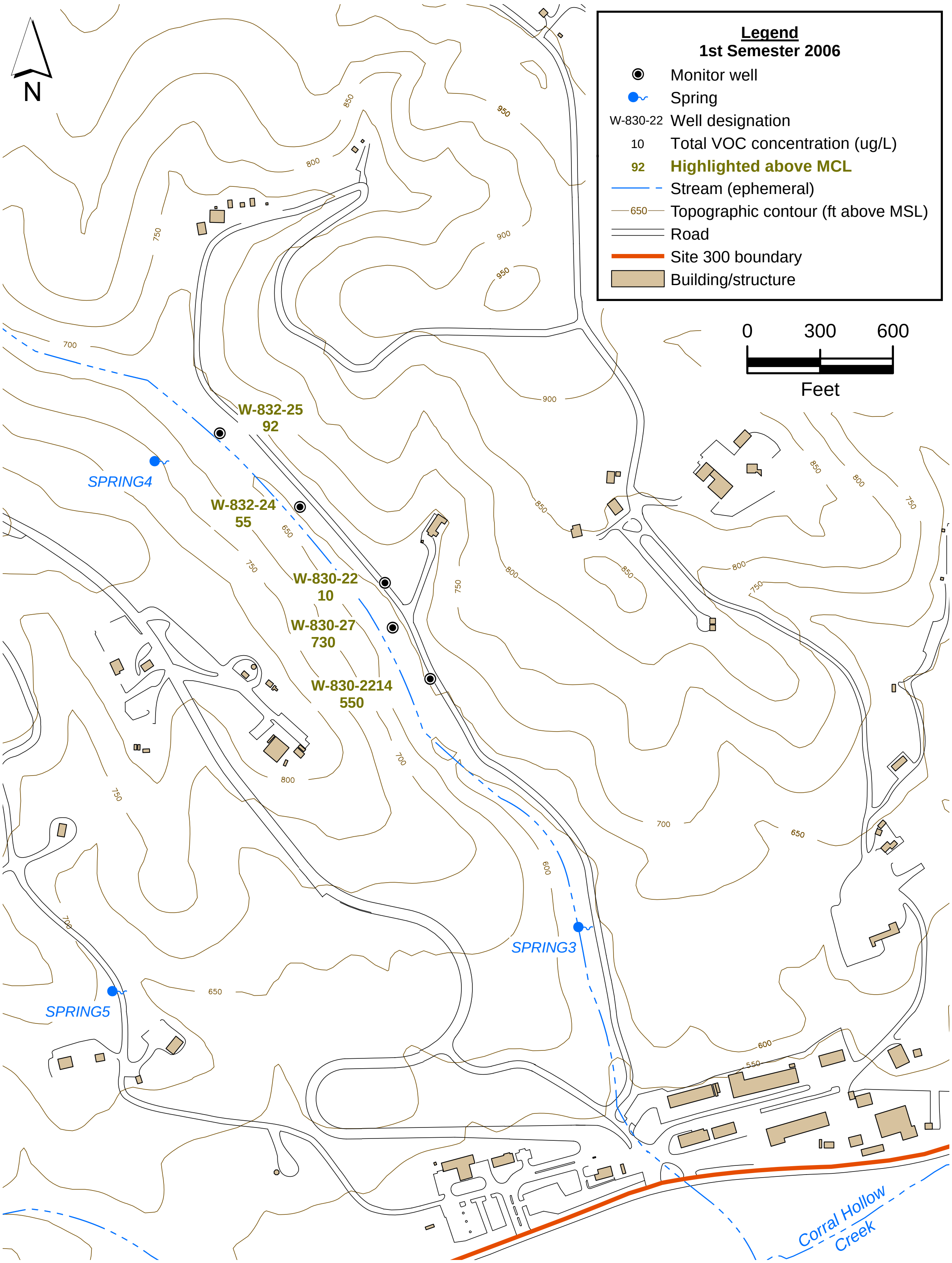


Figure 2.7-8. Building 832 Canyon OU map showing total VOC concentrations for the Tnsc$_{1a}$ HSU.

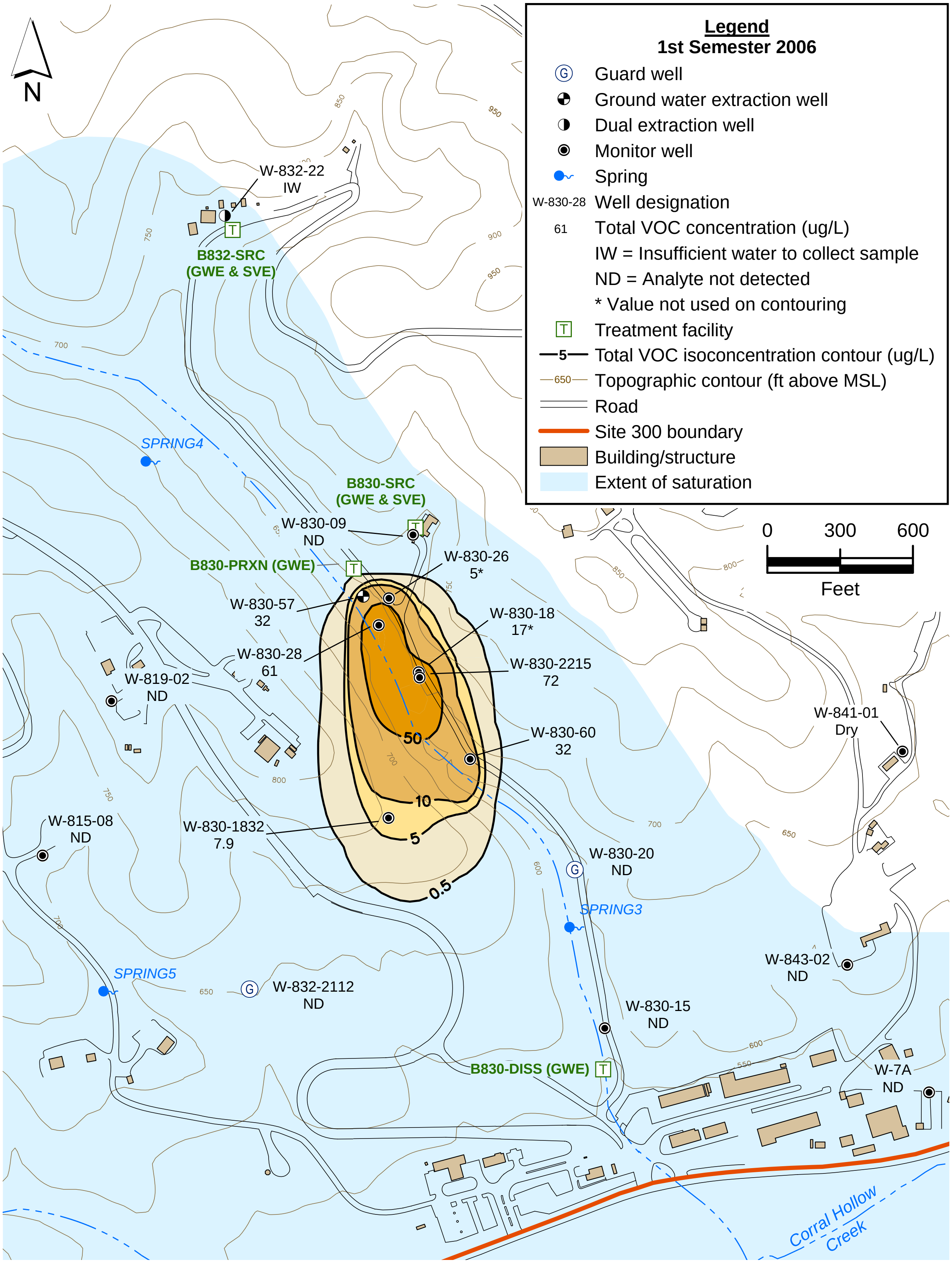


Figure 2.7-9. Building 832 Canyon OU total VOC isoconcentration contour map for the Upper Tnbs$_1$ HSU.

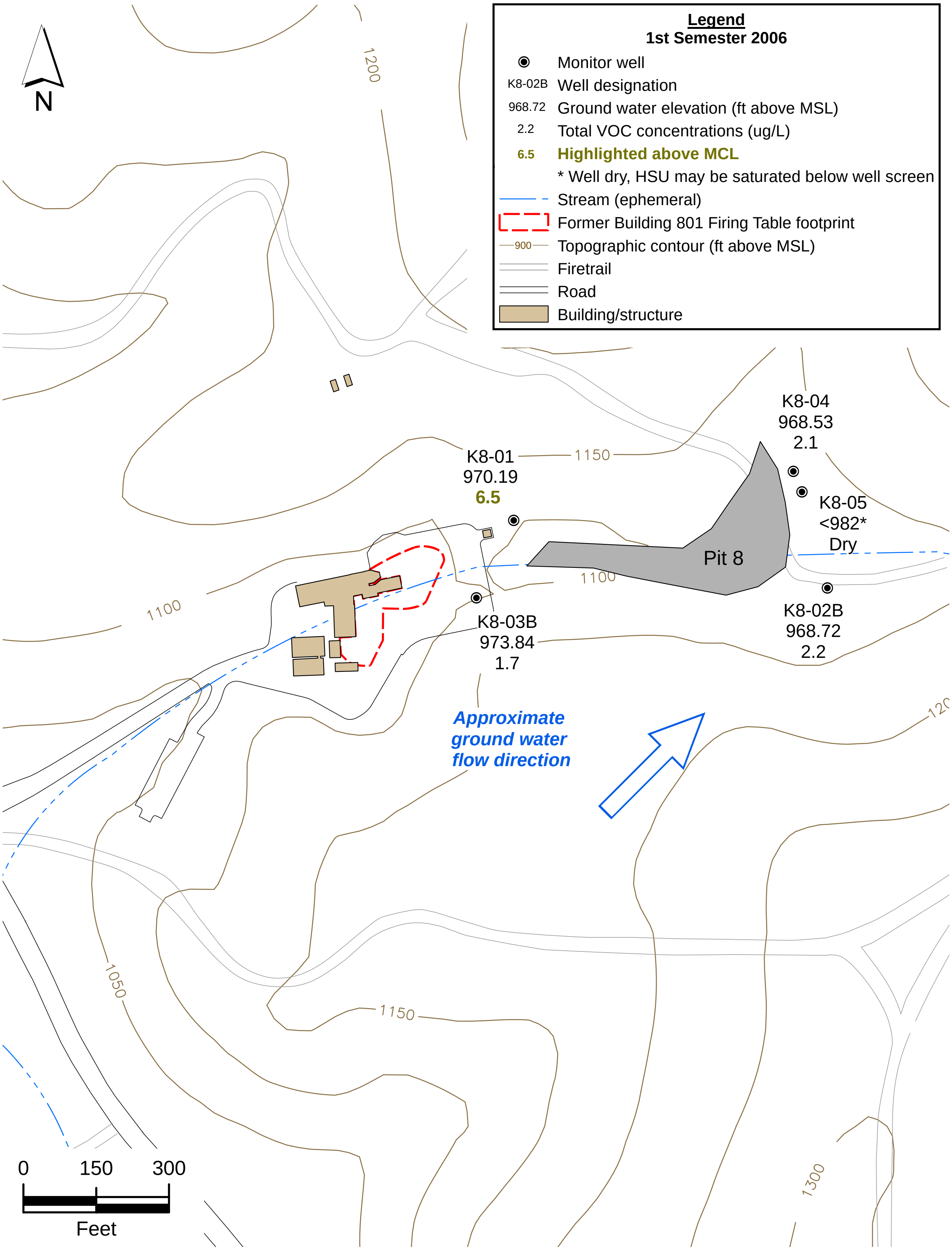


Figure 2.8-1. Building 801 Firing Table and Pit 8 Landfill site map showing monitor well locations, ground water elevations, total VOC concentrations and hydraulic gradient direction in the $Tnbs_1/Tnbs_0$ HSU.

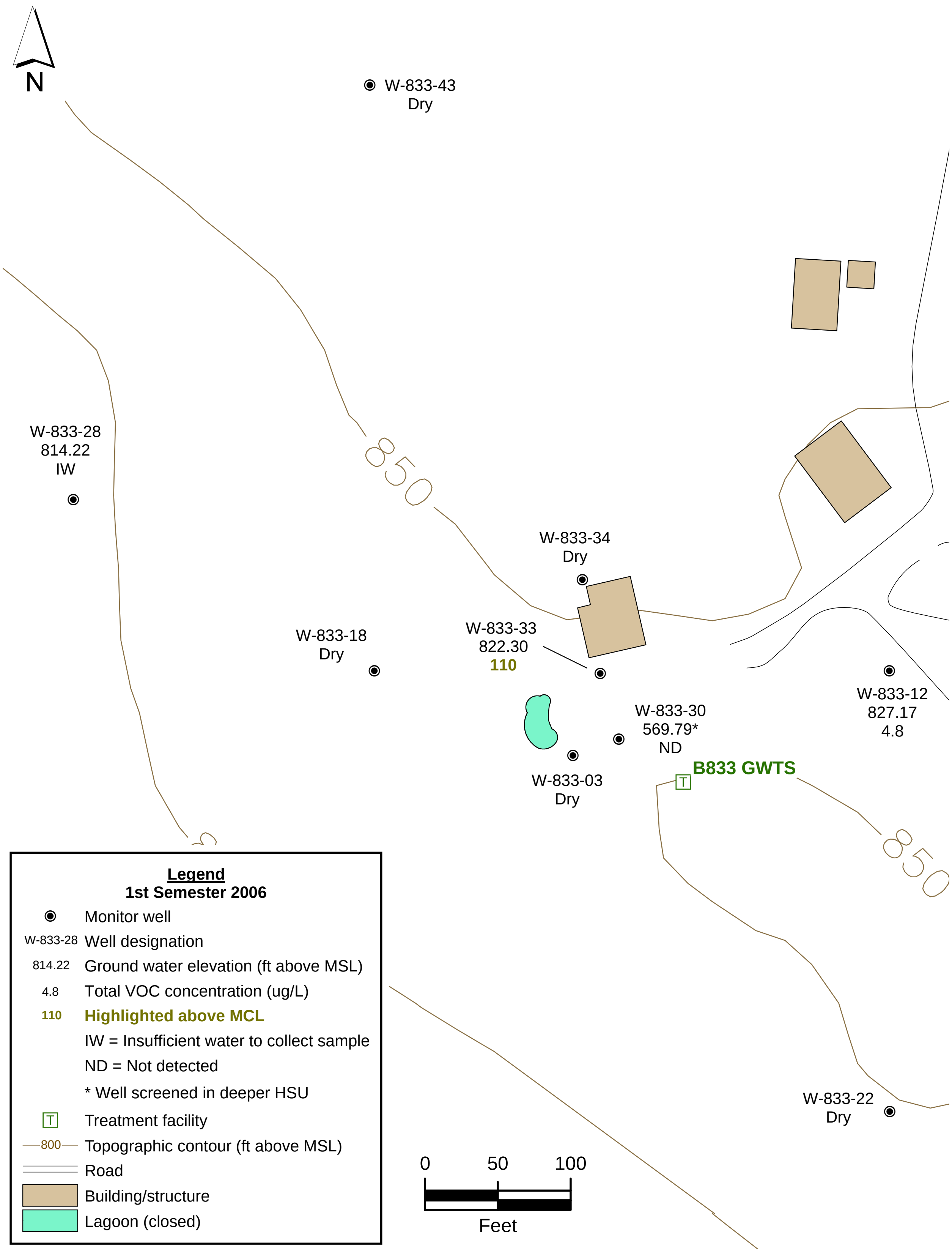


Figure 2.8-2. Building 833 site map showing monitor well locations, ground water elevations, and total VOC concentrations in the Tpsg HSU.

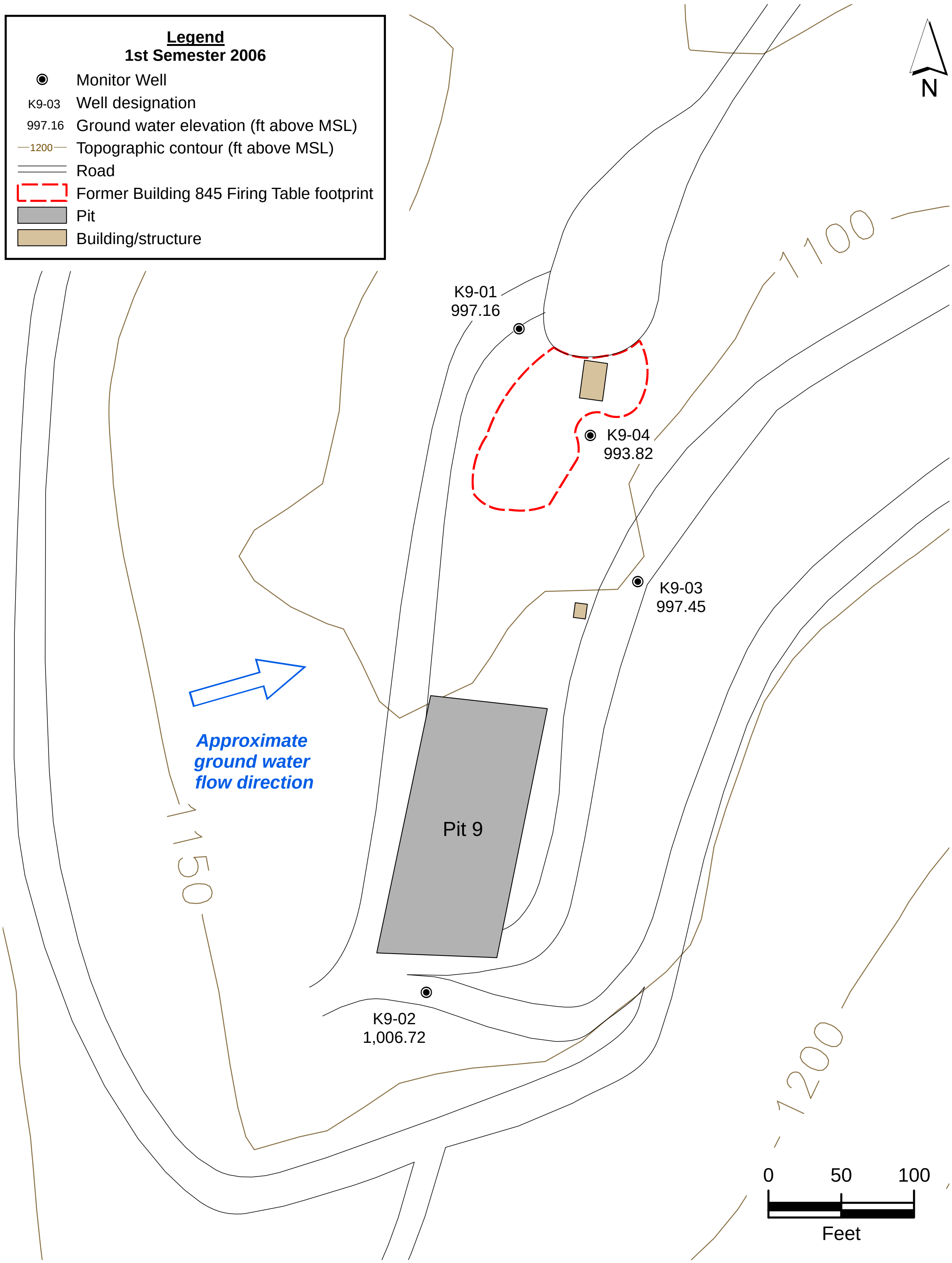


Figure 2.8-3. Building 845 Firing Table and Pit 9 Landfill site map showing monitor well locations, ground water elevations, and hydraulic gradient direction in the Tnsc$_0$ HSU.

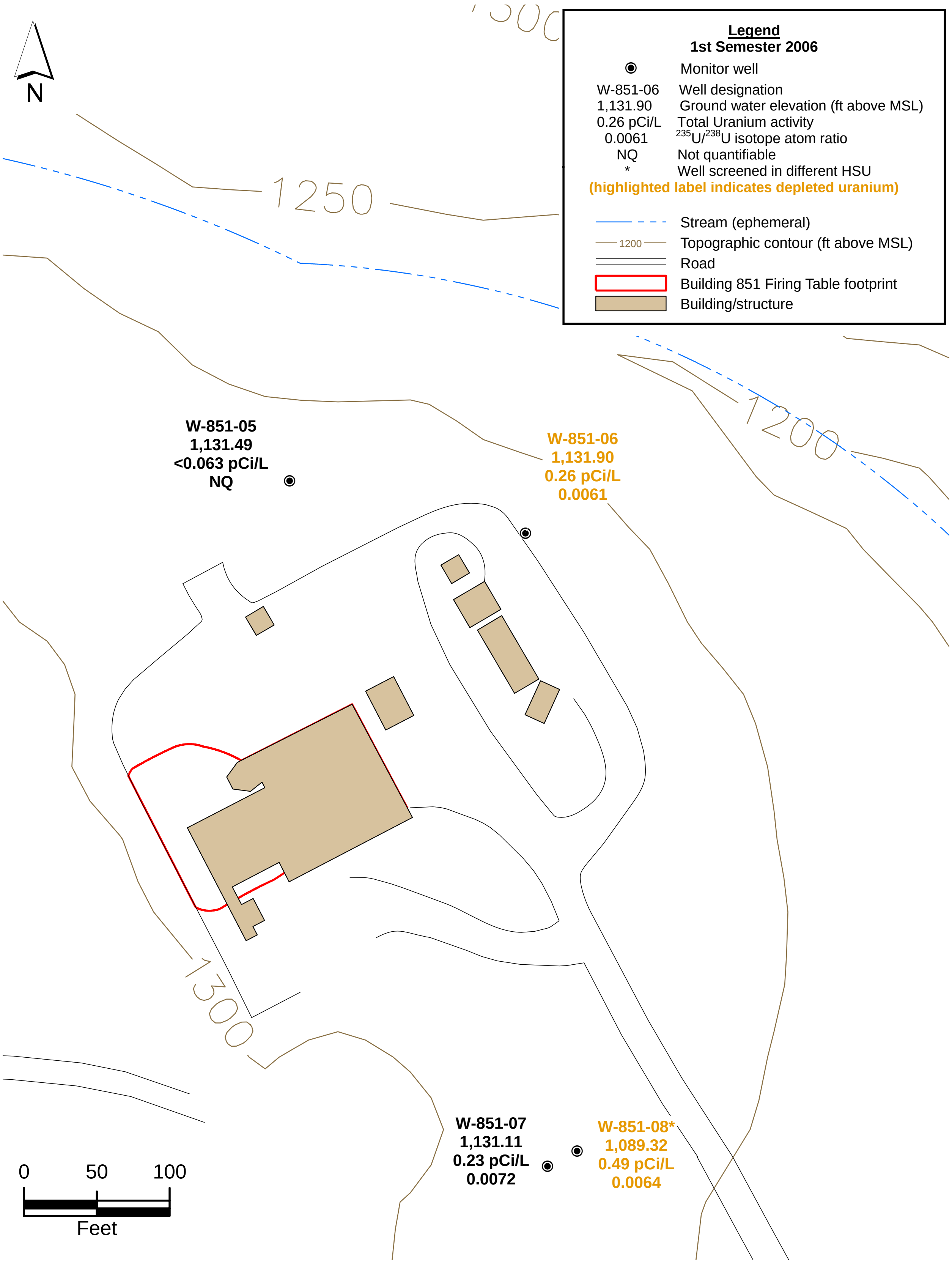
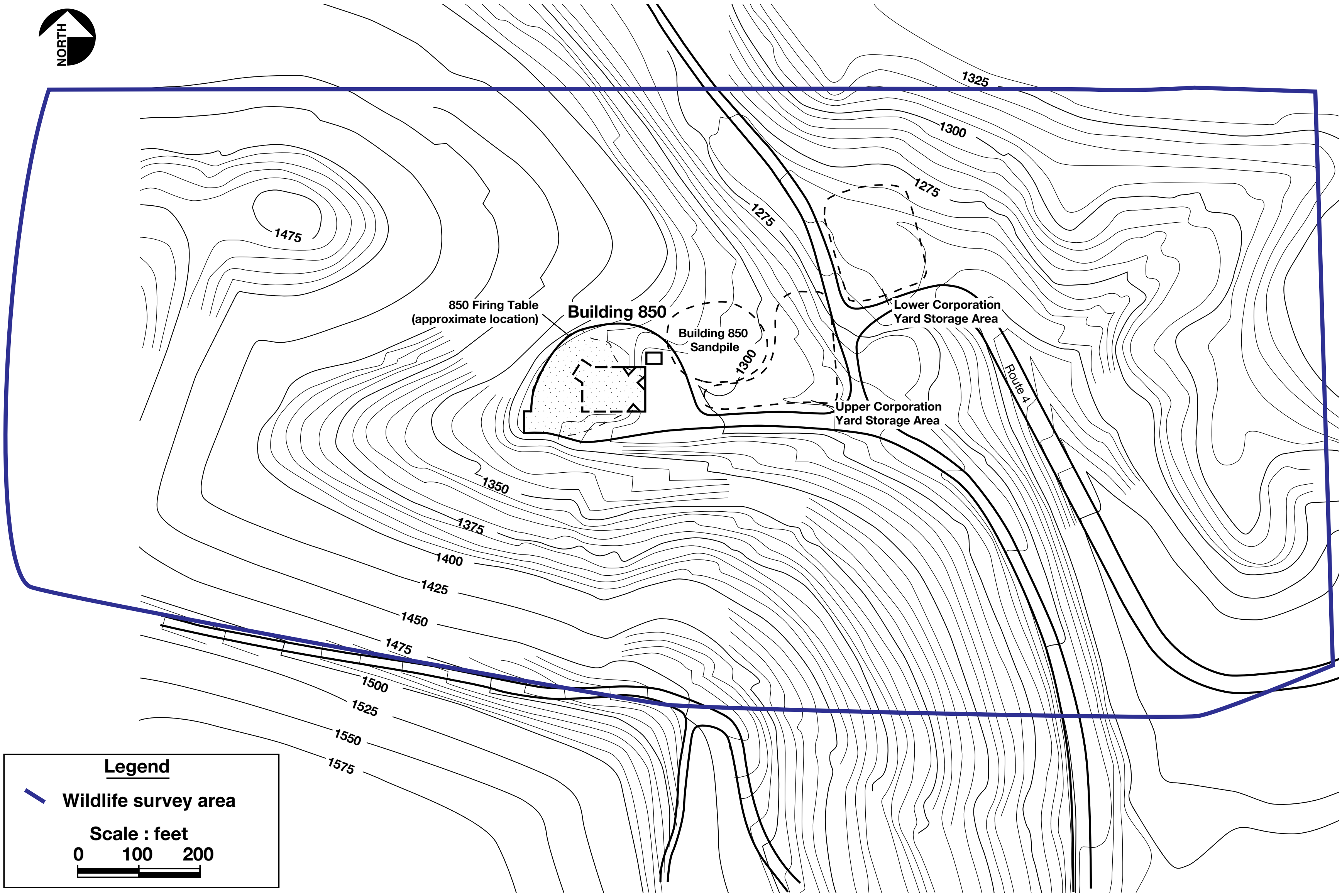


Figure 2.8-4. Building 851 Firing Table site map showing monitor well locations, ground water elevations, and ground water uranium activities and $^{235}U/^{238}U$ isotope atom ratios in the Tmss HSU.



ERD-S3R-06-0096

Figure 4.2-1. Area surveyed for important burrowing species at Building 850.

Tables

Table Acronyms and Abbreviations

1,1,1-TCA	1,1,1-trichloroethane.
1,1,2-TCA	1,1,2-trichloroethane.
1,1-DCA	1,1-dichloroethane.
1,1-DCE	1,1-dichloroethylene.
1,2-DCA	1,2-dichloroethane.
1,2-DCE	1,2-dichloroethylene.
A	Annual.
As N	As nitrogen.
As $CaCO_3$	As calcium carbonate.
B	Biennial.
B815	Building 815.
B817	Building 817.
B829	Building 829.
B832	Building 832.
B834	Building 834.
B850	Building 850.
B854	Building 854.
bgs	Below ground surface.
BTEX	Benzene, toluene, ethyl benzene, and xylene.
BTU	Biotreatment Unit.
BUD	Borehole undeclared.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFE	Carbon filter effluent.
CFI	Carbon filter influent.
CF3I	Third aqueous phase granular carbon filter influent.
cfm	Cubic feet per minute.
CFV2	Second vapor phase granular activated carbon filter effluent.
CGSA	Central General Services Area.
CHC	Corral hollow creek.
Cis-1,2-DCE	Cis-1,2-dichloroethene.
CMP	Compliance Monitoring Plan.
CMR	Compliance Monitoring Report.
COC	Contaminants of Concern.
DIS	Discretionary sampling (not required by the CMP).
DISS	Distal south.
DMW	Detection monitor well.
DOE	Department of Energy.
DSB	Distal Site Boundary.
EGSA	Eastern General Services Area.
EPA	Environmental Protection Agency.
ERD	Environmental Restoration Division.

E	Effluent.
EV	Effluent vapor.
EW	Extraction well.
ft	Feet.
ft^3	Cubic feet.
g	Gram(s).
GAC	Granular activated carbon.
gal	gallon(s).
gpm	Gallons per minute.
GSA	General Services Area.
GTU	GAC Treatment Unit.
GW	Guard well.
GWTS	Ground Water Treatment System.
H_2O	Water.
HEPA	High Explosives Process Area.
HMX	High-Melting Explosive.
HQ	Hazard quotient.
HSU	Hydrostratigraphic unit.
I	Influent.
IV	Influent vapor.
IW	Injection well.
kg	kilograms.
LLNL	Lawrence Livermore National Laboratory.
μg/L	Micrograms per liter.
μmhos/cm	Micro ohms per centimeter.
M	Monthly.
MCL	Maximum Contaminant Level.
mg/L	Milligrams per liter.
mg/kg	Milligrams per kilogram.
MWB	Monitor well used for background.
MWPT	Monitor well used for plume tracking.
N	No.
NC	Non-CMP well/borehole.
NO_3	Nitrate.
NA	Not applicable.
NTU	Nephelometric turbidity units.
OU	Operable unit.
O&M	Operations and Maintenance.
PCE	Tetrachloroethylene.
pCi/L	PicoCuries per liter.
pg/g	picogram per gram.
pH	A measure of the acidity or alkalinity of an aqueous solution.
PHG	State of California Public Health Goal

ppb	Parts per billion.
ppm $_{v/v}$	Parts per million on a volume-to-volume basis.
PRX	Proximal.
PRXN	Proximal north.
PTU	Portable Treatment Unit.
Q	Quarterly.
R1	Receiving water sampling point located 100 ft upstream.
R2	Receiving water sampling point located 100 ft downstream.
RD	Remedial Design
RDX	Research Department explosive.
RWQCB	Regional Water Quality Control Board.
S	Semi-annual.
SRC	Source.
SPR	Spring.
STU	Solar-powered Treatment Unit.
SVE	Soil Vapor Extraction.
SVI	Soil Vapor Influent.
TBOS	Tetra-2-ethylbutylorthosilicate.
TBOS/TKEBS	tetrabutyl ortho silicate/tetrakis (2-ethylbutyl) silane.
TCE	Trichloroethylene.
TDS	Total dissolved solids.
TF	Treatment facility.
Trans-1,2-DCE	Trans-1,2-dichloroethene.
$^{235}U/^{238}U$	Atom ratio of the isotopes uranium-235 and uranium-238.
U.S.	United States.
VCF4I	Fourth vapor phase granular activated carbon filter influent.
VE	Vapor effluent.
VES	Vapor extraction system.
VI	Vapor influent.
VOC	Volatile organic compound.
WGMG	Water Guidance and Monitoring Group.
WS	Water supply well.
Y	Yes.

Requested Analyses

ANIONS =	Anions suite performed by various analytical methods.
AS:THISO =	Thorium isotopes performed by alpha 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.
E1002TOX =	Daphnid (ceriodaphnia dubia) survival and reproduction test with reference toxicant performed by EPA Method 1002.
E1003TOX =	Green alga (selenastrum capricornutum) gross test with reference toxicant performed by EPA Method 1003.
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.
E210.2 =	Beryllium performed by EPA Method 210.2.
E218.2 =	Chromium performed by EPA Method 218.2.
E239.2 =	Lead performed by EPA Method 239.2.
E245.2 =	Mercury performed by EPA Method 245.2.
E300.0:NO2 =	Nitrite performed by EPA Method 300.0.
E300.0:NO3 =	Nitrate performed by EPA Method 300.0.
E300.0:O-PO2 =	Orthophosphate 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.
E8082A =	Polychlorinated biphenyls performed by EPA Method 8082A.
E8330:R+H =	High explosive compounds RDX and HMX performed by EPA Method 8330.
E8330:TNT =	Trinitrotoluene 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.
GENMINDISS =	Dissolved 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.

WDRE624 = Volatile organic compounds performed by EPA Method 624.

Data Qualifier Flag Definitions

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

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

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

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

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

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

I = Surrogate recoveries were outside of QC limits.

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

L = Spike accuracy not within control limits.

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

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

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

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

Water Level Measurement Notes

BLDG D&D	Building/area was under going decontamination and demolition.
CB	Christy box.
DRY	Well was dry.
FIRE HAZARD	Well couldn't be accessed due to tall dry grass.
FL	Flowing (Artesian) well.
ft	Feet.
ME	Measurement error.
MSL	Mean sea level.
MT	Measured twice.
NM	Water level not measured.
PUMPING	Well was being pumped.
RA	Restricted access.
TRACER STUDY	Well was part of the Building 834 tracer study.
VE	Vacuum extraction.

Stratigraphic Units

Qal =	Quaternary alluvium.
Qls =	Quaternary landslide deposits.
Qt =	Quaternary terrace deposits.
WBR =	Weathered bedrock.
Tps =	Pliocene non-marine unit (clay).
Tpsg =	Pliocene non-marine unit (gravel facies).
$Tnsc_2$ =	Miocene Neroly Formation upper siltstone/claystone unit.
$Tnbs_2$ =	Miocene Neroly Formation upper blue sandstone unit.
$Tnsc_1$ =	Miocene Neroly Formation middle siltstone/claystone unit.
$Tnsc_{1a}$, $Tnsc_{1b}$, $Tnsc_{1c}$ =	Extensive sandstone bodies within the $Tnsc_1$ Neroly Formation middle siltstone/claystone unit (1a = deepest).
$Tnbs_1$ =	Neroly Formation lower blue sandstone unit.
Upper $Tnbs_1$ =	Upper member of the Neroly Formation lower blue sandstone unit, above claystone marker bed.
Lower $Tnbs_1$ =	Lower member of the Neroly Formation lower blue sandstone unit, below claystone marker bed.
$Tnbs_0$ =	Miocene Neroly Formation basal sandstone unit.
$Tnsc_0$ =	Miocene Neroly Formation lower siltstone/claystone unit.
Tmss =	Miocene Cierbo Formation.
Tts =	Eocene Tesla Formation.
Kgv =	Cretaceous Great Valley Sequence.

Table Summ-1. Mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Volume of ground water treated (thousands of gal)	Volume of soil vapor treated (thousands of ft^3)	Estimated total VOC mass removed (g)	Estimated total perchlorate mass removed (g)	Estimated total nitrate mass removed (kg)	Estimated total RDX mass removed (g)	Estimated total TBOS mass removed (g)
EGSA GWTS	11,229	NA	73	NA	NA	NA	NA
CGSA GWTS	1,377	NA	220	NA	NA	NA	NA
CGSA SVE	NA	4,810	350	NA	NA	NA	NA
B834 GWTS	81	NA	2,100	NA	21	NA	7.0
B834 SVE	NA	23,587	23,000	NA	NA	NA	NA
B815-SRC GWTS	228	NA	5.1	17	85	60	NA
B815-PRX GWTS	429	NA	46	7.9	96	NA	NA
B815-DSB GWTS	924	NA	35	NA	NA	NA	NA
B817-SRC GWTS	2	NA	0	0.23	0.74	0.34	NA
B817-PRX GWTS	364	NA	12	48	120	11	NA
B829-SRC GWTS	1	NA	0.12	0.055	0.40	NA	NA
B854-SRC GWTS	240	NA	160	7.5	48	NA	NA
B854-SRC SVE	NA	8,679	3,600	NA	NA	NA	NA
B854-PRX GWTS	189	NA	37	11	33	NA	NA
B832-SRC GWTS	35	NA	12	1.4	12	NA	NA
B832-SRC SVE	NA	756	57	NA	NA	NA	NA
B830-SRC GWTS	19	NA	150	0.29	6.1	NA	NA
B830-SRC SVE	NA	1,595	1,500	NA	NA	NA	NA
B830-PRXN GWTS	115	NA	14	NA	7.4	NA	NA
B830-DISS GWTS	74	NA	30	1.9	18	NA	NA
Total	15,307	39,426	31,000	95	450	71	7.0

Notes:

B834 = Building 834.
B815 = Building 815.
B817 = Building 817.
B829 = Building 829.
B854 = Building 854.
B832 = Building 832.
B830 = Building 830.
CGSA = Central General Services Area.
DISS = Distal south.
DSB = Distal site boundary.
EGSA = Eastern General Services Area.
ft^3 = cubic feet.
gal = Gallons.
g = Grams.
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.
*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.

Table Summ-2. Summary of cumulative remediation.

Treatment facility	Volume of ground water treated (thousands of gal)	Volume of soil vapor treated (thousands of ft^3)	Estimated total VOC mass removed (kg)	Estimated total perchlorate mass removed (g)	Estimated total nitrate mass removed (kg)	Estimated total RDX mass removed (kg)	Estimated total TBOS mass removed (kg)
EGSA GWTS	289,206	NA	7.2	NA	NA	NA	NA
CGSA GWTS	13,817	NA	14	NA	NA	NA	NA
CGSA SVE	NA	83,092	67	NA	NA	NA	NA
B834 GWTS	470	NA	36	NA	98	NA	9.4
B834 SVE	NA	113,487	270	NA	NA	NA	NA
B815-SRC GWTS	2,315	NA	0.059	160	790	0.63	NA
B815-PRX GWTS	3,589	NA	0.43	78	1,000	NA	NA
B815-DSB GWTS	5,989	NA	0.18	NA	NA	NA	NA
B817-SRC GWTS	12	NA	0	1.1	3.9	0.0020	NA
B817-PRX GWTS	464	NA	0.021	54	140	0.013	NA
B829-SRC GWTS	2	NA	0.00015	0.061	0.51	NA	NA
B854-SRC GWTS	4,385	NA	4.3	100	890	NA	NA
B854-SRC SVE	NA	11,606	5.5	NA	NA	NA	NA
B854-PRX GWTS	1,435	NA	0.43	65	240	NA	NA
B832-SRC GWTS	317	NA	0.11	7.8	140	NA	NA
B832-SRC SVE	NA	15,960	1.7	NA	NA	NA	NA
B830-SRC GWTS	74	NA	0.76	1.1	30	NA	NA
B830-SRC SVE	NA	1,643	1.7	NA	NA	NA	NA
B830-PRXN GWTS	1,949	NA	0.26	NA	22	NA	NA
B830-DISS GWTS	2,002	NA	0.72	19	490	NA	NA
Total	326,025	225,788	410	490	3,800	0.65	9.4

Notes:

B834 = Building 834.
B815 = Building 815.
B817 = Building 817.
B829 = Building 829.
B854 = Building 854.
B832 = Building 832.
B830 = Building 830.
CGSA = Central General Services Area.
DISS = Distal south.
DSB = Distal site boundary.
EGSA = Eastern General Services Area.
ft^3 = cubic feet.
gal = Gallons.
g = grams.
GWTS = Ground water treatment system.
kg = Kilograms.
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.
*Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.

Table 2.1-1. Central General Services Area (CGSA) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
CGSA	January	816	816	1,167	289,110
	February	672	672	907	165,655
	March	696	696	930	185,218
	April	672	672	1,025	274,094
	May	840	840	437	293,400
	June	672	672	344	169,506
Total		4,368	4,368	4,810	1,376,983

Table 2.1-2. Eastern General Services Area (EGSA) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
EGSA	January	NA	816	NA	2,194,163
	February	NA	672	NA	1,819,092
	March	NA	672	NA	1,442,990
	April	NA	696	NA	1,886,707
	May	NA	840	NA	2,219,222
	June	NA	648	NA	1,666,382
Total		NA	4,344	NA	11,228,556

Table 2.1-3. General Services Area OU VOCs in ground water treatment system influent, effluent, and receiving water.

Location	Date	TCE (μg/L)	PCE (μg/L)	cis-1,2-DCE (μg/L)	trans-1,2-DCE (μg/L)	Carbon tetra-chloride (μg/L)	Chloro-form (μg/L)	1,1-DCA (μg/L)	1,2-DCA (μg/L)	1,1-DCE (μg/L)	1,1,1-TCA (μg/L)	1,1,2-TCA (μg/L)	Freon 11 (μg/L)	Freon 113 (μg/L)	Vinyl chloride (μg/L)
Central General Services Area															
CGSA-E	**1/10/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
CGSA-E	**2/8/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
CGSA-E	**3/9/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
CGSA-E	**4/11/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
CGSA-E	**5/10/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
CGSA-E	**6/14/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
CGSA-I	**1/10/06**	**21 B**	**1**	**0.54**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
CGSA-I	**4/11/06**	**35**	**1.7**	**1.1**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**0.86**	**<0.5**	**<0.5**	**0.5**	**<0.5**	**<0.5**
CGSA-I	**4/11/06[a]**	**35**	**1.6**	**1.2**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**0.74**	**<0.5**	**<0.5**	**0.58**	**<0.5**	**<0.5**
Eastern General Services Area Receiving Water															
EGSA-CHC-R1	**3/1/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-CHC-R1	**4/18/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-CHC-R2	**3/1/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-CHC-R2	**4/18/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
Eastern General Services Area															
EGSA-E	**1/10/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-E	**3/8/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-E	**4/11/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-E	**5/2/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-E	**6/5/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-I	**1/10/06**	**2.2 B**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-I	**4/11/06**	**1.8 B**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
EGSA-I	**4/11/06[a]**	**1.8 B**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Notes:

[a] **Collocated sample collected for quality control purposes.**

Eastern GSA Receiving Water samples are collected quarterly when there is continuous flow. There was only continuous flow during March and April 2006.

The Eastern GSA effluent sample for February was inadvertently not collected.

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

Table 2.1-3 (Cont.). Analytes detected but not reported in main table.

Location	Date	Detection frequency	1,2-Dichloroethene (total) (μg/L)
CGSA-E	1/10/06	0 of 19	-
CGSA-E	2/8/06	0 of 18	-
CGSA-E	3/9/06	0 of 18	-
CGSA-E	4/11/06	0 of 18	-
CGSA-E	5/10/06	0 of 18	-
CGSA-E	6/14/06	0 of 18	-
CGSA-I	1/10/06	0 of 19	-
CGSA-I	4/11/06	1 of 18	1.1
CGSA-I	4/11/06[a]	1 of 18	1.2
EGSA-CHC-R1	3/1/06	0 of 18	-
EGSA-CHC-R1	4/18/06	0 of 18	-
EGSA-CHC-R2	3/1/06	0 of 18	-
EGSA-CHC-R2	4/18/06	0 of 18	-
EGSA-E	1/10/06	0 of 19	-
EGSA-E	3/8/06	0 of 18	-
EGSA-E	4/11/06	0 of 18	-
EGSA-E	5/2/06	0 of 18	-
EGSA-E	6/5/06	0 of 18	-
EGSA-I	1/10/06	0 of 19	-
EGSA-I	4/11/06	0 of 18	-
EGSA-I	4/11/06[a]	0 of 18	-

Table 2.1-4. General Services Area OU anions in ground water treatment system influent, effluent, and receiving water.

Location	Date	Chloride (mg/L)	Fluoride (mg/L)	Nitrate (as N) (mg/L)	Nitrite (as N) (mg/L)	Sulfate (mg/L)
Eastern General Services Area Receiving Water						
EGSA-CHC-R1	**3/1/06**	**50 B**	**0.39**	**<2**	**<0.4**	**160**
EGSA-CHC-R1	**4/18/06**	**69**	**0.39**	**<2**	**<0.4**	**250**
EGSA-CHC-R2	**3/1/06**	**55 B**	**0.53**	**<2**	**<0.4**	**170**
EGSA-CHC-R2	**4/18/06**	**72**	**0.4**	**<2**	**<0.4**	**260**
Eastern General Services Area						
EGSA-E	**1/10/06**	**160 D**	**0.35 D**	**<4 D**	**<0.4**	**410 D**
EGSA-E	**2/8/06**	**150 BD**	**0.33 D**	**<4 D**	**<0.4**	**370 D**
EGSA-E	**3/8/06**	**160**	**0.45**	**3.1**	**<0.4**	**360**
EGSA-E	**4/11/06**	**150**	**0.27**	**2.8**	**<0.4**	**350**
EGSA-I	**1/10/06**	**71**	**0.28**	**5.9**	**<0.4**	**26**
EGSA-I	**4/11/06**	**150**	**0.27**	**2.7**	**<0.4**	**350**

Notes:

Eastern GSA Receiving Water samples are collected quarterly when there is continuous flow. There was only continuous flow during March and April 2006.

Anions are required annually for the treatment influent and quarterly for the effluent. Additional samples were collected inadvertently.

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

Table 2.1-5. General Services Area OU metals in ground water treatment system influent, effluent, and receiving water.

Location	Date	Aluminum (mg/L)	Arsenic (mg/L)	Calcium (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Selenium (mg/L)
Eastern General Services Area Receiving Water							
EGSA-CHC-R1	**3/1/06**	**0.64**	**<0.002**	**58 B**	**<0.05**	**31**	**<0.002**
EGSA-CHC-R1	**4/18/06**	**0.44 B**	**<0.002**	**-**	**<0.05**	**-**	**<0.002 L**
EGSA-CHC-R2	**3/1/06**	**0.8**	**<0.002**	**61 B**	**<0.05**	**31**	**<0.002**
EGSA-CHC-R2	**4/18/06**	**0.38 B**	**<0.002**	**-**	**<0.05**	**-**	**<0.002 L**
Eastern General Services Area							
EGSA-E	**1/10/06**	**<0.05**	**<0.002**	**-**	**-**	**-**	**0.0058 L**
EGSA-E	**2/8/06**	**0.086**	**0.0023**	**-**	**-**	**-**	**0.0074 L**
EGSA-E	**3/8/06**	**<0.05**	**0.0023**	**-**	**-**	**-**	**0.0091**
EGSA-E	**4/11/06**	**<0.05**	**0.0025**	**-**	**-**	**-**	**0.006 L**
EGSA-I	**1/10/06**	**<0.05**	**<0.002**	**-**	**-**	**-**	**0.0056 L**
EGSA-I	**4/11/06**	**<0.05**	**0.0025**	**-**	**-**	**-**	**0.0062 L**

Notes:

Eastern GSA Receiving Water samples are collected quarterly when there is continuous flow. There was only continuous flow during March and April 2006.

Metals are required annually for the treatment influent and quarterly for the effluent. Additional samples were collected inadvertently.

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

Table 2.1-6. General Services Area OU conductivity in ground water treatment system influent, effluent, and receiving water.

Location	Date	Specific Conductance (μmhos/cm)
Eastern General Services Area Receiving Water		
EGSA-CHC-R1	**3/1/06**	**860**
EGSA-CHC-R1	**4/18/06**	**1,100**
EGSA-CHC-R2	**3/1/06**	**910**
EGSA-CHC-R2	**4/18/06**	**1,200**
Eastern General Services Area		
EGSA-E	**1/10/06**	**1,800**
EGSA-E	**2/8/06**	**1,700**
EGSA-E	**3/8/06**	**1,700**
EGSA-E	**4/11/06**	**1,700**
EGSA-E	**5/2/06**	**1,500 LO**
EGSA-E	**6/5/06**	**1,500**
EGSA-I	**1/10/06**	**1,800**
EGSA-I	**4/11/06**	**1,700**

Notes:

Eastern GSA Receiving Water samples are collected quarterly when there is continuous flow. There was only continuous flow during March and April 2006.

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

Table 2.1-7. General Services Area OU cyanide in ground water treatment system influent, effluent, and receiving water.

Location	Date	Cyanide (mg/L)
Eastern General Services Area Receiving Water		
EGSA-CHC-R1	**3/1/06**	**<0.02**
EGSA-CHC-R1	**4/18/06**	**<0.02**
EGSA-CHC-R2	**3/1/06**	**<0.02**
EGSA-CHC-R2	**4/18/06**	**<0.02**
Eastern General Services Area		
EGSA-E	**1/10/06**	**<0.02**
EGSA-E	**2/8/06**	**<0.02**
EGSA-E	**3/8/06**	**<0.02**
EGSA-E	**4/11/06**	**0.021**
EGSA-I	**1/10/06**	**<0.02**
EGSA-I	**4/11/06**	**<0.02**

Notes:

Eastern GSA Receiving Water samples are collected quarterly when there is continuous flow. There was only continuous flow during March and April 2006.

Cyanide is required annually for the treatment influent and quarterly for the effluent. Additional samples were collected inadvertently.

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

Table 2.1-8. Eastern General Services Area total dissolved solids in ground water treatment system effluent water.

Location	Date	Total dissolved solids (TDS) (mg/L)
EGSA-E	1/10/06	1,200 D
EGSA-E	3/8/06	1,100 LD
EGSA-E	4/11/06	1,100 D

Notes:

TDS is required quarterly for the effluent. Additional samples were collected inadvertently.

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

Table 2.1-9. Eastern General Services Area hardness and turbidity in receiving water.

Location	Date	Total Hardness (as $CaCO_3$) (mg/L)	Turbidity (NTU)
EGSA-CHC-R1	3/1/06	270 H	12
EGSA-CHC-R1	4/18/06	380	6.5
EGSA-CHC-R2	3/1/06	280 H	14
EGSA-CHC-R2	4/18/06	370	5.5

Notes:

Eastern GSA Receiving Water samples are collected quarterly when there is continuous flow. There was only continuous flow during March and April 2006.

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

Table 2.1-10. Central General Services Area VOCs in soil vapor extraction treatment system influent.

Location	Date	1,1-DCE ($ppm_{v/v}$)	cis-1,2-DCE ($ppm_{v/v}$)	PCE ($ppm_{v/v}$)	TCE ($ppm_{v/v}$)
CGSA-SVE-I	2/13/06	<0.2	<0.2	<0.2	0.5
CGSA-SVE-I	5/4/06	<0.2	<0.2	<0.2	0.5

Notes:

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

Table 2.1-11. General Services Area OU treatment facility sampling and analysis plan.

Sample Location	Sample Identification	Parameter	Frequency
EGSA GWTS			
Influent Port	**TF-GSA1-I**	**VOCs**	**Quarterly**
		pH	**Quarterly**
		Conductivity	**Quarterly**
		Nitrate + Nitrite	**Annually**
		Total Aluminum	**Annually**
		Total Selenium	**Annually**
		Total Cyanide	**Annually**
		Total Arsenic	**Annually**
		Fluoride	**Annually**
		Chloride	**Annually**
		Sulfate	**Annually**
Effluent Port	**TF-GSA1-E**	**VOCs**	**Monthly**
		pH	**Monthly**
		Conductivity	**Monthly**
		Dissolved Oxygen	**Monthly**
		Nitrate + Nitrite	**Quarterly**
		Total Aluminum	**Quarterly**
		Total Selenium	**Quarterly**
		Total Cyanide	**Quarterly**
		Total Arsenic	**Quarterly**
		Fluoride	**Quarterly**
		Chloride	**Quarterly**
		Sulfate	**Quarterly**
		Total Dissolved Solids	**Quarterly**
		Acute Toxicity	**Annually**
		Chronic Toxicity	**Once within 5 years**
		EPA Priority Pollutants	**Once within 5 years**

Table 2.1-11 (Cont.). General Services Area OU treatment facility sampling and analysis plan.

Sample Location	Sample Identification	Parameter	Frequency
Receiving Water Monitoring	3SW-CHC-R1 & R2[a]	VOCs	Quarterly
		pH	Quarterly
		Conductivity	Quarterly
		Dissolved Oxygen	Quarterly
		Nitrate + Nitrite	Quarterly
		Total Aluminum	Quarterly
		Total Selenium	Quarterly
		Total Cyanide	Quarterly
		Total Arsenic	Quarterly
		Fluoride	Quarterly
		Chloride	Quarterly
		Sulfate	Quarterly
		Total Dissolved Solids	Quarterly
		Temperature	Quarterly
		Hardness	Quarterly
		Turbidity	Quarterly
		Visual Observations[b]	Monthly
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	No Monitoring Requirements	
Effluent Vapor	TF-GSA2-EV	VOCs	Weekly[c]
Intermediate GAC	TF-GSA2-CF4IV	VOCs	Weekly[c]

Notes:

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

[a] Samples are to be collected at R1 (100 ft upstream) and R2 (100 ft downstream) when water is flowing from sources other than the treatment system.

[b] Floating or suspended matter, discoloration, bottom deposits, aquatic life, visible films / sheens, fungi / slimes / growths, potential nuisance conditions, and flow conditions.

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

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

Table 2.1-12. Central General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-35A-01	MWPT	Qal	B	CGSA CMP	E200.7:Cd	2	NA	Next sample required 2ndQ 2007.
W-35A-01	MWPT	Qal	B	CGSA CMP	E239.2	2	NA	Next sample required 2ndQ 2007.
W-35A-01	MWPT	Qal		DIS	E601	1	Y	
W-35A-01	MWPT	Qal	S	CGSA CMP	E601	2	Y	
W-35A-01	MWPT	Qal		DIS	E601	3		
W-35A-01	MWPT	Qal	S	CGSA CMP	E601	4		
W-35A-02	MWPT	Qal	B	CGSA CMP	E200.7:Zn	2	NA	Next sample required 2ndQ 2007.
W-35A-02	MWPT	Qal	S	CGSA CMP	E601	2	Y	
W-35A-02	MWPT	Qal	S	CGSA CMP	E601	4		
W-35A-03	MWPT	Qal	S	CGSA CMP	E601	2	Y	
W-35A-03	MWPT	Qal	S	CGSA CMP	E601	4		
W-35A-04	MWPT	Qal	B	CMP/WGMG	E200.7:Cu	2	NA	Next sample required 2ndQ 2007.
W-35A-04	MWPT	Qal	S	CMP/WGMG	E601	2	Y	
W-35A-04	MWPT	Qal	S	CMP/WGMG	E601	4		
W-35A-05	MWPT	$Tnbs_2$	B	CGSA CMP	E239.2	2	NA	Next sample required 2ndQ 2007.
W-35A-05	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-35A-05	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-35A-06	MWPT	Qal	S	CGSA CMP	E601	2	Y	
W-35A-06	MWPT	Qal	S	CGSA CMP	E601	4		
W-35A-07	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-35A-07	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-35A-08	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-35A-08	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-35A-09	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-35A-09	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-35A-10	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-35A-10	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-35A-11	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-35A-11	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-35A-12	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-35A-12	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-35A-13	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-35A-13	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-35A-14	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-35A-14	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-7A	MWPT	$Tnbs_1$	B	CGSA CMP	E239.2	2	NA	Next sample required 2ndQ 2007.
W-7A	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-7A	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-7B	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-7B	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-7C	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-7C	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-7E	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	2	Y	
W-7E	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	4		
W-7ES	MWPT	Qal	S	CMP/WGMG	E601	1	Y	
W-7ES	MWPT	Qal	S	CMP/WGMG	E601	3		
W-7F	MWPT	$Tnsc_1$	S	CGSA CMP	E601	2	Y	
W-7F	MWPT	$Tnsc_1$	S	CGSA CMP	E601	4		
W-7G	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-7G	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-7H	MWPT	Qal	S	CGSA CMP	E601	2	Y	

Table 2.1-12. Central General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-7H	MWPT	Qal	S	CGSA CMP	E601	4		
W-71	EW	$Tnbs_2$	B	CMP-TF	E245.2	4		CGSA extraction well. Next sample required 4ndQ 2006.
W-7I	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	CGSA extraction well.
W-7I	EW	$Tnbs_2$	S	CMP-TF	E601	4		CGSA extraction well.
W-7J	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-7J	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-7K	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-7K	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-7L	MWPT	$Tnbs_1$	B	CGSA CMP	E200.7:Cu	2	NA	Next sample required 2ndQ 2007.
W-7L	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-7L	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-7M	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-7M	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-7N	MWPT	$Tnbs_1$	B	CGSA CMP	E245.2	2	NA	Next sample required 2ndQ 2007.
W-7N	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-7N	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-7O	EW	Qal	B	CMP-TF	E200.7:Cu	2	NA	CGSA extraction well. Next sample required 2ndQ 2007.
W-7O	EW	Qal	B	CMP-TF	E200.7:Zn	2	NA	CGSA extraction well. Next sample required 2ndQ 2007.
W-7O	EW	Qal	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-7O	EW	Qal	S	CMP-TF	E601	4		CGSA extraction well.
W-7P	EW	$Tnbs_1$	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-7P	EW	$Tnbs_1$	S	CMP-TF	E601	4		CGSA extraction well.
W-7PS	MWPT	Qal	Q	CMP/WGMG	E601	1	Y	
W-7PS	MWPT	Qal	Q	CMP/WGMG	E601	2	Y	
W-7PS	MWPT	Qal	Q	CMP/WGMG	E601	3		
W-7PS	MWPT	Qal	Q	CMP/WGMG	E601	4		
W-7Q	MWPT	$Tnbs_2$		DIS	E601	1	Y	
W-7Q	MWPT	$Tnbs_2$		DIS	E601	2	Y	
W-7Q	MWPT	$Tnbs_2$		DIS	E601	3		
W-7Q	MWPT	$Tnbs_2$		DIS	E601	4		
W-7R	EW	Qal	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-7R	EW	Qal	S	CMP-TF	E601	4		CGSA extraction well.
W-7S	MWPT	Qal		DIS	E601	1	Y	
W-7S	MWPT	Qal		DIS	E601	2	Y	
W-7S	MWPT	Qal		DIS	E601	3		
W-7S	MWPT	Qal		DIS	E601	4		
W-7T	MWPT	Qal		DIS	E601	1	Y	
W-7T	MWPT	Qal		DIS	E601	2	Y	
W-7T	MWPT	Qal		DIS	E601	3		
W-7T	MWPT	Qal		DIS	E601	4		
W-843-01	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-843-01	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-843-02	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-843-02	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-872-01	MWPT	$Tnbs_2$	B	CGSA CMP	E200.7:Cu	2	NA	Next sample required 2ndQ 2007.
W-872-01	MWPT	$Tnbs_2$	B	CGSA CMP	E239.2	2	NA	Next sample required 2ndQ 2007.
W-872-01	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-872-01	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-872-02	EW	$Tnbs_2$	S	CMP-TF	E601	2	Y	CGSA extraction well.

Table 2.1-12. Central General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-872-02	EW	$Tnbs_2$	S	CMP-TF	E601	4		CGSA extraction well.
W-873-01	MWPT	$Tnbs_1$	S	CGSA CMP	E601	2	Y	
W-873-01	MWPT	$Tnbs_1$	S	CGSA CMP	E601	4		
W-873-02	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-873-02	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-873-03	MWPT	$Tnsc_1$	S	CGSA CMP	E601	2	Y	
W-873-03	MWPT	$Tnsc_1$	S	CGSA CMP	E601	4		
W-873-04	MWPT	$Tnsc_1$	B	CGSA CMP	E239.2	2	NA	Next sample required 2ndQ 2007.
W-873-04	MWPT	$Tnsc_1$	S	CGSA CMP	E601	2	Y	
W-873-04	MWPT	$Tnsc_1$	S	CGSA CMP	E601	4		
W-873-06	MWPT	$Tnbs_2$	B	CGSA CMP	E200.7:Cd	2	NA	Next sample required 2ndQ 2007.
W-873-06	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-873-06	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-873-07	EW	$Tnbs_2$	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-873-07	EW	$Tnbs_2$	S	CMP-TF	E601	4		CGSA extraction well.
W-875-01	MWPT	$Tnbs_2$	B	CGSA CMP	E200.7:Cd	2	NA	Next sample required 2ndQ 2007.
W-875-01	MWPT	$Tnbs_2$	B	CGSA CMP	E200.7:Cu	2	NA	Next sample required 2ndQ 2007.
W-875-01	MWPT	$Tnbs_2$	B	CGSA CMP	E200.7:Zn	2	NA	Next sample required 2ndQ 2007.
W-875-01	MWPT	$Tnbs_2$	B	CGSA CMP	E239.2	2	NA	Next sample required 2ndQ 2007.
W-875-01	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-875-01	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-875-02	MWPT	$Tnsc_1$	S	CGSA CMP	E601	2	Y	
W-875-02	MWPT	$Tnsc_1$	S	CGSA CMP	E601	4		
W-875-03	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	N	Dry.
W-875-03	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-875-04	MWPT	$Tnbs_2$	B	CGSA CMP	E239.2	2	NA	Next sample required 2ndQ 2007.
W-875-04	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-875-04	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-875-05	MWPT	$Tnsc_1$	S	CGSA CMP	E601	2	Y	
W-875-05	MWPT	$Tnsc_1$	S	CGSA CMP	E601	4		
W-875-06	MWPT	$Tnsc_1$	S	CGSA CMP	E601	2	Y	
W-875-06	MWPT	$Tnsc_1$	S	CGSA CMP	E601	4		
W-875-07	EW	$Tnbs_2$	B	CMP-TF	E239.2	2	NA	CGSA extraction well. Next sample required 2ndQ 2007.
W-875-07	EW	$Tnbs_2$	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-875-07	EW	$Tnbs_2$	S	CMP-TF	E601	4		CGSA extraction well.
W-875-08	EW	$Tnbs_2$	S	CMP-TF	E601	2	Y	CGSA extraction well.
W-875-08	EW	$Tnbs_2$	S	CMP-TF	E601	4		CGSA extraction well.
W-875-09	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	N	CGSA extraction well. Insufficient water.
W-875-09	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		CGSA extraction well.
W-875-10	MWPT	$Tnbs_2$	B	CGSA CMP	E200.7:Ba	2	N	Insufficient water. Next sample required 2ndQ 2008.
W-875-10	MWPT	$Tnbs_2$	B	CGSA CMP	E239.2	2	N	Insufficient water. Next sample required 2ndQ 2008.
W-875-10	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	N	Insufficient water.
W-875-10	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-875-11	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	N	CGSA extraction well. Insufficient water.
W-875-11	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		CGSA extraction well.
W-875-15	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	N	CGSA extraction well. Insufficient water.
W-875-15	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		CGSA extraction well.

Table 2.1-12. Central General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-876-01	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	Y	
W-876-01	MWPT	$Tnbs_2$	S	CGSA CMP	E601	4		
W-879-01	MWPT	$Tnsc_1$	S	CGSA CMP	E601	2	Y	
W-879-01	MWPT	$Tnsc_1$	S	CGSA CMP	E601	4		
W-889-01	MWPT	$Tnsc_1$	S	CGSA CMP	E601	2	Y	
W-889-01	MWPT	$Tnsc_1$	S	CGSA CMP	E601	4		
W-CGSA-1732	MWPT	Qal		DIS	E601	1	N	Dry.
W-CGSA-1733	MWPT	Qal		DIS	E601	1	Y	
W-CGSA-1733	MWPT	Qal		DIS	E601	2	Y	
W-CGSA-1733	MWPT	Qal		DIS	E601	4		
W-CGSA-1735	MWPT	Qal		DIS	E601	1	N	Dry.
W-CGSA-1736	MWPT	Qal		DIS	E601	2	Y	
W-CGSA-1736	MWPT	Qal		DIS	E601	4		
W-CGSA-1737	MWPT	Qal		DIS	E601	2	Y	
W-CGSA-1737	MWPT	Qal		DIS	E601	4		
W-CGSA-1739	MWPT	Qal		DIS	E601	1	Y	
W-CGSA-1739	MWPT	Qal		DIS	E601	2	Y	
W-CGSA-1739	MWPT	Qal		DIS	E601	4		

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

Table 2.1-13. Eastern General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CDF-1	MWPT	Qal-$Tnsc_0$		WGMG	E502.2	1	Y	
CDF-1	MWPT	Qal-$Tnsc_0$		WGMG	E502.2	2	Y	
CDF-1	MWPT	Qal-$Tnsc_0$		WGMG	E502.2	3		
CDF-1	MWPT	Qal-$Tnsc_0$		WGMG	E502.2	4		
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	3		
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	3		
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	3		
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	4		
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	4		
CDF-1	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	4		
CON-1	MWPT	$Tnsc_0$		WGMG	E502.2	1	Y	
CON-1	MWPT	$Tnsc_0$		WGMG	E502.2	2	Y	
CON-1	MWPT	$Tnsc_0$		WGMG	E502.2	3		
CON-1	MWPT	$Tnsc_0$		WGMG	E502.2	4		
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	3		
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	3		
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	3		
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	4		
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	4		
CON-1	MWPT	$Tnsc_0$	M	CMP/WGMG	E601	4		
CON-2	MWPT	Qal-$Tnsc_0$	Q	CMP/WGMG	E601	1	Y	
CON-2	MWPT	Qal-$Tnsc_0$	Q	CMP/WGMG	E601	2	Y	
CON-2	MWPT	Qal-$Tnsc_0$	Q	CMP/WGMG	E601	3		
CON-2	MWPT	Qal-$Tnsc_0$	Q	CMP/WGMG	E601	4		
W-24P-03	MWPT	Qal	Q	CMP	E601	1	Y	
W-24P-03	MWPT	Qal		DIS	E601	2	Y	
W-24P-03	MWPT	Qal	Q	CMP	E601	2	Y	
W-24P-03	MWPT	Qal	Q	CMP	E601	3		
W-24P-03	MWPT	Qal	Q	CMP	E601	4		
W-25D-01	MWPT	Qal	S	CMP	E601	2	Y	
W-25D-01	MWPT	Qal	S	CMP	E601	4		
W-25D-02	MWPT	Qal	S	CMP	E601	2	Y	
W-25D-02	MWPT	Qal	S	CMP	E601	4		
W-25M-01	MWPT	Qal		DIS	E300.0:PERC	2	Y	
W-25M-01	MWPT	Qal		DIS	E300.0:PERC	4		
W-25M-01	MWPT	Qal	S	CMP	E601	2	Y	

Table 2.1-13. Eastern General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-25M-01	MWPT	Qal	S	CMP	E601	4		
W-25M-01	MWPT	Qal		DIS	E8330:R+H	2	Y	
W-25M-01	MWPT	Qal		DIS	E8330:R+H	4		
W-25M-01	MWPT	Qal		DIS	NUTRIENTS	2	Y	
W-25M-01	MWPT	Qal		DIS	NUTRIENTS	4		
W-25M-02	MWPT	Qal	S	CMP	E601	2	Y	
W-25M-02	MWPT	Qal	S	CMP	E601	4		
W-25M-03	MWPT	Qal	S	CMP	E601	2	Y	
W-25M-03	MWPT	Qal	S	CMP	E601	4		
W-25N-01	EW	Qal	S	CMP-TF	E601	2	Y	EGSA extraction well.
W-25N-01	EW	Qal	S	CMP-TF	E601	4		EGSA extraction well.
W-25N-04	MWPT	Tmss		DIS	ANIONS	2	Y	
W-25N-04	MWPT	Tmss		DIS	ANIONS	4		
W-25N-04	MWPT	Tmss		DIS	E200.7:Ba	2	Y	
W-25N-04	MWPT	Tmss		DIS	E200.7:Ba	4		
W-25N-04	MWPT	Tmss		DIS	E300.0:PERC	2	Y	
W-25N-04	MWPT	Tmss		DIS	E300.0:PERC	4		
W-25N-04	MWPT	Tmss		DIS	E350.2	2	Y	
W-25N-04	MWPT	Tmss		DIS	E350.2	4		
W-25N-04	MWPT	Tmss	S	CMP	E601	2	Y	
W-25N-04	MWPT	Tmss	S	CMP	E601	4		
W-25N-05	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-05	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-25N-06	MWPT	Qal	S	CMP	E601	2	Y	
W-25N-06	MWPT	Qal	S	CMP	E601	4		
W-25N-07	MWPT	Qal	Q	CMP	E601	1	Y	
W-25N-07	MWPT	Qal	Q	CMP	E601	2	Y	
W-25N-07	MWPT	Qal	Q	CMP	E601	3		
W-25N-07	MWPT	Qal	Q	CMP	E601	4		
W-25N-08	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-08	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-25N-09	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-09	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-25N-10	MWPT	$Tnbs_1$	Q	CMP	E601	1	Y	
W-25N-10	MWPT	$Tnbs_1$	Q	CMP	E601	2	Y	
W-25N-10	MWPT	$Tnbs_1$	Q	CMP	E601	3		
W-25N-10	MWPT	$Tnbs_1$	Q	CMP	E601	4		
W-25N-11	MWPT	$Tnbs_1$	Q	CMP	E601	1	Y	
W-25N-11	MWPT	$Tnbs_1$	Q	CMP	E601	2	Y	
W-25N-11	MWPT	$Tnbs_1$	Q	CMP	E601	3		
W-25N-11	MWPT	$Tnbs_1$	Q	CMP	E601	4		
W-25N-12	MWPT	$Tnbs_1$	Q	CMP	E601	1	Y	
W-25N-12	MWPT	$Tnbs_1$	Q	CMP	E601	2	Y	
W-25N-12	MWPT	$Tnbs_1$	Q	CMP	E601	3		
W-25N-12	MWPT	$Tnbs_1$	Q	CMP	E601	4		
W-25N-13	MWPT	$Tnbs_1$	Q	CMP	E601	1	Y	
W-25N-13	MWPT	$Tnbs_1$	Q	CMP	E601	2	Y	
W-25N-13	MWPT	$Tnbs_1$	Q	CMP	E601	3		

Table 2.1-13. Eastern General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-25N-13	MWPT	$Tnbs_1$	Q	CMP	E601	4		
W-25N-15	MWPT	Qal	S	CMP	E601	2	Y	
W-25N-15	MWPT	Qal	S	CMP	E601	4		
W-25N-18	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-18	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-25N-20	MWPT	Qal	S	CMP	E601	2	Y	
W-25N-20	MWPT	Qal	S	CMP	E601	4		
W-25N-21	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-21	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-25N-22	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-22	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-25N-23	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-23	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-25N-24	EW	Qal	S	CMP-TF	E601	2	Y	EGSA extraction well.
W-25N-24	EW	Qal	S	CMP-TF	E601	4		EGSA extraction well.
W-25N-25	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-25	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-25N-26	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-26	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-25N-28	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-25N-28	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-26R-01	MWPT	$Tnbs_1$		WGMG	E601	1	Y	
W-26R-01	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	2	Y	
W-26R-01	MWPT	$Tnbs_1$		WGMG	E601	3		
W-26R-01	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	4		
W-26R-02	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-26R-02	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-26R-03	EW	Qal	S	CMP-TF	E601	2	Y	EGSA extraction well.
W-26R-03	EW	Qal	S	CMP-TF	E601	4		EGSA extraction well.
W-26R-04	MWPT	Qal		DIS	E601	1	Y	
W-26R-04	MWPT	Qal	S	CMP	E601	2	Y	
W-26R-04	MWPT	Qal		DIS	E601	3		
W-26R-04	MWPT	Qal	S	CMP	E601	4		
W-26R-05	MWPT	Qal		WGMG	E601	1	Y	
W-26R-05	MWPT	Qal	S	CMP/WGMG	E601	2	Y	
W-26R-05	MWPT	Qal		WGMG	E601	3		
W-26R-05	MWPT	Qal	S	CMP/WGMG	E601	4		
W-26R-06	MWPT	$Tnbs_1$		DIS	E601	1	Y	
W-26R-06	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-26R-06	MWPT	$Tnbs_1$		DIS	E601	3		
W-26R-06	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-26R-07	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-26R-07	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-26R-08	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-26R-08	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-26R-11	MWPT	Qal		DIS	E601	1	Y	
W-26R-11	MWPT	Qal	S	CMP	E601	2	Y	
W-26R-11	MWPT	Qal		DIS	E601	3		

Table 2.1-13. Eastern General Services Area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-26R-11	MWPT	Qal	S	CMP	E601	4		
W-7D	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-7D	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-7DS	MWPT	Qal		WGMG	E601	1	Y	
W-7DS	MWPT	Qal	S	CMP/WGMG	E601	2	Y	
W-7DS	MWPT	Qal		WGMG	E601	3		
W-7DS	MWPT	Qal	S	CMP/WGMG	E601	4		

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

Table 2.1-14. Central General Services Area (CGSA) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
CGSA	January	71	36	NA	NA	NA	NA
	February	69	31	NA	NA	NA	NA
	March	71	32	NA	NA	NA	NA
	April	78	40	NA	NA	NA	NA
	May	33	49	NA	NA	NA	NA
	June	26	34	NA	NA	NA	NA
Total		350	220	NA	NA	NA	NA

Table 2.1-15. Eastern General Services Area (EGSA) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
EGSA	January	NA	15	NA	NA	NA	NA
	February	NA	12	NA	NA	NA	NA
	March	NA	9.7	NA	NA	NA	NA
	April	NA	12	NA	NA	NA	NA
	May	NA	14	NA	NA	NA	NA
	June	NA	10	NA	NA	NA	NA
Total		NA	73	NA	NA	NA	NA

Table 2.2-1. Building 834 (B834) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B834	January	634	634	3,532	12,141
	February	641	641	3,707	12,124
	March	692	692	3,954	13,564
	April	663	663	3,661	14,636
	May	821	821	5,088	16,658
	June	591	591	3,644	11,971
Total		4,042	4,042	23,586	81,094

Table 2.2-2. Building 834 OU VOCs in ground water treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
834-E	1/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-E	2/7/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-E	3/1/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-E	3/8/06[a]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-E	3/14/06[a]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-E	4/4/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-E	5/3/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-E	6/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-I	1/11/06	4,300 D	75 D	140 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D	<10 D
834-I	3/8/06[a]	4,900 BD	45	340 D	<25 D	<0.5	0.93	<0.5	<0.5	1.9	<0.5	1.9	1.2	<0.5	<0.5
834-I	3/14/06[a]	6,300 D	51	320 D	<50 D	<0.5	1.4	<0.5	<0.5	2.4	<0.5	2.2	4	<0.5	<0.5
834-I	4/4/06	7,600 D	44 D	280 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D
834-I	4/4/06[b]	7,200 D	35 D	250 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D	<25 D

Notes:

[a] **Additional start-up samples after the addition of extraction well W-834-2001.**

[b] **Collocated sample collected for quality control purposes.**

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

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

Location	Date	Detection frequency	1,2-Dichloroethene (total) (μg/L)
834-E	1/11/06	0 of 19	-
834-E	2/7/06	0 of 18	-
834-E	3/1/06	0 of 18	-
834-E	3/8/06	0 of 18	-
834-E	3/14/06	0 of 18	-
834-E	4/4/06	0 of 18	-
834-E	5/3/06	0 of 18	-
834-E	6/5/06	0 of 18	-
834-I	1/11/06	1 of 19	140 D
834-I	3/8/06	1 of 18	340 D
834-I	3/14/06	1 of 18	320 D
834-I	4/4/06	1 of 18	280 D
834-I	4/04/06[a]	1 of 18	250 D

Table 2.2-3. Building 834 OU nitrate in ground water treatment system influent and effluent.

Location	Date	Nitrate (as NO_3) (mg/L)
834-E	1/11/06	85
834-E	2/7/06	85
834-E	3/1/06	100 D
834-E	3/8/06[a]	110 D
834-E	3/14/06[a]	97 D
834-E	4/4/06	89
834-E	5/3/06	100 D
834-E	6/5/06	85
834-I	1/11/06	94 D
834-I	3/8/06[a]	88 D
834-I	3/14/06[a]	84 D
834-I	4/4/06	87
834-I	4/4/06[b]	87

Notes:

[a] Additional start-up samples after the addition of extraction well W-834-2001.

[b] Collocated sample collected for quality control purposes.

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

Table 2.2-4. Building 834 OU diesel range organic compounds in ground water extraction treatment system influent and effluent.

Location	Date	Diesel Range Organics (C12-C24) (μg/L)
834-E	1/11/06	<200
834-E	2/7/06	<200
834-E	3/1/06	<200
834-E	3/8/06[a]	<200
834-E	3/14/06[a]	<200 D
834-E	4/4/06	<200
834-E	5/3/06	<200
834-E	6/5/06	<200
834-I	1/11/06	<200
834-I	3/8/06[a]	320
834-I	3/14/06[a]	640 D
834-I	4/4/06	510
834-I	4/4/06[b]	520
834-I	5/3/06	250
834-I	6/5/06	<200

Notes:

[a] Additional start-up samples after the addition of extraction well W-834-2001.

[b] Collocated sample collected for quality control purposes.

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

Table 2.2-5. Building 834 OU TBOS in ground water treatment system influent and effluent.

Location	Date	TBOS (μg/L)
834-E	1/11/06	<1
834-E	2/7/06	<1 R
834-E	3/1/06	<1
834-E	3/8/06[a]	<1 D
834-E	3/14/06[a]	<100 D
834-E	4/4/06	<100
834-E	5/3/06	<10
834-E	6/5/06	<1
834-I	1/11/06	1.1
834-I	3/8/06[a]	1.8 D
834-I	3/14/06[a]	21
834-I	4/4/06	16
834-I	4/4/06[b]	14

Notes:

[a] **Additional start-up samples after the addition of extraction well W-834-2001.**

[b] **Collocated sample collected for quality control purposes.**

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

Table 2.2-6. Building 834 OU treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
834 GWTS			
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**
834 SVE			
Influent Port	**TF-834-VI**	**No Monitoring Requirements**	
Effluent Port	**TF-834-VE**	**VOCs**	**Weekly[a]**
Intermediate GAC	**TF-834-VCF4I**	**VOCs**	**Weekly[a]**

Notes:

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

[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.**

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

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-1709	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1709	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-1709	MWPT	Tpsg	S	CMP	E601	3		
W-834-1709	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-1711	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-1711	MWPT	Tps	S	CMP	E601	1	Y	
W-834-1711	MWPT	Tps		DIS	E601	2	Y	
W-834-1711	MWPT	Tps	S	CMP	E601	3		
W-834-1711	MWPT	Tps		DIS	E601	4		
W-834-1711	MWPT	Tps	A	CMP	TBOS	1	Y	
W-834-1824	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1824	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-1824	MWPT	Tpsg	S	CMP	E601	3		
W-834-1824	MWPT	Tpsg	A	DIS	TBOS	1	Y	
W-834-1825	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1825	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-1825	MWPT	Tpsg	S	CMP	E601	3		
W-834-1825	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-1833	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1833	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-1833	MWPT	Tpsg	S	CMP	E601	3		
W-834-1833	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-2001	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-2001	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-2001	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-2001	EW	Tpsg	A	CMP-TF	EM8015:DIESEL	1	Y	B834 extraction well.
W-834-2001	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-2113	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2113	MWPT	Tpsg	S	CMP	E624	1	Y	
W-834-2113	MWPT	Tpsg		DIS	E624	2	Y	
W-834-2113	MWPT	Tpsg	S	CMP	E624	3		
W-834-2113	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-2113	MWPT	Tpsg		DIS	TBOS	2	Y	
W-834-2117	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2117	MWPT	Tpsg		DIS	E300.0:PERC	1	Y	
W-834-2117	MWPT	Tpsg		DIS	E300.0:PERC	2	Y	
W-834-2117	MWPT	Tpsg	S	CMP	E624	1	Y	
W-834-2117	MWPT	Tpsg		DIS	E624	2	Y	
W-834-2117	MWPT	Tpsg	S	CMP	E624	3		
W-834-2117	MWPT	Tpsg		DIS	E624	4		
W-834-2117	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-2118	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2118	MWPT	Tpsg		DIS	E300.0:PERC	1	Y	

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-2118	MWPT	Tpsg		DIS	E300.0:PERC	2	Y	
W-834-2118	MWPT	Tpsg	S	CMP	E624	1	Y	
W-834-2118	MWPT	Tpsg		DIS	E624	2	Y	
W-834-2118	MWPT	Tpsg	S	CMP	E624	3		
W-834-2118	MWPT	Tpsg		DIS	E624	4		
W-834-2118	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-2119	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2119	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-2119	MWPT	Tpsg	S	CMP	E601	3		
W-834-2119	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-A1	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-A1	MWPT	Tps	S	CMP	E601	1	Y	
W-834-A1	MWPT	Tps	S	CMP	E601	3		
W-834-A1	MWPT	Tps	A	CMP	EM8015:DIESEL	1	Y	
W-834-A1	MWPT	Tps	A	CMP	TBOS	1	Y	
W-834-A2	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-A2	MWPT	Tpsg	S	CMP	E601	1	N	Insufficient water.
W-834-A2	MWPT	Tpsg	S	CMP	E601	3		
W-834-A2	MWPT	Tpsg	A	CMP	EM8015:DIESEL	1	N	Insufficient water.
W-834-A2	MWPT	Tpsg	A	CMP	TBOS	1	N	Insufficient water.
W-834-B2	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-B2	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-B2	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-B2	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-B3	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-B3	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-B3	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-B3	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-B4	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-B4	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-B4	MWPT	Tpsg	S	CMP	E601	3		
W-834-B4	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-C2	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-C2	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-C2	MWPT	Tpsg	S	CMP	E601	3		
W-834-C2	MWPT	Tpsg	A	CMP	TBOS	1	N	Insufficient water.
W-834-C4	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-C4	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-C4	MWPT	Tpsg	S	CMP	E601	3		
W-834-C4	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-C5	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-C5	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-C5	MWPT	Tpsg	S	CMP	E601	3		

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-C5	MWPT	Tpsg		DIS	E8330:R+H	1	Y	
W-834-C5	MWPT	Tpsg		DIS	EM8015:DIESEL	1	Y	
W-834-C5	MWPT	Tpsg		DIS	GENMIN	1	Y	
W-834-C5	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-D10	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-D10	MWPT	Tps	S	CMP	E624	1	Y	
W-834-D10	MWPT	Tps	S	CMP	E624	3		
W-834-D10	MWPT	Tps	A	CMP	EM8015:DIESEL	1	Y	
W-834-D10	MWPT	Tps	A	CMP	TBOS	1	Y	
W-834-D11	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-D11	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-D11	MWPT	Tpsg	S	CMP	E601	3		
W-834-D11	MWPT	Tpsg	A	CMP	EM8015:DIESEL	1	N	Insufficient water.
W-834-D11	MWPT	Tpsg	A	CMP	TBOS	1	N	Insufficient water.
W-834-D12	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-D12	EW	Tpsg	S	CMP-TF	E624	1	Y	B834 extraction well.
W-834-D12	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-D12	EW	Tpsg	A	CMP-TF	EM8015:DIESEL	1	Y	B834 extraction well.
W-834-D12	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-D13	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-D13	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-D13	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-D13	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-D14	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-D14	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-D14	MWPT	Tpsg	S	CMP	E601	3		
W-834-D14	MWPT	Tpsg	A	CMP	TBOS	1	N	Insufficient water.
W-834-D15	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D15	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-D15	MWPT	Tpsg	S	CMP	E601	3		
W-834-D15	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-D16	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D16	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-D16	MWPT	Tpsg	S	CMP	E601	3		
W-834-D16	MWPT	Tpsg	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-D16	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-D17	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D17	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-D17	MWPT	Tpsg	S	CMP	E601	3		
W-834-D17	MWPT	Tpsg	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-D17	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-D18	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D18	MWPT	Tpsg	S	CMP	E601	1	Y	

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-D18	MWPT	Tpsg	S	CMP	E601	3		
W-834-D18	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-D2	MWPT	Tnbs1	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D2	MWPT	Tnbs1	A	CMP	E601	1	N	Dry.
W-834-D2	MWPT	Tnbs1	A	CMP	TBOS	1	N	Dry.
W-834-D3	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D3	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-D3	MWPT	Tpsg	S	CMP	E601	3		
W-834-D3	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-D4	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-D4	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-D4	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-D4	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-D5	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-D5	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-D5	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-D5	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-D6	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-D6	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-D6	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-D6	EW	Tpsg		DIS	EM8015:DIESEL	1	Y	B834 extraction well.
W-834-D6	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-D7	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-D7	EW	Tpsg	S	CMP-TF	E624	1	Y	B834 extraction well.
W-834-D7	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-D7	EW	Tpsg	A	CMP-TF	EM8015:DIESEL	1	Y	B834 extraction well.
W-834-D7	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-D9A	MWPT	Tnbs2	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D9A	MWPT	Tnbs2	A	CMP	E601	1	N	Dry.
W-834-D9A	MWPT	Tnbs2	A	CMP	TBOS	1	N	Dry.
W-834-G3	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-G3	MWPT	Tpsg	A	CMP	E601	1	N	Dry.
W-834-G3	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-H2	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-H2	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-H2	MWPT	Tpsg	S	CMP	E601	3		
W-834-H2	MWPT	Tpsg	A	CMP	TBOS	1	N	Insufficient water.
W-834-J1	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-J1	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-J1	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-J1	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-J2	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-J2	MWPT	Tpsg	S	CMP	E601	1	Y	

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-J2	MWPT	Tpsg	S	CMP	E601	3		
W-834-J2	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-J3	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-J3	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-J3	MWPT	Tpsg	S	CMP	E601	3		
W-834-J3	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-K1A	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-K1A	MWPT	Tpsg	S	CMP	E601	1	N	Insufficient water.
W-834-K1A	MWPT	Tpsg	S	CMP	E601	3		
W-834-K1A	MWPT	Tpsg	A	CMP	EM8015:DIESEL	1	N	Insufficient water.
W-834-K1A	MWPT	Tpsg	A	CMP	TBOS	1	N	Insufficient water.
W-834-M1	MWPT	Tpsg		DIS	E218.2	1	Y	
W-834-M1	MWPT	Tpsg		DIS	E218.2	3		
W-834-M1	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-M1	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-M1	MWPT	Tpsg	S	CMP	E601	3		
W-834-M1	MWPT	Tpsg		DIS	GENMIN	1	Y	
W-834-M1	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-M2	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-M2	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-M2	MWPT	Tpsg	S	CMP	E601	3		
W-834-M2	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-S1	EW	Tpsg		DIS	E218.2	1	Y	B834 extraction well.
W-834-S1	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-S1	EW	Tpsg	S	CMP-TF	E624	1	Y	B834 extraction well.
W-834-S1	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-S1	EW	Tpsg	A	CMP-TF	EM8015:DIESEL	1	Y	B834 extraction well.
W-834-S1	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-S10	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-S10	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-S10	MWPT	Tpsg	S	CMP	E601	3		
W-834-S10	MWPT	Tpsg		DIS	EM8015:DIESEL	1	N	Dry.
W-834-S10	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-S12A	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-S12A	EW	Tpsg	S	CMP-TF	E624	1	Y	B834 extraction well.
W-834-S12A	EW	Tpsg	S	CMP-TF	E624	3		B834 extraction well.
W-834-S12A	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-S13	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-S13	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-S13	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-S13	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-S4	MWPT	Tpsg		DIS	E218.2	1	Y	
W-834-S4	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-S4	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-S4	MWPT	Tpsg	S	CMP	E601	3		
W-834-S4	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-S5	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-S5	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-S5	MWPT	Tpsg	S	CMP	E601	3		
W-834-S5	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-S6	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-S6	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-S6	MWPT	Tpsg	S	CMP	E601	3		
W-834-S6	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-S7	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-S7	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-S7	MWPT	Tpsg	S	CMP	E601	3		
W-834-S7	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-S8	MWPT	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-S8	MWPT	Tnsc2	S	CMP	E601	1	Y	
W-834-S8	MWPT	Tnsc2	S	CMP	E601	3		
W-834-S8	MWPT	Tnsc2	A	CMP	EM8015:DIESEL	1	Y	
W-834-S8	MWPT	Tnsc2	A	CMP	TBOS	1	Y	
W-834-S9	MWPT	Tnsc2		DIS	E218.2	1	Y	
W-834-S9	MWPT	Tnsc2		DIS	E218.2	3		
W-834-S9	MWPT	Tnsc2	A	CMP	E300.0:NO3	1	Y	
W-834-S9	MWPT	Tnsc2	S	CMP	E601	1	Y	
W-834-S9	MWPT	Tnsc2	S	CMP	E601	3		
W-834-S9	MWPT	Tnsc2	A	CMP	EM8015:DIESEL	1	Y	
W-834-S9	MWPT	Tnsc2	A	CMP	TBOS	1	Y	
W-834-T1	GW	Tnbs1	S	CMP	E300.0:NO3	1	N	Dry.
W-834-T1	GW	Tnbs1	S	CMP	E300.0:NO3	3		
W-834-T1	GW	Tnbs1	Q	CMP	E601	1	N	Dry.
W-834-T1	GW	Tnbs1	Q	CMP	E601	2	Y	
W-834-T1	GW	Tnbs1	Q	CMP	E601	3		
W-834-T1	GW	Tnbs1	Q	CMP	E601	4		
W-834-T1	GW	Tnbs1	S	CMP	TBOS	1	N	Dry.
W-834-T1	GW	Tnbs1	S	CMP	TBOS	3		
W-834-T11	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T11	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-T11	MWPT	Tpsg	S	CMP	E601	3		
W-834-T11	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-T2	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T2	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-T2	MWPT	Tpsg	S	CMP	E601	3		
W-834-T2	MWPT	Tpsg	A	CMP	TBOS	1	Y	

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-T2A	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T2A	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-T2A	MWPT	Tpsg	S	CMP	E601	3		
W-834-T2A	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-T2B	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T2B	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-T2B	MWPT	Tpsg	S	CMP	E601	3		
W-834-T2B	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-T2C	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T2C	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-T2C	MWPT	Tpsg	S	CMP	E601	3		
W-834-T2C	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-T2D	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T2D	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-T2D	MWPT	Tpsg	S	CMP	E601	3		
W-834-T2D	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-T3	GW	Tnbs1	S	CMP	E300.0:NO3	1	Y	
W-834-T3	GW	Tnbs1	S	CMP	E300.0:NO3	3		
W-834-T3	GW	Tnbs1	Q	CMP	E601	1	Y	
W-834-T3	GW	Tnbs1	Q	CMP	E601	2	Y	
W-834-T3	GW	Tnbs1	Q	CMP	E601	3		
W-834-T3	GW	Tnbs1	Q	CMP	E601	4		
W-834-T3	GW	Tnbs1	S	CMP	TBOS	1	Y	
W-834-T3	GW	Tnbs1	S	CMP	TBOS	3		
W-834-T5	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T5	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-T5	MWPT	Tpsg	S	CMP	E601	3		
W-834-T5	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-T7A	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-834-T7A	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-T7A	MWPT	Tpsg	S	CMP	E601	3		
W-834-T7A	MWPT	Tpsg	A	CMP	TBOS	1	N	Insufficient water.
W-834-T8A	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T8A	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-T8A	MWPT	Tpsg	S	CMP	E601	3		
W-834-T8A	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-T9	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-T9	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-T9	MWPT	Tpsg	S	CMP	E601	3		
W-834-T9	MWPT	Tpsg	A	CMP	TBOS	1		Dry.
W-834-U1	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-U1	MWPT	Tps	S	CMP	E601	1	Y	
W-834-U1	MWPT	Tps	S	CMP	E601	3		

Table 2.2-7. Building 834 OU ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-834-U1	MWPT	Tps	A	CMP	EM8015:DIESEL	1	Y	
W-834-U1	MWPT	Tps	A	CMP	TBOS	1	Y	

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

Table 2.2-8. Building 834 (B834) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B834	January	3,800	220	NA	3.5	NA	0.87
	February	4,100	210	NA	3.5	NA	0.93
	March	4,300	370	NA	3.5	NA	1.2
	April	3,300	480	NA	3.5	NA	1.4
	May	4,300	510	NA	3.9	NA	1.6
	June	3,000	320	NA	3.1	NA	1.0
Total		23,000	2,100	NA	21	NA	7.0

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
BC6-10	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
BC6-10	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
BC6-10	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
BC6-10	MWPT	$Tnbs_1$	S	CMP	E601	3		
BC6-10	MWPT	$Tnbs_1$	S	CMP	E906	1	Y	
BC6-10	MWPT	$Tnbs_1$	S	CMP	E906	3		
BC6-13 (SPRING 7)	MWPT	$Qt/Tnbs_1$	A	CMP	E300.0:NO3	1	N	Dry.
BC6-13 (SPRING 7)	MWPT	$Qt/Tnbs_1$	A	CMP	E300.0:PERC	1	N	Dry.
BC6-13 (SPRING 7)	MWPT	$Qt/Tnbs_1$	A	CMP	E601	1	N	Dry.
BC6-13 (SPRING 7)	MWPT	$Qt/Tnbs_1$	A	CMP	E906	1	N	Dry.
CARNRW1	WS	$Tnbs_1/Tmss$		WGMG	624	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:NO3	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E300.0:PERC	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	1	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	2	Y	
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	4		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	4		

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	1	Y	
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	1	Y	
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	1	Y	
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	2	Y	
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	2	Y	
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	2	Y	
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	3		
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	3		
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	3		
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	4		
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	4		
CARNRW1	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E906	4		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	3		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	3		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	3		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	4		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	4		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:NO3	4		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	3		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	3		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	3		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	4		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	4		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E300.0:PERC	4		
CARNRW2	WS	Tnbs$_1$/Tmss		WGMG	E502.2	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss		WGMG	E502.2	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	1	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	2	Y	
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	3		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	3		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	3		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	4		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	4		
CARNRW2	WS	Tnbs$_1$/Tmss	M	CMP/WGMG	E601	4		

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	1	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	2	Y	
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	3		
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	4		
CARNRW2	WS	$Tnbs_1$/Tmss	M	CMP/WGMG	E906	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:NO3	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E300.0:PERC	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	2	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	3		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E601	4		
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	
CARNRW3	WS	$Tnbs_1$/Tmss	M	CMP	E906	1	Y	

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	1	Y	
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	2	Y	
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	2	Y	
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	2	Y	
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	3		
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	3		
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	3		
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	4		
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	4		
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	4		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	3		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	3		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	3		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	4		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	4		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:NO3	4		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	4		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	4		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	4		
CARNRW4	WS	Qal/Tts	M	CMP	E601	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E601	3		
CARNRW4	WS	Qal/Tts	M	CMP	E601	3		
CARNRW4	WS	Qal/Tts	M	CMP	E601	3		
CARNRW4	WS	Qal/Tts	M	CMP	E601	4		
CARNRW4	WS	Qal/Tts	M	CMP	E601	4		
CARNRW4	WS	Qal/Tts	M	CMP	E601	4		
CARNRW4	WS	Qal/Tts	M	CMP	E906	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	1	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	2	Y	

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
CARNRW4	WS	Qal/Tts	M	CMP	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	3		
CARNRW4	WS	Qal/Tts	M	CMP	E906	3		
CARNRW4	WS	Qal/Tts	M	CMP	E906	3		
CARNRW4	WS	Qal/Tts	M	CMP	E906	4		
CARNRW4	WS	Qal/Tts	M	CMP	E906	4		
CARNRW4	WS	Qal/Tts	M	CMP	E906	4		
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E300.0:NO3	1	Y	
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E300.0:NO3	2	Y	
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E300.0:NO3	3		
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E300.0:NO3	4		
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E300.0:PERC	1	Y	
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E300.0:PERC	2	Y	
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E300.0:PERC	3		
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E300.0:PERC	4		
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E624	1	Y	
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E624	2	Y	
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E624	3		
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E624	4		
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E906	1	Y	
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E906	2	Y	
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E906	3		
EP6-06*	DMW	Qt/Tnbs$_1$		WGMG	E906	4		
EP6-07	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	1	Y	
EP6-07	MWPT	Tnbs$_1$	A	CMP	E300.0:PERC	1	Y	
EP6-07	MWPT	Tnbs$_1$	S	CMP	E601	1	Y	
EP6-07	MWPT	Tnbs$_1$	S	CMP	E601	3		
EP6-07	MWPT	Tnbs$_1$	S	CMP	E906	1	Y	
EP6-07	MWPT	Tnbs$_1$	S	CMP	E906	3		
EP6-08*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	1	Y	
EP6-08*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	2	Y	
EP6-08*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	3		
EP6-08*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	4		
EP6-08*	DMW	Tnbs$_1$		WGMG	E300.0:PERC	1	Y	
EP6-08*	DMW	Tnbs$_1$		WGMG	E300.0:PERC	2	Y	
EP6-08*	DMW	Tnbs$_1$		WGMG	E300.0:PERC	3		
EP6-08*	DMW	Tnbs$_1$		WGMG	E300.0:PERC	4		
EP6-08*	DMW	Tnbs$_1$		WGMG	E624	1	Y	
EP6-08*	DMW	Tnbs$_1$		WGMG	E624	2	Y	
EP6-08*	DMW	Tnbs$_1$		WGMG	E624	3		
EP6-08*	DMW	Tnbs$_1$		WGMG	E624	4		
EP6-08*	DMW	Tnbs$_1$		WGMG	E906	1	Y	
EP6-08*	DMW	Tnbs$_1$		WGMG	E906	2	Y	
EP6-08*	DMW	Tnbs$_1$		WGMG	E906	3		
EP6-08*	DMW	Tnbs$_1$		WGMG	E906	4		
EP6-09*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	1	Y	
EP6-09*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	2	Y	
EP6-09*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	3		
EP6-09*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	4		

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
EP6-09*	DMW	$Tnbs_1$		WGMG	E624	1	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E624	2	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E624	3		
EP6-09*	DMW	$Tnbs_1$		WGMG	E624	4		
EP6-09*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E906	3		
EP6-09*	DMW	$Tnbs_1$		WGMG	E906	4		
K6-01**	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E601	1	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E601	3		
K6-01**	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E906	3		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	3		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	4		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	3		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	4		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E624	1	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E624	2	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E624	3		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E624	4		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E906	1	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E906	2	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E906	3		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E906	4		
K6-03	MWPT	$Tnbs_1$	A	CMP/WGMG	E300.0:NO3	1	Y	
K6-03	MWPT	$Tnbs_1$	A	CMP/WGMG	E300.0:PERC	1	Y	
K6-03	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	1	Y	
K6-03	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	3		
K6-03	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	1	Y	
K6-03	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	3		
K6-04	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-04	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-04	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
K6-04	MWPT	$Tnbs_1$	S	CMP	E601	3		
K6-04	MWPT	$Tnbs_1$	S	CMP	E906	1	Y	
K6-04	MWPT	$Tnbs_1$	S	CMP	E906	3		
K6-14	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-14	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-14	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
K6-14	MWPT	$Tnbs_1$	S	CMP	E601	3		

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K6-14	MWPT	$Tnbs_1$	S	CMP	E906	1	Y	
K6-14	MWPT	$Tnbs_1$	S	CMP	E906	3		
K6-15	MWPT	$Qt/Tnbs_1$	A	CMP/WGMG	E300.0:NO3	1	N	Dry.
K6-15	MWPT	$Qt/Tnbs_1$	A	CMP/WGMG	E300.0:PERC	1	N	Dry.
K6-15	MWPT	$Qt/Tnbs_1$	S	CMP/WGMG	E601	1	N	Dry.
K6-15	MWPT	$Qt/Tnbs_1$	S	CMP/WGMG	E601	3		
K6-15	MWPT	$Qt/Tnbs_1$	S	CMP/WGMG	E906	1	N	Dry.
K6-15	MWPT	$Qt/Tnbs_1$	S	CMP/WGMG	E906	3		
K6-16	MWPT	$Qt/Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-16	MWPT	$Qt/Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-16	MWPT	$Qt/Tnbs_1$	S	CMP	E601	1	Y	
K6-16	MWPT	$Qt/Tnbs_1$	S	CMP	E601	3		
K6-16	MWPT	$Qt/Tnbs_1$	S	CMP	E906	1	Y	
K6-16	MWPT	$Qt/Tnbs_1$	S	CMP	E906	3		
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:NO3	3		
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:PERC	3		
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	1	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	2	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	3		
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	4		
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	1	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	2	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	3		
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	4		
K6-18	MWPT	$Qt/Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-18	MWPT	$Qt/Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-18	MWPT	$Qt/Tnbs_1$	S	CMP	E601	1	Y	
K6-18	MWPT	$Qt/Tnbs_1$	S	CMP	E601	3		
K6-18	MWPT	$Qt/Tnbs_1$	S	CMP	E906	1	Y	
K6-18	MWPT	$Qt/Tnbs_1$	S	CMP	E906	3		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	3		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	4		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	3		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	4		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E624	1	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E624	2	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E624	3		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E624	4		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E906	1	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E906	2	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E906	3		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E906	4		
K6-21	MWPT	Qt	A	CMP	E300.0:NO3	1	N	Dry.
K6-21	MWPT	Qt	A	CMP	E300.0:PERC	1	N	Dry.

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K6-21	MWPT	Qt	A	CMP	E601	1	N	Dry.
K6-21	MWPT	Qt	A	CMP	E906	1	N	Dry.
K6-22	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
K6-22	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3		
K6-22	GW	$Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
K6-22	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3		
K6-22	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
K6-22	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
K6-22	GW	$Tnbs_1$	Q	CMP	E601	3		
K6-22	GW	$Tnbs_1$	Q	CMP	E601	4		
K6-22	GW	$Tnbs_1$	Q	CMP	E906	1	Y	
K6-22	GW	$Tnbs_1$	Q	CMP	E906	2	Y	
K6-22	GW	$Tnbs_1$	Q	CMP	E906	3		
K6-22	GW	$Tnbs_1$	Q	CMP	E906	4		
K6-23	MWPT	Tmss	A	CMP	E300.0:NO3	1	Y	
K6-23	MWPT	Tmss	A	CMP	E300.0:PERC	1	Y	
K6-23	MWPT	Tmss	S	CMP	E601	1	Y	
K6-23	MWPT	Tmss	S	CMP	E601	3		
K6-23	MWPT	Tmss	S	CMP	E906	1	Y	
K6-23	MWPT	Tmss	S	CMP	E906	3		
K6-24	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-24	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-24	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
K6-24	MWPT	$Tnbs_1$	S	CMP	E601	3		
K6-24	MWPT	$Tnbs_1$	S	CMP	E906	1	Y	
K6-24	MWPT	$Tnbs_1$	S	CMP	E906	3		
K6-25	MWPT	Tmss	A	CMP	E300.0:NO3	1	Y	
K6-25	MWPT	Tmss	A	CMP	E300.0:PERC	1	Y	
K6-25	MWPT	Tmss	S	CMP	E601	1	Y	
K6-25	MWPT	Tmss	S	CMP	E601	3		
K6-25	MWPT	Tmss	S	CMP	E906	1	Y	
K6-25	MWPT	Tmss	S	CMP	E906	3		
K6-26	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-26	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-26	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
K6-26	MWPT	$Tnbs_1$	S	CMP	E601	3		
K6-26	MWPT	$Tnbs_1$	S	CMP	E906	1	Y	
K6-26	MWPT	$Tnbs_1$	S	CMP	E906	3		
K6-27	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
K6-27	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
K6-27	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
K6-27	MWPT	$Tnbs_1$	S	CMP	E601	3		
K6-27	MWPT	$Tnbs_1$	S	CMP	E906	1	Y	
K6-27	MWPT	$Tnbs_1$	S	CMP	E906	3		
K6-32	MWPT	$Tnbs_1$	A	CMP/WGMG	E300.0:NO3	1	Y	
K6-32	MWPT	$Tnbs_1$	A	CMP/WGMG	E300.0:PERC	1	Y	
K6-32	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	1	Y	
K6-32	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	3		
K6-32	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	1	Y	
K6-32	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	3		

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K6-33	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	1	Y	
K6-33	MWPT	Tnbs$_1$	A	CMP	E300.0:PERC	1	Y	
K6-33	MWPT	Tnbs$_1$	S	CMP	E601	1	Y	
K6-33	MWPT	Tnbs$_1$	S	CMP	E601	3		
K6-33	MWPT	Tnbs$_1$	S	CMP	E906	1	Y	
K6-33	MWPT	Tnbs$_1$	S	CMP	E906	3		
K6-34	GW	Tnbs$_1$	S	CMP	E300.0:NO3	1	Y	
K6-34	GW	Tnbs$_1$	S	CMP	E300.0:NO3	3		
K6-34	GW	Tnbs$_1$	S	CMP	E300.0:PERC	1	Y	
K6-34	GW	Tnbs$_1$	S	CMP	E300.0:PERC	3		
K6-34	GW	Tnbs$_1$	Q	CMP	E601	1	Y	
K6-34	GW	Tnbs$_1$	Q	CMP	E601	2	Y	
K6-34	GW	Tnbs$_1$	Q	CMP	E601	3		
K6-34	GW	Tnbs$_1$	Q	CMP	E601	4		
K6-34	GW	Tnbs$_1$	Q	CMP	E906	1	Y	
K6-34	GW	Tnbs$_1$	Q	CMP	E906	2	Y	
K6-34	GW	Tnbs$_1$	Q	CMP	E906	3		
K6-34	GW	Tnbs$_1$	Q	CMP	E906	4		
K6-35	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	1	Y	
K6-35	MWPT	Tnbs$_1$	A	CMP	E300.0:PERC	1	Y	
K6-35	MWPT	Tnbs$_1$	S	CMP	E601	1	Y	
K6-35	MWPT	Tnbs$_1$	S	CMP	E601	3		
K6-35	MWPT	Tnbs$_1$	S	CMP	E906	1	Y	
K6-35	MWPT	Tnbs$_1$	S	CMP	E906	3		
K6-36*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	1	Y	
K6-36*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	2	Y	
K6-36*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	3		
K6-36*	DMW	Tnbs$_1$		WGMG	E300.0:NO3	4		
K6-36*	DMW	Tnbs$_1$		WGMG	E300.0:PERC	1	Y	
K6-36*	DMW	Tnbs$_1$		WGMG	E300.0:PERC	2	Y	
K6-36*	DMW	Tnbs$_1$		WGMG	E300.0:PERC	3		
K6-36*	DMW	Tnbs$_1$		WGMG	E300.0:PERC	4		
K6-36*	DMW	Tnbs$_1$		WGMG	E624	1	Y	
K6-36*	DMW	Tnbs$_1$		WGMG	E624	2	Y	
K6-36*	DMW	Tnbs$_1$		WGMG	E624	3		
K6-36*	DMW	Tnbs$_1$		WGMG	E624	4		
K6-36*	DMW	Tnbs$_1$		WGMG	E906	1	Y	
K6-36*	DMW	Tnbs$_1$		WGMG	E906	2	Y	
K6-36*	DMW	Tnbs$_1$		WGMG	E906	3		
K6-36*	DMW	Tnbs$_1$		WGMG	E906	4		
SPRING15	SPR	Qt	A	CMP	E300.0:NO3	1	N	Dry.
SPRING15	SPR	Qt	A	CMP	E300.0:PERC	1	N	Dry.
SPRING15	SPR	Qt	A	CMP	E601	1	N	Dry.
SPRING15	SPR	Qt	A	CMP	E906	1	N	Dry.
W-33C-01	MWPT	Tts	A	CMP	E300.0:NO3	1	Y	
W-33C-01	MWPT	Tts	A	CMP	E300.0:PERC	1	Y	
W-33C-01	MWPT	Tts	S	CMP	E601	1	Y	
W-33C-01	MWPT	Tts	S	CMP	E601	3		
W-33C-01	MWPT	Tts	S	CMP	E906	1	Y	
W-33C-01	MWPT	Tts	S	CMP	E906	3		

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-34-01	MWB	$Tnsc_1$		DIS	E300.0:NO3	1	Y	
W-34-01	MWB	$Tnsc_1$		DIS	E300.0:PERC	1	Y	
W-34-01	MWB	$Tnsc_1$		DIS	E601	1	Y	
W-34-01	MWB	$Tnsc_1$		DIS	E906	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		DIS	E300.0:NO3	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		DIS	E601	1	Y	
W-34-02	MWB	Upper $Tnbs_1$		DIS	E906	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3		
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3		
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	3		
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	4		
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	2	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	3		
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	4		

Notes:
*** = Non CMP well. DWM Analytes and sampling frequency are specified in the Pit 6 Landfill Post-Closure Plan.**
**** = K6-01 to be sampled quarterly if K6-01S is dry.**
Pit 6 primary COC: VOCs (E601, E502.2, or E624).
Pit 6 primary COC: tritium (E906).
Pit 6 secondary COC: nitrate (E300:NO3).
Pit 6 secondary COC: perchlorate (E300.0:PERC).
See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.

Table 2.4-1. Building 815-Source (B815-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B815-SRC	January	NA	720	NA	32,297
	February	NA	631	NA	38,560
	March	NA	603	NA	38,775
	April	NA	622	NA	41,728
	May	NA	812	NA	48,522
	June	NA	397	NA	28,299
Total		NA	3,785	NA	228,181

Table 2.4-2. Building 815-Proximal (B815-PRX) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B815-PRX	January	NA	743	NA	76,257
	February	NA	410	NA	45,835
	March	NA	662	NA	75,201
	April	NA	669	NA	70,834
	May	NA	840	NA	91,326
	June	NA	652	NA	69,648
Total		NA	3,976	NA	429,101

Table 2.4-3. Building 815-Distal Site Boundary (B815-DSB) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B815-DSB	January	NA	790	NA	185,007
	February	NA	673	NA	147,540
	March	NA	677	NA	152,350
	April	NA	660	NA	87,115
	May	NA	870	NA	206,368
	June	NA	617	NA	145,445
Total		NA	4,287	NA	923,825

Table 2.4-4. Building 817-Source (B817-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B817-SRC	January	NA	15	NA	318
	February	NA	15	NA	301
	March	NA	19	NA	383
	April	NA	19	NA	402
	May	NA	23	NA	519
	June	NA	22	NA	401
Total		NA	113	NA	2,324

Table 2.4-5. Building 817-Proximal (B817-PRX) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft³)	Volume of ground water discharged (gal)
B817-PRX	January	NA	775	NA	15,492
	February	NA	682	NA	18,164
	March	NA	613	NA	18,835
	April	NA	570	NA	74,326
	May	NA	554	NA	132,586
	June	NA	624	NA	104,299
Total		NA	3,818	NA	363,702

Table 2.4-6. Building 829-Source (B829-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft³)	Volume of ground water discharged (gal)
B829-SRC	January	NA	13	NA	87
	February	NA	39	NA	255
	March	NA	53	NA	395
	April	NA	33	NA	246
	May	NA	50	NA	281
	June	NA	41	NA	201
Total		NA	229	NA	1,465

Table 2.4-7. High Explosive Process Area OU VOCs in ground water treatment system influent and effluent.

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro -form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 815-Distal Site Boundary															
815-DSB-E	1/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-E	2/9/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-E	3/2/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-E	4/6/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-E	5/4/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-E	6/6/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-I	1/5/06	9.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-I	4/6/06	11	<0.5	<0.5	<0.5	<0.5	<0.5 B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-DSB-I	4/6/06[a]	10	<0.5	<0.5	<0.5	<0.5	<0.5 B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 815-Proximal															
815-PRX-E	1/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-E	2/8/06	<0.5	<0.5	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-E	2/13/06[b]	<0.5	<0.5	<0.5	<0.5	<0.5	0.66	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-E	2/27/06[b]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-E	3/7/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-E	4/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-E	5/2/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-E	6/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-I	1/5/06	21	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-I	4/5/06	30	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-PRX-I	4/5/06[a]	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 815-Source															
815-SRC-E	1/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-E	2/8/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-E	3/2/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-E	4/13/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-E	5/4/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-E	6/6/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-I	1/12/06	5.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.81	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-I	4/13/06	4.4 B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-I	4/13/06[a]	4.4 B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2.4-7 (Cont.). High Explosive Process Area OU VOCs in ground water treatment system influent and effluent.

Location	Date	TCE (μg/L)	PCE (μg/L)	cis-1,2-DCE (μg/L)	trans-1,2-DCE (μg/L)	Carbon tetra-chloride (μg/L)	Chloro-form (μg/L)	1,1-DCA (μg/L)	1,2-DCA (μg/L)	1,1-DCE (μg/L)	1,1,1-TCA (μg/L)	1,1,2-TCA (μg/L)	Freon 11 (μg/L)	Freon 113 (μg/L)	Vinyl chloride (μg/L)
Building 817-Proximal															
817-PRX-E	1/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-E	2/8/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-E	3/2/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-E	4/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-E	5/4/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-E	6/6/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-I	1/11/06	8.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-I	4/11/06	9 B	<0.5	<0.5	<0.5	<0.5	<0.5 B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-I	4/11/06[a]	9 B	<0.5	<0.5	<0.5	<0.5	<0.5 B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 817-Source															
817-SRC-E	1/10/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-E	2/7/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-E	3/8/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-E	4/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-E	5/3/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-E	6/7/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-I	1/10/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-I	4/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-I	4/5/06[a]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 829-Source															
829-SRC-E	1/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-E	2/1/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-E	3/1/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-E	4/4/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-E	5/4/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-E	6/7/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-I	1/11/06	26 B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-I	4/4/06	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
829-SRC-I	4/4/06[a]	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

[a] **Collocated sample collected for quality control purposes.**

[b] **Additional samples collected due to effluent chloroform detection.**

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

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

Location	Date	Detection frequency
815-DSB-E	1/5/06	0 of 19
815-DSB-E	2/9/06	0 of 18
815-DSB-E	3/2/06	0 of 18
815-DSB-E	4/6/06	0 of 18
815-DSB-E	5/4/06	0 of 18
815-DSB-E	6/6/06	0 of 18
815-DSB-I	1/5/06	0 of 19
815-DSB-I	4/6/06	0 of 18
815-DSB-I	4/6/06[a]	0 of 18
815-PRX-E	1/5/06	0 of 19
815-PRX-E	2/8/06	0 of 18
815-PRX-E	2/13/06	0 of 18
815-PRX-E	2/27/06	0 of 18
815-PRX-E	3/7/06	0 of 18
815-PRX-E	4/5/06	0 of 18
815-PRX-E	5/2/06	0 of 18
815-PRX-E	6/5/06	0 of 18
815-PRX-I	1/5/06	0 of 19
815-PRX-I	4/5/06	0 of 18
815-PRX-I	04/5/06[a]	0 of 18
815-SRC-E	1/12/06	0 of 19
815-SRC-E	2/8/06	0 of 18
815-SRC-E	3/2/06	0 of 18
815-SRC-E	4/13/06	0 of 18
815-SRC-E	5/4/06	0 of 18
815-SRC-E	6/6/06	0 of 18
815-SRC-I	1/12/06	0 of 19
815-SRC-I	4/13/06	0 of 18
815-SRC-I	04/13/06[a]	0 of 18
817-PRX-E	1/11/06	0 of 19
817-PRX-E	2/8/06	0 of 18
817-PRX-E	3/2/06	0 of 18
817-PRX-E	4/11/06	0 of 18
817-PRX-E	5/4/06	0 of 18

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

Location	Date	Detection frequency
817-PRX-E	6/6/06	0 of 18
817-PRX-I	1/11/06	0 of 19
817-PRX-I	4/11/06	0 of 18
817-PRX-I	4/11/06[a]	0 of 18
817-SRC-E	1/10/06	0 of 19
817-SRC-E	2/7/06	0 of 18
817-SRC-E	3/8/06	0 of 18
817-SRC-E	4/5/06	0 of 18
817-SRC-E	5/3/06	0 of 18
817-SRC-E	6/7/06	0 of 18
817-SRC-I	1/10/06	0 of 19
817-SRC-I	2/6/06	0 of 18
817-SRC-I	4/5/06	0 of 18
817-SRC-I	4/5/06[a]	0 of 18
829-SRC-E	1/11/06	0 of 19
829-SRC-E	2/1/06	0 of 18
829-SRC-E	3/1/06	0 of 18
829-SRC-E	4/4/06	0 of 18
829-SRC-E	5/4/06	0 of 18
829-SRC-E	6/7/06	0 of 18
829-SRC-I	1/11/06	0 of 19
829-SRC-I	4/4/06	0 of 18
829-SRC-I	4/4/06[a]	0 of 18

Table 2.4-8. High Explosive Process Area OU nitrate and perchlorate in ground water treatment system influent and effluent.

Location	Date	Nitrate (as NO_3) (mg/L)	Perchlorate (μg/L)
Building 815-Distal Site Boundary			
815-DSB-E	**1/5/06**	**<0.5**	**-**
815-DSB-E	**2/9/06**	**<0.5**	**-**
815-DSB-E	**3/2/06**	**<0.5**	**-**
815-DSB-E	**4/6/06**	**<0.5**	**-**
815-DSB-E	**5/4/06**	**<0.5**	**-**
815-DSB-E	**6/6/06**	**<0.5**	**-**
815-DSB-I	**1/5/06**	**<0.5**	**-**
815-DSB-I	**4/6/06**	**<0.5**	**-**
815-DSB-I	**4/6/06[a]**	**<0.5**	**-**
Building 815-Proximal			
815-PRX-E	**1/5/06**	**74**	**<4**
815-PRX-E	**2/8/06**	**76**	**<4**
815-PRX-E	**3/7/06**	**69**	**<4**
815-PRX-E	**4/5/06**	**84**	**<4**
815-PRX-E	**5/2/06**	**82**	**<4**
815-PRX-E	**6/5/06**	**82 D**	**<4**
815-PRX-I	**1/5/06**	**80**	**7.6**
815-PRX-I	**4/5/06**	**81**	**8.7**
815-PRX-I	**4/5/06[a]**	**81**	**8**
Building 815-Source			
815-SRC-E	**1/12/06**	**98 D**	**<4**
815-SRC-E	**2/8/06**	**99 D**	**<4**
815-SRC-E	**3/2/06**	**99 D**	**<4**
815-SRC-E	**4/13/06**	**100 D**	**<4**
815-SRC-E	**5/4/06**	**100 D**	**<4**
815-SRC-E	**6/6/06**	**99 D**	**4.4**
815-SRC-E	**6/15/06[b]**	**-**	**7.2**
815-SRC-E	**6/26/06[c]**	**-**	**<4**
815-SRC-E	**6/27/06[c]**	**-**	**<4**
815-SRC-E	**6/28/06[c]**	**-**	**<4**
815-SRC-I	**1/12/06**	**97**	**23**
815-SRC-I	**4/13/06**	**100 D**	**<4[d]**
815-SRC-I	**4/13/06[a]**	**99 D**	**14**
Building 817-Proximal			
817-PRX-E	**1/11/06**	**56**	**<4**
817-PRX-E	**2/8/06**	**74**	**<4**
817-PRX-E	**3/2/06**	**68**	**<4**
817-PRX-E	**4/11/06**	**90 D**	**<4**
817-PRX-E	**5/4/06**	**86**	**<4**
817-PRX-E	**6/6/06**	**96 D**	**<4**
817-PRX-I	**1/11/06**	**86**	**27**
817-PRX-I	**4/11/06**	**92 D**	**21**
817-PRX-I	**4/11/06[a]**	**92 D**	**21**

Table 2.4-8 (Cont.). High Explosive Process Area OU nitrate and perchlorate in ground water treatment system influent and effluent.

Location	Date	Nitrate (as NO_3) (mg/L)	Perchlorate (μg/L)
Building 817-Source			
817-SRC-E	**1/10/06**	**12**	**<4**
817-SRC-E	**2/7/06**	**18**	**<4**
817-SRC-E	**3/8/06**	**12**	**<4**
817-SRC-E	**4/5/06**	**1.2**	**<4**
817-SRC-E	**5/3/06**	**26**	**<4**
817-SRC-E	**6/7/06**	**44**	**<4**
817-SRC-I	**1/10/06**	**86**	**26**
817-SRC-I	**4/5/06**	**82**	**27**
817-SRC-I	**4/5/06[a]**	**85 D**	**26**
Building 829-Source			
829-SRC-E	**1/11/06**	**<0.5**	**<20 D[e]**
829-SRC-E	**2/1/06**	**<0.5**	**<4**
829-SRC-E	**3/1/06**	**<0.5**	**<4**
829-SRC-E	**4/4/06**	**<0.5**	**<4**
829-SRC-E	**5/4/06**	**<0.5**	**<4**
829-SRC-E	**6/7/06**	**<1 D**	**<4**
829-SRC-I	**1/11/06**	**48**	**8.8**
829-SRC-I	**4/4/06**	**98 D**	**11**
829-SRC-I	**4/4/06[a]**	**98 D**	**9.7**

Notes:

[a] **Collocated sample collected for quality control purposes.**

[b] **Resample for confirmation of effluent detection of perchlorate.**

[c] **Effluent re-sampling after change-out of ion exchange resin.**

[d] **Data suspect; influent historically contains perchlorate.**

[e] **High PQLs due to matrix interference; residual chloride bleeding off ion exchange resin.**

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

Table 2.4-9. High Explosive Process Area OU high explosive compounds in ground water treatment system influent and effluent.

Location	Date	HMX (μg/L)	RDX (μg/L)
Building 815-Proximal			
815-PRX-E	**1/5/06**	**<5 D**	**<5 D**
815-PRX-E	**2/8/06**	**<1 D**	**<1 D**
815-PRX-E	**3/7/06**	**<1**	**<1**
815-PRX-E	**4/5/06**	**<1**	**<1**
815-PRX-E	**6/5/06**	**<1 D**	**<1 D**
815-PRX-I	**1/5/06**	**<5**	**<5**
815-PRX-I	**4/5/06**	**<1**	**<1**
815-PRX-I	**4/5/06[a]**	**<1**	**<1**
Building 815-Source			
815-SRC-E	**1/12/06**	**<5 D**	**<5 D**
815-SRC-E	**2/8/06**	**<1 D**	**<1 D**
815-SRC-E	**3/2/06**	**<1**	**<1**
815-SRC-E	**4/13/06**	**<1**	**<1**
815-SRC-E	**5/4/06**	**<1**	**<1**
815-SRC-E	**6/6/06**	**<1 D**	**<1 D**
815-SRC-I	**1/12/06**	**6.3**	**70**
815-SRC-I	**4/13/06**	**6.2**	**79**
815-SRC-I	**4/13/06[a]**	**7.3 D**	**78 D**
Building 817-Proximal			
817-PRX-E	**1/25/06**	**<1 D**	**<1 D**
817-PRX-E	**2/8/06**	**<1 D**	**<1 D**
817-PRX-E	**3/2/06**	**<1**	**<1**
817-PRX-E	**4/11/06**	**<1**	**<1**
817-PRX-E	**5/4/06**	**<1**	**<1**
817-PRX-E	**6/6/06**	**<1 D**	**<1 D**
817-PRX-I	**1/25/06**	**<1 D**	**4.7 D**
817-PRX-I	**4/11/06**	**<1**	**5.8**
817-PRX-I	**4/11/06[a]**	**<1**	**6**
Building 817-Source			
817-SRC-E	**1/10/06**	**<5 D**	**<5 D**
817-SRC-E	**2/7/06**	**<1**	**<1**
817-SRC-E	**3/8/06**	**<1**	**<1**
817-SRC-E	**4/5/06**	**<1 S**	**<1 S**
817-SRC-E	**5/3/06**	**<1**	**<1**
817-SRC-E	**6/7/06**	**<1 D**	**<1 D**
817-SRC-I	**1/10/06**	**9.4 D**	**36 D**
817-SRC-I	**4/5/06**	**14**	**39**
817-SRC-I	**4/5/06[a]**	**12**	**39**
Building 829-Source			
829-SRC-I[b]	**4/4/06**	**<1**	**<1**

Notes:

[a] **Collocated sample collected for quality control purposes.**

[b] **Facility influent only sampled annually for HMX and RDX; no HE compounds historically detected in extraction well.**

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

Table 2.4-10. High Explosive Process Area OU treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
815-SRC GWTS			
Influent Port	**GTU02-I**	**VOCs**	**Quarterly**
		HE Compounds	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**GTU02-E**	**VOCs**	**Monthly**
		HE Compounds	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
815-PRX GWTS			
Influent Port	**GTU06-I**	**VOCs**	**Quarterly**
		Nitrate	**Quarterly**
		HE Compounds	**Quarterly**
		Perchlorate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**GTU06-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		HE Compounds	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
815-DSB GWTS			
Influent Port	**STU04-I**	**VOCs**	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**STU04-E**	**VOCs**	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

Table 2.4-10 (Cont.). High Explosive Process Area OU treatment facility sampling and analysis plans.

Sample location	Sample identification	Parameter	Frequency
817-SRC GWTS			
Influent Port	**W-817-01-STU10-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		HE Compounds	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**STU10-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		HE Compounds	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
817-PRX GWTS			
Influent Port	**GTU08-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		HE Compounds	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**GTU08-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		HE Compounds	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
829-SRC GWTS			
Influent Port	**W-829-06-STU07-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**STU07-E**	**VOCs**	**Monthly**
Effluent Port	**BTU04-E**	**Perchlorate**	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

Notes:

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

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

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:NO3	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E300.0:PERC	4		
GALLO1	WS	$Tnbs_2$		WGMG	E502.2	1	Y	
GALLO1	WS	$Tnbs_2$		WGMG	E502.2	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	1	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	2	Y	
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	3		

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	4		
SPRING14	SPR	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2007.
SPRING14	SPR	$Tnbs_2$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2007.
SPRING14	SPR	$Tnbs_2$	B	CMP	E601	1	NA	Next sample required 1stQ 2007.
SPRING14	SPR	$Tnbs_2$	B	CMP	E8330:R+H	1	NA	Next sample required 1stQ 2007.
SPRING5	SPR	Tps	A	CMP	E300.0:NO3	1	N	Dry.
SPRING5	SPR	Tps	A	CMP	E300.0:PERC	1	N	Dry.
SPRING5	SPR	Tps	S	CMP	E601	1	N	Dry.
SPRING5	SPR	Tps	S	CMP	E601	3		
SPRING5	SPR	Tps	A	CMP	E8330:R+H	1	N	Dry.
W-35B-01	GW	Qal	S	CMP	E300.0:NO3	1	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:NO3	3		
W-35B-01	GW	Qal	S	CMP	E300.0:PERC	1	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:PERC	3		
W-35B-01	GW	Qal	Q	CMP	E601	1	Y	
W-35B-01	GW	Qal	Q	CMP	E601	2	Y	
W-35B-01	GW	Qal	Q	CMP	E601	3		
W-35B-01	GW	Qal	Q	CMP	E601	4		
W-35B-01	GW	Qal	S	CMP	E8330:R+H	1	Y	
W-35B-01	GW	Qal	S	CMP	E8330:R+H	3		
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	3		
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	4		
W-35B-02	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	3		
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	4		
W-35B-03	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	3		
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	4		
W-35B-04	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	3		
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	4		
W-35B-05	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-35C-01	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-35C-01	MWPT	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-35C-01	MWPT	$Tnsc_2$	S	CMP	E601	1	Y	
W-35C-01	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-35C-01	MWPT	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-35C-02	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-35C-02	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-35C-02	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
W-35C-02	MWPT	$Tnbs_1$	S	CMP	E601	3		
W-35C-02	MWPT	$Tnbs_1$	A	CMP	E8330:R+H	1	Y	
W-35C-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	B815-DSB extraction well.
W-35C-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	B815-DSB extraction well.
W-35C-04	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B815-DSB extraction well.
W-35C-04	EW	$Tnbs_2$	S	CMP-TF	E601	3		B815-DSB extraction well.
W-35C-04	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B815-DSB extraction well.
W-35C-05	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-35C-05	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-35C-05	MWPT	Tps	S	CMP	E601	1	Y	
W-35C-05	MWPT	Tps	S	CMP	E601	3		
W-35C-05	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-35C-06	MWPT	Qal	A	CMP	E300.0:NO3	1	Y	
W-35C-06	MWPT	Qal	A	CMP	E300.0:PERC	1	Y	
W-35C-06	MWPT	Qal	S	CMP	E601	1	Y	
W-35C-06	MWPT	Qal	S	CMP	E601	3		
W-35C-06	MWPT	Qal	A	CMP	E8330:R+H	1	Y	
W-35C-07	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-35C-07	MWPT	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-35C-07	MWPT	$Tnsc_2$	S	CMP	E601	1	Y	
W-35C-07	MWPT	$Tnsc_2$	S	CMP	E601	3		

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-35C-07	MWPT	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-35C-08	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-35C-08	MWPT	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-35C-08	MWPT	$Tnsc_2$	S	CMP	E601	1	Y	
W-35C-08	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-35C-08	MWPT	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-4A	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-4A	MWPT	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-4A	MWPT	$Tnsc_2$	S	CMP	E601	1	Y	
W-4A	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-4A	MWPT	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-4AS	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-4AS	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-4AS	MWPT	Tps	S	CMP	E601	1	Y	
W-4AS	MWPT	Tps	S	CMP	E601	3		
W-4AS	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-4B	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-4B	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-4B	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-4B	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-4B	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:NO3	1	Y	
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:NO3	3		
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:PERC	1	Y	
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:PERC	3		
W-4C	GW	$Tnsc_1$	Q	CMP	E601	1	Y	
W-4C	GW	$Tnsc_1$	Q	CMP	E601	2	Y	
W-4C	GW	$Tnsc_1$	Q	CMP	E601	3		
W-4C	GW	$Tnsc_1$	Q	CMP	E601	4		
W-4C	GW	$Tnsc_1$	S	CMP	E8330:R+H	1	NA	Guard well for B832 Canyon, no HE contamination in the $Tnsc_1$.
W-4C	GW	$Tnsc_1$	S	CMP	E8330:R+H	3	NA	Guard well for B832 Canyon, no HE contamination in the $Tnsc_1$.
W-6BD	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-6BD	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-6BD	MWPT	Tps	S	CMP	E601	1	Y	
W-6BD	MWPT	Tps	S	CMP	E601	3		
W-6BD	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-6BS	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-6BS	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-6BS	MWPT	Tps	S	CMP	E601	1	Y	
W-6BS	MWPT	Tps	S	CMP	E601	3		
W-6BS	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-6CD	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6CD	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6CD	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-6CD	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-6CD	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-6CI	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-6CI	MWPT	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-6CI	MWPT	$Tnsc_2$	S	CMP	E601	1	Y	
W-6CI	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-6CI	MWPT	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-6CS	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-6CS	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-6CS	MWPT	Tps	S	CMP	E601	1	Y	
W-6CS	MWPT	Tps	S	CMP	E601	3		
W-6CS	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-6EI	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-6EI	MWPT	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-6EI	MWPT	$Tnsc_2$	S	CMP	E601	1	Y	
W-6EI	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-6EI	MWPT	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-6ER	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	B815-DSB extraction well.
W-6ER	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	B815-DSB extraction well.
W-6ER	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B815-DSB extraction well.
W-6ER	EW	$Tnbs_2$	S	CMP-TF	E601	3		B815-DSB extraction well.
W-6ER	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B815-DSB extraction well.
W-6ES	MWPT	Qal	A	CMP	E300.0:NO3	1	Y	
W-6ES	MWPT	Qal	A	CMP	E300.0:PERC	1	Y	
W-6ES	MWPT	Qal	S	CMP	E601	1	Y	
W-6ES	MWPT	Qal	S	CMP	E601	3		
W-6ES	MWPT	Qal	A	CMP	E8330:R+H	1	Y	
W-6F	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6F	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6F	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-6F	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-6F	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-6G	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6G	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6G	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-6G	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-6G	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-6H	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-6H	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-6H	GW	$Tnbs_2$	Q	CMP	E601	3		
W-6H	GW	$Tnbs_2$	Q	CMP	E601	4		
W-6H	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-6H	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-6I	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-6I	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-6I	MWPT	Tps	S	CMP	E601	1	Y	
W-6I	MWPT	Tps	S	CMP	E601	3		
W-6I	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-6J	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-6J	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-6J	GW	$Tnbs_2$	Q	CMP	E601	3		
W-6J	GW	$Tnbs_2$	Q	CMP	E601	4		
W-6J	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-6K	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6K	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6K	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-6K	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-6K	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-6L	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-6L	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-6L	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-6L	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-6L	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-806-06A	MWB	$Tnsc_1$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2007.
W-806-06A	MWB	$Tnsc_1$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2007.
W-806-06A	MWB	$Tnsc_1$	B	CMP	E601	1	NA	Next sample required 1stQ 2007.
W-806-06A	MWB	$Tnsc_1$	B	CMP	E8330:R+H	1	NA	Next sample required 1stQ 2007.
W-806-07	MWB	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2007.
W-806-07	MWB	$Tnbs_2$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2007.
W-806-07	MWB	$Tnbs_2$	B	CMP	E601	1	NA	Next sample required 1stQ 2007.
W-806-07	MWB	$Tnbs_2$	B	CMP	E8330:R+H	1	NA	Next sample required 1stQ 2007.
W-808-01	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-808-01	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-808-01	MWPT	Tps	S	CMP	E601	1	Y	
W-808-01	MWPT	Tps	S	CMP	E601	3		
W-808-01	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-808-02	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	N	Dry.
W-808-02	MWPT	$Tnsc_2$	A	CMP	E300.0:PERC	1	N	Dry.
W-808-02	MWPT	$Tnsc_2$	S	CMP	E601	1	N	Dry.
W-808-02	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-808-02	MWPT	$Tnsc_2$	A	CMP	E8330:R+H	1	N	Dry.
W-808-03	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-808-03	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-808-03	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
W-808-03	MWPT	$Tnbs_1$	S	CMP	E601	3		
W-808-03	MWPT	$Tnbs_1$	A	CMP	E8330:R+H	1	Y	
W-809-01	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-809-01	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-809-01	MWPT	Tps	S	CMP	E601	1	Y	
W-809-01	MWPT	Tps	S	CMP	E601	3		
W-809-01	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-809-02	MWPT	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2007.
W-809-02	MWPT	$Tnbs_2$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2007.
W-809-02	MWPT	$Tnbs_2$		DIS	E300.0:PERC	1	Y	
W-809-02	MWPT	$Tnbs_2$	B	CMP	E601	1	NA	Next sample required 1stQ 2007.
W-809-02	MWPT	$Tnbs_2$	B	CMP	E8330:R+H	1	NA	Next sample required 1stQ 2007.
W-809-03	MWPT	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2007.
W-809-03	MWPT	$Tnbs_2$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2007.
W-809-03	MWPT	$Tnbs_2$		DIS	E300.0:PERC	1	Y	
W-809-03	MWPT	$Tnbs_2$	B	CMP	E601	1	NA	Next sample required 1stQ 2007.
W-809-03	MWPT	$Tnbs_2$	B	CMP	E8330:R+H	1	NA	Next sample required 1stQ 2007.
W-809-04	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-809-04	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-809-04	MWPT	Tps	S	CMP	E601	1	Y	
W-809-04	MWPT	Tps	S	CMP	E601	3		
W-809-04	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-810-01	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-810-01	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-810-01	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
W-810-01	MWPT	$Tnbs_1$	S	CMP	E601	3		
W-810-01	MWPT	$Tnbs_1$	A	CMP	E8330:R+H	1	Y	
W-814-01	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-814-01	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-814-01	MWPT	Tps	S	CMP	E601	1	Y	
W-814-01	MWPT	Tps	S	CMP	E601	3		
W-814-01	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-814-02	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-814-02	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-814-02	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-814-02	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-814-02	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-814-03	MWPT	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-814-03	MWPT	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-814-03	MWPT	Tps	S	CMP	E601	1	N	Dry.
W-814-03	MWPT	Tps	S	CMP	E601	3		
W-814-03	MWPT	Tps	A	CMP	E8330:R+H	1	N	Dry.
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:NO3	1	Y	
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:NO3	3		
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:PERC	1	Y	

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:PERC	3		
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	1	Y	
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	2	Y	
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	3		
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	4		
W-814-04	GW	$Tnsc_1$	S	CMP	E8330:R+H	1	Y	
W-814-04	GW	$Tnsc_1$	S	CMP	E8330:R+H	3		
W-814-2138	MWPT	Tpsg	A	CMP	E8330:R+H	3		
W-814-2138	MWPT	Tpsg	A	CMP	E300.0:NO3	3		
W-814-2138	MWPT	Tpsg	A	CMP	E300.0:PERC	3		
W-814-2138	MWPT	Tpsg	A	CMP	E601	3		
W-815-01	MWPT	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-01	MWPT	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-01	MWPT	Tps	S	CMP	E601	1	N	Dry.
W-815-01	MWPT	Tps	S	CMP	E601	3		
W-815-01	MWPT	Tps	A	CMP	E8330:R+H	1	N	Dry.
W-815-02	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	B815-SRC extraction well.
W-815-02	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	B815-SRC extraction well.
W-815-02	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B815-SRC extraction well.
W-815-02	EW	$Tnbs_2$	S	CMP-TF	E601	3		B815-SRC extraction well.
W-815-02	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B815-SRC extraction well.
W-815-03	MWPT	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-03	MWPT	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-03	MWPT	Tps	S	CMP	E601	1	N	Dry.
W-815-03	MWPT	Tps	S	CMP	E601	3		
W-815-03	MWPT	Tps	A	CMP	E8330:R+H	1	N	Dry.
W-815-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	B815-SRC extraction well.
W-815-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	B815-SRC extraction well.
W-815-04	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B815-SRC extraction well.
W-815-04	EW	$Tnbs_2$	S	CMP-TF	E601	3		B815-SRC extraction well.
W-815-04	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B815-SRC extraction well.
W-815-05	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-815-05	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-815-05	MWPT	Tps	S	CMP	E601	1	Y	
W-815-05	MWPT	Tps	S	CMP	E601	3		
W-815-05	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-815-06	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-815-06	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-815-06	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-815-06	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-815-06	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-815-07	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-815-07	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-815-07	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-815-07	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-815-07	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3		
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3		
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	3		
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	4		
W-815-08	GW	$Tnbs_1$	S	CMP	E8330:R+H	1	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E8330:R+H	3		
W-815-1928	MWPT	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-815-1928	MWPT	Tps	A	CMP	E300.0:PERC	1	N	Dry.
W-815-1928	MWPT	Tps	S	CMP	E601	1	N	Dry.
W-815-1928	MWPT	Tps	S	CMP	E601	3		
W-815-1928	MWPT	Tps	A	CMP	E8330:R+H	1	N	Dry.
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	3		
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	4		
W-815-2110	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	3		
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	4		
W-815-2111	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-817-01	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	B817-SRC extraction well.
W-817-01	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	B817-SRC extraction well.
W-817-01	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B817-SRC extraction well.
W-817-01	EW	$Tnbs_2$	S	CMP-TF	E601	3		B817-SRC extraction well.
W-817-01	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B817-SRC extraction well.
W-817-02	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-817-02	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-817-02	MWPT	$Tnbs_2$	A	CMP	E601	1	Y	
W-817-02	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-817-03	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	B817-PRX extraction well.
W-817-03	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	1	Y	B817-PRX extraction well.

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-817-03	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B817-PRX extraction well.
W-817-03	EW	$Tnbs_2$	S	CMP-TF	E601	3		B817-PRX extraction well.
W-817-03	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B817-PRX extraction well.
W-817-03A	MWPT	Tps		DIS	E1002TOX	1	Y	
W-817-03A	MWPT	Tps		DIS	E1003TOX	1	Y	
W-817-03A	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-817-03A	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-817-03A	MWPT	Tps	S	CMP	E601	1	Y	
W-817-03A	MWPT	Tps	S	CMP	E601	3		
W-817-03A	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-817-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	B817-PRX extraction well.
W-817-04	EW	Tnbs2	A	CMP-TF	E300.0:PERC	1	Y	B817-PRX extraction well.
W-817-04	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B817-PRX extraction well.
W-817-04	EW	$Tnbs_2$	S	CMP-TF	E601	3		B817-PRX extraction well.
W-817-04	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	3		B817-PRX extraction well.
W-817-05	MWPT	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
W-817-05	MWPT	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
W-817-05	MWPT	$Tnsc_1$	S	CMP	E601	1	Y	
W-817-05	MWPT	$Tnsc_1$	S	CMP	E601	3		
W-817-05	MWPT	$Tnsc_1$	A	CMP	E8330:R+H	1	Y	
W-817-07	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-817-07	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-817-07	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-817-07	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-817-07	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-01	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-01	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-01	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-01	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-818-01	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-03	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-03	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-03	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-03	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-818-03	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-04	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-04	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-04	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-04	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-818-04	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-06	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-06	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-06	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-06	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-818-06	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-07	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-818-07	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-07	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-07	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-818-07	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-08	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	3		B815-PRX extraction well.
W-818-08	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	3		B815-PRX extraction well.
W-818-08	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B815-PRX extraction well.
W-818-08	EW	$Tnbs_2$	S	CMP-TF	E601	3		B815-PRX extraction well.
W-818-08	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	3		B815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	3		B815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	A	CMP-TF	E300.0:PERC	3		B815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	S	CMP-TF	E601	3		B815-PRX extraction well.
W-818-09	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	3		B815-PRX extraction well.
W-818-11	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-818-11	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-818-11	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-818-11	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-818-11	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-819-02	MWPT	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
W-819-02	MWPT	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
W-819-02	MWPT	$Tnsc_1$	S	CMP	E601	1	Y	
W-819-02	MWPT	$Tnsc_1$	S	CMP	E601	3		
W-819-02	MWPT	$Tnsc_1$	A	CMP	E8330:R+H	1	Y	
W-823-01	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-823-01	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	
W-823-01	MWPT	Tps	S	CMP	E601	1	Y	
W-823-01	MWPT	Tps	S	CMP	E601	3		
W-823-01	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-823-02	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-823-02	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-823-02	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-823-02	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-823-02	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-823-03	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-823-03	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-823-03	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-823-03	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-823-03	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-823-13	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-823-13	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-823-13	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-823-13	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-823-13	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-827-01	MWB	$Tnbs_2$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2007.
W-827-01	MWB	$Tnbs_2$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2007.

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-827-01	MWB	Tnbs$_2$	B	CMP	E601	1	NA	Next sample required 1stQ 2007.
W-827-01	MWB	Tnbs$_2$	B	CMP	E8330:R+H	1	NA	Next sample required 1stQ 2007.
W-827-02	MWB	Tnsc$_1$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2007.
W-827-02	MWB	Tnsc$_1$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2007.
W-827-02	MWB	Tnsc$_1$	B	CMP	E601	1	NA	Next sample required 1stQ 2007.
W-827-02	MWB	Tnsc$_1$	B	CMP	E8330:R+H	1	NA	Next sample required 1stQ 2007.
W-827-03	MWB	Tnsc$_1$	B	CMP	E300.0:NO3	1	NA	Next sample required 1stQ 2007.
W-827-03	MWB	Tnsc$_1$	B	CMP	E300.0:PERC	1	NA	Next sample required 1stQ 2007.
W-827-03	MWB	Tnsc$_1$	B	CMP	E601	1	NA	Next sample required 1stQ 2007.
W-827-03	MWB	Tnsc$_1$	B	CMP	E8330:R+H	1	NA	Next sample required 1stQ 2007.
W-827-05	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	1	Y	
W-827-05	MWPT	Tnbs$_1$	A	CMP	E300.0:PERC	1	Y	
W-827-05	MWPT	Tnbs$_1$	S	CMP	E601	1	Y	
W-827-05	MWPT	Tnbs$_1$		DIS	E601	2	Y	
W-827-05	MWPT	Tnbs$_1$	S	CMP	E601	3		
W-827-05	MWPT	Tnbs$_1$	A	CMP	E8330:R+H	1	Y	
W-829-06	EW	Tnsc$_1$	A	CMP-TF	E300.0:NO3	1	Y	B829-SRC extraction well.
W-829-06	EW	Tnsc$_1$	A	CMP-TF	E300.0:PERC	1	Y	B829-SRC extraction well.
W-829-06	EW	Tnsc$_1$	S	CMP-TF	E601	1	Y	B829-SRC extraction well.
W-829-06	EW	Tnsc$_1$	S	CMP-TF	E601	3		B829-SRC extraction well.
W-829-06	EW	Tnsc$_1$	A	CMP-TF	E8330:R+H	2	Y	B829-SRC extraction well.
W-829-15$	DMW	Tnbs$_1$		WGMG	E300.0:PERC	2	Y	
W-829-15$	DMW	Tnbs$_1$		WGMG	E624	2	Y	
W-829-15$	DMW	Tnbs$_1$		WGMG	E8330:R+H	2	Y	
W-829-15$	DMW	Tnbs$_1$		WGMG	E8330:TNT	2	Y	
W-829-1938$	DMW	Tnbs$_1$		WGMG	E300.0:NO3	1	Y	
W-829-1938$	DMW	Tnbs$_1$		WGMG	E300.0:PERC	1	Y	
W-829-1938$	DMW	Tnbs$_1$		WGMG	E300.0:PERC	2	Y	
W-829-1938$	DMW	Tnbs$_1$		WGMG	E624	1	Y	
W-829-1938$	DMW	Tnbs$_1$		WGMG	E624	2	Y	
W-829-1938$	DMW	Tnbs$_1$		WGMG	E8330:R+H	1	Y	
W-829-1938$	DMW	Tnbs$_1$		WGMG	E8330:R+H	2	Y	
W-829-1938$	DMW	Tnbs$_1$		WGMG	E8330:TNT	2	Y	
W-829-1940	MWPT	Tnsc$_1$	A	CMP	E300.0:NO3	1	Y	
W-829-1940	MWPT	Tnsc$_1$	A	CMP	E300.0:PERC	1	Y	
W-829-1940	MWPT	Tnsc$_1$	S	CMP	E601	1	Y	
W-829-1940	MWPT	Tnsc$_1$	S	CMP	E601	3		
W-829-1940	MWPT	Tnsc$_1$	A	CMP	E8330:R+H	1	Y	
W-829-22$	DMW	Tnbs$_1$		WGMG	E300.0:PERC	2	Y	
W-829-22$	DMW	Tnbs$_1$		WGMG	E624	2	Y	
W-829-22$	DMW	Tnbs$_1$		WGMG	E8330:R+H	2	Y	
W-829-22$	DMW	Tnbs$_1$		WGMG	E8330:TNT	2	Y	
W-880-01	GW	Tnbs$_2$	S	CMP	E300.0:NO3	1	Y	
W-880-01	GW	Tnbs$_2$	S	CMP	E300.0:NO3	3		
W-880-01	GW	Tnbs$_2$	S	CMP	E300.0:PERC	1	Y	
W-880-01	GW	Tnbs$_2$	S	CMP	E300.0:PERC	3		

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

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

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	3		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	4		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	4		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	4		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	1	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	1	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	1	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	2	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	2	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	2	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	3		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	3		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	3		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	4		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	4		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E601	4		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	3		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	3		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	3		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	4		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	4		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:NO3	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	2	Y	

Table 2.4-11. High Explosive Process Area OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	4		
WELL 20	WS	$Tnbs_1$		WGMG	E502.2	1	Y	
WELL 20	WS	$Tnbs_1$		WGMG	E502.2	1	Y	
WELL 20	WS	$Tnbs_1$		WGMG	E502.2	1	Y	
WELL 20	WS	$Tnbs_1$		WGMG	E502.2	2	Y	
WELL 20	WS	$Tnbs_1$		WGMG	E502.2	2	Y	
WELL 20	WS	$Tnbs_1$		WGMG	E502.2	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E601	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	1	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	2	Y	
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	3		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	4		
WELL 20	WS	$Tnbs_1$	M	CMP/WGMG	E8330:R+H	4		

Notes:
$ = Non-CMP well. Analytes and sampling frequency are specified in the RCRA Closure Plan for the High Explosives Open Burn Facility.
*** = Non-CMP well. Analytes and sampling frequency are specified in the Waste Discharge Requirements for the High Explosives Surface Water Impoundments.**
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).
See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.

Table 2.4-12. Building 815-Source (B815-SRC) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B815-SRC	January	NA	0.68	2.4	12	8.7	NA
	February	NA	0.88	2.9	14	10	NA
	March	NA	0.86	2.9	14	10	NA
	April	NA	0.94	3.2	15	11	NA
	May	NA	1.1	3.7	18	13	NA
	June	NA	0.64	2.1	10	7.5	NA
Total		NA	5.1	17	85	60	NA

Notes:

***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.**

Table 2.4-13. Building 815-Proximal (B815-PRX) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B815-PRX	January	NA	7.4	1.4	17	NA	NA
	February	NA	5.5	0.85	10	NA	NA
	March	NA	9.0	1.4	17	NA	NA
	April	NA	7.3	1.3	16	NA	NA
	May	NA	9.8	1.7	20	NA	NA
	June	NA	7.4	1.3	16	NA	NA
Total		NA	46	7.9	96	NA	NA

Notes:

***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.**

Table 2.4-14. Building 815-Distal Site Boundary (B815-DSB) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B815-DSB	January	NA	7.7	NA	NA	NA	NA
	February	NA	6.1	NA	NA	NA	NA
	March	NA	6.3	NA	NA	NA	NA
	April	NA	2.9	NA	NA	NA	NA
	May	NA	7.2	NA	NA	NA	NA
	June	NA	5.1	NA	NA	NA	NA
Total		NA	35	NA	NA	NA	NA

Table 2.4-15. Building 817-Source (B817-SRC) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B817-SRC	January	NA	0	0.031	0.10	0.043	NA
	February	NA	0	0.029	0.10	0.044	NA
	March	NA	0	0.036	0.13	0.057	NA
	April	NA	0	0.041	0.13	0.059	NA
	May	NA	0	0.053	0.16	0.077	NA
	June	NA	0	0.041	0.12	0.059	NA
Total		NA	0	0.23	0.74	0.34	NA

Notes:

***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.**

Table 2.4-16. Building 817-Proximal (B817-PRX) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B817-PRX	January	NA	0.52	2.0	5.1	0.48	NA
	February	NA	0.62	2.4	6.0	0.57	NA
	March	NA	0.64	2.5	6.2	0.59	NA
	April	NA	2.5	9.8	25	2.3	NA
	May	NA	4.5	18	44	4.2	NA
	June	NA	3.6	14	35	3.3	NA
Total		NA	12	48	120	11	NA

Notes:

***Nitrate re-injected into the $Tnbs_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.**

Table 2.4-17. Building 829-Source (B829-SRC) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B829-SRC	January	NA	0.0086	0.0029	0.016	NA	NA
	February	NA	0.025	0.0085	0.046	NA	NA
	March	NA	0.039	0.013	0.072	NA	NA
	April	NA	0.015	0.010	0.091	NA	NA
	May	NA	0.017	0.012	0.10	NA	NA
	June	NA	0.012	0.0084	0.075	NA	NA
Total		NA	0.12	0.055	0.40	NA	NA

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	E624	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E624	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:THISO	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:THISO	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:THISO	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:THISO	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:UISO	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:UISO	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:UISO	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:UISO	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:NO3	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:NO3	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:NO3	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:NO3	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:PERC	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:PERC	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:PERC	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:PERC	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	E624	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E624	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E624	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	E624	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	E906	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E906	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-02B*	DMW	$Tnbs_0$		WGMG	E906	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	E906	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	MS:UISO	2	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-03*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-03*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-03*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-03*	DMW	$Tnbs_1$		WGMG	E624	1	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	E624	2	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-03*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-03*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-03*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-03*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-03*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E624	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E624	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E624	3		

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E624	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	MS:UISO	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-05*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-05*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-05*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-05*	DMW	$Tnbs_1$		WGMG	E624	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E624	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-05*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-05*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-05*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-05*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
K1-06	DMW	$Tnbs_1$		DIS	E300.0:NO3	1	Y	
K1-06	DMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K1-06	DMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
K1-06	DMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
K1-06	DMW	$Tnbs_1$		DIS	E906	1	Y	
K1-06	DMW	$Tnbs_1$	S	CMP	E906	2	Y	
K1-06	DMW	$Tnbs_1$	S	CMP	E906	4		
K1-06	DMW	$Tnbs_1$		DIS	MS:UISO	1	Y	
K1-06	DMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-07*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-07*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-07*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-07*	DMW	$Tnbs_1$		WGMG	E624	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E624	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-07*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-07*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-07*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-07*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-08*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-08*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-08*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-08*	DMW	$Tnbs_1$		WGMG	E624	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E624	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-08*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-08*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-08*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-08*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-09*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K1-09*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-09*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-09*	DMW	$Tnbs_1$		WGMG	E624	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E624	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-09*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-09*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-09*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-09*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
K2-03	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K2-03	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
K2-03	MWPT	$Tnbs_1$	S	CMP	E906	4		
K2-03	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
K2-04D	MWPT	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K2-04D	MWPT	$Tnbs_1$	A	CMP/WGMG	E300.0:NO3	2	Y	
K2-04D	MWPT	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K2-04D	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	2	Y	
K2-04D	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	4		
K2-04D	MWPT	$Tnbs_1$	A	CMP/WGMG	MS:UISO	2	Y	
K2-04S	MWPT	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K2-04S	MWPT	$Tnbs_1$	A	CMP/WGMG	E300.0:NO3	2	Y	
K2-04S	MWPT	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K2-04S	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	2	Y	
K2-04S	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	4		
K2-04S	MWPT	$Tnbs_1$	A	CMP/WGMG	MS:UISO	2	Y	
NC2-05	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-05	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-05	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-05	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-05	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-05A	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-05A	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-05A	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-05A	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-05A	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC2-06	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-06	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-06	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-06	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-06	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-06A	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-06A	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-06A	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-06A	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-06A	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-09	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-09	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-09	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-09	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-09	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-10	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-10	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-10	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-10	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-10	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-11D	MWPT	$Tnbs_1$		WGMG	AS:UISO	2	Y	
NC2-11D	MWPT	$Tnbs_1$	A	CMP/WGMG	E300.0:NO3	2	Y	
NC2-11D	MWPT	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
NC2-11D	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	2	Y	
NC2-11D	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	4		
NC2-11D	MWPT	$Tnbs_1$	A	CMP/WGMG	MS:UISO	2	Y	
NC2-11I	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-11I	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-11I	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-11I	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-11S	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-11S	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-11S	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-11S	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-12D	MWPT	$Tnbs_1$		WGMG	AS:UISO	2	Y	
NC2-12D	MWPT	$Tnbs_1$	A	CMP/WGMG	E300.0:NO3	2	Y	
NC2-12D	MWPT	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
NC2-12D	MWPT	$Tnbs_1$		WGMG	E601	4		
NC2-12D	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	2	Y	
NC2-12D	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	4		
NC2-12D	MWPT	$Tnbs_1$	A	CMP/WGMG	MS:UISO	2	Y	
NC2-12I	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-12I	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-12I	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-12I	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-12S	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-12S	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC2-12S	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-12S	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-13	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-13	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-13	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-13	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-14S	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-14S	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-14S	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-14S	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-14S	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-15	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	4		
NC2-15	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-15	MWPT	$Tnbs_1$	S	CMP	E906	1	Y	
NC2-15	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-15	MWPT	$Tnbs_1$	A	CMP	MS:UISO	4		
NC2-16	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-16	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-16	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-16	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-16	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-17	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	4		
NC2-17	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-17	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-17	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-17	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-18	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-18	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-18	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-18	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-18	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-19	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-19	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-19	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-19	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-19	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-20	MWPT	$Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
NC2-20	MWPT	$Tnbs_0$		DIS	E300.0:PERC	2	Y	
NC2-20	MWPT	$Tnbs_0$	S	CMP	E906	2	Y	
NC2-20	MWPT	$Tnbs_0$	S	CMP	E906	4		
NC2-20	MWPT	$Tnbs_0$	A	CMP	MS:UISO	2	Y	
NC2-21	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-21	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-21	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-21	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-21	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-10	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-10	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-10	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-10	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-10	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-10	MWPT	$Tnbs_1$	A	DIS	MS:UISO	2	Y	
NC7-11	MWPT	Qal/$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-11	MWPT	Qal/$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-11	MWPT	Qal/$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-11	MWPT	Qal/$Tnbs_1$	S	CMP	E906	2	Y	
NC7-11	MWPT	Qal/$Tnbs_1$	S	CMP	E906	4		
NC7-11	MWPT	Qal/$Tnbs_1$	A	DIS	MS:UISO	2	Y	
NC7-14	MWPT	Qal/$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-14	MWPT	Qal/$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-14	MWPT	Qal/$Tnbs_1$	S	CMP	E906	2	Y	
NC7-14	MWPT	Qal/$Tnbs_1$	S	CMP	E906	4		
NC7-14	MWPT	Qal/$Tnbs_1$	A	CMP	MS:UISO	2	N	Insufficient water.
NC7-15	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-15	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-15	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-15	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-15	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-19	MWPT	Qal/$Tnbs_1$	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	CMP	E906	2	Y	
NC7-19	MWPT	Qal/$Tnbs_1$	S	CMP	E906	4		
NC7-19	MWPT	Qal/$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-27	MWPT	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
NC7-27	MWPT	$Tnsc_0$		DIS	E300.0:PERC	2	Y	
NC7-27	MWPT	$Tnsc_0$	S	CMP	E906	2	Y	
NC7-27	MWPT	$Tnsc_0$	S	CMP	E906	4		
NC7-27	MWPT	$Tnsc_0$	A	CMP	MS:UISO	2	Y	
NC7-28	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-28	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-28	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-28	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-28	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-28	MWPT	$Tnbs_1$		DIS	MS:UISO	1	Y	
NC7-28	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-29	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-29	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-29	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-29	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-29	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-43	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-43	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-43	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-43	MWPT	$Tnbs_1$	S	CMP	E906	4		

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-43	MWPT	Tnbs$_1$	A	CMP	MS:UISO	2	Y	
NC7-44	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
NC7-44	MWPT	Tnbs$_1$		DIS	E300.0:PERC	2	Y	
NC7-44	MWPT	Tnbs$_1$	S	CMP	E906	2	Y	
NC7-44	MWPT	Tnbs$_1$	S	CMP	E906	4		
NC7-44	MWPT	Tnbs$_1$	A	CMP	MS:UISO	2	Y	
NC7-45	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	2	N	Not accessible due to bent casing.
NC7-45	MWPT	Tnbs$_1$	S	CMP	E906	2	N	Not accessible due to bent casing.
NC7-45	MWPT	Tnbs$_1$	S	CMP	E906	4		
NC7-45	MWPT	Tnbs$_1$	A	CMP	MS:UISO	2	N	Not accessible due to bent casing.
NC7-46	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
NC7-46	MWPT	Tnbs$_1$	S	CMP	E906	2	Y	
NC7-46	MWPT	Tnbs$_1$	S	CMP	E906	4		
NC7-46	MWPT	Tnbs$_1$	A	CMP	MS:UISO	2	Y	
NC7-54	MWPT	Qal	A	CMP	E300.0:NO3	2	Y	
NC7-54	MWPT	Qal	S	CMP	E906	2	Y	
NC7-54	MWPT	Qal	S	CMP	E906	4		
NC7-54	MWPT	Qal	A	CMP	MS:UISO	2	Y	
NC7-54	MWPT	Qal		DIS	MS:UISO	4		
NC7-55	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	2	N	Dry.
NC7-55	MWPT	Tnbs$_1$	S	CMP	E906	2	N	Dry.
NC7-55	MWPT	Tnbs$_1$	S	CMP	E906	4		
NC7-55	MWPT	Tnbs$_1$	A	CMP	MS:UISO	2	N	Dry.
NC7-56	MWPT	Qal/Tnbs$_1$	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	CMP	E906	2	Y	
NC7-56	MWPT	Qal/Tnbs$_1$	S	CMP	E906	4		
NC7-56	MWPT	Qal/Tnbs$_1$	A	CMP	MS:UISO	2	Y	
NC7-57	MWPT	Qal	A	CMP	E300.0:NO3	2	N	Dry.
NC7-57	MWPT	Qal	S	CMP	E906	2	N	Dry.
NC7-57	MWPT	Qal	S	CMP	E906	4		
NC7-57	MWPT	Qal	A	CMP	MS:UISO	2	N	Dry.
NC7-58	MWPT	Qal	A	CMP	E300.0:NO3	2	Y	
NC7-58	MWPT	Qal		DIS	E300.0:PERC	2	Y	
NC7-58	MWPT	Qal	S	CMP	E906	2	Y	
NC7-58	MWPT	Qal	S	CMP	E906	4		
NC7-58	MWPT	Qal	A	CMP	MS:UISO	2	Y	
NC7-59	MWPT	Qal/Tnbs$_1$	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	CMP	E906	2	Y	
NC7-59	MWPT	Qal/Tnbs$_1$	S	CMP	E906	4		
NC7-59	MWPT	Qal/Tnbs$_1$	A	CMP	MS:UISO	2	Y	
NC7-60	MWPT	Tnbs$_0$	A	CMP	E300.0:NO3	2	Y	
NC7-60	MWPT	Tnbs$_0$		DIS	E300.0:PERC	2	Y	
NC7-60	MWPT	Tnbs$_0$	S	CMP	E906	2	Y	
NC7-60	MWPT	Tnbs$_0$	S	CMP	E906	4		
NC7-60	MWPT	Tnbs$_0$	A	CMP	MS:UISO	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-61	MWPT	$Tnbs_0$		WGMG	AS:UISO	2	Y	
NC7-61	MWPT	$Tnbs_0$	A	CMP/WGMG	E300.0:NO3	2	Y	
NC7-61	MWPT	$Tnbs_0$		WGMG	E300.0:PERC	1	Y	
NC7-61	MWPT	$Tnbs_0$		WGMG	E300.0:PERC	2	Y	
NC7-61	MWPT	$Tnbs_0$	S	CMP/WGMG	E906	2	Y	
NC7-61	MWPT	$Tnbs_0$	S	CMP/WGMG	E906	4		
NC7-61	MWPT	$Tnbs_0$		WGMG	MS:UISO	1	Y	
NC7-61	MWPT	$Tnbs_0$	A	CMP/WGMG	MS:UISO	2	Y	
NC7-62	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-62	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-62	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-62	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-62	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-69	MWPT	Tmss		WGMG	AS:UISO	2	Y	
NC7-69	MWPT	Tmss		WGMG	E300.0:NO2	4		
NC7-69	MWPT	Tmss	A	CMP/WGMG	E300.0:NO3	2	Y	
NC7-69	MWPT	Tmss		WGMG	E300.0:O-PO2	4		
NC7-69	MWPT	Tmss		WGMG	E300.0:PERC	2	Y	
NC7-69	MWPT	Tmss		WGMG	E350.2	4		
NC7-69	MWPT	Tmss		WGMG	E601	2	Y	
NC7-69	MWPT	Tmss		WGMG	E601	4		
NC7-69	MWPT	Tmss	S	CMP/WGMG	E906	2	Y	
NC7-69	MWPT	Tmss	S	CMP/WGMG	E906	4		
NC7-69	MWPT	Tmss	A	CMP/WGMG	MS:UISO	2	Y	
NC7-70	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-70	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-70	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-70	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-70	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-70	MWPT	$Tnbs_1$		DIS	MS:UISO	1	Y	
NC7-70	MWPT	$Tnbs_1$	A	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	CMP	E300.0:NO3	2	Y	
NC7-71	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-71	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-71	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-71	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-71	MWPT	$Tnbs_1$	A	CMP	MS:UISO	1	Y	
NC7-71	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-72	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-72	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-72	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-72	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-72	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-73	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-73	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
NC7-73	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-73	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-73	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-76	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-76	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-76	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-76	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-76	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
SPRING24	SPR	$Tnbs_0/Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	CMP	E906	2	Y	
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	DIS	E906	3		
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	CMP	E906	4		
SPRING24	SPR	$Tnbs_0/Tnbs_1$	A	CMP	MS:UISO	2	Y	
W-850-05	MWPT	$Tnbs_1$		DIS	DWMETALS	4		
W-850-05	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-850-05	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-850-05	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
W-850-05	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
W-850-05	MWPT	$Tnbs_1$	S	CMP	E906	4		
W-850-05	MWPT	$Tnbs_1$		DIS	MS:UISO	1	Y	
W-850-05	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	DWMETALS	1	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	E200.7:SiO2	1	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	E300.0:NO3	1	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	E300.0:PERC	1	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$	A	CMP	E300.0:NO3	2	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$	A	CMP	E300.0:PERC	2	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	E624	1	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	E8330:R+H	1	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	E900	1	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	E906	1	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$	S	CMP	E906	2	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$	S	CMP	E906	4		New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	GENMINDISS	1	Y	New well.
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		Baseline	MS:UISO	1	Y	New well.
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	DWMETALS	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	DWMETALS	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E300.0:PERC	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E300.0:PERC	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E601	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E601	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E906	1	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	4		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	A	CMP	MS:UISO	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	DWMETALS	1	Y	

Table 2.5-1. Building 850 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	DWMETALS	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E300.0:PERC	1	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E300.0:PERC	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E601	1	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E601	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E900	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	A	CMP	MS:UISO	2	Y	
W8SPRNG	SPR	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W8SPRNG	SPR	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
W8SPRNG	SPR	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
W8SPRNG	SPR	$Tnbs_1$		DIS	E906	1	Y	
W8SPRNG	SPR	$Tnbs_1$	S	CMP	E906	2	Y	
W8SPRNG	SPR	$Tnbs_1$	S	CMP	E906	4		
W8SPRNG	SPR	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E601	1	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E601	2	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E602	1	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E602	2	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E906	1	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E906	2	Y	
W-PIT7-16	MWPT	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-PIT7-16	MWPT	$Tnsc_0$	S	CMP	E906	2	Y	
W-PIT7-16	MWPT	$Tnsc_0$	S	CMP	E906	4		
W-PIT7-16	MWPT	$Tnsc_0$	A	CMP	MS:UISO	2	Y	

Notes:
*** = NON-CMP WELL. Analytes and sampling frequency for detection monitoring wells (DMW) are specified in Waste Discharge Requirements for the Pit 1 Landfill.**
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.
See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.

Table 2.6-1. Building 854-Source (B854-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B854-SRC	January	523	580	1,497	38,319
	February	467	673	1,314	42,908
	March	645	841	1,858	53,045
	April	476	599	1,363	36,828
	May	347	632	997	36,792
	June	577	518	1,650	31,932
Total		3,035	3,843	8,679	239,824

Table 2.6-2. Building 854-Proximal (B854-PRX) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B854-PRX	January	NA	249	NA	15,864
	February	NA	329	NA	21,426
	March	NA	402	NA	31,705
	April	NA	371	NA	31,987
	May	NA	542	NA	47,837
	June	NA	459	NA	40,592
Total		NA	2,352	NA	189,411

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

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 854-Proximal															
854-PRX-E	1/4/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-E	2/1/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-E	3/1/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-E	4/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-E	5/3/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-E	6/7/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-I	1/4/06	47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-I	4/5/06	54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-I	4/5/06[a]	53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 854-Source															
854-SRC-E	1/4/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-E	2/1/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-E	3/1/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-E	4/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-E	5/3/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-E	6/7/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-I	1/4/06	180 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-I	4/5/06	180 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-I	4/5/06[a]	190 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

[a] **Collocated sample collected for quality control purposes.**

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

Table 2.6-3 (Cont.). Analytes detected but not reported in main table.

Location	Date	Detection frequency
854-PRX-E	1/4/06	0 of 19
854-PRX-E	2/1/06	0 of 18
854-PRX-E	3/1/06	0 of 18
854-PRX-E	4/5/06	0 of 18
854-PRX-E	5/3/06	0 of 18
854-PRX-E	6/7/06	0 of 18
854-PRX-I	1/4/06	0 of 19
854-PRX-I	4/5/06	0 of 18
854-PRX-I	4/05/06[a]	0 of 18
854-SRC-E	1/4/06	0 of 19
854-SRC-E	2/1/06	0 of 18
854-SRC-E	3/1/06	0 of 18
854-SRC-E	4/5/06	0 of 18
854-SRC-E	5/3/06	0 of 18
854-SRC-E	6/7/06	0 of 18
854-SRC-I	1/4/06	0 of 19
854-SRC-I	4/5/06	0 of 18
854-SRC-I	4/05/06[a]	0 of 18

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

Location	Date	Nitrate (as NO_3) (mg/L)	Perchlorate (μg/L)
Building 854-Proximal			
854-PRX-E	1/4/06	1.1	<4
854-PRX-E	2/1/06	<0.5	<4
854-PRX-E	3/1/06	<0.5	<4
854-PRX-E	4/5/06	7.8	<4
854-PRX-E	5/3/06	14	<4
854-PRX-E	6/7/06	17	<4
854-PRX-I	1/4/06	46	16
854-PRX-I	4/5/06	47	12
854-PRX-I	4/5/06[a]	47	14
Building 854-Source			
854-SRC-E	1/4/06	54	<4
854-SRC-E	2/1/06	52	<4
854-SRC-E	3/1/06	50	<4
854-SRC-E	4/5/06	51	<4
854-SRC-E	5/3/06	49	<4
854-SRC-E	6/7/06	47	<4
854-SRC-I	1/4/06	52	8.5
854-SRC-I	4/5/06	54	8.0
854-SRC-I	4/5/06[a]	54	8.1

Notes:

[a] **Collocated sample collected for quality control purposes.**

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

Table 2.6-5. Building 854 OU treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
854-SRC GWTS			
Influent Port	**W-854-02-STU08-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**STU08-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
854-SRC SVE			
Influent Port	**VES06-I**	**No Monitoring Requirements**	
Effluent Port	**VES06-E**	**VOCs**	**Weekly**[a]
Intermediate GAC	**VES06-CF3I**	**VOCs**	**Weekly**[a]
854-PRX GWTS			
Influent Port	**W-854-03-STU02-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**STU02-E**	**VOCs**	**Monthly**
Effluent Port	**BTU03-E**	**Perchlorate**	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**

Notes:

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

[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.**

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

Table 2.6-6. Building 854 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
SPRING10	SPR	Qls	Q	CMP	E601	1	Y	
SPRING10	SPR	Qls	Q	CMP	E601	2	Y	
SPRING10	SPR	Qls	Q	CMP	E601	3		
SPRING10	SPR	Qls	Q	CMP	E601	4		
SPRING10	SPR	Qls	A	CMP	E300.0:NO3	2	Y	
SPRING10	SPR	Qls	A	CMP	E300.0:PERC	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	CMP	E601	1	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	CMP	E601	2	Y	
SPRING11	SPR	Qls-$Tnbs_1$	Q	CMP	E601	3		
SPRING11	SPR	Qls-$Tnbs_1$	Q	CMP	E601	4		
SPRING18	SPR	$Tnbs_1$		DIS	AS:UISO	2	Y	
SPRING18	SPR	$Tnbs_1$		DIS	DWMETALS	2	Y	
SPRING18	SPR	$Tnbs_1$		DIS	E210.2	2	Y	
SPRING18	SPR	$Tnbs_1$		DIS	E601	2	Y	
SPRING18	SPR	$Tnbs_1$		DIS	E8330:R+H	2	Y	
SPRING18	SPR	$Tnbs_1$		DIS	E900	2	Y	
SPRING18	SPR	$Tnbs_1$		DIS	E906	2	Y	
W-854-01	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-01	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-01	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-854-01	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-854-02	EW	$Tnbs_1$	A	CMP-TF	E300.0:NO3	2	Y	B854-SRC extraction well.
W-854-02	EW	$Tnbs_1$	A	CMP-TF	E300.0:PERC	2	Y	B854-SRC extraction well.
W-854-02	EW	$Tnbs_1$	S	CMP-TF	E601	2	Y	B854-SRC extraction well.
W-854-02	EW	$Tnbs_1$	S	CMP-TF	E601	4		B854-SRC extraction well.
W-854-03	EW	$Tnbs_1$	A	CMP-TF	E300.0:NO3	2	Y	B854-PRX extraction well.
W-854-03	EW	$Tnbs_1$	A	CMP-TF	E300.0:PERC	2	Y	B854-PRX extraction well.
W-854-03	EW	$Tnbs_1$	S	CMP-TF	E601	2	Y	B854-PRX extraction well.
W-854-03	EW	$Tnbs_1$	S	CMP-TF	E601	4		B854-PRX extraction well.
W-854-04	MWPT	Tmss	A	CMP	E300.0:NO3	2	Y	
W-854-04	MWPT	Tmss	A	CMP	E300.0:PERC	2	Y	
W-854-04	MWPT	Tmss	S	CMP	E601	2	Y	
W-854-04	MWPT	Tmss	S	CMP	E601	4		
W-854-05	MWPT	Qls-$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-05	MWPT	Qls-$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-05	MWPT	Qls-$Tnbs_1$	S	CMP	E601	2	Y	
W-854-05	MWPT	Qls-$Tnbs_1$	S	CMP	E601	4		
W-854-06	MWPT	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-06	MWPT	$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-06	MWPT	$Tnsc_0$	S	CMP	E601	2	Y	
W-854-06	MWPT	$Tnsc_0$	S	CMP	E601	4		
W-854-07	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-07	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-07	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-854-07	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-854-08	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-08	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-08	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	

Table 2.6-6. Building 854 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-854-08	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-854-09	MWPT	$Tnsbs_0$	A	CMP	E300.0:NO3	2	Y	
W-854-09	MWPT	$Tnsbs_0$	A	CMP	E300.0:PERC	2	Y	
W-854-09	MWPT	$Tnsbs_0$	S	CMP	E601	2	Y	
W-854-09	MWPT	$Tnsbs_0$	S	CMP	E601	4		
W-854-10	MWPT	$Tnsbs_0$	A	CMP	E300.0:NO3	2	Y	
W-854-10	MWPT	$Tnsbs_0$	A	CMP	E300.0:PERC	2	Y	
W-854-10	MWPT	$Tnsbs_0$	S	CMP	E601	2	Y	
W-854-10	MWPT	$Tnsbs_0$	S	CMP	E601	4		
W-854-11	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	N	Dry.
W-854-11	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	2	N	Dry.
W-854-11	MWPT	$Tnbs_1$	S	CMP	E601	2	N	Dry.
W-854-11	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-854-12	MWPT	Tmss	B	CMP	E300.0:NO3	2	N	Dry. Due to dryness, frequency changed to biennial. Next sample required 2ndQ 2008.
W-854-12	MWPT	Tmss	B	CMP	E300.0:PERC	2	N	Dry. Due to dryness, frequency changed to biennial. Next sample required 2ndQ 2008.
W-854-12	MWPT	Tmss	B	CMP	E601	2	N	Dry. Due to dryness, frequency changed to biennial. Next sample required 2ndQ 2008.
W-854-13	MWPT	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-13	MWPT	$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-13	MWPT	$Tnsc_0$	S	CMP	E601	2	Y	
W-854-13	MWPT	$Tnsc_0$	S	CMP	E601	4		
W-854-13	MWPT	$Tnsc_0$	B	CMP	E8082A	2	NA	Next sample required 2ndQ 2007.
W-854-14	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-854-14	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-14	MWPT	$Tnbs_1$	A	CMP	E601	2	Y	
W-854-15	MWPT	Qls	A	CMP	E300.0:NO3	2	Y	
W-854-15	MWPT	Qls	A	CMP	E300.0:PERC	2	Y	
W-854-15	MWPT	Qls	S	CMP	E601	2	Y	
W-854-15	MWPT	Qls	S	CMP	E601	4		
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$	S	CMP	E601	2	Y	
W-854-17	MWPT	$Tnsbs_0$-$Tnsc_0$	S	CMP	E601	4		
W-854-1701	MWPT	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-1701	MWPT	$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-1701	MWPT	$Tnsc_0$	S	CMP	E601	2	Y	
W-854-1701	MWPT	$Tnsc_0$	S	CMP	E601	4		
W-854-1706	MWPT	Qal-$Tnbs_1$	A	CMP	E300.0:NO3	2	N	Dry.
W-854-1706	MWPT	Qal-$Tnbs_1$	A	CMP	E300.0:PERC	2	N	Dry.
W-854-1706	MWPT	Qal-$Tnbs_1$	A	CMP	E601	2	N	Dry.
W-854-1707	MWPT	$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-1707	MWPT	$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-1707	MWPT	$Tnsc_0$	S	CMP	E601	2	Y	
W-854-1707	MWPT	$Tnsc_0$	S	CMP	E601	4		
W-854-1731	MWPT	Tmss	A	CMP	E300.0:NO3	2	Y	
W-854-1731	MWPT	Tmss	A	CMP	E300.0:PERC	2	Y	
W-854-1731	MWPT	Tmss	S	CMP	E601	2	Y	

Table 2.6-6. Building 854 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-854-1731	MWPT	Tmss	S	CMP	E601	4		
W-854-1822	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
W-854-1822	MWPT	Tnbs$_1$	A	CMP	E300.0:PERC	2	Y	
W-854-1822	MWPT	Tnbs$_1$	S	CMP	E601	2	Y	
W-854-1822	MWPT	Tnbs$_1$	S	CMP	E601	4		
W-854-1823	MWPT	Tnsbs$_1$-Tnsc$_0$	A	CMP	E300.0:NO3	2	Y	
W-854-1823	MWPT	Tnsbs$_1$-Tnsc$_0$	A	CMP	E300.0:PERC	2	Y	
W-854-1823	MWPT	Tnsbs$_1$-Tnsc$_0$	S	CMP	E601	2	Y	
W-854-1823	MWPT	Tnsbs$_1$-Tnsc$_0$	S	CMP	E601	4		
W-854-18A	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
W-854-18A	MWPT	Tnbs$_1$	A	CMP	E300.0:PERC	2	Y	
W-854-18A	MWPT	Tnbs$_1$	S	CMP	E601	2	Y	
W-854-18A	MWPT	Tnbs$_1$	S	CMP	E601	4		
W-854-19	MWPT	Qls	A	CMP	E300.0:NO3	2	N	Dry.
W-854-19	MWPT	Qls	A	CMP	E300.0:PERC	2	N	Dry.
W-854-19	MWPT	Qls	A	CMP	E601	2	N	Dry.
W-854-1902	MWPT	Tnsbs$_1$-Tnsc$_0$	A	CMP	E300.0:NO3	2	Y	
W-854-1902	MWPT	Tnsbs$_1$-Tnsc$_0$	A	CMP	E300.0:PERC	2	Y	
W-854-1902	MWPT	Tnsbs$_1$-Tnsc$_0$	S	CMP	E601	2	Y	
W-854-1902	MWPT	Tnsbs$_1$-Tnsc$_0$	S	CMP	E601	4		
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$		Baseline	E900	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$		Baseline	DWMETALS	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$		Baseline	GENMIN	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$		Baseline	E200.7:SiO2	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$		Baseline	MS:UISO	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$		Baseline	E906	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$		Baseline	E8330:R+H	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$	A	Baseline/CMP	E300.0:NO3	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$	A	Baseline/CMP	E300.0:PERC	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$	S	Baseline/CMP	E624	1	Y	New well.
W-854-2115	MWPT	Tnsbs$_1$-Tnsc$_0$	S	CMP	E601	4		New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	E900	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	DWMETALS	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	GENMIN	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	E200.7:SiO2	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	MS:UISO	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	E906	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	E8330:R+H	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	E300.0:NO3	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	E300.0:PERC	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$		Baseline	E624	1	Y	New well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$	S	CMP-TF	E601	2	NA	Facility under construction. Sample collected first quarter. B854-DIS extraction well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$	S	CMP-TF	E601	4		B854-DIS extraction well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$	A	CMP-TF	E300.0:PERC	2	NA	Facility under construction. Sample collected first quarter. B854-DIS extraction well.
W-854-2139	EW	Tnsbs$_1$-Tnsc$_0$	A	CMP-TF	E300.0:NO3	2	NA	Facility under construction. Sample collected first quarter. B854-DIS extraction well.
W-854-45	MWPT	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	

Table 2.6-6. Building 854 OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-854-45	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-854-45	MWPT	$Tnbs_1$	S	CMP	E601	2	Y	
W-854-45	MWPT	$Tnbs_1$	S	CMP	E601	4		
W-854-F2	MWPT	Qls-$Tnbs_1$	B	CMP	E300.0:NO3	2	NA	Next sample required 2ndQ 2007.
W-854-F2	MWPT	Qls-$Tnbs_1$	B	CMP	E300.0:PERC	2	NA	Next sample required 2ndQ 2007.
W-854-F2	MWPT	Qls-$Tnbs_1$	B	CMP	E601	2	NA	Next sample required 2ndQ 2007.

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.
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, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B854-SRC	January	730	26	1.2	7.5	NA	NA
	February	640	29	1.4	8.5	NA	NA
	March	900	36	1.7	10	NA	NA
	April	440	25	1.1	7.5	NA	NA
	May	320	25	1.1	7.5	NA	NA
	June	530	22	0.97	6.5	NA	NA
Total		3,600	160	7.5	48	NA	NA

Table 2.6-8. Building 854-Proximal (B854-PRX) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B854-PRX	January	NA	3.1	0.96	2.8	NA	NA
	February	NA	4.1	1.3	3.7	NA	NA
	March	NA	6.1	1.9	5.5	NA	NA
	April	NA	6.2	1.7	5.7	NA	NA
	May	NA	9.2	2.5	8.5	NA	NA
	June	NA	7.8	2.2	7.2	NA	NA
Total		NA	37	11	33	NA	NA

Table 2.7-1. Building 832-Source (B832-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B832-SRC	January	816	816	217	8,251
	February	672	672	158	5,494
	March	619	619	119	4,711
	April	648	648	119	6,888
	May	752	752	71	8,046
	June	672	672	72	1,887
Total		4,179	4,179	756	35,277

Table 2.7-2. Building 830-Source (B830-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B830-SRC	January	NA	30	NA	1,872
	February	NA	33	NA	1,708
	March	225	44	158	2,889
	April	281	53	197	3,209
	May	651	110	590	5,173
	June	672	80	651	3,762
Total		1,829	350	1,596	18,613

Table 2.7-3. Building 830-Proximal North (B830-PRXN) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B830-PRXN	January	NA	329	NA	21,024
	February	NA	370	NA	30,234
	March	NA	393	NA	31,560
	April	NA	409	NA	32,055
Total		NA	1,501	NA	114,873

Table 2.7-4. Building 830-Distal South (B830-DISS) volumes of ground water and soil vapor extracted and discharged, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
B830-DISS	January	NA	168	NA	5,600
	February	NA	0	NA	0
	March	NA	0	NA	0
	April	NA	504	NA	4,800
	May	NA	744	NA	28,900
	June	NA	672	NA	34,600
Total		NA	2,088	NA	73,900

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

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 830-Distal South															
830-DISS-E	**4/6/06[a]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-DISS-E	**4/18/06[b]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-DISS-E	**5/3/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-DISS-E	**6/5/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-DISS-I	**4/6/06**	**98 BD**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5 B**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-DISS-I	**4/6/06[c]**	**99 BD**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5 B**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-DISS-I	**4/19/06[b]**	**110 B**	**<0.5**	**0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
Building 830-Proximal North															
830-PRXN-E	**1/5/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-PRXN-E	**2/8/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-PRXN-E	**3/7/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-PRXN-E	**4/6/06[d]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-PRXN-I	**1/5/06**	**31**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**0.57**	**0.6**	**<0.5**
830-PRXN-I	**4/6/06**	**29**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**< 0.5 B**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-PRXN-I	**4/6/06[c]**	**28**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**< 0.5 B**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**0.81**	**<0.5**
Building 830-Source															
830-SRC-E	**1/11/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-SRC-E	**2/7/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-SRC-E	**3/8/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-SRC-E	**4/11/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-SRC-E	**5/3/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-SRC-E	**6/7/06**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
830-SRC-I	**1/11/06**	**3,800 BD**	**12**	**<0.5**	**<0.5**	**<0.5**	**1.1**	**<0.5**	**2**	**0.7**	**<0.5**	**0.82**	**<0.5**	**<0.5**	**<0.5**
830-SRC-I	**4/11/06**	**2,500 D**	**2.7**	**<0.5**	**<0.5**	**<0.5**	**0.85 B**	**<0.5**	**0.88**	**0.53**	**<0.5**	**0.57**	**<0.5**	**<0.5**	**<0.5**
830-SRC-I	**4/11/06[c]**	**2,400 D**	**2.9**	**<0.5**	**<0.5**	**<0.5**	**0.93 B**	**<0.5**	**0.85**	**<0.5**	**<0.5**	**0.55**	**<0.5**	**<0.5**	**<0.5**

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

Location	Date	TCE (µg/L)	PCE (µg/L)	cis-1,2-DCE (µg/L)	trans-1,2-DCE (µg/L)	Carbon tetra-chloride (µg/L)	Chloro-form (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	1,1-DCE (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	Freon 11 (µg/L)	Freon 113 (µg/L)	Vinyl chloride (µg/L)
Building 832-Source															
832-SRC-E	1/19/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-E	2/7/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-E	3/1/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-E	4/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-E	5/3/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-E	6/5/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-I	1/19/06	34 B	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-I	4/5/06	100 D	<0.5	3.2	<0.5	<0.5	0.51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-I	4/5/06[c]	100 D	<0.5	3.1	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

[a] Building 830-Distal South was shutdown from January 9th to April 6th due to freezing conditions at Site 300 and resulting increases in nitrate concentrations in the effluent, and then remained off-line while an alternate discharge method was evaluated.

[b] Additional samples collected due to facility re-start.

[c] Collocated sample collected for quality control purposes.

[d] Building 830-Proximal North was disconnected from the extraction well and removed from the Building 832 Canyon OU on April 25, 2006.

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

Table 2.7-5 (Cont.). Analytes detected but not reported in main table.

Location	Date	Detection frequency	1,2-Dichloroethene (total) (μg/L)
830-DISS-E	4/6/06[a]	0 of 18	-
830-DISS-E	4/18/06	0 of 18	-
830-DISS-E	5/3/06	0 of 18	-
830-DISS-E	6/5/06	0 of 18	-
830-DISS-I	4/6/06	0 of 18	-
830-DISS-I	4/6/06[c]	0 of 18	-
830-DISS-I	4/19/06	0 of 18	-
830-PRXN-E	1/5/06	0 of 19	-
830-PRXN-E	2/8/06	0 of 18	-
830-PRXN-E	3/7/06	0 of 18	-
830-PRXN-E	4/6/06[c]	0 of 18	-
830-PRXN-I	1/5/06	0 of 19	-
830-PRXN-I	4/6/06	0 of 18	-
830-PRXN-I	4/6/06[c]	0 of 18	-
830-SRC-E	1/11/06	0 of 19	-
830-SRC-E	2/7/06	0 of 18	-
830-SRC-E	3/8/06	0 of 18	-
830-SRC-E	4/11/06	0 of 18	-
830-SRC-E	5/3/06	0 of 18	-
830-SRC-E	6/7/06	0 of 18	-
830-SRC-I	1/11/06	0 of 19	-
830-SRC-I	4/11/06	0 of 18	-
830-SRC-I	4/11/06[c]	0 of 18	-
832-SRC-E	1/19/06	0 of 19	-
832-SRC-E	2/7/06	0 of 18	-
832-SRC-E	3/1/06	0 of 18	-
832-SRC-E	4/5/06	0 of 18	-
832-SRC-E	5/3/06	0 of 18	-
832-SRC-E	6/5/06	0 of 18	-
832-SRC-I	1/19/06	0 of 18	-
832-SRC-I	4/5/06	1 of 18	3.2
832-SRC-I	4/5/06[c]	1 of 18	3.1

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

Location	Date	Nitrate (as NO_3) (mg/L)	Perchlorate (μg/L)
Building 830-Distal South			
830-DISS-E	4/6/06[a]	1.9	<4
830-DISS-E	4/18/06[b]	13	<4
830-DISS-E	5/3/06	5.6	<4
830-DISS-E	6/5/06	24	<4
830-DISS-I	4/6/06	64	5
830-DISS-I	4/6/06[c]	63	5.8
830-DISS-I	4/19/06[b]	63	<4
Building 830-Proximal North			
830-PRXN-E	1/5/06	14 D	<4
830-PRXN-E	2/8/06	16 D	<4
830-PRXN-E	3/7/06	14 D	<4
830-PRXN-E	4/6/06[d]	15 D	<4
830-PRXN-I	1/5/06	17 D	<4
830-PRXN-I	4/6/06	17 D	<4
830-PRXN-I	4/6/06[c]	17 D	<4
Building 830-Source			
830-SRC-E	1/11/06	97 D	<4
830-SRC-E	2/7/06	99 D	<4
830-SRC-E	3/8/06	90 D	<4
830-SRC-E	4/11/06	99 D	<4
830-SRC-E	5/3/06	120 D	<4
830-SRC-E	6/7/06	130 D	<4
830-SRC-I	1/11/06	120 D	7.1
830-SRC-I	4/11/06	130 D	5.8
830-SRC-I	4/11/06[c]	110 D	4.7
Building 832-Source			
832-SRC-E	1/19/06	91 D	<4
832-SRC-E	2/7/06	97 D	<4
832-SRC-E	3/1/06	100 D	<4
832-SRC-E	4/5/06	96 D	<4
832-SRC-E	5/3/06	95 D	<4
832-SRC-E	6/5/06	90 D	<4
832-SRC-I	1/19/06	110 D	11
832-SRC-I	4/5/06	94 D	10
832-SRC-I	4/5/06[c]	96 D	12

Notes:

[a] **Building 830-Distal South was shutdown from January 9th to April 6th due to freezing conditions at Site 300 and resulting increases in nitrate concentrations in the effluent, and then remained off-line while an alternate discharge method was evaluated.**

[b] **Additional samples collected due to facility re-start. Operator inadvertently took samples on different days.**

[c] **Collocated sample collected for quality control purposes.**

[d] **Building 830-Proximal North was disconnected from the extraction well and removed from the Building 832 Canyon OU on April 25, 2006.**

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

Table 2.7-7. Building 832 Canyon OU treatment facility sampling and analysis plan.

Sample Location	Sample Identification	Parameter	Frequency
832-SRC GWTS			
Influent Port	**TF-832-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**TF-832-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		PH	**Monthly**
832-SRC SVE			
Influent Port	**TF-832-SVI**	**No Monitoring Requirements**	
Effluent Port	**TF-832-SVE**	**VOCs**	**Weekly**[a]
Intermediate GAC	**TF-832-VCF4I**	**VOCs**	**Weekly**[a]
830-SRC GWTS			
Influent Port	**GTU05-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		PH	**Quarterly**
Effluent Port	**GTU05-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		PH	**Monthly**
830-SRC SVE			
Influent Port	**VES15-I**	**No Monitoring Requirements**	
Effluent Port	**VES15-E**	**VOCs**	**Weekly**[a]
Intermediate GAC	**VES15-CF3I**	**VOCs**	**Weekly**[a]

Table 2.7-7 (Cont.). Building 832 Canyon treatment facility sampling and analysis plans.

Sample Location	Sample Identification	Parameter	Frequency
830-PRXN GWTS			
Influent Port	**W-830-57-STU03-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		PH	**Quarterly**
Effluent Port	**STU03-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		PH	**Monthly**
830-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**

Notes:

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

[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.**

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

Table 2.7-8. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
SPRING3	SPR	Qal	A	CMP	E300.0:NO3	1	Y	
SPRING3	SPR	Qal	A	CMP	E300.0:PERC	1	Y	
SPRING3	SPR	Qal	S	CMP	E601	1	Y	
SPRING3	SPR	Qal	S	CMP	E601	3		
SPRING4	SPR	Tps	B	CMP	E300.0:NO3	1	NA	Next sample required 1ndQ 2007.
SPRING4	SPR	Tps	B	CMP	E300.0:PERC	1	NA	Next sample required 1ndQ 2007.
SPRING4	SPR	Tps	B	CMP	E601	1	NA	Next sample required 1ndQ 2007.
SVI-830-031	MWPT	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
SVI-830-031	MWPT	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
SVI-830-031	MWPT	$Tnsc_1$	S	CMP	E601	1	Y	
SVI-830-031	MWPT	$Tnsc_1$	S	CMP	E601	3		
SVI-830-032	MWPT	$Tnsc_1$	A	CMP	E300.0:NO3	1	N	Dry.
SVI-830-032	MWPT	$Tnsc_1$	A	CMP	E300.0:PERC	1	N	Dry.
SVI-830-032	MWPT	$Tnsc_1$	S	CMP	E601	1	N	Dry.
SVI-830-032	MWPT	$Tnsc_1$	S	CMP	E601	3		
SVI-830-033	MWPT	$Tnsc_1$	A	CMP	E300.0:NO3	1	N	Insufficient water.
SVI-830-033	MWPT	$Tnsc_1$	A	CMP	E300.0:PERC	1	N	Insufficient water.
SVI-830-033	MWPT	$Tnsc_1$	S	CMP	E601	1	Y	
SVI-830-033	MWPT	$Tnsc_1$	S	CMP	E601	3		
SVI-830-035	MWPT	$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
SVI-830-035	MWPT	$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
SVI-830-035	MWPT	$Tnsc_1$	S	CMP	E601	1	Y	
SVI-830-035	MWPT	$Tnsc_1$	S	CMP	E601	3		
W-830-04A	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-04A	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-04A	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-04A	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-05	MWPT	$Tnbs_2$-$Tnsc_{1c}$	A	CMP	E300.0:NO3	1	Y	
W-830-05	MWPT	$Tnbs_2$-$Tnsc_{1c}$	A	CMP	E300.0:PERC	1	Y	
W-830-05	MWPT	$Tnbs_2$-$Tnsc_{1c}$	S	CMP	E601	1	Y	
W-830-05	MWPT	$Tnbs_2$-$Tnsc_{1c}$	S	CMP	E601	3		
W-830-07	MWPT	$Tnsc_1$	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-830-07	MWPT	$Tnsc_1$	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-830-07	MWPT	$Tnsc_1$	S	CMP	E601	1	N	Insufficient water.
W-830-07	MWPT	$Tnsc_1$	S	CMP	E601	3		
W-830-09	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-09	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-09	MWPT	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-09	MWPT	Upper $Tnbs_1$	S	CMP	E601	3		
W-830-10	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-10	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-10	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-10	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-11	MWPT	$Tnsc_{1c}$	A	CMP	E300.0:NO3	1	Y	
W-830-11	MWPT	$Tnsc_{1c}$	A	CMP	E300.0:PERC	1	Y	
W-830-11	MWPT	$Tnsc_{1c}$	S	CMP	E601	1	Y	
W-830-11	MWPT	$Tnsc_{1c}$	S	CMP	E601	3		
W-830-12	MWPT	Lower $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-12	MWPT	Lower $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-12	MWPT	Lower $Tnbs_1$	S	CMP	E601	1	Y	
W-830-12	MWPT	Lower $Tnbs_1$	S	CMP	E601	3		
W-830-13	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-830-13	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-830-13	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-830-13	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-830-14	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-14	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-14	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-14	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-15	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	Water from casing flowing into Christy box.

Table 2.7-8. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-15	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	Water from casing flowing into Christy box.
W-830-15	MWPT	Upper $Tnbs_1$	S	CMP	E601	1	Y	Water from casing flowing into Christy box.
W-830-15	MWPT	Upper $Tnbs_1$	S	CMP	E601	3		
W-830-16	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	1	Y	
W-830-16	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	3		
W-830-16	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	1	Y	
W-830-16	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	3		
W-830-16	GW	$Tnsc_{1b}$	Q	CMP	E601	1	Y	
W-830-16	GW	$Tnsc_{1b}$	Q	CMP	E601	2	Y	
W-830-16	GW	$Tnsc_{1b}$	Q	CMP	E601	3		
W-830-16	GW	$Tnsc_{1b}$	Q	CMP	E601	4		
W-830-17	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-830-17	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-830-17	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-830-17	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-830-1730	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	1	Y	
W-830-1730	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	3		
W-830-1730	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	1	Y	
W-830-1730	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	3		
W-830-1730	GW	$Tnsc_{1b}$	Q	CMP	E601	1	Y	
W-830-1730	GW	$Tnsc_{1b}$	Q	CMP	E601	2	Y	
W-830-1730	GW	$Tnsc_{1b}$	Q	CMP	E601	3		
W-830-1730	GW	$Tnsc_{1b}$	Q	CMP	E601	4		
W-830-18	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-18	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-18	MWPT	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-18	MWPT	Upper $Tnbs_1$	S	CMP	E601	3		
W-830-1807	EW	Qal/$Tnsc_1$	A	CMP-TF	E300.0:NO3	1	Y	B830-SRC extraction well.
W-830-1807	EW	Qal/$Tnsc_1$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-1807	EW	Qal/$Tnsc_1$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.
W-830-1807	EW	Qal/$Tnsc_1$	S	CMP-TF	E601	3		B830-SRC extraction well.
W-830-1829	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-1829	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-1830	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-1830	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-1831	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	1	Y	
W-830-1831	GW	$Tnsc_{1b}$	S	CMP	E300.0:NO3	3		
W-830-1831	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	1	Y	
W-830-1831	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	3		
W-830-1831	GW	$Tnsc_{1b}$	Q	CMP	E601	1	Y	
W-830-1831	GW	$Tnsc_{1b}$	Q	CMP	E601	2	Y	
W-830-1831	GW	$Tnsc_{1b}$	Q	CMP	E601	3		
W-830-1831	GW	$Tnsc_{1b}$	Q	CMP	E601	4		
W-830-1832	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-1832	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-1832	MWPT	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-1832	MWPT	Upper $Tnbs_1$	S	CMP	E601	3		
W-830-19	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B830-SRC extraction well.
W-830-19	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-19	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.
W-830-19	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B830-SRC extraction well.
W-830-20	GW	Upper $Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-830-20	GW	Upper $Tnbs_1$	S	CMP	E300.0:NO3	3		
W-830-20	GW	Upper $Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
W-830-20	GW	Upper $Tnbs_1$	S	CMP	E300.0:PERC	3		

Table 2.7-8. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-20	GW	Upper $Tnbs_1$	Q	CMP	E601	1	Y	
W-830-20	GW	Upper $Tnbs_1$	Q	CMP	E601	2	Y	
W-830-20	GW	Upper $Tnbs_1$	Q	CMP	E601	3		
W-830-20	GW	Upper $Tnbs_1$	Q	CMP	E601	4		
W-830-21	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-21	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-21	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-21	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-22	MWPT	$Tnsc_{1a}$	A	CMP	E300.0:NO3	1	Y	
W-830-22	MWPT	$Tnsc_{1a}$	A	CMP	E300.0:PERC	1	Y	
W-830-22	MWPT	$Tnsc_{1a}$	S	CMP	E601	1	Y	
W-830-22	MWPT	$Tnsc_{1a}$	S	CMP	E601	3		
W-830-2213	EW	$Tnsc_{1b}$		Baseline	DWMETALS	2	Y	New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$		Baseline	E200.7:SiO2	2	Y	New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	A	Baseline/CMP	E300.0:NO3	2	Y	New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	A	Baseline/CMP	E300.0:PERC	2	Y	New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	S	Baseline/CMP	E624	2	Y	New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	S	CMP	E601	3		New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$		Baseline	E8330:R+H	2	Y	New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$		Baseline	E900	2	Y	New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$		Baseline	E906	2	Y	New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$		Baseline	GENMINDISS	2	Y	New well. B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$		Baseline	MS:UISO	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		Baseline	DWMETALS	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		Baseline	E200.7:SiO2	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	A	Baseline/CMP	E300.0:NO3	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	A	Baseline/CMP	E300.0:PERC	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	S	CMP	E601	3		New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	S	Baseline/CMP	E624	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		Baseline	E8330:R+H	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		Baseline	E900	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		Baseline	E906	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		Baseline	GENMINDISS	2	Y	New well. B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$		Baseline	MS:UISO	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		Baseline	DWMETALS	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		Baseline	E200.7:SiO2	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	A	Baseline/CMP	E300.0:NO3	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	A	Baseline/CMP	E300.0:PERC	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	S	Baseline/CMP	E624	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	S	CMP	E601	3		New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		Baseline	E8330:R+H	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		Baseline	E900	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		Baseline	E906	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		Baseline	GENMINDISS	2	Y	New well. B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$		Baseline	MS:UISO	2	Y	New well. B830-SRC extraction well.
W-830-2216	MWPT	$Tnbs_2$		Baseline	DWMETALS	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$		Baseline	E200.7:SiO2	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$	A	Baseline/CMP	E300.0:NO3	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$		Baseline	EM8015:DIESEL	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$	A	Baseline/CMP	E300.0:PERC	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$		Baseline	E624	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$	S	CMP	E601	3		New well.
W-830-2216	MWPT	$Tnbs_2$		Baseline	E8330:R+H	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$		Baseline	E900	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$		Baseline	E906	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$		Baseline	GENMINDISS	1	Y	New well.
W-830-2216	MWPT	$Tnbs_2$		Baseline	MS:UISO	1	Y	New well.
W-830-25	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-25	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-25	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	

Table 2.7-8. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-25	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-26	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-26	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-26	MWPT	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-26	MWPT	Upper $Tnbs_1$	S	CMP	E601	3		
W-830-27	MWPT	$Tnsc_{1a}$	A	CMP	E300.0:NO3	1	Y	
W-830-27	MWPT	$Tnsc_{1a}$	A	CMP	E300.0:PERC	1	Y	
W-830-27	MWPT	$Tnsc_{1a}$	S	CMP	E601	1	Y	
W-830-27	MWPT	$Tnsc_{1a}$	S	CMP	E601	3		
W-830-28	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-28	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-28	MWPT	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-28	MWPT	Upper $Tnbs_1$	S	CMP	E601	3		
W-830-29	MWPT	Lower $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-29	MWPT	Lower $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-29	MWPT	Lower $Tnbs_1$	S	CMP	E601	1	Y	
W-830-29	MWPT	Lower $Tnbs_1$	S	CMP	E601	3		
W-830-30	MWPT	Qal/$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
W-830-30	MWPT	Qal/$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
W-830-30	MWPT	Qal/$Tnsc_1$	S	CMP	E601	1	Y	
W-830-30	MWPT	Qal/$Tnsc_1$	S	CMP	E601	3		
W-830-34	MWPT	Qal/$Tnsc_1$	A	CMP	E300.0:NO3	1	Y	
W-830-34	MWPT	Qal/$Tnsc_1$	A	CMP	E300.0:PERC	1	Y	
W-830-34	MWPT	Qal/$Tnsc_1$	S	CMP	E601	1	Y	
W-830-34	MWPT	Qal/$Tnsc_1$	S	CMP	E601	3		
W-830-49	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-49	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-49	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-49	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-50	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-50	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-50	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-50	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-51	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B830-DISS extraction well.
W-830-51	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B830-DISS extraction well.
W-830-51	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B830-DISS extraction well.
W-830-51	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B830-DISS extraction well.
W-830-52	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B830-DISS extraction well.
W-830-52	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B830-DISS extraction well.
W-830-52	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B830-DISS extraction well.
W-830-52	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B830-DISS extraction well.
W-830-53	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B830-DISS extraction well.
W-830-53	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B830-DISS extraction well.
W-830-53	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B830-DISS extraction well.
W-830-53	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B830-DISS extraction well.
W-830-54	MWPT	$Tnsc_{1c}$	A	CMP	E300.0:NO3	1	Y	
W-830-54	MWPT	$Tnsc_{1c}$	A	CMP	E300.0:PERC	1	Y	
W-830-54	MWPT	$Tnsc_{1c}$	S	CMP	E601	1	Y	
W-830-54	MWPT	$Tnsc_{1c}$	S	CMP	E601	3		
W-830-55	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-55	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-55	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-55	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-56	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-56	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-56	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-56	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-57	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:NO3	1	Y	B830-PRXN extraction well.
W-830-57	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:PERC	1	Y	B830-PRXN extraction well.
W-830-57	EW	Upper $Tnbs_1$	S	CMP-TF	E601	1	Y	B830-PRXN extraction well.
W-830-57	EW	Upper $Tnbs_1$	S	CMP-TF	E601	3		Future B830-SRC extraction well.

Table 2.7-8. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-830-58	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-830-58	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-830-58	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-830-58	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-830-59	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B830-SRC extraction well.
W-830-59	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-59	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.
W-830-59	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B830-SRC extraction well.
W-830-60	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-830-60	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-60	MWPT	Upper $Tnbs_1$	S	CMP	E601	1	Y	
W-830-60	MWPT	Upper $Tnbs_1$	S	CMP	E601	3		
W-831-01	MWB	Lower $Tnbs_1$	B	CMP	E300.0:NO3	1	NA	Next sample required 1ndQ 2007.
W-831-01	MWB	Lower $Tnbs_1$	B	CMP	E300.0:PERC	1	NA	Next sample required 1ndQ 2007.
W-831-01	MWB	Lower $Tnbs_1$	B	CMP	E601	1	NA	Next sample required 1ndQ 2007.
W-832-01	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B832-SRC extraction well.
W-832-01	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B832-SRC extraction well.
W-832-01	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B832-SRC extraction well.
W-832-01	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B832-SRC extraction well.
W-832-09	MWPT	Lower $Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-832-09	MWPT	Lower $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-832-09	MWPT	Lower $Tnbs_1$	S	CMP	E601	1	Y	
W-832-09	MWPT	Lower $Tnbs_1$	S	CMP	E601	3		
W-832-10	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B832-SRC extraction well.
W-832-10	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B832-SRC extraction well.
W-832-10	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B832-SRC extraction well.
W-832-10	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B832-SRC extraction well.
W-832-11	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B832-SRC extraction well.
W-832-11	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B832-SRC extraction well.
W-832-11	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B832-SRC extraction well.
W-832-11	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B832-SRC extraction well.
W-832-12	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	B832-SRC extraction well.
W-832-12	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	B832-SRC extraction well.
W-832-12	EW	Qal/fill	S	CMP-TF	E601	1	Y	B832-SRC extraction well.
W-832-12	EW	Qal/fill	S	CMP-TF	E601	3		B832-SRC extraction well.
W-832-13	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-13	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-13	MWPT	Qal/fill	S	CMP	E601	1	N	Insufficient water.
W-832-13	MWPT	Qal/fill	S	CMP	E601	3		
W-832-14	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-14	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-14	MWPT	Qal/fill	S	CMP	E601	1	N	Insufficient water.
W-832-14	MWPT	Qal/fill	S	CMP	E601	3		
W-832-15	EW	Qal/fill	A	CMP-TF	E300.0:NO3	1	Y	B832-SRC extraction well.
W-832-15	EW	Qal/fill	A	CMP-TF	E300.0:PERC	1	Y	B832-SRC extraction well.
W-832-15	EW	Qal/fill	S	CMP-TF	E601	1	Y	B832-SRC extraction well.
W-832-15	EW	Qal/fill	S	CMP-TF	E601	3		B832-SRC extraction well.
W-832-15	EW	Qal/fill	B	CMP-TF	E8330:R+H	2	Y	B832-SRC extraction well. Next sample required 2ndQ 2008.
W-832-16	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-16	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-16	MWPT	Qal/fill	S	CMP	E601	1	N	Insufficient water.
W-832-16	MWPT	Qal/fill	S	CMP	E601	3		
W-832-17	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-17	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-17	MWPT	Qal/fill	S	CMP	E601	1	N	Insufficient water.
W-832-17	MWPT	Qal/fill	S	CMP	E601	3		
W-832-18	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-18	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-18	MWPT	Qal/fill	S	CMP	E601	1	N	Insufficient water.
W-832-18	MWPT	Qal/fill	S	CMP	E601	3		

Table 2.7-8. Building 832 Canyon OU ground and surface water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-832-19	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Dry.
W-832-19	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.
W-832-19	MWPT	Qal/fill	S	CMP	E601	1	N	Dry.
W-832-19	MWPT	Qal/fill	S	CMP	E601	3		
W-832-1927	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-832-1927	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-832-20	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-20	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-20	MWPT	Qal/fill	S	CMP	E601	1	N	Insufficient water.
W-832-20	MWPT	Qal/fill	S	CMP	E601	3		
W-832-21	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Dry.
W-832-21	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.
W-832-21	MWPT	Qal/fill	S	CMP	E601	1	N	Dry.
W-832-21	MWPT	Qal/fill	S	CMP	E601	3		
W-832-2112	GW	Upper $Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-832-2112	GW	Upper $Tnbs_1$	S	CMP	E300.0:NO3	3		
W-832-2112	GW	Upper $Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
W-832-2112	GW	Upper $Tnbs_1$	S	CMP	E300.0:PERC	3		
W-832-2112	GW	Upper $Tnbs_1$	Q	CMP	E601	1	Y	
W-832-2112	GW	Upper $Tnbs_1$	Q	CMP	E601	2	Y	
W-832-2112	GW	Upper $Tnbs_1$	Q	CMP	E601	3		
W-832-2112	GW	Upper $Tnbs_1$	Q	CMP	E601	4		
W-832-22	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-22	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-22	MWPT	Qal/fill	S	CMP	E601	1	N	Insufficient water.
W-832-22	MWPT	Qal/fill	S	CMP	E601	3		
W-832-23	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-832-23	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-832-23	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-832-23	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-832-24	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	
W-832-24	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	
W-832-24	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	Y	
W-832-24	MWPT	$Tnsc_{1b}$	S	CMP	E601	3		
W-832-25	EW	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	Y	New B832-SRC extraction well.
W-832-25	EW	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	Y	New B832-SRC extraction well.
W-832-25	EW	$Tnsc_{1b}$	S	CMP	E601	1	Y	New B832-SRC extraction well.
W-832-25	EW	$Tnsc_{1b}$	S	CMP	E601	3		New B832-SRC extraction well.
W-832-SC1	MWPT	Qal	A	CMP	E300.0:NO3	1	Y	
W-832-SC1	MWPT	Qal	A	CMP	E300.0:PERC	1	Y	
W-832-SC1	MWPT	Qal	S	CMP	E601	1	Y	
W-832-SC1	MWPT	Qal	S	CMP	E601	3		
W-832-SC2	MWPT	Qal	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-832-SC2	MWPT	Qal	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-832-SC2	MWPT	Qal	S	CMP	E601	1	Y	
W-832-SC2	MWPT	Qal	S	CMP	E601	3		
W-832-SC3	MWPT	Qal	A	CMP	E300.0:NO3	1	Y	
W-832-SC3	MWPT	Qal	A	CMP	E300.0:PERC	1	Y	
W-832-SC3	MWPT	Qal	S	CMP	E601	1	Y	
W-832-SC3	MWPT	Qal	S	CMP	E601	3		
W-832-SC4	MWPT	Qal	A	CMP	E300.0:NO3	1	Y	
W-832-SC4	MWPT	Qal	A	CMP	E300.0:PERC	1	Y	
W-832-SC4	MWPT	Qal	S	CMP	E601	1	Y	
W-832-SC4	MWPT	Qal	S	CMP	E601	3		
W-870-01	MWPT	Qal	A	CMP	E300.0:NO3	1	N	Dry.
W-870-01	MWPT	Qal	A	CMP	E300.0:PERC	1	N	Dry.
W-870-01	MWPT	Qal	S	CMP	E601	1	N	Dry.
W-870-01	MWPT	Qal	S	CMP	E601	3		
W-870-02	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	

Table 2.7-8. Building 832 Canyon OU ground and surface water sampling and analysis plan.

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

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).
Building 832 secondary COC: perchlorate (E300.0:PERC).
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, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B832-SRC	January	17	3.0	0.31	2.8	NA	NA
	February	12	1.8	0.20	1.9	NA	NA
	March	9.0	1.5	0.18	1.7	NA	NA
	April	9.0	2.3	0.27	2.5	NA	NA
	May	5.4	2.7	0.32	2.9	NA	NA
	June	5.5	0.64	0.076	0.69	NA	NA
Total		57	12	1.4	12	NA	NA

Table 2.7-10. Building 830-Source (B830-SRC) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B830-SRC	January	NA	22	0.054	0.86	NA	NA
	February	NA	19	0.050	0.78	NA	NA
	March	220	30	0.077	1.2	NA	NA
	April	200	21	0.029	0.84	NA	NA
	May	530	34	0.045	1.3	NA	NA
	June	550	24	0.034	0.99	NA	NA
Total		1,500	150	0.29	6.1	NA	NA

Table 2.7-11. Building 830-Proximal North (B830-PRXN) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B830-PRXN	January	NA	2.6	NA	1.4	NA	NA
	February	NA	3.7	NA	2.0	NA	NA
	March	NA	3.8	NA	2.0	NA	NA
	April	NA	3.5	NA	2.1	NA	NA
Total		NA	14	NA	7.4	NA	NA

Table 2.7-12. Building 830-Distal South (B830-DISS) mass removed, January 1, 2006 through June 30, 2006.

Treatment facility	Month	SVE VOC mass removed (g)	GWTS VOC mass removed (g)	Perchlorate mass removed (g)	Nitrate mass removed (kg)	RDX mass removed (g)	TBOS mass removed (g)
B830-DISS	January	NA	2.1	0.14	1.3	NA	NA
	February	NA	0	0	0	NA	NA
	March	NA	0	0	0	NA	NA
	April	NA	2.0	0.12	1.1	NA	NA
	May	NA	12	0.75	6.9	NA	NA
	June	NA	14	0.88	8.3	NA	NA
Total		NA	30	1.9	18	NA	NA

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K8-01	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K8-01	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
K8-01	MWPT	Upper $Tnbs_1$	S	CMP	E601	2	Y	
K8-01	MWPT	Upper $Tnbs_1$	S	CMP	E601	4		
K8-01	MWPT	Upper $Tnbs_1$		DIS	E906	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	CMPTRIMET	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E340.2	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E601	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	E8330:R+H	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	CMP	E906	1	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	CMP	E906	2	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	CMP	E906	3		
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	Q	CMP	E906	4		
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2007.
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2007.
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	A	CMP	T26METALS	2	Y	
K8-03B	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K8-03B	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
K8-03B	MWPT	Upper $Tnbs_1$	S	CMP	E601	2	Y	
K8-03B	MWPT	Upper $Tnbs_1$	S	CMP	E601	4		
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	CMPTRIMET	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E340.2	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E601	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	E8330:R+H	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	CMP	E906	1	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	CMP	E906	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	Q	CMP	E906	3		
K8-04	CMP DMW	Upper $Tnbs_1$	Q	CMP	E906	4		
K8-04	CMP DMW	Upper $Tnbs_1$	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2007.
K8-04	CMP DMW	Upper $Tnbs_1$	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2007.
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	T26METALS	2	Y	
K8-05	CMP DMW	$Tnbs_2$	B	CMP	CMPTRIMET	2	N	Dry. Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E300.0:NO3	2	N	Dry. Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E300.0:PERC	2	N	Dry. Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E340.2	2	N	Dry. Next sample required 2ndQ 2008.

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E601	2	N	Dry. Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E8330:R+H	2	N	Dry. Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E906	2	N	Dry. Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	MS:THISO	2	N	Dry. Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	MS:UISO	2	N	Dry. Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	T26METALS	2	N	Dry. Next sample required 2ndQ 2008.

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).
Building 801 secondary COC: uranium (MS:UISO) .
See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.

Table 2.8-2. Building 833 area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-833-03	MWPT	Tps	A	CMP	E601	1	N	Dry.
W-833-12	MWPT	Tps	A	CMP	E601	1	Y	
W-833-18	MWPT	Tps	A	CMP	E601	1	N	Dry.
W-833-22	MWPT	Tps	B	CMP	E601	2	N	Dry.
W-833-28	MWPT	Tps	A	CMP	E601	1	N	Dry.
W-833-30	MWPT	Lower $Tnbs_1$	S	CMP	E601	1	Y	
W-833-30	MWPT	Lower $Tnbs_1$	S	CMP	E601	3		
W-833-33	MWPT	Tps	B	CMP	E601	2	Y	Next sample required 2ndQ 2008.
W-833-34	MWPT	Tps	A	CMP	E601	1	N	Dry.
W-833-43	MWPT	Tps	B	CMP	E601	1	N	Dry.
W-840-01	MWPT	Lower $Tnbs_1$		DIS	E300.0:NO3	1	Y	
W-840-01	MWPT	Lower $Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-840-01	MWPT	Lower $Tnbs_1$		DIS	E601	1	Y	
W-841-01	MWPT	Upper $Tnbs_1$		DIS	E300.0:NO3	1	N	Dry.
W-841-01	MWPT	Upper $Tnbs_1$		DIS	E300.0:PERC	1	N	Dry.
W-841-01	MWPT	Upper $Tnbs_1$		DIS	E601	1	N	Dry.

Notes:
Building 833 primary COC: VOCs (E601).
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 area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K9-01	CMP DMW	Tmss	A	CMP	CMPTRIMET	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E340.2	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E601	2	Y	
K9-01	CMP DMW	Tmss	A	CMP	E8330	2	Y	
K9-01	CMP DMW	Tmss	Q	CMP	E906	1	Y	
K9-01	CMP DMW	Tmss	Q	CMP	E906	2	Y	
K9-01	CMP DMW	Tmss	Q	CMP	E906	3		
K9-01	CMP DMW	Tmss	Q	CMP	E906	4		
K9-01	CMP DMW	Tmss	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2007.
K9-01	CMP DMW	Tmss	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2007.
K9-01	CMP DMW	Tmss	A	CMP	T26METALS	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	CMPTRIMET	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E340.2	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E601	2	Y	
K9-02	CMP DMW	Tmss	A	CMP	E8330	2	Y	
K9-02	CMP DMW	Tmss	Q	CMP	E906	1	Y	
K9-02	CMP DMW	Tmss	Q	CMP	E906	2	Y	
K9-02	CMP DMW	Tmss	Q	CMP	E906	3		
K9-02	CMP DMW	Tmss	Q	CMP	E906	4		
K9-02	CMP DMW	Tmss	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2007.
K9-02	CMP DMW	Tmss	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2007.
K9-02	CMP DMW	Tmss	A	CMP	T26METALS	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	CMPTRIMET	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E340.2	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E601	2	Y	
K9-03	CMP DMW	Tmss	A	CMP	E8330	2	Y	
K9-03	CMP DMW	Tmss	Q	CMP	E906	1	Y	
K9-03	CMP DMW	Tmss	Q	CMP	E906	2	Y	
K9-03	CMP DMW	Tmss	Q	CMP	E906	3		
K9-03	CMP DMW	Tmss	Q	CMP	E906	4		
K9-03	CMP DMW	Tmss	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2007.
K9-03	CMP DMW	Tmss	B	CMP	MS:UISO	2	Y	Next sample required 2ndQ 2007.
K9-03	CMP DMW	Tmss	A	CMP	T26METALS	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	CMPTRIMET	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E300.0:NO3	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E300.0:PERC	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E340.2	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E601	2	Y	
K9-04	CMP DMW	Tmss	A	CMP	E8330	2	Y	
K9-04	CMP DMW	Tmss	Q	CMP	E906	1	Y	
K9-04	CMP DMW	Tmss	Q	CMP	E906	2	Y	

Table 2.8-3. Building 845 Firing Table and Pit 9 Landfill area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K9-04	CMP DMW	Tmss	Q	CMP	E906	3		
K9-04	CMP DMW	Tmss	Q	CMP	E906	4		
K9-04	CMP DMW	Tmss	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2007.
K9-04	CMP DMW	Tmss	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2007.
K9-04	CMP DMW	Tmss	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.
Contaminants of Concern in the Vadose Zone not detected in Ground Water: HE Compounds and uranium.
See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.

Table 2.8-4. Building 851 area ground water sampling and analysis plan.

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-851-05	MWPT	Tmss	B	CMP	E601	2	NA	Next sample required 2ndQ 2007.
W-851-05	MWPT	Tmss	A	CMP	E906	2	Y	
W-851-05	MWPT	Tmss	S	CMP	MS:UISO	2	Y	
W-851-05	MWPT	Tmss	S	CMP	MS:UISO	4		
W-851-06	MWPT	Tmss	A	CMP	E906	2	Y	
W-851-06	MWPT	Tmss	S	CMP	MS:UISO	2	Y	
W-851-06	MWPT	Tmss	S	CMP	MS:UISO	4		
W-851-07	MWPT	Tmss	A	CMP	E906	2	Y	
W-851-07	MWPT	Tmss	S	CMP	MS:UISO	2	Y	
W-851-07	MWPT	Tmss	S	CMP	MS:UISO	4		
W-851-08	MWPT	Tmss	A	CMP	E906	2	Y	
W-851-08	MWPT	Tmss	S	CMP	MS:UISO	2	Y	
W-851-08	MWPT	Tmss	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).
See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
K2-01C	CMP DMW	Tnbs$_1$		WGMG	AS:UISO	1	Y	
K2-01C	CMP DMW	Tnbs$_1$		WGMG	AS:UISO	2	Y	
K2-01C	CMP DMW	Tnbs$_1$	A	CMP/WGMG	CMPTRIMET	2	Y	
K2-01C	CMP DMW	Tnbs$_1$	A	CMP/WGMG	E300.0:NO3	2	Y	
K2-01C	CMP DMW	Tnbs$_1$	A	CMP/WGMG	E300.0:PERC	2	Y	
K2-01C	CMP DMW	Tnbs$_1$	A	CMP/WGMG	E340.2	2	Y	
K2-01C	CMP DMW	Tnbs$_1$	A	CMP/WGMG	E601	2	Y	
K2-01C	CMP DMW	Tnbs$_1$	A	CMP/WGMG	E8330:R+H	2	Y	
K2-01C	CMP DMW	Tnbs$_1$	Q	CMP/WGMG	E906	1	Y	
K2-01C	CMP DMW	Tnbs$_1$	Q	CMP/WGMG	E906	2	Y	
K2-01C	CMP DMW	Tnbs$_1$	Q	CMP/WGMG	E906	3		
K2-01C	CMP DMW	Tnbs$_1$	Q	CMP/WGMG	E906	4		
K2-01C	CMP DMW	Tnbs$_1$	B	CMP	MS:THISO	2	Y	Next sample required 2ndQ 2008.
K2-01C	CMP DMW	Tnbs$_1$	B	CMP	MS:UISO	2	Y	Next sample required 2ndQ 2008.
K2-01C	CMP DMW	Tnbs$_1$	A	CMP	T26METALS	2	Y	
NC2-08	CMP DMW	Tnbs$_1$	A	CMP	CMPTRIMET	2	Y	
NC2-08	CMP DMW	Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
NC2-08	CMP DMW	Tnbs$_1$	A	CMP	E300.0:PERC	2	Y	
NC2-08	CMP DMW	Tnbs$_1$	A	CMP	E340.2	2	Y	
NC2-08	CMP DMW	Tnbs$_1$	A	CMP	E601	2	Y	
NC2-08	CMP DMW	Tnbs$_1$	A	CMP	E8330:R+H	2	Y	
NC2-08	CMP DMW	Tnbs$_1$	Q	CMP	E906	1	Y	
NC2-08	CMP DMW	Tnbs$_1$	Q	CMP	E906	2	Y	
NC2-08	CMP DMW	Tnbs$_1$	Q	CMP	E906	3		
NC2-08	CMP DMW	Tnbs$_1$	Q	CMP	E906	4		
NC2-08	CMP DMW	Tnbs$_1$	B	CMP	MS:THISO	2	Y	Next sample required 2ndQ 2008.
NC2-08	CMP DMW	Tnbs$_1$	B	CMP	MS:UISO	2	Y	Next sample required 2ndQ 2008.
NC2-08	CMP DMW	Tnbs$_1$	A	CMP	T26METALS	2	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	A	CMP	CMPTRIMET	2	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	A	CMP	E300.0:NO3	2	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	A	CMP	E300.0:PERC	2	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	A	CMP	E340.2	2	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	A	CMP	E601	2	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	A	CMP	E8330:R+H	2	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	Q	CMP	E906	1	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	Q	CMP	E906	2	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	Q	CMP	E906	3		
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	Q	CMP	E906	4		
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	B	DIS	MS:THISO	1	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	B	CMP	MS:THISO	2	Y	Next sample required 2ndQ 2008.
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	B	DIS	MS:UISO	1	Y	
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	B	CMP	MS:UISO	2	Y	Next sample required 2ndQ 2008.
W-PIT2-1934	CMP DMW	Lower Tnbs$_1$	A	CMP	T26METALS	2	Y	

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

Sampling location	Location type	Completion interval	Sampling frequency required	Sample driver	Requested analysis	Sampling quarter	Sampled Y/N	Comment
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	CMP	CMPTRIMET	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	CMP	E300.0:PERC	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	CMP	E340.2	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	CMP	E601	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	CMP	E8330:R+H	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	Q	CMP	E906	1	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	Q	CMP	E906	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	Q	CMP	E906	3		
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	Q	CMP	E906	4		
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	B	DIS	MS:THISO	1	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	B	CMP	MS:THISO	2	Y	Next sample required 2ndQ 2008.
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	B	DIS	MS:UISO	1	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	B	CMP	MS:UISO	2	Y	Next sample required 2ndQ 2008.
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	CMP	T26METALS	2	Y	

Notes:
No COCs in ground water at Pit 2.
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.
See Table Acronyms and Abbreviations in the Tables section of this report for Requested Analysis acronym definitions.

Appendix A

Results of Influent and Effluent ph Monitoring,

January through June 2006

A-1. Results of infuent and effluent pH monitoring, January through June 2006.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result
GSA OU			
EGSA GWTS	**01/10/2006**	**7**	**7**
EGSA GWTS	**02/08/2006**	**NA**	**7**
EGSA GWTS	**03/08/2006**	**NA**	**7**
EGSA GWTS	**04/11/2006**	**7**	**7**
EGSA GWTS	**05/02/2006**	**NA**	**7**
EGSA GWTS	**06/05/2006**	**NA**	**7**
CGSA GWTS	**01/10/2006**	**7**	**7**
CGSA GWTS	**02/08/2006**	**NA**	**7.2**
CGSA GWTS	**03/09/2006**	**NA**	**7**
CGSA GWTS	**04/11/2006**	**7**	**7**
CGSA GWTS	**05/10/2006**	**NA**	**7**
CGSA GWTS	**06/14/2006**	**NA**	**7**
Building 834 OU			
B834 GWTS	**01/11/2006**	**7.5**	**7**
B834 GWTS	**02/07/2006**	**NA**	**8.3**
B834 GWTS	**03/01/2006**	**8.1**	**8.2**
B834 GWTS	**04/04/2006**	**8.1**	**8.2**
B834 GWTS	**05/03/2006**	**7.9**	**8.2**
B834 GWTS	**06/05/2006**	**7.6**	**8.2**
HEPA OU			
B815-SRC GWTS	**01/12/2006**	**6.5**	**7**
B815-SRC GWTS	**02/08/2006**	**NA**	**7**
B815-SRC GWTS	**03/02/2006**	**NA**	**7.3**
B815-SRC GWTS	**04/13/2006**	**7.4**	**7.2**
B815-SRC GWTS	**05/04/2006**	**NA**	**7.25**
B815-SRC GWTS	**06/06/2006**	**NA**	**7**
B815-PRX GWTS	**01/05/2006**	**7**	**7**
B815-PRX GWTS	**02/08/2006**	**NA**	**7**
B815-PRX GWTS	**03/07/2006**	**NA**	**7**

A-1. Results of infuent and effluent pH monitoring, January through June 2006.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result
B815-PRX GWTS	**04/05/2006**	**7**	**7**
B815-PRX GWTS	**05/02/2006**	**NA**	**7**
B815-PRX GWTS	**06/05/2006**	**NA**	**7**
B815-DSB GWTS	**01/05/2006**	**NM**	**6.5**
B815-DSB GWTS	**02/08/2006**	**NA**	**7**
B815-DSB GWTS	**03/02/2006**	**NA**	**8.5**
B815-DSB GWTS	**04/06/2006**	**8.4**	**8.4**
B815-DSB GWTS	**05/04/2006**	**NA**	**8.4**
B815-DSB GWTS	**06/06/2006**	**NA**	**6.5**
B817-SRC GWTS	**01/10/2006**	**6.5**	**7**
B817-SRC GWTS	**02/07/2006**	**NA**	**7**
B817-SRC GWTS	**03/08/2006**	**NA**	**8.3**
B817-SRC GWTS	**04/05/2006**	**7.5**	**8**
B817-SRC GWTS	**05/03/2006**	**NA**	**7.5**
B817-SRC GWTS	**06/07/2006**	**NA**	**7**
B817-PRX GWTS	**01/09/2006**	**7.5**	**7**
B817-PRX GWTS	**02/08/2006**	**NA**	**7**
B817-PRX GWTS	**03/02/2006**	**NA**	**7.5**
B817-PRX GWTS	**04/11/2006**	**7.8**	**7.51**
B817-PRX GWTS	**05/04/2006**	**NA**	**7.4**
B817-PRX GWTS	**06/06/2006**	**NA**	**6.5**
B829-SRC GWTS	**01/11/2006**	**7.5**	**6.5**
B829-SRC GWTS	**02/01/2006**	**NA**	**6.5**
B829-SRC GWTS	**03/01/2006**	**NA**	**7**
B829-SRC GWTS	**04/04/2006**	**7**	**7**
B829-SRC GWTS	**05/04/2006**	**NA**	**7**
B829-SRC GWTS	**06/07/2006**	**NA**	**7**
Building 854 OU			
B854-SRC GWTS	**01/04/2006**	**6.5**	**6.5**
B854-SRC GWTS	**02/01/2006**	**NA**	**7**

A-1. Results of infuent and effluent pH monitoring, January through June 2006.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result
B854-SRC GWTS	03/01/2006	NA	6.5
B854-SRC GWTS	04/05/2006	7	7
B854-SRC GWTS	05/03/2006	NA	7
B854-SRC GWTS	06/07/2006	NA	7
B854-PRX GWTS	01/04/2006	7.5	6.5
B854-PRX GWTS	02/01/2006	NA	7
B854-PRX GWTS	03/01/2006	NA	7
B854-PRX GWTS	04/05/2006	7	7
B854-PRX GWTS	05/03/2006	NA	7
B854-PRX GWTS	06/07/2006	NA	7
832 Canyon OU			
B832-SRC GWTS	01/19/2006	7	7.5
B832-SRC GWTS	02/07/2006	NA	7.5
B832-SRC GWTS	03/01/2006	7.6	7.3
B832-SRC GWTS	04/05/2006	7.4	7.5
B832-SRC GWTS	05/03/2006	7.6	7.6
B832-SRC GWTS	06/05/2006	7.5	7.5
B830-SRC GWTS	01/11/2006	7	7
B830-SRC GWTS	02/07/2006	NA	7
B830-SRC GWTS	03/08/2006	NA	7.5
B830-SRC GWTS	04/11/2006	7	7.5
B830-SRC GWTS	05/03/2006	NA	7.5
B830-SRC GWTS	06/07/2006	NA	7.5
B830-PRXN GWTS	01/05/2006	7	7
B830-PRXN GWTS	02/08/2006	NA	7
B830-PRXN GWTS	03/07/2006	NA	7
B830-PRXN GWTS	04/06/2006	7	7
B830-PRXN GWTS	05/31/2006	NA	NM
B830-PRXN GWTS	06/30/2006	NA	NM
B830-DISS GWTS	01/31/2006	NM	NM

A-1. Results of infuent and effluent pH monitoring, January through June 2006.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result
B830-DISS GWTS	02/28/2006	NA	NM
B830-DISS GWTS	03/31/2006	NA	NM
B830-DISS GWTS	04/06/2006	7.4	7
B830-DISS GWTS	05/03/2006	7.8	7.4
B830-DISS GWTS	06/05/2006	7.7	7.2

Notes:

B834 = Building 834.
B815 = Building 815.
B817 = Building 817.
B829 = Building 829.
B854 = Building 854.
B832 = Building 832.
B830 = Building 830.
CGSA = Central General Services Area.
EGSA = Eastern General Services Area.
DISS = Distal south.
DSB = Distal site boundary.
GWTS = Ground water treatment system.
PRX = Proximal.
PRXN = Proximal North.
SRC = Source.
NA = Not applicable.
NM = Not measured.
OU = Operable unit.
pH= A measure of the acidity or alkalinity of an aqueous solution.

Appendix B

Eastern General Service Area receiving water field monitoring data and visual observations

B-1. Eastern General Service Area receiving water field monitoring data.

Sample Location	Sample Date	Continuous Flow Conditions (Yes/No)[1]	pH (units)	Dissolved Oxygen (ppm)	Temperature (°C)
3SW-CHC-R1	3/1/06	Yes	NM[2]	NM	NM
3SW-CHC-R1	5/2/06	Yes	7.5	9.2	21.1
3SW-CHC-R1	7/5/06	No	NA	NA	NA
3SW-CHC-R2	3/1/06	Yes	NM	NM	NM
3SW-CHC-R2	5/2/06	Yes	7.5	9.1	18.5
3SW-CHC-R2	7/5/06	No	NA	NA	NA

Notes:

NM = Not measured.

NA = Not applicable.

[1] When continuous flow conditions do not exist between the upstream and downstream monitoring locations (R1/R2), no monitoring is conducted.

[2] Field measurements overlooked in March. No continuous flow conditions existed in the two previous months.

B-2. Eastern General Service Area receiving water visual observations.

Sample Location	Sample Date	Visual Observations A	B	C	D	E	F	G
3SW-CHC-R1	1/06[a]	NA	NA	NA	NA	NA	NA	NA
3SW-CHC-R1	2/06[a]	NA	NA	NA	NA	NA	NA	NA
3SW-CHC-R1	3/06	NR	NR	NR	NR	NR	NR	NR
3SW-CHC-R1	4/18/06	No	No	No	No	No	No	No
3SW-CHC-R1	5/2/06	No	Slight	Yes	Yes	No	No	No
3SW-CHC-R1	6/5/06	Yes	No	Yes	Yes	No	Yes	No
3SW-CHC-R2	1/06[a]	NA	NA	NA	NA	NA	NA	NA
3SW-CHC-R2	2/06[a]	NA	NA	NA	NA	NA	NA	NA
3SW-CHC-R2	3/06	NR	NR	NR	NR	NR	NR	NR
3SW-CHC-R2	4/18/06	No	No	No	No	No	No	No
3SW-CHC-R2	5/2/06	No	Slight	Yes	No	No	No	No
3SW-CHC-R2	6/5/06	Yes	No	Yes	Yes	No	Yes	No

Notes:

A = Floating or suspended matter.

B = Discoloration.

C = Bottom deposits.

D = Presence of aquatic life.

E = Visible films, sheens, or coatings.

F = Presence of fungi, slimes, or objectionable growths.

G = Potential nuisance conditions.

NA = Not applicable.

NR = Not recorded.

[a] No continuous flow; no water at R1 or R2 locations.

Errata

The following figure replaces Figure 2.5-5 from the 2005 Annual Compliance Monitoring Report for the Lawrence Livermore National Laboratory Site 300 (Dibley, 2006a). The revised figure correctly shows the tritium activities for NC2-05 (<100 pCi/L) and NC7-29 (<100 pCi/L), the perchlorate values for wells NC2-05 (<4 μg/L) and NC7-29 (9.7 μg/L) were incorrectly posted on the map. These were data posting errors only. The distribution/shape of the plume was correct.

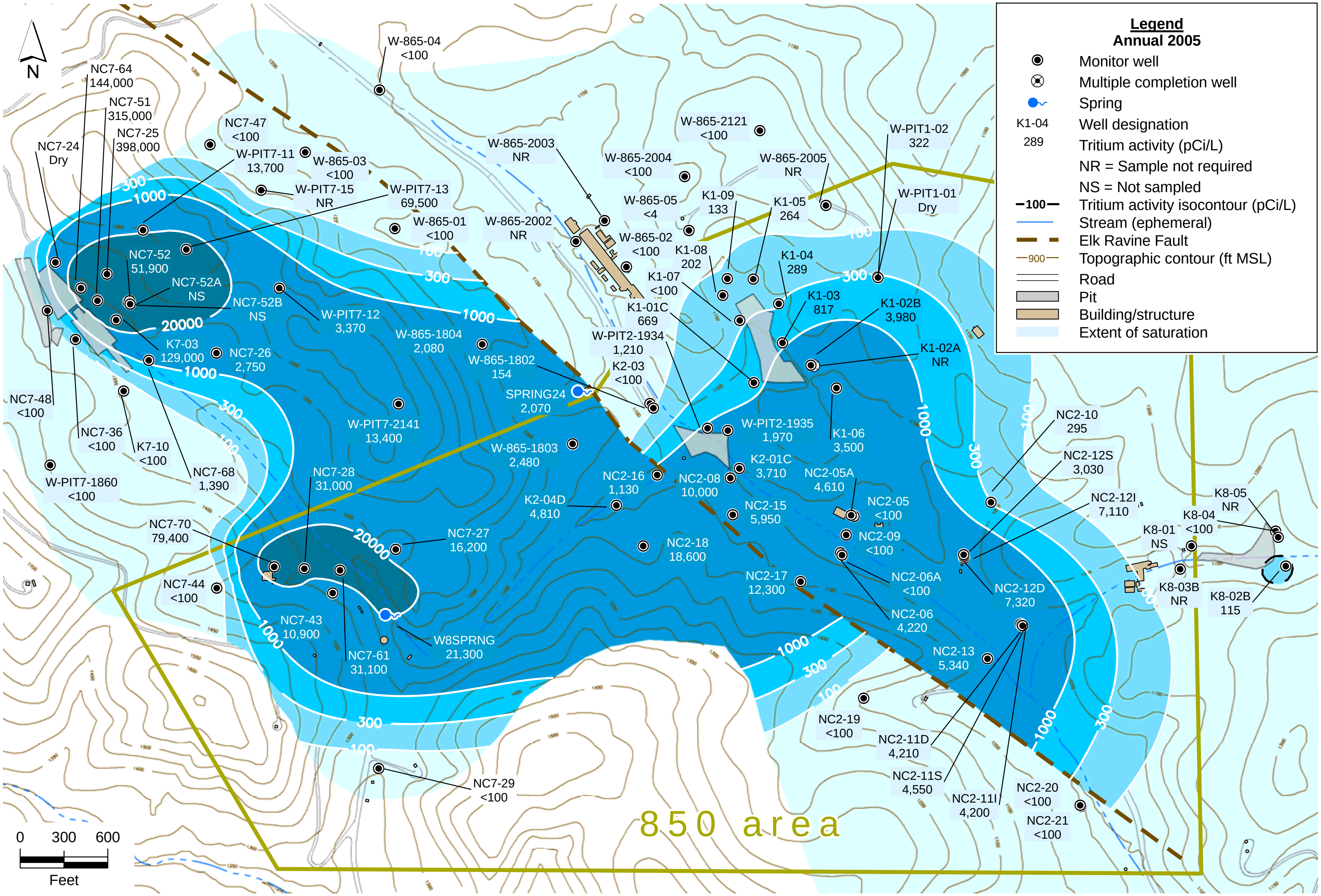


Figure 2.5-5. (Revised) Building 850 OU tritium isoconcentration contour map for the $Tnbs_1/Tnbs_0$ HSU.